Smart Warehouse: US Energy Company's Answer for All Visibility Concerns

Related Articles Contact Wipro Please fill the required details to access the content Smart Warehouse: US Energy Company's Answer for All Visibility Concerns June | 2020 Client background Client: US-based multinational energy company Industry: Oil & Gas Area of Operations: Worldwide Number of Employees: Over 45000 Products & Services: Petroleum, petrochemicals and natural gas Challenge A Fortune 500 organization, driven by the values of responsible operations, execution excellence and technology innovation, was facing challenges in adhering to their vision as their current systems and processes were becoming outdated, and accurate tracking of lubricants was proving to be difficult. They wanted to implement product batch traceability and setup smart warehouse operations to keep up with the ever-evolving demands of their clients. They were looking for a technology partner who could help them in effectively designing and implementing a phase-wise transformation solution addressing their key challenge areas i.e. product batch traceability, supply chain transparency, lubricant tracking, and after-sales service. Solution Wipro stepped in as the preferred partner and initiated smart warehouse operations for the client. MS Azure was chosen for IaaS and PaaS solution deployment. Solution involved integration of multiple systems and hardware like MS Azure, Azure Data factory, local plant server database, hand-held scanners, hand-held computers, mobile application platform, QR code printers, SAP EWM, data collection agent programs, tower lamps, SAP MII, and PCN network. A Lubricant Track and Trace solution was implemented. Its capabilities included: Challenge areas and implementation strategy The engagement involved four key phases: Business Impact The client enabled sustainable transformation by adapting advancements in technology to enhance their market competitiveness, and showed results with the successful deployment of Lubricant Track and Trace solution. Some of the major outcomes of the engagement were: A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to

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How a Healthcare Technology Major Moved 3 TB Sensitive Data and

ServiceNow Instance to AWS in Just 8 Weeks

How a Healthcare Technology Major Moved 3 TB Sensitive Data and ServiceNow Instance to AWS in Just 8 Weeks June | 2020 Client background Client: A multinational company based in Europe Industry: Conglomerate Area of operation: Global Products: Health products, electronics Employees: Over 70,000 The Challenge The client had sensitive data residing on the ServiceNow platform that was being decommissioned in accordance with ServiceNow's cloud security policy. They wanted to retain the data stored in ServiceNow for reporting and audit compliance. The client decided to have the complete ServiceNow instance moved to their AWS. However, the decision to migrate the data was made only close to the decommissioning date, leaving just around two months for the mammoth exercise of setting up ServiceNow application, DB schema, and lift and shift of more than 3 TB of data. Additionally, the client wanted to treat the migrated data as a new quality relevant application (QMS), which led to the overall platform being a validated platform with IQ, PQ and complete process of writing multiple documents, test scripts, reviews and approvals. Solution Wipro stepped in as the preferred ServiceNow and data migration partner and leveraged its in-depth understanding of the ServiceNow platform to conduct the exercise of setting up a new ServiceNow instance on client's AWS and migrating large-scale data from ServiceNow instance to AWS in an extremely short span of time. The highlights of the solution include: AWS was treated as any other virtual machine hosting service and all components such as database, DNS, application server and storage had to be configured to ensure the application was for non-SaaS environment. Business Impact Leveraging Wipro's expertise and effective relationship with ServiceNow, the client was able to migrate more than 3 TB of database on ServiceNow cloud to client premises in AWS in a short span of two months. The client was able to: A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident

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A Global Insurance Group Enabled Agile IT and

Over 68% Cost Savings. Find Out How.

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State of the art infrastructure integrates large, distributed petrochemical complex

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How a Global Company Enabled Smart Logistics & Smart Energy to Enhance Efficiencies

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Event Consolidation &

Event Flood Control for Scalable Operations

Related Articles Contact Wipro Please fill the required details to access the content Event Consolidation Event Flood Control for Scalable Operations July | 2020 Client Background Client: One of the largest financial services organizations based out of Europe and the UK Industry: Wealth Management Area of operation: Operates across 50 countries Products: Global Wealth Management, Personal & Corporate Banking, Asset Management, and Investment Banking Employees: ~60,000 The Challenge Amongst the world's leading global wealth management companies, the client offers an extensive suite of financial services. However, internally, the organization faced several issues with its existing Netcool legacy platform, which had been in use for over 15 years. Consequently, there were many challenges related to transformations, high alert volume, and multiple integrations. Some of the key challenge areas identified included: The Solution   To effectively address event consolidation and enable event flood control, the client required a partner with technical expertise and an insightful approach. With years of experience handling similar projects, Wipro was able to come up with best-in-class, customized industry solutions that addressed the client's multiple challenges. Some of the key highlights of the solutions delivered were: Business Impact Wipro's Architect team again proved their technical expertise. They swiftly addressed multi-point issues that enabled scalability, controlled the ticket volume, and consolidated events by applying the right tools and customizing solutions in tandem with the client's needs. Some of the key benefits realized were: A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to
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Indian O&G Company HMEL Makes its Refinery Smart and Highly Secure. Find Out How.

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London-based modular housing provider taps into IoT to future-proof home development and maintenance operations

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How a Top Electronics Manufacturer Brought Down WAN Operations Cost by Over 30%

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leading Asia-based electronics manufacturing company Industry: Technology Area of operations: Global Number of employees: Over 35,000 Challenge The client had a complex IT network distributed across 40+ countries and managed by over 100 vendors. This made operations very difficult and cumbersome, and resulted in: Solution Wipro, with its consulting framework for network - InsightixTM, and its extensive experience in large-scale project management, global logistics and vendor management - developed a comprehensive plan for SD-WAN implementation with its #WANFreedom carrier agnostic SD-WAN solution. Business Impact Wipro's #WANFreedom solution, underpinned by most widely deployed SD-WAN technology – Cisco SD-WAN, enabled the client to transform their legacy network to a secure, cloud-scale and business-aligned network environment.
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Helping a Leading Swedish Conglomerate Migrate to a Future-Ready, Software-Defined Data Center

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solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to =====================

Enhancing network security via a network refresh and NAC deployment for U.S.-based manufacturing company

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How a Leading Telco Got Ready for IoT and 5G

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Background Client: A leading communication service provider Products/ Services: Mobile, fixed, and broadband internet services Area of operations: Asia and Africa Employees: Over 15,000 Challenges A secure and efficient network is crucial to boost performance and ensure mobility. However, with an increasing number of devices connecting to the internet, the client felt challenged in meeting the growing network demand and provide native IP security support. They needed to find a way to create efficient and secure packet processing and routing. At the same time, the client also wanted to quickly develop enhanced visibility for data control teams and be compliant with critical regulatory mandates. Improving network for IPv6-only new-age IoT devices and expanding beyond expensive IPv4 network was also crucial to reduce cost and enhance the customer experience. The client, therefore, was looking to implement and launch IPv6 support for the mobile network. Solution Wipro leveraged a dual-stack technology where IPv4 and IPv6 could co-exist during the initial phase deployment. The network was gradually transitioned to native IPv6 to enable a robust and secure IPv6 ready mobile network. Key highlights of the implementation include: Business Impact The implementation of the IPv6 ready mobile network solution helped the telecommunications company become future-ready. It helped build a futuristic, reliable, secure, and faster mobile data experience for new-age devices. It helped the client: A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to
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A leading airport in the Middle East boosts operational efficiency with Service Lifecycle Management

Related Articles Contact Wipro Please fill the required details to access the content A leading airport in the Middle East boosts operational January | 2021 Client Background Client: A leading airport in the Middle East Industry: Aviation Area of operations: Aviation Customers: 559 Flights, Over 2 million passengers Challenges The airport's IT and OT landscape were fraught with operational challenges, given the siloed operations for various systems. Multiple service desk teams and legacy systems combined with the lack of asset databases impacted inventory management and maintenance process streamlining. In addition, the lack of incident tracking mechanisms and SLA measurement systems made it difficult to transition out of the existing mix of in-house and

local incumbent IT and OT organizations. Other challenges included legacy systems, End of Life (EOL) / End of Support (EOS) for certain systems and poor documentation which impeded the understanding of the system architecture. As airport operations were critical, there was a need to transform the service management process and systems for 24X7X365 SLA based managed services for all IT and OT systems. Besides uptime SLA assurance and adherence at system / sub-systems level, improved response and resolution time were also critical to ensure minimal service outages. Solutions Wipro's comprehensive solution encompassed a wide range of services – from pre-assessment to implementation and support. The solution spanned over 60 systems across 8 terminal buildings and landside areas like parking, mosque, arrival & departure entrances, as well as air-side locations such as fire stations, fuel stations, power grid, water treatment areas, runways, and perimeters. The solution included: Business Impact Wipro's holistic solution enabled the customer to drive digital transformation aligned with its 2020 vision, helping to improve its processes, tools, security, and ultimately the passenger experience. A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to =====================

Wipro implemented a centralized accidents and trauma care service solution through ambulance tracking and emergency response in one of the largest cities in India

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delivery ,completely free of cost Client Background Client: Autonomous government organization Geography/Area of Operations: India Products/ Services: Health care and trauma care/ Ambulance dispatch Number of Ambulances: 300 Challenges The golden hour is the period of time following a traumatic injury during which there is the highest likelihood that prompt medical and surgical treatment will prevent death. While initially defined as an hour (60 minutes), the exact time period depends on the nature of the injury and can be more than or less than this duration. The proposed solution needed to address the following challenges to ensure that the treatment is provided within the golden hour. Solution Our solution is based on Wipro Smart i-Connect™ IoT platform. The platform has an inbuilt mobile asset management module, basic analytics and big data connectors, with more than 98 inbuilt protocols to directly interface with multiple devices, can be integrated with GIS engines, and has a data ingestion and normalization engine. Wipro Smart i-Connect™ application dashboard is a single / common visualization dashboard for all reporting and a single point of tracking & monitoring. The solution features include: Business Impact Wipro successfully simplified the client's core operation and the resulting benefits were as follows: A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to

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A leading UK bank enables remote work solution for all contract employees

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challenge, Wipro's team analyzed and evaluated the existing capacity and proposed the Rapid Employee Access Solution. It was a remote, fast and secure solution that enabled Desktop as a Service (DaaS) on cloud using the Azure WVD native environment. Besides, the Wipro team leveraged the Azure environment and set up the VDI service in the cloud - building, creating and publishing the VDI image with Windows 10 multi-session. Business Impact Wipro's intuitive solution enabled seamless business continuity for the client with minimal disruption to services, ensuring superior customer experience. Benefits of the solution included: A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to

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Multinational financial services firm leverages emerging technologies based automation boost efficiency

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contributed towards the enterprise's target of achieving a TCO reduction of 25%. It also helped the customer to significantly improve the efficiencies of the remaining team members. The solution enabled the customer to achieve a standardized delivery and execution methodology, and significantly reduce manual interventions, thereby reducing any threats of business loss due to configuration errors on production systems. A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to =====================

Global, R&D-driven biopharmaceutical leader improves user experience with analytics

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A Switzerland based leading global technology company goes digital to enhance user productivity

----- Arcticle source ----- https://www.wipro.com/infrastructure/a-switzerland-based-leading-global-technology-company-goes-digital-to-enhance-user-productivity/ ----- Related Articles Contact Wipro Please fill the required details to access the content A Switzerland based leading global technology company goes digital to enhance user productivity Significant improvements in service outcome of user enablement leveraging IT infrastructure services May | 2021 Client Background Client: Multinational robotics organization Industry: Engineering & Technology Area of operations: 2,200 sites across 110 countries Employees: Close to 150,000 Revenue: Close to US$30 billion (2019) Challenges Digital transformation, the integration of digital technology into all areas of a business, fundamentally changes how an organization operates and delivers value to customers. With diverse businesses in electrification, process automation, robotics & discrete automation and motion, the customer was focused on driving innovation for a sustainable future. However, there were several challenges: Solution As the chosen partner to collaborate with the customer, Wipro's tasks and processes to resolve these challenges included: Business Impact A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to ======================

Global IT Company Adopts Single Solution Suite to Ensure Smooth Return to Work Post COVID-19

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Background Client: Global IT company Area of operations: Worldwide Employees: 160,000+ Challenge Worldwide, COVID-19 has had a detrimental effect on companies' productivity and business continuity. Today, companies are planning and executing strategies to quickly regain equilibrium in the 'new normal' way of working. Remote working has been a big part of this effort. Soon, employees may have to go back to their physical workplaces for various reasons. The challenges here would be: Solution Wipro's "Health COV-ER", the 'Back to Workplace' solution suite, is a one-stop solution offering a single channel for collaboration and communication, including employee transportation and return to work, social distancing, and contact tracing. Health COV-ER offers a comprehensive solution that includes: This cloud solution was enabled for the IT Company in 25+ offices in India for supporting 100K+ employees and two offices in the Philippines to support 10K employees. Contact tracing for employees detected with COVID-19 was used to identify and isolate affected employees Business impact With Wipro's Health COV-ER, the company experienced the following benefits: To know more about the value you will receive with Health COV-ER, contact marketing.cis@wipro.com. A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to =====================

Re-Imagine the Datacenter for the Digital Era

----- Arcticle source ----- https://www.wipro.com/infrastructure/re-imagine-the-datacenter-for-the-digital-era/ ----- About the Author Contact Wipro Please fill the required details to access the content Achieve business agility through Cloudification, expansion beyond boundaries, web-scale automation and intelligent self-learning infrastructure As access to virtually unlimited compute resources continues to grow, enterprises and consumers are able to do things that could not be dreamt of until a few years ago. At the core of this shift are Social, Mobility and Analytics trends powered by Cloud technologies. As Public Clouds mature and become more secure, the inhibitions to move to Cloud have begun to disappear. Enterprises want to cloudify their own Datacenters to derive the benefit of agility, elasticity and self-service, learning from Public Cloud providers. The world is going digital at a much faster pace, putting enormous stress on Datacenters. But weighed down by technical debt, Datacenters are unable to change as quickly as the business environment necessitates. This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly and confidently face the change.   Digital and its Impact on Datacenters What

does 'Digital' or 'Digitalization' mean? One of the early examples of large scale digitalization was when we converted mail to e-mail. Communications became digital. Today, everything, from commerce to learning is becoming digital. The spotlight is now on 'Digital' because of the exponential rate at which it is disrupting traditional processes and well-established behaviors. Fuelling this disruption are technologies such as Cloud, Internet of Things (IoT), Mobility, Social platforms and real time Analytics. These technologies have opened fresh opportunities to digitize, triggering a race between enterprises to innovate, increase efficiency and engage with customers. Consumer behavior is changing, new insurance models are being built, the number of steps to complete financial transactions have decreased with even something as deeply entrenched as physical currency threatening to become digital. Paper files are vanishing. Sensors, actuators, microcontrollers and system-on-chip devices are becoming affordable to build cheap robots and drones. Even governments are being overthrown by social media. The next decade will see more technology change than the last 40 years put together. End users will demand Always-On and high-performance experiences of applications and services, data volumes and velocity will multiply, perimeters will have to be broken to expand to newer geographies or enable much tighter B2B integration. There will be more machines talking to each other than humans talking to machines, and machines will continuously learn, identify patterns and predict events in a world where 'Digital' is becoming pervasive. Meanwhile, enterprises are forced into this disruption while most of their IT infrastructure is still legacy At the core of digital is data. A consequence of the accelerated growth in digitalization is the new demands placed on Datacenters. Traditional application architectures are not flexible enough to adapt to the heavy data velocity, volume and variety. In addition, the IoT is driving decentralization of Datacenters and data security in borderless enterprises is taking new forms. Envisioning the New Datacenter The new Datacenter eco-system must respond to the emerging business conditions dictated by a digital world. This means bringing renewed focus to speed of deployment, availability, flexibility, scalability, agility, maintainability, security and affordability. Programmable Infrastructure: Traditionally, when business needed an addition of, say, 10 servers, the process included procurement, installation, configuration, testing and roll out. This could take weeks, if not months. Today, using virtualization, 10 virtual servers can be deployed in minutes. As infrastructure abstraction gets more sophisticated, more and more control is moving to software from hardware. It is not just humans, but software and applications, which will need to provision or deprovision Datacenter components dynamically based on business demand. This can be made possible when components of the infrastructure - such as compute, network, storage and associated services such as backup, archival, DNS, application services, etc.- are programmable. Every Datacenter component must be exposed through APIs that allow various components to talk to each other and that allow administrators to orchestrate and make changes faster. This is a shift from the traditional manual and time consuming process. It forms the basis of a Software Defined Datacenter with configuration and state monitoring programmable. Pervasive Fabric: Future Datacenters will be hybrid and distributed in nature. Such Datacenters necessitate a single pane of glass for provisioning, migrating, managing and monitoring the infrastructure and applications deployed across different Clouds, providing

workload portability and making the network and service location immaterial to the end-user. Web-Scale Agility: Few large companies make over 200 changes per day to their applications. All enterprises will want the same web-scale agility within their Datacenters. A DevOps approach of automated development, testing and release management along with microservices-friendly infrastructure becomes necessary to bring this web-scale agility. DevOps Approaches Cognitive: Datacenters will add intelligence to their systems so that they develop the capability to learn and auto-scale to meet changing business demands, predict failures and self-heal. Pattern recognition and machine learning technologies will enable this development, now possible with the availability of event and performance data and the reduction in data storage costs. Cognitive IT Security: Security concerns have been the biggest inhibitors to expanding Datacenters. Fears around compromised security have grown further as compute perimeters are breaking. But once new virtual boundaries are mapped and enterprise defense-in-depth policies made software defined, security policies can be easily applied to objects irrespective of where the object physically resides in public or private clouds. Security Floating Security Principals and Policy Objects Application Architectures and Development Practices: How long does it take to upgrade a largely monolithic and resource-hungry ERP workload to a newer version? How long does it take to bring up a DR environment in case of a disaster? How long does it take to migrate assets from one Datacenter to other? How much do you worry about redundancy at all levels to keep the infrastructure always on? The new fast-paced world doesn't have time to think about all these things. That is why the trend of tightly coupled applications - into what seems a monolithic black box - is witnessing a reversal. In their place, microservices are evolving. These are a group of tiny and autonomous services with very minimal or no coupling. They are stateless, can be brought up fast, are portable and can be scaled out. This makes DevOps integration easier than in traditional application architectures. Illustration:Monolithic vs Microservices Architec Financial Accountability: Businesses will want to consume Datacenter services on a utility based OpEx model with a swipe of a card. This means creating shared infrastructure with the ability to cross-charge business units based on usage. As a consequence, CIOs will become financially more accountable and need to build business value realization models. Newer KPIs will emerge such as 'Revenue per unit of Compute', 'On-prem vs Off-prem utilization mix' etc. Building Blocks of the New Datacenter Is the IT Pro Dying? Charles Darwin said, "It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change." After years of installing and configuring systems and servers, or managing and backing up databases, server/ system/ database administrators will have to face the new reality: systems are being automated and their roles are being redefined. The future of an IT pro is in adding smartness to infrastructure. The new world doesn't want the "learned", it needs "learners". Programming or scripting, necessary for adding smartness to infrastructure, is not difficult. They don't require complicated logic and syntax anymore. And to acquire scripting skills is a necessity to be able to continue as an IT pro of the future. Transformation Approach While it is practically impossible to rip and replace decades of technical debt, enterprises can take a phased, two-step approach to transformation. The Transformation Journey Summary It is time to rethink Datacenters to meet tomorrow's needs. Businesses are changing,

digital technologies are creating fresh opportunities, the perimeters of an enterprise are getting broken and conventionally developed skills are getting extinct. We need to fly, yet remain grounded. It's an interesting inflexion point and the good news is that these changes are bringing CIOs and Datacenter architects back to the forefront to lead their organizations into the digital era. Govindaraj Rangan Govindaraj Rangan (Govind) has 19 years of industry experience across the breadth of the technology spectrum – Application Development to IT Operations, UX Design to IT Security Controls, Presales to Implementation, Converged Systems to Internet of Things, Strategy to Hands-on. With his zeal to remain start-of-the-art, he is quick in developing deep hands-on expertise in emerging technologies and applying in real Customer scenarios. He is currently working on solutions to Cloudify Enterprise Datacenters, expanding their boundaries into Public Clouds, experimenting with IoT and Robotics to build the Datacenter for the Digital Era. He has an M.B.A. from ICFAI University specializing in Finance, M.S. in Software Systems from BITS Pilani and B.E. (EEE) from Madras University. Professionally, he is MCSE, CISSP, PMP, ITIL Foundation certified. Email: govindaraj.rangan@wipro.com
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SD-WAN

----- Arcticle source ----- https://www.wipro.com/infrastructure/sd-wan/ ----- About the author Contact Wipro Please fill the required details to access the content SD-WAN - Unbox your branch office Unbox your branch office Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. NFV's success in telecom space and the imagination of a few experts to extend to this enterprise have given birth to the idea of Enterprise Network Functions Virtualization (ENFV). The concept of physical network appliances is going away, leaving only the switch as the lone wolf in the appliances space. Moving every network appliance from a physical world to virtual and packing them in a single x86 appliance is possible now. This Point of View (PoV) document discusses about one such trend of virtualizing important network and security functions and therefore making the branch networks run from a single box. Current approach and its challenges Large corporations of various industry verticals such as retail or banking heavily rely on branches in conducting day-to-day business for one simple reason – they are closer to the consumer of their products or services. While cloudification has successfully moved the applications to a central location, the people who need to access these applications are distributed across the country or globe. However, with the increasing costs and need for consolidation it's no longer possible to have an IT staff member in each branch. Some of these branches may be as small as 5-10 employees. With increasing complexity in technologies, the generic IT administrators no longer can handle highly specialized IT tasks. You need specialized operating system administrators, back-up administrators, IT security staff and somebody to manage them all. Of course, a branch cannot afford an expansive IT department. Management of Head Quarters IT or the data centers are being outsourced to commercial outsourcing & professional

services organizations. Can you manage a branch with no IT staff? Seems unrealistic, but with the branch-in-a-box approach, it's doable. Current approach in connecting the branch is: New approach – Virtualized Branch Networking Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the above shortcomings. This is achieved through virtualization of network functions including routing, wireless LAN controller, firewall, and virtualized servers for running various local applications. Switch may be still required, but a small network switch (supported by few manufacturers now) as a module in the server itself, serves the purpose. Access points cannot be replaced though. The benefits hyper-convergence brings to a branch office network is not only limited to running network functions; with the compute and storage available on these appliances you may run small branch office applications, domain, file and print services, time and attendance applications or CCTV surveillance consoles. All these come with the enterprise grade advantage of centralized back up and management. This single server can be shipped to the branch offices preconfigured waiting to be connected to the Internet (a task which can be achieved by a non-IT staff) and powered, while rest of the configuration, management, policies and control from one central location. In a single click, back up of branch data can be initiated, restored from central location and the branch is up and running in no time. Benefits Resultant benefits are several: Critical success factors Several leading network vendors have recognized the need of customers managing large number of branches and have packaged their hyper-converged branch solutions. However, the following will determine the success factors of such solutions: As the customers adopt more and more branch-in-a-box solutions, feedback exchange with vendors and system integrators these solutions will mature over the period resulting in simplified, secure branch office networking. Be assured, time has come to order your branch networking in a box and unbox your branch.   Mohan Krishnamurthy Madwachar- Mohan has coauthored eight books published by Syngress: He also writes in newspaper columns on various subjects and has contributed to leading content companies as a technical writer and a subject matter expert. To contact the author, write to: Marketing.gis@wipro.com
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SD-WAN:

----- Arcticle source ----- https://www.wipro.com/infrastructure/sd-wan--/ ----- About the author Contact Wipro Please fill the required details to access the content SD-WAN - The next wave in WAN refresh The next wave in WAN refresh The last decade has witnessed a considerable change in the server, applications and end-point device landscape. Transformation in Wide Area Networks (WANs), however, has not kept pace. But the widespread migration of networks and datacenters to Cloud, the growth in end-user wireless devices and bandwidth hungry applications are forcing CTOs to re-examine how they architect, provision and manage their enterprise networks. Traditional MPLS (Multiprotocol Label Switching) used to manage network traffic has become expensive and can't really scale. Fortunately, a solution in the form of Software Defined WANs (SD-WANs) is on the rise,

and about 25% enterprises will use SD-WANs to manage their networks in the next 2 years. Today, only 5% do so. With 55% of IT budgets sucked up by WANs, it is natural that CTOs will want to examine how SD-WANs can solve their problems. Gartner assumes that by 2020, more than 50% of WAN edge infrastructure refresh initiatives would be based on SD WAN versus traditional routers (up from less than 2% today). Currently, enterprises have a complex and expensive infrastructure at branch offices (sites) consisting of terminals/devices, routers, switches, bridges, controllers, firewalls, etc. The individual sites are hauled back to a regional HQ; the regional HQs may be connected between themselves or to a central HQ – which then provides users and applications with Internet/Cloud access. The fact that offices, employees, partners and customers don't directly connect between themselves presents a handicap to real-time applications and collaboration. No enterprise can afford that. To overcome this, smart CTOs have begun to replace or supplement their traditional WANs with secondary links to low-cost business-grade Internet and are leveraging faster rovisioning through 3G/4G/LTE. A shift that is inevitable This shift in strategy takes care of four things: it reduces anxiety of WAN latency and provides users with a great experience; it makes better use of WAN pipes; it brings down costs; and it eliminates the powerful stranglehold of pricing structures that telecom providers have over enterprises. The layer of software over traditional WANs ensures all modes of connectivity are managed for better ROI. With intelligent software and an integrated approach, SD-WANs also make it possible to apply analytics and automation along with new pay-as-you-go models (for a comparison between traditional WANs and SD-WANs, see table "Why SD-WANs are trending"). This makes SD-WANs ready to take on the emerging challenges in enterprise connectivity and takes them from the realm of a technology discussion to the reality of implementation. SD-WAN adoption While SD-WAN adoption is inevitable, it is essential for an enterprise to go through a set of well-defined phases with a technology/ system integration partner: Enterprises must also examine the best-fit cost models that SD-WAN implementations offer (see box "Comparison between commercial SD-WAN models" below). Businesses of the future will depend on SD-WAN The underlying reality of today's business is that infrastructure, networks and capacity must scale and shape dynamically, based on real-time needs. The widely used conference call that forms the bedrock of modern day-to-day enterprise operations, presents us with a classic example. When a team spread across geographies needs to conduct a conference in real-time, it sets up an online call-bridge allowing team members to conduct a discussion using their phone, mobile devices or a desktop. The enterprise and the team doesn't labor over the transport being used; they are not bothered with IT and infrastructure complexities. Their concern is centered around how quickly and effectively the business intent is fulfilled. Before the conference begins, the network does not exist. It is created just in time for the conference and is automatically dismantled as soon as the conference is over. The process is simple and it puts the network back in control of the enterprise. In an era where CTOs cannot imagine a future without Infrastructure as-a-Service (IaaS), Software as-a-Service (SaaS) and mobile work forces, the need to adopt SD-WANs is even more urgent. Enterprises need quick, fast and flexible access to a variety of high-bandwidth services that are within their control. This is where SD-WANs score with cost

savings, simplicity, better user experience and scalability.
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Designing a zerodowntime experience

for your end users using

"digital lockers"

----- Arcticle source ----- https://www.wipro.com/infrastructure/designing-a-zerodowntime-experience-for-your-end-users-using-digital-lockers/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content Designing a zero downtime experience for your end users using "digital lockers" A key focus area within the digital workplace today is fostering customer experience and intimacy. Enterprises increasingly realize that a superior end-user experience is a prime driver of operational efficiency, and have tried to provide this through many strategies; BYOD, VDI, or lightweight tablet devices. While these initiatives have helped, they only treat the symptom and not the underlying problem which is that end-user devices and endpoints can and do frequently crash. Moreover, the impact is not just limited to a single employee, but affects the entire enterprise. Due to the hyper-networked nature of work colleagues, partners and customers of the employee must put their interactions on hold until the IT team restores normal operations. This results in a loss of productivity that is estimated to be 4 to 5 times higher. User experience monitoring, can help enterprises identify such events ahead of time, but their effectiveness is minimized if the issue is due to a hardware failure, where the only solution is to provide employees with a replacement endpoint quickly, efficiently and with simplicity. Traditional models do not cut it Enterprises have traditionally used two models to solve this problem. Either they have looked to onsite field engineers to provide replacement endpoints to end users, or they have looked at VDI to eliminate the dependency on the endpoint. However, these models have both failed due to the varied nature of the workplace ecosystem. Having a dedicated field engineer present at smaller sites such as sales offices can be cost prohibitive, while VDI is dependent on excellent network connectivity to ensure day to day functioning and in turn, severely restrict the mobility of road warriors. In this whitepaper, we will explain how a business can drive a better near-zero downtime user experience for their employees through digital lockers. Planning for digital Lockers A digital locker is a digitally access controlled physical locker, with multiple bays that can be utilized by end users to return an endpoint, or pick up a new endpoint, within minutes, without requiring the intervention of on-site field services. Digital lockers thereby enable a zero-downtime experience for end users in a cost-effective manner. However, an essential prerequisite to achieving this is building a seamless mechanism to transfer applications, data, and settings from the existing

endpoint to the new endpoint. Today, multiple models of digital lockers are available with the basic versions providing granular bay-by-bay access, while advanced models offer network interfaces for remotely managing endpoints and, office-in-a-box capabilities on which enterprise IT can run virtual workloads. We believe that digital lockers are not just a tool to provide a better break-fix service, but a chance to rethink and transform your existing support model. Here are a few key aspects to consider when introducing digital lockers: The six fundamental principles to designing a zero-downtime experience for your end users using digital lockers Design for the entire service spectrum and the full estate Business downtime needs to be reduced, irrespective of whether it is because of a failed endpoint or a new employee without one. Design your laptop locker to provide zero-downtime experience across the end user lifecycle, and across your locations. For critical peripherals (keyboards, monitors) use vending machines (like digital lockers, but based on retail vending machines) to provide a seamless integrated zero-downtime experience. Choose an out-of-the-box experience Digital lockers provide the best user experience when users can quickly return to their work. Long lead times required for reengineering or for process approvals destroys the user experience.Eliminate user wait times by opting for an OOB (Out-of-the-box) experience with your endpoints, or ensure that your remote management team reconfigures these machines right after they are installed within the digital lockers, and much before you allocate them to users. Decouple the workspace and the endpoint To allow seamless migration of the workspace (applications, data, and settings) from the old to the new endpoint, look at decoupling the workspace from the rest of the endpoint, through profile virtualization services or EFSS solutions like OneDrive and Dropbox. If you cannot put your data in the Cloud due to regulatory reasons, use the advanced features available on your digital lockers to run fileshare loads. Invest in orchestration Migrating users between endpoints is a non-trivial exercise, with multiple failure points. Invest in orchestration to ensure that your IT management systems can seamlessly support the new model without needing to increase the headcount of your remote engineering team. Revisit your third party service contracts to ensure a seamless IT supply chain Having machines available in the locker is a critical prerequisite to ensuring that your users can pick them up. Revisit your asset management processes to ensure that replenishment orders can seamlessly backfill inventory. Work with your OEM and your field services partner to ensure that they are contractually obligated to maintain accurate asset inventory. Simplify the user experience Doing the above five steps does not ensure success if your end users still need to punch in a 15-digit access code they received on email, or if the nearest digital locker is in another building a mile away. Ensure that you deploy digital lockers in locations that are convenient for end users to access and make sure that you integrate them with existing access control mechanisms like ID cards to simplify the user experience. Summary The uptick in user experience as well as the economics of using these solutions is a winner and can lower the TCO of endpoint management by over 70%, enabling enterprises to focus on improving and maintaining the applications that are the real heartbeat of an organization. It is a great way to ensure that the lights in an organization do not suddenly dim. Going beyond digital lockers and vending machines While the value proposition of digital lockers and vending machines is compelling, far more innovative

models are currently being developed that are poised to disrupt the existing service landscape. Chief amongst these is the VR (virtual reality) kiosk, which provides collaboration and problem resolution capabilities to engineers and end users using remote conferencing and VR interfaces, thereby providing all the advantages of a genius bar, but at hyper-scale and at a fraction of the cost. The world of end user computing is poised to undergo an interesting change fostering employee productivity and significant cost savings Digital lockers are not just a tool to provide a better break-fix service, but a chance to rethink and transform your existing support model. Ramesh Ananthakrisnan - Product Head, Wipro Live WorkspaceTM Ramesh has more than 12 years of experience in developing and deploying the digital workplace to multiple Fortune 100 and 500 customers. He is responsible for the go-to-market for the digital workplace and AI and NLP as it applies to end user services. To know more, reach out to marketing.gis@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Getting Cloud migration right:

----- Arcticle source ----- https://www.wipro.com/infrastructure/getting-cloud-migration-right-faster-simpler-and-safer/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Becoming a Cloud-first organization is no longer a choice for business. The more relevant questions today are 'how soon can we get there' and 'how much do we need to invest'. According to a Forbes article discussing Forrester's Cloud computing predictions for 2018, "Forrester predicts that more than 50% of global enterprises will rely on at least one public Cloud platform to drive digital transformation and delight customers."1 The worldwide public Cloud revenue is expected to grow 21.4% in 2018 alone, according to a recent Gartner2. Clearly, Cloud computing is one of the most disruptive technologies IT has seen since the early days of digital age. Its massive growth comes from its rapid adoption across industries and businesses of all sizes, thanks to its benefits – elasticity, scalability, agility, and pay-as-you go pricing models. Migrating to the Cloud, however, is nt just limited to merely shifting workloads and applications. It requires organizations to reimagine their IT infrastructure and operating philosophies to drive innovation, create new opportunities, and future-proof their success. Tackling the Cloud adoption and migration effectively can maximize the Cloud benefits. 66% of IT decision makers admit to delaying the migrations because "migrating complex apps to the Cloud is perceived more trouble than it's worth". 44% of businesses have experienced some kind of Cloud migration failure3. What makes Cloud migrations such a headache and how can the right planning and execution methodology help

organizations steer clear of the pitfalls? Three key challenges plaguing Cloud migrations While the benefits of migrating to the Cloud are many folds and well proven there are challenges: time factor, costs involved, integration complexity, data risk, people and process, downtimes and so on. Let's discuss in detail three of the biggest challenges in migrating to the Cloud (of any type): #1 Assembling the right ingredients Think of Infrastructure-as-a-service (IaaS) such as AWS, Azure and Google Cloud, as well as people and processes as building blocks – you can assemble them in various ways to get different outcomes. Outcomes to your business are important and to know the need to prioritize them. While the technology challenge is addressed by opting for right platform, which is more prescriptive in nature, getting the right people and devising the right strategies to drive them. #2 Accurately forecasting time, cost, and resource investment Most companies that become frustrated with their Cloud migration often do not do their homework. They miscalculate the time required to migrate to the Cloud, which in turn, affects the cost of service and resources required, ultimately undermining the benefits. The trick to realizing superior cost savings with migration is to begin with migrating in-house services that are least used to the Cloud first, and gradually progress to most-used services. Another factor here is that most organizations' legacy systems (records and transactional processes for instance) are not Cloud-ready and require re-architecting. Enterprises typically calculate Cloud costs by looking at the cost per service unit but fail to multiply this correctly over the length of time required to migrate, say a month or a year. #3 Protecting and securing data in the Cloud Migrating their in-house security posture as-is to the Cloud is one of the biggest challenges any organization can make. While a majority of organizations have made the leap to the Cloud, nearly a quarter are still wary of migrating – primarily due to concerns over security. Gartner's recent report on Cloud security makes an interesting point here – it says most security failures result due to a fault on the users' part, not Cloud providers', as the former fail to manage the controls used to protect corporate data. Gartner predicts that through 2022, at least 95% of Cloud security failures will be the customer's fault4. While public Cloud platform providers have taken note of customer's distrust and are bolstering security through fully integrated and unified security solutions. Managed Cloud migration services: The panacea to the challenges Efficient planning is the most important stage for successful migration. There is no predefined formula for migrations, this can change based on the enterprise needs. Planning for migration could involve: Automation becomes key to build workflows for standard SOPs during migrations; this improves the efficiency and eliminates possibilities of human error during migration. #1 In-depth planning with phased migration: Opt for a Cloud service partner with considerable experience in assessing and migration planning, and well-developed process and capabilities to execute migration in a phased manner: #2 Automation for migration: Reduction in time, cost and risk brings major success in migration projects, enabling large and complex Cloud migrations. This drives faster migrations, improves accuracy by reducing manual errors, tools and process automation for higher availability of service that help in reducing cost of manual actions. Here are the key benefits an expert Cloud managed services provider (MSP) can bring to the table: # Increased agility and scale: While increased agility and scale are the inherent benefits of Cloud computing, realizing these with your in-house

IT team can prove to be daunting. Cloud service partners that bring an industrialized approach to migration, backed by robust infrastructure, SLAs, software-defined policies, and standardized processes can enable up to 90% automation for assessment/data analysis, in addition to the capacity to scale up to 500+ migrations per week. Cloud service partners with access to migration best practices across industries, ready blueprints, proprietary frameworks, tools, and technologies are able to significantly accelerate and streamline migration. # Predictable cost savings: Outsourcing

Cloud migration to the right service partner enables end-to-end visibility and control over costs through automation, and reduces network maintenance costs as well. Flexible pay-per-service or consumption-based payment plans add to the convenience as businesses need not pay for unused capacity. Cloud migration service partners that offer advanced analytics capabilities further facilitate automated intelligent orchestration of workloads to the best-fit Cloud, maximizing ROI and capacity utilization. Some migration service partners also offer converged solutions such as security protection, network monitoring, and disaster recovery that further augment cost savings. The road to successful Cloud migration As businesses increasingly move beyond a single Cloud to adopt a multi-Cloud approach, migration and interoperability challenges loom large. Operational cost, time, effort, and resource savings that can be achieved by partnering with a managed Cloud provider far outweigh the savings of managing the migration in-house. A managed Cloud provider combines automated assessments with industrialized approach to migration, resulting in seamless post-migration digital operations at zero risk. The bottom-line: a combination of careful planning, detailed deliberations, and partnerships with managed Cloud providers can help anticipate and overcome potential roadblocks and ensure migration success. Anantha Rao L - Principal Consultant and Practice Manager for Cloud automation services in Wipro's Cloud & Infrastructure Services He has a total of 19 years of experience with 10 years specifically into developing transformation solutions. He has pioneered complex initiatives to drive automation in consulting, delivery and infrastructure management across various verticals and geographies. He can be reached at anantha.lrao@wipro.com. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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The business case for SD-WAN

About the Author Related Articles Contact Wipro Please fill the required details to access the content The business case for SD-WAN Traditional MPLS (Multiprotocol Label Switching), used to manage branch connectivity and network traffic, isn't cutting it any more. In its place, SD-

WAN (Software Define Wide Area Networks) is mainstreaming. Major enterprises are busy examining SD-WAN as a means of dealing with growing network traffic, triggered by the migration of networks and datacenters to Cloud; the proliferation of Internet of Things (IoT); the focus on collaboration; and by the bottomless demand for wireless end-user devices and rich, bandwidth-intensive applications. What is changing with SD-WAN? SD-WAN creates an overlay on the existing network topology. This layer provides enterprises with central control over branch connectivity. They can use this layer to prioritize traffic based on business rules achieving this with greater security using encryption, next generation firewalls, web filtering, and threat management based on location, session, user and application. In addition, a variety of components can be added to SD-WAN implementation such as controllers for device management and, sometimes, an analytics engine for optimizing cloud workloads and monitoring. One study in North America found that by 2017, 74% of respondents had already tried the technology in labsi . Not surprisingly, one leading analyst predicts that worldwide SD-WAN infrastructure and services revenues will see a compound annual growth rate (CAGR) of 69.6% and reach $8.05 billion in 2021ii. Clearly, branch connectivity using traditional WANs - that have not been architected for cloud and have always had security concerns - are primed for retirement. There are compelling reasons for SD-WAN adoption: The technology reduces latency, it optimizes use of WAN infrastructure, brings down costs and gives better management control (for more details see traditional WAN versus SD-WAN). Today, with 55% of IT budgets taken up by WANs, CTOs are being naturally drawn to SD-WAN. Figure 1: Traditional WAN vs SD WAN With SD-WAN trending, every CTO must ask, "In which line of my business can SD-WAN bring value and the highest ROI? And what is the business case for SD-WAN?" Defining the business case Identifying and defining the business case is the first step in SD-WAN adoption. Typically, businesses will want to increase the available bandwidth as they expand. Doing this with MPLS is expensive. SD-WANs make it easy to increase bandwidth without adding to costs. Often, businesses are in the process of retiring old technology. At this point, they would want to consider SD-WAN and upgrade their infrastructure to take advantage of MPLS, broadband and 4G. Finally, SD-WANs provide visibility into applications allowing administrators to prioritize traffic based on application criticality. This has the net effect of improving user experience and ensuring that business is not affected due to poor bandwidth. The other drivers for SD-WAN adoption include agility and security. Automation can speed up configuration and deployments while traffic from data-sensitive applications can be isolated for enhanced security. Analyzing the business case Once the business case is defined and business goals set, effort should be directed to analyzing the business case for appropriate solutions. This involves examining: • Network architecture: This includes understanding the type of routers, links and potential software upgrade required • Utilization: Link utilization and the impact of outbound traffic on inbound and vice versa, along with the type of links (symmetric or asymmetric) which business are constantly trying to optimize • Application landscape: Type of applications, their behavior and SLAs associated with the applications. Special attention needs to be paid to the following category of applications: • Security analysis: This is an important aspect of the analysis, and the solutions implemented must align with compliance requirements of the business. The

analysis must include: •   Cost: Capturing the complete maintenance and management cost of the WAN implementation. This will include: Identifying potential problems During the analysis stage the technical shortcomings of the WAN need to be understood and documented. This will form a major input in determining the specifications of the SD-WAN. This stage requires data from existing network monitoring platforms or from the service provider, and then subjecting the data to analysis. Some of the key areas to be analyzed include: Choosing an SD-WAN By creating a business case, analyzing it and listing problem areas, the most suitable SD-WAN solutions can be identified. At this stage, the business needs the assistance of an experienced system integrator who can evaluate the multiple SD-WAN choices and determine the best fit solution. The SD-WAN market is crowded with vendors. It is difficult for a business to determine the technical features that will meet business requirements, overcome existing problems and deliver a future-proof solution. This should be left to the SI partner. The benefits of SD-WANs are irrefutable. These benefits are technical and commercial in nature. They solve several problems associated with traditional WANs. Going forward, with the increasing adoption of Cloud-based technologies, growing business locations, the need for unified communications and the growth in video-based collaboration a business will be left with no alternative but to capitalize on SD-WAN. References i https://technology.ihs.com/602230/three-out-of-four-companies-evaluating-sd-wan-as-enterprises-embrace-the-cloud-ihs-markit-survey-says ii https://www.idc.com/getdoc.jsp?containerId=prUS42925117 Ramesh N G -
  Director Network Services, Cloud & Infrastructure Services, Wipro Ltd. Ramesh has 18 years of experience in the field of information technology, networking infrastructure architecting, and technical delivery. He specializes in the field of software defined, traditional and Cloud networking areas. Currently, he heads the software defined networking practice globally within Wipro's Cloud & Infrastructure Services. He leads a team of SDN solution architects, Cloud and Openstack networking professionals, to shape the future of the SDN business for Wipro in global geographies. He holds multiple industry leading certifications which include juniper networking professional certification as well as and Openstack certifications from Red Hat and Mirantis. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Data management in the digital realm

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Please fill the required details to access the content Data management in the digital realm NextGen and heterogeneity Introduction The IT landscape of today is defined by two terms, "high velocity" and "consumer experience". In the earlier white papers, data management in the digital realm - trends, challenges, and other constraints and data management in the digital realm breaking dawn-optimizing the usual, we saw the changing trends and challenges faced by IT departments. We also saw the solutions and hygiene that IT must put in place to counter basic challenges and also enable an organization to survive in today's hypercompetitive environment. The proliferation and adoption of application agnostic hybrid infrastructure platforms introduce many new challenges that were never seen before. Hence, looking at advanced mechanisms that facilitate an organization to pursue agile roadmaps will be a key differentiator. These mechanisms are expected to manage and protect data, provide fuel for strategies, and handle heterogeneity, thereby driving innovation within the boundaries of reducing and leveling budgets. Advanced mechanisms Backup and data protection have refined themselves to meet the demands of the usual workloads but are they enough to meet the expectations of modern IT? The basic question that we need to address is Organizations cannot undermine the importance of big data protection and management. Their goal to achieve big data protection and management is facilitated by a few data management software solutions that integrate with common big data platforms. This integration delivers deep insights on the environment and facilitates varied and practical plans of data protection and recovery. Using intelligent approaches provided by big data protection and management vendors and a combination of technologies, big data environment can be extended to the Cloud. This extension enables recovering a big data environment in a public Cloud infrastructure to ensure business continuity and flexibility both during disaster recovery testing or an actual event. Thus, organizations achieve a big data environment that is protected & disaster averse. With the proliferation of PaaS and SaaS methodologies, organizations are given new ways of utilizing the cloud: primary source for hosting applications. Knowing this, we need to think about a few aspects. In reality, very, few SaaS providers offer data recovery but at a heavy price, complex terms and conditions. Additionally, the process of initiation itself takes weeks. In today's world where JIT concepts rule, such timelines are hardly acceptable. The truth is, these activities must or at least should remain the responsibility of each and every organization, regardless of how data is managed, accessed, or stored. Protecting and managing application and data present in the Cloud is just as doable as that for an on-premise scenario. Just like we keep multiple copies of the same data, some on-premise and off-premise likewise we keep multiple copies in the Cloud, either the same Cloud or other Clouds. Another approach for applications running in the Cloud will be to use Cloud file sharing technology with links pointing to a backup server on premise. This helps bring elements of governance, e-discovery, and compliance with the data landscape. Now that we have seen that solutions and methodologies are available to perform efficient backups, organizations will have to find solutions around challenges surrounding methodologies of locating and accessing protected data. The next set of questions which need to be pondered upon are The solution should be such that it ensures data is stored securely in a single, indexed, de-duplicated, storage agnostic virtual repository to enable recovery, retention, access, and search. In addition, it

should be intuitive enough to facilitate employees in performing basic restorations with minimal training. With end-users empowered IT admins no longer have to be part of each and every recovery and restore work. With data management in control, organizations should think around the following The solution architecture should be planned and implemented with the capability of backing data from various sources such as end-user devices, databases, physical servers, virtual servers, and cloud while meeting varied protection expectations.   Figure1 : Any data-any source-any target-anywhere Let us consider an example; files and emails are better being archived & databases backed up. Multiple approaches bring complexities and hence consolidating actions is better. A solution that is deeply integrated with applications and hypervisor, ensures data recoveries are uncorrupted and application aware, enables a single operation to perform backup, archive and reporting will be the most sought after as implementing such a solution will result in reduction in complexity of operations, protection time, infrastructure costs and better administration. We saw above that the software in the solution must have robust functionalities and features that facilitate multiple benefits. But what about the hardware that needs to complement the software. The benefits can be delivered only when the software and hardware are in sync and behave as a single system. Let us question ourselves. Organizations have to focus on software-defined infrastructure solutions that not only provide strong vendor support and services, skill advancement, tightly integrates in an API economy but also contain costs and complement the data management software. Considering another way round, employing software-defined storage as a backup target will bring flexibility and reduce infrastructure costs. Software-defined storage solutions minimize issues like vendor lock-in, especially for hardware procurements from their storage suppliers. According to markets and markets, the software-defined storage market was worth $4.72 billion in 2016, and it could increase to $22.56 billion by 2021. That's a 36.7% compound annual growth rate.[1] Organizations have to harness heterogeneity. Heterogeneity enables capitalizing strengths of individual components be it software or hardware, speeds up returns & improves TCO. However, heterogeneity also invites complexities. To sum up The solution architecture explained here facilitates data protection and management at a pace that matches high-velocity data growth. It is capable of handling and managing complexities associated with heterogeneous data sources, data types and data targets, and innovative platforms such as PaaS and SaaS. It enables efficiencies at multiple levels, ensures data availability and restorability, facilitates monitoring, customizations, and centralization of control through a single pane of glass thereby facilitating monitoring and governance In addition, the solution is programmable and provides necessary touch points that allow seamless integration with intelligent software-defined targets, near-automated deployments, and operations, thereby delivering simplified and rich end user experience. Sauradeep Das Senior Manager, Cloud Infrastructure Services Wipro Ltd. He is a seasoned IT professional with 12 years of industry experience specialized in infrastructure and telecom domains. He has vast experience and played versatile roles during his career including sales, presales, and practice and business development. Currently he is part of the SDx team as a solution architect and is responsible for SDx presales, practice development and delivery enablement. Sauradeep holds a Bachelor degree in engineering

with masters in management. He is passionate about innovations and adoption of new technologies. He is reachable at sauradeep.das@wipro.com ======================

Software Defined Networking:

Software Defined Networking: Connecting hybrid clouds seamlessly There has been a steep increase in cloud adoption, both by private and public enterprises, for hosting their workloads. Cloud players have made this possible by providing viable solutions to the consumers, who pay only as they use. Hybrid cloud deployments are gaining traction as they deliver the security of private cloud along with the flexibility of public cloud. This computing environment that allows data and applications to be shared between public cloud and private cloud, demands new standards of compliance and standardization of network and security configurations and policies. Traditional ways of connecting the cloud and on-premise datacenter involves various modes like configuring Virtual Private Network (VPN)-native networking constructs. This model though successful, requires skill, effort and involves constant monitoring of the tunnel, which has dependency on firewall/router on the premises. There are cloud networking only solutions which are best suited for multi-cloud networking and help in extending connectivity between various clouds. However, the policy and control remain local to the various clouds and not hybrid for cloud deployments. Software defined networking (SDN), which offers an application-centric approach in data center networking in contrast to a network-centric approach, is looked upon as a game changer in hybrid cloud networks. It enables the elasticity and responsiveness required in hybrid cloud computing. Connecting to cloud: The current models and the challenges Networking for cloud connectivity can be achieved multiple ways. Connectivity via the standard way involves building and operating IPSEC tunnels from cloud to on premises. Figure 1 depicts the standard way of extending reachability from on-premises to public clouds. Figure 1: IPSEC tunnel between on-premises and cloud Several other ways of extending the connectivity involve cloud networking solutions that provide an overlay tunnel between the on-premises and cloud. This method, though effective, cannot extend consistent policy and control and relies on the respective native network constructs. Other ways of extending connectivity include the direct connect/express route from respective cloud providers to the on-premises. Figure 2 depicts connectivity between an on-premises datacenter to public cloud through Cloud Exchange locations. Figure 2: Cloud Connect architecture A cloud service solution extends connectivity between on-premise and corresponding cloud construct by pairing with a Cloud exchange connect location. Though this method provides advantages, the configurations required to extend the reachability is manual with multiple touchpoints and stipulates certain essential skill requirements. Different connectivity types like IPSEC over Internet, Direct Connect, Express route and through Cloud broker, each have segregated control and management

planes which require additional skills over and above the standard networking skills. Figure 3 depicts the typical challenges faced by organizations while adopting various strategies for networking with the hybrid cloud. Figure 3: Current challenges for networking with hybrid cloud SDN for Hybrid Cloud Considering the rate of cloud adoptions and the requirements for standardizing the policy and compliance, the need for extending SDN fabric across various clouds is of paramount importance. The methods described in the previous section aid in networking for cloud, however the policy enforcement is still decentralized and in silos. SDN for hybrid cloud brings in the flexibility of consistent policy push across the clouds, both private and public from a central orchestrator, which is available in both on-premises and cloud model. The network components as part of the innovative solution have greater levels of integrations with cloud native components. This ensures no dependencies exist between the Cloud and Networking teams to achieve business goals. The other important aspect of SDN for Hybrid cloud solution is that the customer can use connectivity mechanisms like Direct connect, Express route etc. for extending the management and control plane reachability beyond the datacenter boundaries. Figure 4 describes the advantages SDN in hybrid cloud brings to the organization. Figure 4: Advantages of SDN in Hybrid Cloud Figure 4: Advantages of SDN in Hybrid Cloud While hybrid cloud with SDN brings in many advantages, there are some associated constraints ranging from hardware dependency, security across diverse platforms, integration with applications, compatibility between on-premises and cloud platforms, and need for planning. Conclusion SDN for hybrid cloud has become the most critical aspect in an organizational digital journey. Precision planning with consulting approach is key to adopting the right SDN in a hybrid cloud environment considering numerous factors like security, application integration, and compatibility. Organizations should embrace hybrid cloud with SDN to achieve speed, flexibility and agility for deploying and migrating applications between on-premises and various public clouds while on the path to achieve digital transformation. Lalit Kameshwar Practice Manager, Cloud & Infrastructure Services, Wipro Limited. Lalit has 13 years of experience in the field of information technology, networking infrastructure architecting, and technical delivery. He specializes in the field of software defined, traditional and Cloud networking. He leads a team of SDN solution architects, Cloud and OpenStack networking professionals, to shape the future of the SDN business for Wipro in global geographies. He holds multiple industry leading certifications, which include VMware and Juniper certifications. He can be reached at lalith.kameshwar@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Global | Open | Connected

Global | Open | Connected The future of logistics with Physical Internet The future of logistics with Physical Internet November | 2019 The article discusses: Goods efficiently and seamlessly moving across borders in standard-sized, modular containers just like bytes of data... This is the exciting premise of the Physical Internet, which involves application of the digital internet technologies and methodologies to the physical world. While the boundaries between the physical and digital world have been blurring for years, some barriers, such as logistics, remain. For instance, we can select, order, and pay within minutes but it still takes a good amount of time to receive the item. This latency is what the logistics and supply chain industry hopes to minimize with the Physical Internet - the logistics system that is based on global physical, digital, and operational interconnectivity. Physical Internet has the potential to become the next frontier of evolution for the logistics and supply chain industry. Experts expect the Physical Internet to become mainstream by 2030i. Let's deep dive into this new logistics revolution – the Physical Internet – to understand how it is expected to pan out, what technologies will play a key role in its evolution, and how logistics companies can prepare for the upcoming disruption. The driving force behind the revolution Logistics serves as the invisible backbone, powering day-to-day tasks in our increasingly digitized lives. But forward looking organizations worry that the current logistics supply chains are unsustainable from an economic, environmental, and societal perspective. The way we currently transport, store, and handle freight is not only inefficient at every step, but also costly. Digest this - 40% of trucks on the road at any given time are empty, that is, deadheading to pick up their next loads.ii Carriers generally operate with a deadhead rate of 15% of their total miles, which means driving 50-100 empty miles. For every ton mile driven, heavy vehicles emit 161.8 grams of carbon dioxide into the atmosphere. According to combined calculations from several data sources, nearly 67 million metric tons of carbon dioxide are emitted by empty trucks annually.iii To make matters worse – not just trucks, even vast distribution centers are underutilized for days or weeks on end. Clearly, making logistics operations sustainable requires companies to commit to integrating triple bottom line goals that include social goals, environmental goals, and economic goals. Applying the principles of the internet to the physical world can help companies do just that. How? Let's look at an example to understand this. When an image is sent from one location to another over the internet, the data is disassembled into smaller packets that are automatically routed through the most efficient network pathways. When the individual data packets arrive at their destination, they are reassembled to present users with the original image. This process uses standardized protocols that are platform independent. Irrespective of the operating system (Mac, Linux, Microsoft Windows) that users leverage, or the device (smartphone or any other handheld device) they use, they will see the exact same image. Now

let's apply this principle to logistics. Standardized set of boxes (much like the standardized IP protocols) can be bundled together on a single shipment (ensuring greater space utilization) and the most efficient available mode of transport (rail/air/water) can be automatically set. Another attribute added to this is service level committed and charged suitably. If during the travel time, this shipment encounters an issue, the next available node can fill in and take over the process. The result: superior efficiencies, asset utilization, and reduced shipment time (through route and lag optimization). It's easy to see that Physical Internet holds immense promise, but what are the key technologies that will drive it? Blockchain and IoT: The building blocks of Physical Internet Blockchain technology holds immense potential for the logistics industry. In 2019, over 20% of logistics providers tested out the technology while an equal percentage have already implemented it.iv The potential of blockchain combined with the power of IoT will be the game changer – it will turn the entire supply chain into a global connected digital enterprise. Blockchain enables distributed ledgers that records all transaction details like proof of ownership, exchange of assets, and enables secure transfer. This will lead to enhanced efficiencies and value for all parties involved with reduced duplication of data, accelerated transaction time, and zero data errors. On the other hand, IoT sensors embedded in trucks, cargo packages, etc. will enable end-to-end visibility for all parties involved and facilitate real time route optimization, and communication between various disparate parts of the supply chain. In essence, the Physical Internet leverages the powerful combination of blockchain and IoT technologies to enable: Better oversight: Blockchain helps track data transactions taking place between multiple networks owned and administered by various organizations as physical goods pass between points in the supply chain. For all parties connected to the IoT network, blockchain records can reliably track any data leaks/theft, breakages in the network and so on, and help initiate remedial action. Safer contract execution through smart contracts: Consider a Physical Internet powered supply chain wherein payments have to be made by one system only when all the conditions are met by other systems. In such a case, blockchain-enabled smart contracts can prove highly useful. Greater security: Blockchains' robust encryption standards provide an additional layer of security to IoT data, making it difficult for any threat player to bypass. How logistics players can prepare for the disruption While the structure of the logistics marketplace in five or ten years from now is still open to debate, companies are realizing that increased collaboration is the way forward. Preparing for the Physical Internet revolution that is expected to become mainstream in just a decade from now requires collaboration on three key aspects: Though top logistics companies have been partnering with national postal companies and small local players for some years now, succeeding in the Physical Internet era will require them to do so far more extensively. This would mean doing away with standalone distribution centers as well as their owned fleet and resources. Everything will need to be shared and operated collaboratively – in a standardized manner. How then will companies compete? The nature of market dynamics, especially the level of collaboration versus competition, will vary between the scenarios. For instance, when it comes to competing at scale, an established network may become a hindrance rather than an advantage, while locally a larger footprint may translate into better market dominance. The future is here

The race to dominate the Physical Internet space has already begun with Amazon competing with logistics biggies such as UPS and FedEx.v The logistics giants are also prepping to thrive in the new Physical Internet era. DHL Express, for instance, has already started containerized last mile delivery to enable cost-efficient transfer of goods between terminals, motor vehicles and specialized last mile delivery vehicles.vi The time to reimagine logistics is here. The Physical Internet with its ability to move boxes like bytes will usher in a new world of global connected logistics – one that will not only be highly efficient and quick but also transparent and secure. Definitely a clear win for both, companies as well as consumers!

References
i PTV Group, Physical Internet: How Far Have We Come?, http://compass.ptvgroup.com/2017/08/physical-internet-how-far-have-we-come/?lang=en ii Truckinginfo, Application Promises Reduction in Deadhead Miles, https://www.truckinginfo.com/318464/application-promises-reduction-in-deadhead-miles iii Medium, Potential Carbon Savings of Trucking Deadhead Miles, https://medium.com/@mbarlin_42335/potential-carbon-savings-of-trucking-deadhead-miles-eb09e230123b iv Statista, How is your organization spending on blockchain?, https://www.statista.com/statistics/827408/spending-blockchain-supply-chain/ v Forbes, The Battle for the Physical Internet, https://www.forbes.com/sites/enriquedans/2019/05/17/the-battle-for-the-physical-internet/#651e862b3baa vi Velove, DHL Express taking the next step in city logistics containerization, https://www.velove.se/news/dhl-express-taking-the-next-step-in-city-logistics-containerisation

Ashish Khare General Manager, Cloud & Infrastructure Services, Wipro Ltd. Ashish has 25 years of experience and currently, heads the Smart City and IoT initiative at Wipro. He plays a key role in consulting, covering integration, management and business operations in IoT and Smart City. His current focus is on new technologies and solutions around IT-OT convergence. You can reach Ashish at ashish.khare@wipro.com
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Chaos Engineering: Establishing resilience by embracing chaos

----- Arcticle source ----- https://www.wipro.com/infrastructure/chaos-engineering-establishing-resilience-by-embracing-chaos/ ----- About the Author Contact Wipro Please fill the required details to access the content Chaos Engineering: Establishing resilience by embracing chaos January | 2020 Chaos Engineering as a discipline experiments with the system in production to build confidence in its capability to respond and sustain in turbulent conditions. It helps to identify faults and gaps in the systems. One of the basic principles of chaos engineering is to introduce hypothesis and experiments. The nature and scale of the hypothesis are small while closer to the live systems in terms of functionalities. The primary objective of chaos engineering is to generate new unknown information about a system and its behavior pattern as a whole while reacting to a catastrophe. Why chaos engineering is important Ecosystems are becoming more complex and complicated in the digital age. The service outage in current scenarios is

costly, and the impact is multi-fold. The traditional ways and means of testing are not enough to guarantee service availability with next-gen systems. Hence, there is a need for an innovative approach to verify and validate availability in an automated manner. Chaos engineering addresses these requirements. With the approach of identifying the individual component level failures along with ecosystem-level failures, chaos engineering helps to minimize the impact of outages. Chaos engineering is becoming a norm for disaster recovery testing. The use cases and benefits It is recommended to run chaos engineering continuously in the environment. Some of the key benefits of chaos engineering are: Key resiliency areas addressed by chaos engineering Chaos engineering addresses resiliency of key components in any organization (See Figure 1). Figure 1: Key resiliency areas addressed by chaos engineering How to adopt chaos engineering Chaos engineering should be adopted and implemented in a systematic manner. Key principles to enable adoption of chaos engineering are: How to execute chaos engineering in an automated way The overall process of implementation of chaos engineering in an automated way is described in Figure 2 Figure 2: Chaos engineering implementation process Application of chaos engineering Chaos engineering is not limited to IT/software development. It is widely used across industries cutting across locations such as tech-savvy companies, financial companies, educational institutions, media and communication, service providers etc. Key categories of chaos engineering adoption: Conclusion Chaos engineering is enabling industries to increase service availability and resiliency. This proven approach can be applied to any segment as part of disaster management. Currently, Wipro is using chaos engineering as part of its IPs under the SDx umbrella. One of the use cases is AppAnywhere in which chaos engineering is used to provide resiliency and self-healing capabilities. To know more about AppAnywhere or Wipro's chaos engineering capabilities, connect with us at sdx-cis@wipro.com Rambabu Kata Senior Consultant, Wipro Ram is an IT professional with 25 years of industry experience in IT, delivery, architecture, practice and pre-sales. He has a Bachelor's degree in Electronics and Communication Engineering, and Masters in Marketing Management. He can be reached at Rambabu.Kata@wipro.com.
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Tackling the problem of complex request

fulfillment process in ServiceNow

----- Arcticle source ----- https://www.wipro.com/infrastructure/tackling-the-problem-of-complex-request-fulfillment-process-in-servicenow/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Tackling the problem of complex request fulfillment process in ServiceNow March | 2020 Modern businesses of all sizes, looking to improve productivity, agility and responsiveness, need the support of robust IT service management (ITSM). ITSM is the practice of ensuring that

IT service requests, incidents, issues, changes, assets and other aspects of IT services are managed in a streamlined manner. The ITSM function often receives a wide variety of user requests, given the increasingly important role of enterprise IT in driving competitive differentiation. Efficiently managing the volumes of service requests requires IT teams to follow Information Technology Infrastructure Library (ITIL), an integrated, process-based, best practice framework for managing IT services, which specifies that along with the service desk, service requests must be managed by the request fulfilment process. ServiceNow, a cloud-based ITSM tool, leverages the ITIL v3.0 framework. It is the most preferred tool among enterprises for handling the service management process. While ServiceNow empowers IT users to streamline their workflows, there are certain challenges in leveraging it. In this paper, we propose a method to simplify incident and service request process flow to address ServiceNow related challenges and boost IT as well as user outcomes. Tackling the challenges in ServiceNow request fulfilment process The key to Modern day users demand simplicity and instant gratification while using IT services. The ServiceNow platform is designed to maximize user satisfaction by enabling users to easily contact IT support to report and fix issues. The downside: users must navigate between separate pages and forms to submit incidents and service requests (as illustrated in Figure 1). Figure 1. Incident and Service Request process The manual intervention needed to traverse between different form pages makes the Service Request management process time-consuming and cumbersome for users, thereby defeating the main objective of simplifying request management. Request fulfillment aims to provide employees seamless access to IT services, which enables them to work better. According to Gartner, by 2020, business satisfaction with IT support will decrease by 35% due to an inability of the IT Service Desk to support agile releases in a timely and effective manner . An effective request fulfillment process should help users see available services, understand how to request them, and set expectations for how long requests will take to be addressed - all in a user-friendly and quick manner. The solution: Adopting an 'Intake' approach to ITIL A new Intake approach to ITIL can help reduce the navigation time between multiple forms and provide users a single portal to submit incident and service requests. Here's how it works (Illustrated in Figure 2): The proposed approach promises several advantages over the default approach to request fulfilment that is currently available in ServiceNow. The biggest benefit is the transformation of manual tracking of incidents and requests in the delivery process to automated and streamlined incident and service request management. The other key advantage is reduced navigation between various forms that is currently required to create incident and service requests in ServiceNow. Figure 2. Intake approach to Request Fulfillment Leveraging the proposed approach, a record producer applicable to each user can be created to save time, reduce errors, and boost satisfaction. The intuitive portal enables a single destination for users and teams to submit incident and service requests. The business and IT benefits of the intake approach include: Embrace agility in service request management As customer experience surpasses price and product to become the single most important differentiator for businesses, Gartner predicts that organizations will increasingly redirect their investments towards customer experience innovations . In the corporate IT environment, providing a superior user experience boils down to simplifying

the chaotic and complicated service request process by adopting an intuitive and user-friendly approach. It involves moving request fulfillment to the edge - as close to the users – as possible. The intake approach is a way to gather relevant information and reduce unnecessary steps by customizing request intake forms. Its varied benefits ranging from simplified request submission process and faster time to resolution, to reduced cost of request fulfillment, lead to superior user experience and in turn drive competitive advantage. References 1. ServiceDesk Institute, The Future of Support is Now, https://www.servicedeskinstitute.com/2018/02/07/future-support-now/ 2. Customer Thermometer, Customer Service Stats for 2019, https://www.customerthermometer.com/customer-service/customer-service-and-satisfaction-statistics-for-2019/ Rahul Srinivasan ServiceNow Architect - Cloud Infrastructure Services, Wipro Rahul with 18 years of industry experience specializes in infrastructure and financial domains. He works closely with client and technology partners on leading cloud consulting projects and automation initiatives. Rahul has keen interest in transforming traditional ways of delivering managed services and strongly believes that an intent-based paradigm will deliver long-term benefits to clients and service providers alike. Rahul can be reached at rahul.srinivasan1@wipro.com Malathi Hariharan Technology Assurance Lead – Process & Product Quality, Wipro Malathi has over 19 years of industry experience in areas of Project Management, Technical documentation, Quality Assurance, Quality Management and Continuous Improvement. She has worked across Embedded platform, VLSI, Telecom, Consumer, Communication & Medias, and Cloud & Infrastructure domains. Malathi is experienced in handling development, testing, maintenance, and agile projects. She can be reached at Malathi.hariharan@wipro.co Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Find, Lock and Capture

Wipro's Value Creation Framework for Service Delivery

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emerged as a sole lever to ascertain customer delight. Service providers have always struggled to bring out the right potion of value-add which positions a trusted relationship with customers and addresses individual customer perceptions. FLoC (Find Lock and Capture) addresses modern service provider's dilemma of Value-Add and Customer Engagement. It serves as a structured consistent framework that aligns a sequential process to identify and create, measure and track, and impart visibility for unmatched customer experience. The paper discusses: Read the full paper =======================

The 7-step approach to sustainable and mature 'observability'

The 7-step approach to sustainable and mature 'observability' A guide for I&O leaders March | 2020 The 7-step approach to sustainable and mature 'observability'There is a growing interest in organizations to relate technology events to business outcomes, be it impact correlation or a technology investment's influence on business outcomes. Is our current form of monitoring good enough to address this or is there something beyond we need to look at? The paper decodes this question and provides Infrastructure and Operations (I&O) leaders guidance on the monitoring and observability strategies that would enable them transform their I&O organizations from support functions to strategic business partners. Understanding the current I&O challenges In the last decade, businesses have been rapidly adopting and investing more and more in emerging infrastructure, new technologies and business processes to drive digitization and innovation, reduce their time to market and create new ways of engaging with customers and partners. While the embracement of these new age solutions are happening, it is also irrefutable that legacy environment are counting co-exist. This trend has resulted in organizations having a complex and constantly evolving IT environment. The I&O teams managing these environments are now tasked to maintain a holistic view of the application and infrastructure technology, in a highly synchronized manner, treating the whole system as a single unit rather than as a stack of loosely related individual components. Businesses are also now more focused on outcome based agreements that is driving the I&O leadership to be able to provide an end-to-end service-level agreement (SLAs). At the same time, they have a necessity to drive quality up and cost of operations down. In order to scale up to this demand, the operations teams need a comprehensive 360 degree view of their environment, greater and faster collaboration across silos by sharing real time information about performance and associated risks. They need a better understanding of the dependencies across application code, DevOps-driven tool chains, rapidly changing on-premises infrastructure, complex cloud services, and diverse

mobile, web, and Internet of Things (IoT) end-user experiences and their impact to their core businesses. Traditional workflows, change control programs, monitoring techniques, and root cause analytics are slow and reactive to effectively manage today's rapidly changing environments. Overcoming the challenges with 'observability' I&O organizations have always utilized various monitoring processes to collect system data and report on the state of individual elements. However, monitoring alone is insufficient to address the challenges of complex modern environments. The current environment needs monitoring to be complemented by good 'observability', which is the ability to understand why a system behaves in a certain way. We need solutions that are beyond simple monitoring. Observability solutions will help I&O organizations gain better and deeper insights across the full stack in real time, linking these insights to business outcomes, cost of services, and end-to-end development workflows. The upcoming sections elaborate upon Wipro's approach, solution and guidance to rolling out observability concepts and solutions within an organization. Application of observability Let us examine the following scenario to understand this better. The business operations team of a large retail company suddenly sees a decline in online sales. Concurrently, I&O teams see performance degradations on the application supporting the online portal. The database team has been working on database performance issues for the last 3 hours and have identified some long running queries as the cause. Coincidently, security operations has been on high alert due to an unprecedented stream of attacks on the environment. Is it coincidence that sales is declining at the same time that a security attack is on? Without applying observability, various operations teams, from business to IT to security, would be working in silos and wasting precious time before realizing that the individual issues were interconnected. The monitoring solution worked only because each team realized the stated changes in their respective elements through alerts. But was this sufficient to help the business? The need in such situations is for a solution that can provide a more unified 360 degree relational view of the environment, applying artificial intelligence/machine learning (AI/ML) techniques to filter and correlate data across multiple services. This helps the I&O teams to quickly understand business and end-user impact. Observability platforms allow I&O teams to build and maintain comprehensive views of the full status and performance of entire services, from applications, on-premises infrastructure, cloud services, containers, to Kubernetes, etc. In our scenario, a well designed observability solution would have helped the security team to correlate the impact of the ongoing security incidents with the decline in online sales within minutes. The key capabilities to look for in an observability solution are: Figure 1 details guidance on building a sustainable and mature observability solution. Figure 2: The 7-step approach to a sustainable and mature solution The twin pillars of value realization and sustainability The maturity and success of the observability model is completely reliant on ensuring that the observability process is part of the 'Continuous Improvement Process' of the enterprise. I&O leaders need to align and agree to the maturity model, set up maturity achievement goals to establish a roadmap for increasing levels of maturity and ensure complete buy-in of service partners. The future of observability maturity While the concept of observability is not new, Artificial Intelligence and Machine Learning have given it a new dimension and made observability more

realistic and viable with the promise of good return on investments. Organizations, however, should be cognizant of their own capabilities and limitations and adopt relevant solutions that can be easily implemented while deciding on the application of AI/ML concepts. Since value realization and sustainability are the two foundational pillars ensuring good ROI, I&O leaders should make certain that these are well laid down by observability solution owners or partners implementing it. The future of observability maturity is going to be on the analysis front with 'Prescriptive Analytics' gaining interest and momentum. Application Performance Monitoring products will emerge as the most preferred to enable a fully mature observability solution. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Three Challenges to Cloud 2.0 Adoption,

and How to Overcome Them

----- Arcticle source ----- https://www.wipro.com/infrastructure/three-challenges-to-cloud-2-adoption-and-how-to-overcome-them/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Three Challenges to Cloud 2.0 Adoption, and How to Overcome Them March | 2020 This article was featured in Wipro Digital. Leading enterprises have long found value in the cloud. Worldwide, companies have invested in cloud services at a 10.7% compound annual growth rate since 2014, and IDC predicts nearly $500 billion will be spent on public-cloud services alone in 2023. Yet the nature of these investments has begun to change, presenting new challenges for enterprises that seek to develop cloud-native operations and leverage the "Cloud 2.0" opportunities that lie ahead. Much of the first generation of cloud implementations were "lift and shift" migrations, with companies moving on-premise or mainframe services to the cloud for simple efficiency gains and cost reductions. Those cloud-based values still hold true. Increasingly, however, companies have realized that embracing the cloud at a deeper level, leveraging it to drive their larger digital transformation, can yield far greater benefits. At the same time, not all applications are appropriate, necessary or cost efficient to move to the public cloud. Many companies are realizing that hybrid cloud strategies will be the reality to get the best value from their resources. Cloud strategies require thorough application portfolio assessment, which rationalizes the portfolio and targets resources at the applications that drive business value. This is Cloud 2.0. Data from Forrester shows that 86% of

business and IT leaders plan to continue investing in the cloud to contribute to their digital growth. Such cloud-enabled growth has been a revelation. However, driving and scaling cloud native is complicated and introduces unique business and operational challenges. For digital businesses, these challenges often stem from trying to integrate disparate cloud architectures across heterogenous environments. Porting an application or service from a private cloud to a public cloud, or across managed providers, can introduce errors and management challenges. In addition, different parts of the application landscape may be optimized for a specific vendor, making the prospect of portability difficult or, in some cases, unrealistic. No matter how advanced a service or qualified a team, businesses will struggle to realize value and continuity across the cloud if their solution is locked into a single vendor. Cloud 2.0 also requires companies to change the way they think about organizing their technology organizations. Companies have struggled to navigate balancing their investments in infrastructure and applications. These have historically been separate and siloed exercises, but they're starting to converge, a difficult shift for many enterprises to make. Wipro has anticipated this convergence of infrastructure and applications and has been advising clients on it for some time. This foresight has guided our creation of transformation platforms to help businesses build, run and manage their business with a Cloud 2.0 mindset. VMware has a similar vision, culminating in the launch of its new Tanzu platform that integrates infrastructure and applications under a single, open-source roof. To build a cloud-native business, companies must commit to a comprehensive IT renovation, adopt an Agile/DevOps approach, and simplify key processes through automation and containerization. With the infrastructure in place, companies must create a new cloud layer upon which to run the applications. This layer must integrate across a multi-cloud architecture and enable IT to efficiently meet business demands. Finally, the enterprise should seek to manage its Kubernetes clusters from a single, centrally managed platform to maintain visibility. Leveraging the full power of the cloud, businesses can realize far greater benefits than simple cost reductions and efficiency gains. The cloud can deliver so much more – for business as well as customers – if companies understand the challenges that lie ahead and learn how to successfully transition to cloud-native models. This journey can be accelerated if companies find the right partners. Wipro has helped hundreds of global enterprises navigate their transformation and develop cloud-native offerings. We're also the proud system integrator launch partner for VMware's Tanzu platform, an innovative and integrated solution for companies looking to fully embrace the cloud. Together, Wipro and VMware offer a comprehensive system to help companies design, build and achieve their Cloud 2.0 future. Rahul Shah VP and Global Head of Consultative Sales, Partnerships and Solutions, Wipro Digital Rahul Shah is in the business of building partnerships. His approach starts with theme-led thought processes that provide clients with a starting point and an acceleration goal in their digital transformation journeys. He maintains an "always a student" learning philosophy, always exploring different concepts, business models, technologies and industries, with the goal of weaving them into better transformative propositions for clients. Milind Halapeth VP of Global Infrastructure Services and Global Head of Cloud Practice, Wipro Milind Halapeth has more than 20 years of experience in the IT Industry and has represented Wipro in leading industry conferences and events on data

center, cloud and emerging technologies. As leader of the cloud practice of Wipro he has played a key role in developing next-generation transformative offerings and rapidly growing the cloud practice across global geographies. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Harness the Public Cloud Advantage by Controlling Costs

----- Arcticle source ----- https://www.wipro.com/infrastructure/harness-the-public-cloud-advantage-by-controlling-costs/ ----- About the Author Contact Wipro Please fill the required details to access the content Harness the Public Cloud Advantage by Controlling Costs May | 2020 Cloud computing has enabled a radical shift in the way modern enterprises manage their businesses and data. Offering unmatched computing speed, reliable performance, and enhanced productivity, cloud technology also promises organizations the benefits of reduced CapEx. Firms no longer need to invest in bulky and expensive hardware and software that were required to manage onsite data centers in the past. However, there are hidden cost implications of cloud computing in the form of constantly surging OpEx, and this often results in large, unexpected invoices that leave enterprises grappling to optimize their IT budgets. In our earlier paper on Managing Cloud Costs, we discussed the 3 main problem areas including cloud cost visibility and transparency, cloud cost optimization, and cloud cost management. This paper, in continuance, discusses the economics of traditional IT models vs. cloud computing, public cloud in particular. It explores how organizations can optimize their CapEx and OpEx with public cloud to better allocate budgets and stay on course on their IT spends. The prelude - Economics of traditional IT models Traditionally, enterprises have looked at IT as a necessary investment to ensure smooth functioning of organizational systems. Over the last three decades, IT has evolved to play a pivotal role in prioritizing business decisions and investments with the computerization of various business systems including the systems of record, engagement, and finally, systems of insight. These systems have provided a solid foundation for organizations by ensuring maximization of performance and throughput designed for peak loads. However, with constantly evolving technology, CapEx has continued to rise steadily, accumulating a lot of inefficiencies in IT systems hosted in data centers. All this while, OpEx across organizations was driven down drastically with increased automation of IT systems aided by centralized co-ordination and management of virtual machines. However, this also resulted in increased complexity of systems, further fueling automation and more CapEx

investment. While financial engineering did play a major role in converting some of the CapEx into OpEx through various financial models, customers were still locked into multi-year contracts that required significant initial investments and were expensive. About 2010 – 2015, the advent of cloud technology promised enterprises the advantage of on-demand, large scale data storage infrastructure and computing power that was available with no financial lock-in. The biggest advantage of the cloud is that it offers enterprises economies of scale, as they only need to pay for the services they use. This is perceived to lower both CapEx and OpEx and enable better infrastructure management. More organizations than ever before are migrating to the cloud. Consider this: According to IDC, worldwide public cloud services spending will more than double by 2023[1].   Inherent challenges of the cloud model Despite the promise of financial freedom and ability to select IaaS (micro, nano, large, extra-large instances), PaaS, containers or cloud native services (for eg., serverless) based on the enterprise's needs, cloud technology has some inherent limitations in the areas of security, compliance adherence and the organization's ability to control their IT environment. Ironically, all of these issues are silently contributing to yet another challenge –cost management. Let us explore these limitations in more detail: Growth of hyperscale computing Innovation driven by hyperscalers provided cost benefits, but also increased complexity of operations. The benefits of cloud outweighed concerns around outages and increased surface for attacks. Organizations have and continue to invest heavily in strategic and consulting engagements that provide better maturity models, encouraging them to adopt cloud. Increasingly, more and more enterprises are technologically locked into the engagement, with the slow realization that there are unexpected and hidden costs riding on these cloud investments. Lack of control Enterprises end up storing their data with another party, outside of their physical and organizational control, trusting that their data will be secure and maintained well. Many organizations find this lack of in-house control of the data servers unsettling. This cautious approach to the cloud has resulted in shadow IT steadily gaining prominence, silently fueling unforeseen and unplanned expenditure. The problem of plenty Another important challenge that cloud poses is that of choice. Customers continue to be flummoxed by the different cloud options available and the services each entails, including the different sizes, types and reusable components from the providers. The cloud marketplace has evolved exponentially over the last few years - IaaS, PaaS, SaaS, serverless compute functions, cloud native services, readily consumable business services, customizable services/functions. All of these have opened up a plethora of adoption models making the right choice of cloud services a very difficult one for the customer. Containerization Servers, virtual machines and cloud instances have now matured into containers that best utilize underlying resources to run microservices. Running containers on cloud leveraging multi-cloud orchestration delivers cloud agnostic workloads that could scale in an agile manner. Monolithic workloads are being rewritten for cloud – to run on containers and to be able to scale across cloud or move across clouds. However, the complexity of estimating the cost of running these microservices is probably the toughest challenge for technologists. Containers can scale infinitely depending on the load – running only parts of the code that is relevant as a microservice and scaling back when done. However, what organizations do not realize, and service

provides often fail to stress upon is this - this architecture has multiple moving parts that doesn't seem to be contained in a predictable cost model. Spiraling OpEx One of the biggest advantages of the cloud is the shift from CapEx to a pay-as-you-go model. Much like utilities billing, customers pay only for what they use, when they use it. However, while this proposition is an easy call to make for start-ups, it merits considerable thought and careful planning for large enterprises in the long run. Often, the overall price tag of cloud services ends up being much higher than anticipated for large scale enterprises. 50% of enterprises spend more than $1.2 million on cloud services annually [2]. Most large organizations, because of the amount of data and processes they run, end up overprovisioning for their services, and maintain a hybrid cloud model, incurring large OpEx costs that were unplanned for in their budgets. If they are not careful, these costs can spin out of control, doing away with the biggest advantage of the cloud. Balancing costs with technology innovation Despite the challenges, cloud is driving innovation heavily across industries. The public cloud service market is expected to reach $623.3 billion by 2023 worldwide.[3] Boundaries are blurring and technology is enabling new avenues of growth for traditional businesses. Data is now seamlessly leveraged across domains, and services are hyper-customized to users resulting in empowered end users. The growing importance of digitization is now reflected in new organizational roles such as 'Chief Digital Officer'. The ability to deliver custom content, lean and agile processes enabled by DevOps, microservices on containers, PaaS, and other cloud native services will determine next gen digital business. Efficient cloud systems of the future will be driven by the ability to predict the need, availability of efficient levers to scale quickly, and agility to deliver appropriately. However, as IT management models evolve, cost imperatives are being significantly impacted. Organizations, particularly the larger ones, must ensure that they continuously monitor and improve their OpEx even as upfront CapEx seems to be under control. As mentioned in How to Manage Cloud Costs, organizations must have a thorough understanding of their CSP's billing and invoice structure. This is particularly crucial for organizations operating on hybrid platforms, as hidden and unforeseen costs can significantly impact overall budgeting. Efficiency is guaranteed when performance and throughput are maximized while costs are kept under control. Enterprises must make a conscious effort to correlate business impact with ongoing spends to measure efficiency and take corrective action where required. Best practices to continuously monitor OpEx costs on cloud include: Businesses must make use of available information that pinpoints the inefficiencies in the systems and continuously work to improve their OpEx margins. IT must be chartered with the task of maximizing output and reducing inefficiencies in the system even as innovation continues to multiply the speed at which business happens. Seamless migration to cloud-native state Cloud service providers and hyperscalers must enable organizations to better estimate their consumption with a proactive quota and budget management system. Wipro's holistic extensible platform 'BoundaryLess Enterprise (BLE)' enables enterprises to rapidly adapt to the cloud-native digital world by seamlessly integrating and operating multi-cloud services. BLE provides organizations with a ready-to-use, plug and play platform that delivers cloud services for multiple stakeholders customized to their needs. The solution manages hybrid cloud-native applications lifecycle on CI-CD through DevOps

extending to edge services. Most interestingly, BLE offers automation of workflows to rapidly provision, control, secure and terminate cloud services. It ties in the subscription to the user and the service – so that enterprises can meter their cloud consumption needs and stay on top of their costs. The optimization module in BLE helps organizations estimate their bill of IT, monitor real time consumption and correlate billing data. It further provides organizations with recommendations on optimization, enabling them to operate on the cloud efficiently by improving performance and reducing costs. Click here to know more about Wipro's BoundaryLess Enterprise offering. For any query reach out to CIS marketing at marketing.cis@wipro.com   References [1] https://www.idc.com/getdoc.jsp?containerId=prUS45340719 [2] https://hostingtribunal.com/blog/cloud-adoption-statistics/#gref [3] https://hostingtribunal.com/blog/cloud-adoption-statistics/#gref   Girish Jagajampi Cloud Practice Lead, Cloud & Infrastructure Services, Wipro Ltd. Girish has more than 20 years of experience in the IT industry across software development, datacenter services, DC consolidation & transformations, virtualization and cloud services. He leads the engineering efforts to build and enhance cloud offerings and is focused on delivering solutions that define next-gen services. Connect with him at girish.jagajampi@wipro.com   Click here to download your copy of State of IT infrastructure report 2020

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The Case for a New Approach to Cloud Operations

----- Arcticle source ----- https://www.wipro.com/infrastructure/the-case-for-a-new-approach-to-cloud-operations/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content The Case for a New Approach to Cloud Operations   June | 2020 Imagine you are the IT manager responsible for managing your customer's on-demand video service. The application has module for purchasing various subscriptions, authentication, content catalogs, user data and the content files. Users may use a multitude of devices to access this content from anywhere in the world once the authentication is established. The application uses the standard three-tier architecture that has been running fine in IaaS mode on cloud. A recent event that led to a sudden spike in demand for VOD services has made the customer rethink the whole application architecture. The application designers propose a true cloud-native architecture with components that utilize Platform-as-a-Service (PaaS) in public cloud. The customer likes the idea since it gives them the opportunity to add rich features to their application, enhance the user experience by providing custom recommendations enabled by analytics, and align their capacity and spend with the demand. The proposed architecture will have services like Containers, API gateway, NoSQL DB's, Cognito, Lambda functions, RDS, Mobile Analytics, SQS, SNS and Elasticache. You still have to manage the

service, however, instead of well-established server-centric parameters, you now have event logs, file data and process information to create a map of your application health. This is now a common problem service providers face when customers opt for application transformation in serverless and microservices architectures. The distributed, message-driven and loosely coupled application architecture of cloud services means the way we look at service management needs to move beyond the server-centric approach. How is cloud monitoring different The cloud-native transformation of an application could enable it to scale from few container or Lambda instances to few thousand and back within a short time, generate data that is a mix of structured and unstructured, and provide customers the power to use true pay-per-use model. The platform services themselves are highly available and data backed up in multiple places by default, so the up/down status monitoring or traditional redundant architecture is not required. For the IT manager, this poses problems of choosing which services and parameters to monitor, which tools to use, how to bring it all together in a unified application view and, measurement and charging for services delivered. Some of the challenges in implementing this approach are: Service operations need to make some fundamental changes in the approach to provide the true and integrated picture of the entire IT estate. This requires rethink of our traditional ideas of application architecture and the functional value of each of its components. Service model for the future The traditional service delivery model needs to change to reflect the new reality of on-demand and fluctuating consumption, spread over multiple independent services. The changes required are not limited to a new set of shiny tools the managers should acquire, rather, cover the entire service management lifecycle. People: The composition and skillset of the operations team needs to reflect the blurring boundaries between application and infrastructure in the Infrastructure-as-a-code (IaaC) world by Tools: The arsenal of tools needs to expand to cover services beyond servers and storage. Some examples are Pricing: Aligning the service delivery price with the service consumption is perhaps the biggest challenge for the service providers. While the underlying management tool cost can be managed since these work on volume of data generated and processed, the resource deployment cannot move linearly up or down with the service consumption. The services landscape in the cloud especially around PaaS, is still evolving. The rapid pace of innovation and launch of new services makes it even more complicated to track, evaluate and integrate the management methods into the existing operations framework. To stay ahead, we need to bring the learnings of CI/CD model into our operations framework to quickly adapt our service offerings and delivery model in line with the market demand. References https://Stackify.com/monitoring-microservices-a-5-step-guide https://thenewstack.io/the-hows-whys-and-whats-of-monitoring-microservices/   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the

new approach that is geared-up to address the shortcomings.
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Wipro's Office in a Box (OIB) Framework –

3 simple steps to edge IT infrastructure

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-office-in-a-box-oib-framework/ ----- Related Articles Contact Wipro Please fill the required details to access the content Wipros Office in a Box (OIB) Framework July | 2020 Almost all organizations, across industries and sizes, need to have geographically dispersed employee bases. The extent of dispersion varies from multiple locations in a single metro area (for smaller organizations) to hundreds of locations across multiple countries (for larger, multinational organizations). All of these geographically dispersed locations (factories, remote offices, warehouses, service centers, and so on) need to have local backend IT infrastructure to deliver services to the local staff. Examples of these services include local file storage, local applications, network connectivity, and more. One common design question that CIOs and IT teams of these organizations face is how to strike an optimal balance between "Standardization" and "Customization" – which have divergent objectives. On one hand, "Standardization" hopes to achieve (a) ease of management (b) reduction in costs and (c) consistent services for all staff; and on the other hand, "Customization" hopes to achieve (a) local needs catering (b) best-fit solutions (c) specialized services. Wipro's OIB (Office in a box) framework aims to bridge this gap with a structured approach. 1. Services Needed The first step is to list out all services that are required to be delivered at your remote sites. This should be an all-encompassing list covering all possible services (not all services maybe required at all sites). Having this list helps to create a good starting point for identifying the right solutions that can cater to all the requirements. It also helps to arrange these services in a ladder fashion to identify the various technology components needed. An example of this ladder is shown below. As you look at the figure on your left, the questions that you need to ask yourself are which services to include and exclude. For example, if you come from a manufacturing background, a   good question to ask will be "Should we include OT security in this list?" Another example, if you are a user of Raspberry PI or you are thinking about sensors to collect IoT data from windmills, it may be relevant to ask if these services should be included. These decisions are often driven by organization design, separation between IT/OT teams and responsibilities, gaps in current services, and a vision for future services. The output of Step 1 will be an exhaustive list of services required across the various sites. 2. Categorization of Sites The next step is to categorize the sites in a particular fashion. The objective of categorization is to group sites with similar requirements together, which can likely be

supported by a single solution. The rationale used for categorization, as well as the factors considered to arrive at a categorization, may be different for each customer. However, the objective remains the same: each site should not have its own unique "Christmas tree." For example, sites could be categorized based on number of staff members at each site, or they could be categorized by the nature of business conducted at each site. They could also be categorized by distinct IT needs at each site. Take a look at the picture below to see how sites are categorized on three dimensions: criticality, size, and type. Looking at the picture above, you might ask yourself, "Why don't I categorize sites as factories, warehouses, and so on?" Or you may wonder, "Why don't I have four types of sites by criticality and five types of sites by size?" The output of Step 2 will be a defined list of site types or site categorizes where all sites within a single type or category have homogenous IT requirements (the services identified in Step 1). 3. Design Principles At this stage, we have a matrix consisting of lists of services and services needed per site category (as shown below). The final step is to lay out the design principles, which will be used as a basis for creating the solutions that will be deployed at each site. The intent is to develop design principles at a tactical and operational level, which will help make critical decisions around costs, choice of technology/OEM, and so on. Take a look at the design principles listed below. These could be generic or specific to your situation. For example – if you have already invested in a particular brand of hyper-converged infrastructure it maybe worthwhile to take a decision to either continue or change. Or it maybe on your mind to reduce remote site infra by moving to cloud Based on the design principles, the final decision on the OEM and technology solutions will be made. In parallel the service delivery mechanism will be defined to be used to deliver services to customers/staff/business. From a pricing standpoint it will be an objective to convert the services into a simple intuitive catalog. The final output of the entire framework will be a catalog as depicted below comprised of a service catalog and a price catalog. And so on. To conclude, Wipro's OIB framework takes a simple yet customizable approach to converting IT requirements into a simple, reusable catalog.   About the author Nitin Jog Senior Architect, CIS, Wipro   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.

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IOT and Ambient Computing

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Wipro Please fill the required details to access the content IOT AND AMBIENT COMPUTING THE ERA OF THE SMART AMBIENT WORKPLACE BEGINS July | 2020 Ambient computing – the combination of end point hardware, software, user experience and machines/human machine interaction and learning is the fabric of everyday life. It is about using a computer or far field communication–enabled device or internet-enabled device, without necessarily consciously using it. For instance, we no longer have to use a desktop to be operating a computer. That is the effect of ambient computing – the accumulation of collective devices we use in our homes and workplaces become extensions of each other; they're invisible to us, work in sync with us, and offer us an overall seamless experience. The Internet of Things (IoT) and ambient computing are directly related. IoT describes the smart home and how the devices connect. Ambient computing is what happens when these devices are connected, and more so, what they learn from each other. Think of smart dwellings; you enter the building with your ID card, and it automatically remembers your preferred lighting and ambient temperature, knows how you like your coffee, can recall when your first meeting of the day is due to start, and more. From smart phones and TVs, watches, and voice-activated digital assistants to intelligent coffee machines, smart lighting, and daylight-imitating alarm clocks, the ambient computing experience is all around us. But what are the capabilities of ambient computing and IoT in our workplaces? Ambient computing can help a business function to its full potential, eliminate unnecessary steps in processes, and collect, analyze, and actively learn from data. Ambient computing in the workplace turns the traditional computer-employee relationship on its head. Instead of the employee utilizing the computer to gather information, the computer (or rather, collection of internet-enabled devices) gathers the information for us when we indicate we need it or perhaps even before. Ambient computing already provides some of the intelligent services that are becoming commonplace in the modern work environment, such as voice-driven speakers, smart thermostats, virtual agents, and chatbots. In striking contrast to traditional computing platforms, ambient computing moves the focus away from the physical device. As we move toward fully-integrated smart workplaces, ambient computing will become the norm and provide multiple benefits including cost savings for business leaders and decision makers, and increased collaboration among employees. Among several characteristics of ambient computing, here are five to note. Invisible: Foremost, ambient computing is behind the scenes. For instance, in a business conference room environment, an AI system can gather information and take notes on a conversation without employees realizing. At the same time, the camera and speaker system can adjust to improve image quality, focus on the person talking in the discussion, and block unnecessary noise. Data-centric: Data centers are at the heart of ambient computing. The more data-intelligent systems, the better their ability is to use context to understand certain situations. In remote contact centers, customer data can support virtual assistants as they make suggestions on how to improve a conversation. Embedded: Ambient computing embeds technology into the workplace environment. For instance, in the communication environment, intelligent assistants embedded into collaboration tools can help users find information and set reminders that enhance productivity. Familiar: Ambient computing is simple and easy to adopt. In the communication environment, intelligent tools are

becoming more natural. Now that users can communicate via voice or text, they can choose the experience that works best for them. Inclusive: Ambient computing integrates tools seamlessly. For instance, an AI bot can bring information from CRM systems and help desks into collaboration tools, which is far more useful than nonintegrated systems. A cluster of technologies is enabling the move toward ambient intelligence. Zero UI (user interface) – The replacement of a computer screen and keyboard with machines that respond to voice, touch, movement, and biometrics (for instance, fingerprint and retina recognition). Artificial intelligence – The emergence of computer systems that can perform tasks that a human would generally do, such as reading documents, data analysis, decision-making, and language translation. Machine learning – The ability of computerized devices to build skills and improve performance of various tasks without being explicitly programmed to do so. Natural language processing – Enables computers to listen to people asking questions, understand their words, and reply. Edge computing – Improves responsiveness and turnaround time by moving processing from a "centralized" processing center (most likely in the cloud) to smaller processing centers close to where the information is being created or delivered. Mesh networks – Provide continuous connectivity as computerized device users move from space to space. Mesh networks can encompass seamless movement among a multitude of devices, applications, locations, and individual networks. Ambient computing will continue to leverage machine learning and other forms of artificial intelligence to create a digital workplace environment in which companies will integrate technology seamlessly and invisibly into every business process, thereby maximizing usefulness while minimizing distractions. As technologies in the ambient computing-IoT ecosystems of homes and workspaces become embedded into retail stores, hospitals, and transportation services, IoT sensors will feed people's movements and routines into the cloud. AI systems will absorb this data and refine the directions they give to the smart devices to execute ambient computing scenarios. The result: A future of radically better experiences in which nearly everything is integrated, interconnected, and intelligent – without the mess of applications and actions that are necessary today. Poorna Rajesh D Senior Practice Manager – IoT & Smart Cities, Wipro Limited Poorna has more than 15 years' experience in consulting, pre-sales, technical delivery, business development in IoT, IoT platforms, solution engineering network operations, datacenter infrastructure management, remote infrastructure management solutions, solution design, and solution architecture. Reach him at poorna.rajesh@wipro.com.   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Are Today's Data Centers Less Relevant?

Are Todays Data Centers Less Relevant? July | 2020 Are data centers dying? In my opinion – no, but they are undoubtedly undergoing a transformation. Today's data centers are being repurposed to deliver the right services at the right time, and at the right cost: making an evolution journey from hardware-centric to service-centric. Traditional data centers provided limited and restricted functionality owing to the inefficient processes and layers of complexity associated with deploying and managing multiple layers of the infrastructure. Today, organizations are under immense pressure to keep pace with the demands of rapidly changing business models and innovate at a much faster pace than ever before; the delivery modes of IT infrastructure and services are adapting to meet these demands The growth in data has forced most organizations to revisit their data center strategies by developing new operational capabilities such as software-defined infrastructure, analytics, and the increased adoption of cloud platforms. A greater amount of effort within data center transformation is being directed towards reducing complexity and providing more streamlined operational models for the core and edge of IT infrastructure. With these new edge and modern data centers, organizations aim to accelerate the deployment of resources for better-optimized workloads. The journey to cloud Adoption of cloud - private, public, and hybrid - is rapidly increasing. Analysts predict that even conservative organizations, which formerly subscribed to a "no-cloud" policy, will get there soon. Gartner predicts that by 2022, the market size and growth of the cloud services industry will proceed at a pace nearly three times the growth of overall IT services. Corporations with 'no-cloud' policies will be as rare as those with a 'no-internet' policy. Niche Cloud Service Providers (CSPs) entered the cloud market promoting the efficacy of a "pure cloud" play. On the other hand, key technology veterans enjoyed a huge legacy software installed base and positioned their respective hybrid cloud while trying to strike a balance between cloud and on-premises systems. It has worked well for both of them to be positioned as leaders in this new era of transformation. The transformation challenges IT executives face a complex set of competing priorities to balance "Run to Change", when considering how to transform their data centers. The first of these is to determine how to modernize the legacy footprint and monetize the cost of operations. A key initiative in this transformation journey involves identifying potential workloads that are better serviced on public cloud platforms, and workloads that are good to be kept within the data centers and continue to leverage existing investments on infrastructure. The second set of priorities are to ensure that internal business units have easy access to the IT resources that allow them to transform core services. It should help them enable new digital experience for their end-users, identify how IT can contribute to generate new revenue streams, and help them mark distinction

in the market. This includes bracing new cloud-native applications development, enabling easy or ready to use platform for developers, whether they develop on/off-premise. In addition to this, as new cloud-based applications development mature or demand increases or it becomes more strategic for business, then, that's the time for organizations to decide if it makes more business and commercial sense to bring them back to data centers. To make transformation work successfully at both fronts, organizations are collaborating closely with internal stakeholders to formulate a plan to undergo transformation across the whole organization. This includes reevaluating on / off-premise infrastructure investments, enabling a platform to help the staff to develop new skills, developing a resource pool to support transformation journey working hand in hand with lines of business to ensure business continuity and competitiveness. In most of these scenarios, organizations are looking for experts to guide them to navigate these changes as effectively as possible, because this is indeed a new and bold territory for many of them. Enabling a true hybrid experience In essence, what we are describing here is the adoption of a hybrid-cloud environment, which provides organizations the flexibility to run workloads on/off-premise, platforms that are well-integrated to enable seamless movement of workloads between on /off-premise, a single pane of glass to manage seamless operations, and provide a truly hybrid-experience. Having said that, the true hybrid experience cannot be realized by using conventional platforms alone. A true hybrid experience requires a transformation of technology and operations, i.e. people and processes that deliver value to the business must adapt to the model. Enriching skills, redefining processes, resetting priorities are typically the most difficult steps to data center transformation and modernization. While some choose to take a step ahead and transform themselves, others choose to redirect human capital towards driving new business innovation. As part of this journey, many decide to move conventional applications onto enterprise-class public clouds that can guarantee enterprise SLAs. They shift the human capital investment that was used to manage those applications—the people and skill-sets within IT—toward more innovative projects that directly promote business value. Whether organizations decide to modernize their data centers, adapt managed provider platforms, or both, they need a trusted partner who can help them navigate best-in-class solutions and services in their transformation journey. Many organizations approach this transformation in a phased manner: they begin by modernizing infrastructure, then automate IT services, and incrementally transform people and processes to support the business.Others may want to jump-start the process all at once to transform as quickly as possible. To facilitate the jump-start approach, many vendors have created the best of the breed, ready-to-consume hybrid-cloud solutions. Organizations are also discovering that this combination of tools, built on best-in-class services and proven IT strategies, may best deliver for data center transformation. Next-gen data centers Next-gen data centers constitute evolution of merging IT where resources are abstracted, hardware complexities are zeroed-down, workloads run seamlessly on most appropriate set of resources, and static infrastructure transform into dynamic, workload-aware, pattern-driven methodology that can proactively forecast demand and respond with utmost speed. This journey requires a two-fold change – organizational and cultural. Those who succeed will witness the new way of working, drive innovation,

and make use of rapidly evolving technologies to speed-up their go-to-market strategies. This will be the beginning of the Next-Generation Data Center. Vasudha Mishra Senior Practice Manager – Cloud Infrastructure Services, Data Center and Hybrid Cloud Practice, Wipro Vasudha is an IT Professional with over 15 years of work experience in Information Technology (Service and System Integration), with a blend of IT Infrastructure solutions consulting and pre-sales expertise.   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. ======================

Cloud Cost Optimization is a day-1 exercise

----- Arcticle source ----- https://www.wipro.com/infrastructure/cloud-cost-optimization-is-a-day-1-exercise/ ----- About the Author(s) Related Articles Contact Wipro Please fill the required details to access the content Cloud Cost Optimization is a day-1 exercise August | 2020 Optimization on the cloud can be different than in a traditional data center environment. A key reason can be because site reliability engineers put automated and decision-point processes in place from implementation day-one and continue this onward with existing and new hybrid workloads. At the same time, customers desire a proactive vs. reactive approach. To become a cloud clairvoyant, the optimization process in the cloud environment must factor in a design (or a re-design) of resources, processes and tools. Optimization best practices must be planned while leaders map requirements to solutions, design migration steps, and make target foundations enterprise-ready. Customers and vendors (e.g., Systems Integrators SIs) jointly agree on optimization best practices. It's essential to start with the information you know (for example, contract agreements, business requirements, resource plans) and then determine the resources needed to optimize and integrate the right skills and optimization processes/tools into cloud operations, including CI/CD pipelines. From there, tracking and measuring the results, and actioning on a feedback loop brings agility to the continuous cloud cost optimisation. Here are some questions and/or discussion points that can be used during Agile cloud optimization sessions: Optimization is a continuous process, and you may have many agile sessions with your customers until your process matures and is well established. Manish Garg Vice President & Business Head – Cloud & Infrastructure Services, UKI, Africa and Strategic Accounts Europe. During his 28 years with Wipro, Manish has worked across UK & India playing strategic roles. He has been instrumental in building the Wipro's Cloud & Infrastructure business while serving clients with distinction and living Wipro's culture and values. Manish is deeply

engaged in the marketplace, having worked across industries and has direct experience of helping customers with large IT transformations, small advisory projects and global engagements. Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Wipro wins the 2020 Global Systems Integrator of the Year by Nutanix

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-wins-the-2020-global-systems-integrator-of-the-year-by-nutanix/ ----- Contact Wipro Please fill the required details to access the content Wipro wins the 2020 Global Systems Integrator of the Year by Nutanix September | 2020 Wipro Technologies was awarded the 2020 Global Systems Integrator of the Year award by Nutanix. The award was presented to Wipro during the Partner Xchange Keynote session of the Nutanix .Next Conference. Nutanix awards the Global System Integrator (GSI) of the Year award based on several factors including financial performance of the alliance, executive relationship level, momentum in the global go-to-market between the firms, and the market release of joint industry solutions. Wipro is very excited by the momentum we have seen during the 2020 fiscal year including global market uptake of both the VirtuaDesk™ VDI service powered by Nutanix and the Digital Database Platform Service which we offer based on Nutanix ERA platform. The ecosystem of Wipro's leadership, technical engineering experts and client facing field force have embraced the full stack of Nutanix software and have been important evangelists for us in the joint base of global clients. Over the past 3 years, Wipro and Nutanix have released and continued to enhance the Wipro VirtuaDesk™ solution which is a managed VDI service built on a foundation of Nutanix AHV, Prism Pro and Calm. Wipro's VDI management fabric allows IT leaders to monitor enterprise user experience in real time, automatically and proactively scale resources where they are needed and manage the operations and financial performance of their workplace services through a cadre of reports and dashboards. In 2019, Wipro and Nutanix launched the Digital Database Platform Service (DDPS), a service designed to manage enterprise databases including Oracle, SQL, MongoDB, and Postgres for day to day management, copy data management and intelligent automation of routine DBA tasks. DDPS is built on Nutanix ERA and Calm and has been received positively by analysts as well as the joint client base of Nutanix and Wipro. Wipro is excited to be recognized by Nutanix for this joint work we have undertaken with Nutanix

over the past 5 years. Nutanix has been an incredible partner for us with results that have grown from year to year across our regions and industry verticals. This award is a great barometer and motivator for Wipro and we fully expect exciting growth globally in this relationship.
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Results-Oriented Leadership Practices for Today's New Normal

----- Arcticle source ----- https://www.wipro.com/infrastructure/results-oriented-leadership-practices-for-todays-new-normal/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Results-Oriented Leadership Practices for Today's New Normal September | 2020 Keeping employees focused and engaged is no easy task on a typical day. But doing so during a global pandemic like COVID-19 is an altogether different ball game. Not only were employees forced to adapt to remote work almost overnight – away from the usual channels of collaboration – but the gnawing uncertainty of tomorrow is also making them anxious and prone to depression. So, what does effective leadership look like in the post-COVID world? There's no playbook for effective leadership, but the golden rule of thumb -- aptly illustrated in the widely acclaimed book What Happens Now? -- remains unchanged, even in the face of the current pandemic.[i] It says that all leaders, even highly successful ones, must constantly reinvent and change themselves or risk being outrun by their businesses. In this article, we'll explore the leadership styles best suited for today and list proven best practices regarding what leaders should do to successfully navigate disruptions. COVID-19: A Litmus Test for Leadership A recently launched Leadership Confidence Index revealed that the confidence level among the current leadership of corporations is very low. Only 15% of global business executives have confidence in their current leadership to successfully manage disruption.[ii] This statistic is disturbing -- even for the most seasoned leaders who have weathered many a storm. Today's situation calls for a radical shift in leadership with a greater focus on agility and adaptability and a shift away from top-down or command-and-control styles of leadership. There's an old adage by Theodore M. Hesburgh that says, "The very essence of leadership is that you have to have a vision. You can't blow an uncertain trumpet," which aptly describes the kind of leadership we need today. Even though the COVID crisis has emerged as a test for good and bad leadership, crisis does not build character -- it reveals it. Existing leaders, who are agile, visionary, and courageous enough to take bold steps will emerge as leaders who will make a difference in the post COVID world. With workplaces evolving into a new category of Work from Anywhere (WFA) -- which could be a home, office, café or even the beach -- a new dimension in leadership strategy and approaches has emerged. A leadership style developed by Kenneth Blanchard and Paul Hersey, known as Situational Leadership, is emerging as one of the best ways to lead teams forward today. Situational Leadership refers to leadership that's tailored to a situation and serves as an effective tool helping leaders align their behaviors with the needs of the individual or groups they are responsible for.

With situational leadership, it is up to the leader to change their style, versus followers adapting to the leader's style. The key aspect about Situational Leadership that makes it relevant for today's new normal is flexibility. It adapts its style and behaviors depending on the needs a situation brings to the table. Adapting to the New Normal: What it Takes While there are no silver bullet solutions to lead amid this crisis, our seven proven best practices can help leaders navigate their way to finding the right solutions to their specific problems. #1 Lead and Transform: Leadership is all about constantly striving to transform oneself, others, organizations, and society at large. When faced with crisis, leaders should not be unwilling to step forward, because even a wrong step forward is better than not taking a step at all. #2 Influence: Leaders should aim to create a positive influence that fosters acceptance and, in turn, positive actions. The goal should be to inspire others through one's actions. For instance, if members from the IT team worked through the night to set up a VPN system to enable remote work for hundreds of employees, leaders should highlight their story for others to hear about and feel inspired. #3 Motivate: One key characteristic is how a leader can motivate and lead a team to success. Leaders should empower their teams to make decisions, even if they're wrong. This is important because making a mistake is rarely a matter of 'if' and almost always a matter of 'when' in terms of business. In the face of wrong decisions, good leaders motivate their teams to take the right learnings and apply them in future. #4 Engage: COVID-19 has created more stress than ever to the workplace. Not only are people feeling isolated due to remote work and not being able to venture out, but many are also feeling anxious and depressed. In this new normal, leaders need to create strategies, innovate platforms, and develop environments to create and foster constant engagement with employees. #5 Collaborate: Creating a culture of virtual collaboration among all stakeholders is emerging as a new leadership priority in the post-COVID world. Audio-visual collaboration tools can come in handy for leaders to conduct fun team sessions, virtual games, online meditation, and more. For instance, Goldman Sachs offers cooking classes via Zoom.[iii] Other firms have launched virtual choir workshops, drinks and lunch sessions, story time for children, and even online challenges to boost employee morale.[iv] #6 Flexible: We live in a VUCA world – volatile, uncertain, complex, and ambiguous. Therefore, leadership agility -- the ability to take rapid and effective action amid complexity -- is a key attribute today. In today's fluid and dynamic environment, leaders need to be flexible and willing to amend business strategies and plans quickly when necessary. Those who fail to take note of changing consumer preferences and course-correct early on will end up perishing. For instance, consider Blockbuster's failure and Netflix's subsequent growth to a billion-dollar media giant.[v] Blockbuster's CEO John Antioco, though renowned for his operational acumen, failed to see how media consumption was changing with the emergence of digital technology. #7 Focus on Results: Good leaders must shift their focus activities to outcome-based measurement for success in today. To achieve results, leaders should focus on reskilling and upskilling themselves as well as their teams to prepare for the current and future challenges in the post-COVID world. Finding Opportunity in the Face of Adversity Amid a prolonged crisis like COVID-19, good leadership can be the silver lining the world needs thanks to its potential to turn a crisis into an opportunity for innovation. For instance, if leaders adopt a non-binary,

creative approach to solving the rash of problems that typically emerges in any crisis, so will the others in the organization. This is the time for leaders to seize the moment. Because, once the crisis abates, everyone is likely to remember how leaders acted during the pandemic. Are leaders equipped well to pass their toughest leadership test? Only time will tell. References Saji Peter General Manager & Delivery Head, CIS Saji is an accomplished business leader having 23 plus years of experience in IT Infrastructure Services with expertise in diversified areas covering thought leadership, Customer Management, Delivery Excellence, Strategic Engagements and People Management. He heads the delivery for Digital Workplace and Transformation services in CIS. Part of his portfolio, he leads complex IT Transformation Programs covering advanced End User Technologies and large Network Transformations across various industry sectors globally. He has proven track record in building, developing and leading high performing teams along with sustained leadership development, diversity and local talent in global geos.   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Request a Demo

----- Arcticle source ----- https://www.wipro.com/infrastructure/modern-workspaces-for-finserv-with-vdi/ ----- Optimize Your Remote Working Experience with VDI Services for Finserv Wipro virtuadesk™: Flexible workplaces for Finserv Benefits of VDI overview Wipro's Virtuadesk benefits for Finserv CIOs A Global Swiss Bank Case Study Contact Wipro Please fill the required details to access the content Modern Workspaces for Finserv with VDI The pandemic has changed the fabric of business as we know it. With partial lockdowns, mandatory quarantines, and constantly evolving situations, banks today require more flexibility to meet the challenges and opportunities created by the new way of working. To keep operations and customer engagement throughout the pandemic, many banks adopted stop-gap solutions like Virtual Desktop Infrastructure (VDI) services that enabled them to extend their businesses from in-store to digital to stay productive and continue serving their customers. As the world enters recovery and explores new paths to prosperity, banks looking to improve the resiliency of the workspace, enhance the security posture to mitigate ever increasing security threats and modernize must reassess their workspace strategy. To achieve long-term transformation and realize the benefits of VDI, banks need immediate IT-business alignment and a resilient roadmap focused on security, productivity, agility, and value optimization. A Swiss bank shifts to flexible workplaces with Wipro's virtual desktop infrastructure services at the peak of the pandemic As a leading financial institution in Europe, a

Swiss bank with a global presence needed to pivot quickly during an unprecedented crisis. Like many businesses, the bank was in completely new territory but needed to act quickly and decisively to realize their long-term digital ambitions and effortlessly support their remote workforce. Learn why the financial institution went to Wipro for their VDI services. Our VDI expertise extends beyond COVID-19. We launched Wipro's virtuadesk in 2013 and are pioneering desktop as a service with a bank in the Middle East.   Ready to explore the benefits of VDI?
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Want to see VDI for financial services in action?

----- Arcticle source ----- https://www.wipro.com/infrastructure/secure-scalable-workspaces-for-finserv-with-vdi/ ----- Have a clear objective Simplify and centralize workspace management Adopt VDI with a Gartner Recognized Magic Quadrant Leader Contact Wipro Please fill the required details to access the content Secure, Scalable Workspaces for Finserv with VDI January | 2022 In traditional server setups, an operating system is installed right on top of the hardware of a physical server. With virtualization, an additional layer is created between the hardware and an operating system, enabling the operating system to run inside each virtual machine. VDI hosts desktops that allow users to securely access company data using their personal desktops, laptops, tablets and smartphones as access terminals while the entire applications and data securely reside in the enterprise public or private cloud infrastructure. Changes on a master desktop image can be quickly mirrored to virtual desktops in a desktop pool to create flexible workspaces at scale to make it easy to monitor and operate. Though not impossible, it is difficult to provide secure, scalable, and productive remote workspaces without the right desktop virtualization service. Wipro's virtuadesk™ answers the call. VDI for remote access and mobile workforce Wipro's virtuadesk, a VDI solution for banking, enhances the remote working experience and makes it easier for CIOs, CTOs and CISOs to meet their business objectives across cost optimization, employee engagement, security, compliance and operational excellence. Not all VDI solutions or workspaces are created equal Some solutions fail to focus on subtle elements like personalization, configurability and user experience, which are critical in ensuring productivity. These elements also do not address the inherent network-related challenges, multi-location availability and security while employees work remotely. Few other solutions cannot scale existing enterprise investments in virtualization or offer the commercial flexibility of a pay-as-you-go model. What differentiates Wipro's virtuadesk™ is its hybrid/multi-cloud capabilities that ensure any device, anywhere, anytime availability, plus the full benefits of VDI and desktop as a service: With Wipro's virtuadesk, banks and other financial institutions can enable a simplified, secure, intelligent and high-performing workspace for a remote and mobile workforce today and in the future too. If you want to increase collaboration, move at the speed of business in an uncertain environment and scale as your needs change, explore the benefits of

adopting flexible workplaces. Here are 3 simple steps to leverage the benefits of VDI and desktop as a service. These are the strategies we had used to help a top Swiss bank achieve business continuity and keep their employees engaged and productive. Similar steps will work for you too. What's the purpose of your business? How does that translate to new ways of working? Have a clear vision of what you want to accomplish with desktop virtualization. Asking these questions will help you gain a deeper understanding of what VDI is and how to create flexible workspaces. The right infrastructure can prepare you for whatever lies ahead, enabling your enterprise to pivot quickly and keep things going during trying times. If a user has an issue that they cannot solve with the VDI platform's powerful desktop as a service feature, there is a 'support' tab that is integrated with customer service. Wipro's virtuadesk eliminates device dependence, giving users and administrators greater digital dexterity to pivot forward as things change quickly. The platform's threat intelligence proactively monitors and manages issues and helps create secure flexible workplaces.   Schedule a live demo with us.   =======================

Pragmatic approach for supplier onboarding

----- Arcticle source ----- https://www.wipro.com/infrastructure/pragmatic-approach-for-supplier-onboarding/ ----- About the author(s) Related Articles Contact Wipro Please fill the required details to access the content Pragmatic approach for supplier onboarding Progress, Not Perfection September | 2020 1. INTRODUCTION The increase in complexity of today's IT environments managed by various suppliers requires a structured and robust supporting model that can be provided to customers toward delivering services in an effective and collaborative manner. The SIAM (service integration and management) capability provides valuable insights and acts as a guide in setting up a SIAM organizational structure. Through this whitepaper, we would like to share our practical experiences of the approach taken to onboard suppliers in an SIAM ecosystem. Effective onboarding can improve collaboration between the customer, service integrator, and suppliers. It will also ensure that suppliers feel welcome and prepared, in turn giving them the confidence to deploy the right level of resources to make a positive impact within the SIAM model. 2. KEY STAKEHOLDERS Stakeholders are those who may be impacted by or influence supplier onboarding. Identifying the right stakeholders is an important element in this approach. We suggest identifying stakeholders based on the degree of influence they would have on the entire supplier-onboarding process vis-à-vis the impact it would have. The following outlines the pragmatic approach for onboarding suppliers: 3.1 SEQUENCING THE APPOINTMENT OF SUPPLIERS Suppliers are broadly classified into three types: Prioritizing the onboarding of core SIAM suppliers first, followed by non-core SIAM suppliers, and finally the commodity suppliers is the recommended approach. This sequence is based on the below matrix of 'Business Value Contribution' versus 'Overall Risk on the Systems/Business' and is helpful in minimizing the risks associated with the transition of such

an activity. In addition, here is a short list of recommendations to consider while evaluating the onboarding of suppliers: 3.2. STANDARDIZED ONBOARDING PLAN An onboarding plan aims at making new suppliers familiar with the overall strategy formulated to onboard suppliers and get them acquainted with processes and tools. It also acts as a reference document to track the progress of the supplier's onboarding. The owner of this plan is the service integrator. The details below should be captured in the plan: 3.3. SUPPLIER CONTRACTUAL PROCESSES AND TOOL ALIGNMENT As a prerequisite, the service integrator should work with suppliers to understand their contractual processes and tools agreement with the customer. The objective is to design an integrated process supported by tools that will ensure all suppliers are engaged properly in the service-delivery model and are able to provide value. Before the planned supplier onboarding workshop, a draft version of the process documents and tool integration plan should be ready. 3.4. SUPPLIER ONBOARDING WORKSHOP The objective of the workshop is to introduce new approaches and working models and resolve operational details of the implementation. These workshops require extensive preparation. The retained customer organization, service integrator, and suppliers should all have a clear, mutual understanding of the contractual commitments. The service integrator is responsible for driving the workshop. The below-mentioned actions should be carried out during the workshop: 3.5. FORMAL AGREEMENT BETWEEN SERVICE INTEGRATOR AND SUPPLIERS Post conclusion of the workshop and after agreement of the onboarding plan, a formal agreement between the service integrator and the suppliers should be facilitated by the retained IT. There are various names for such agreements, including Joint Way of Working (J-WOW), Memorandum of Understanding (MOU), Information Sharing Document (ISD), etc. The agreement should cover details on agreed processes, tools, governance, service levels, and reporting. 3.6. ONBOARDING SIGN-OFF The service integrator should be responsible to get a sign-off from the customer and the suppliers on completion of the onboarding exercise. The below verification should be performed at the final stage: References Scopism. (n.d.). www.scopism.com. Rohan Pisal Wipro's Principal Consultant for ITIL & SIAM Practice Rohan Pisal is Wipro's Principal Consultant for ITIL & SIAM Practice. He is an ITIL 4 and SIAM Foundation certified professional. Rohan has 17 years of experience in IT infrastructure support, SAM/ITSM/ITIL/ISO 20k process implementation and sustenance, and process governance. Ronald Coutinho Wipro's Principal Consultant for ITIL & SIAM Practice Ronald Coutinho is Wipro's Principal Consultant for ITIL & SIAM Practice. He is an ITIL 4 Managing Professional, V3 Expert, and SIAM Foundation certified professional. Ronald has 16 years of experience in IT Infrastructure support, Quality Management, ITSM/ITIL/ISO 20K process implementation and Sustenance, and process governance. Rohan Kadam Principal Consultant for the ITIL & SIAM Practice Rohan Kadam is a Principal Consultant for the ITIL & SIAM Practice in addition to being an ITIL 4 Foundation, SIAM Architect, ITIL 2011 Expert, and Six Sigma Green Belt. Rohan has 17 years of experience in IT infrastructure support, Consultancy, Audits, Training and Process improvements in areas related to Service Integration & Management (SIAM), IT Service Management, Information Security, Risk Management, Governance & Business Continuity.   Click here to download your copy of State of IT infrastructure report 2020 Enterprise

business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Why Modernize Legacy Applications with Microsoft Azure?

----- Arcticle source ----- https://www.wipro.com/infrastructure/why-modernize-legacy-applications-with-microsoft-azure/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Why Modernize Legacy Applications with Microsoft Azure? September | 2020 Advancements in technology and digital innovation in the last decade are fundamentally altering business processes, products, services, and relationships. In turn, organizations are restructuring to adapt themselves to this trend. This restructuring, in other words, digital transformation, forms the foundation for organizations looking to deliver value to their customers. It is expected that worldwide spending on digital transformation enabling technology and services will cross USD 2.3 Trillion by 2023[i]. This paper explores the growing role of application modernization in facilitating digital transformation. It further delves into the inherent challenges in application modernization and explores how Microsoft Azure solutions offer cutting-edge features and benefits to help organizations effectively modernize their applications and win the battle for transformation success. Application transformation in the era of the cloud With enterprises embracing digital transformation and adopting Infrastructure as a Service (IaaS) and Software as a Service (SaaS) models to build cloud-native digital capabilities, the application modernization ecosystem is gaining momentum, playing a key role in accelerating the enterprise's digital journey. Many organizations using legacy systems spend huge resources on maintaining existing applications – this stymies innovation while consuming resource bandwidth. Additionally, existing systems are equally hard to replace as they carry vital organizational information and are central to business process operations. Enterprises that realize this are gradually adopting legacy modernization, investing in innovative approaches to upgrade their applications, and reducing maintenance costs. Application modernization is also helping organizations develop agility, improve operational efficiency, align to IT investments, and stay on top of their business imperatives by delivering a superlative customer experience. The global application modernization market is expected to grow to USD 16.67 Billion by 2022[ii]. The case for application modernization and inherent challenges Why modernize legacy applications? Most legacy applications are monolithic, making them difficult to update and

expensive to scale. Modernization supports a microservices architecture where the components are smaller, loosely coupled, and can be deployed and scaled independently of each other. This gives businesses the freedom and flexibility to customize the application modernization processes to meet their individual business requirements and challenges. Application modernization involves redefining, upgrading, and aligning existing applications to meet evolving business needs and accommodate future requirements. It leverages emerging technologies including Machine Learning (ML) and Artificial Intelligence (AI), Cloud, DevOps, Microservices, Containers, IoT, and Serverless Computing amongst others to develop an agile portfolio of solutions tailored to meet new age business requirements. However, selecting the right technology platform that is aligned to their specific business requirements is critical in ensuring successful application modernization. This requires a detailed understanding of technology options available in the market and complete alignment with business objectives. For instance, is the modernization project a business centric one or a technology-led requirement? Application modernization is a complex, multi-layered process with many related factors. Some of the challenges in application modernization include: Given the above challenges, investing in the right tools and platforms is key to successfully transition from legacy applications to the digital world. There are many tools and platform options available including microservices, containers, agile dev processes and the likes. Future forward with Microsoft Azure – 5 reasons to modernize now One of the more popular solutions is Microsoft Azure, fast becoming the leader in the cloud infrastructure race with cutting-edge features and developer-friendly offerings. Q2 2020 earnings reveal that Azure has grown 47% in revenue over the previous quarter, and Microsoft's Intelligent Cloud Business grew 17% to USD 13.4 billion.[iii] Whether your data is on-premises or on the cloud, tools and platforms from Microsoft, specifically the Microsoft Azure Cloud offering promises solutions for almost every possible business modernization scenario. Its microservices offering enables organizations to build, deploy, and operate applications independently at scale, and at speed. With 30-40% of all bespoke applications running on .NET, it is easy to see why Microsoft Azure is gaining in popularity. Microsoft Azure is enterprise ready, with the ability to run all existing ASP.NET apps, allowing organizations to leverage existing knowledge and technology. It is a fully managed services offering with built-in autoscaling, CI/CD, load balancing and more. It delivers strong platform benefits by providing a stable yet flexible foundation for existing and new app development. Its full-stack cloud offering entails frontend, backend, data, intelligence, and DevOps solutions. The solution is also highly secure, providing built-in security services and unique intelligence to protect workloads across infrastructure and applications. It offers a plethora of applications and tools to choose from for advanced development, monitoring, debugging and telemetry. We list a few apps from the Azure family: Azure Web App is a fully managed Platform as a Service (PaaS) that provides various tools and services to create reliable, secure, and scalable mission-critical web apps, mobile apps, API apps, and logic apps – all in a single instance. It provides a multi-lingual and versatile framework, supports visual studio integration, and secure integration with other SaaS apps. Azure Mobile App connects with customers wherever they are with Mobile Backend as a Service (MBaaS), delivering tailored experiences based on

their interests and behavior. Azure Logic App helps schedule, automate, and orchestrate tasks, business processes and workflows required to integrate apps, data, systems, and services across organizations. Azure Function allows you to run small pieces of code or "functions" without the worry of application infrastructure, enabling the cloud infrastructure to provide all the up-to-date servers you need to keep your application running at scale. WebJobs is also a feature of Azure App Service that enables you to run a program or script in the same instance as a web app, API app, or mobile app, with no additional cost. Here are five ways in which application modernization using Microsoft Azure delivers a competitive edge: Apart from the above, Azure offers enhanced security by building in better security protocols against phishing and threat attacks. Azure also offers greater compliance by constantly introducing new compliance updates and guidelines. Toward resilience with Microsoft Azure Microsoft Azure can deliver immense value to an enterprise's digital transformation strategy. However, it is important for organizations to partner with Application Transformation Service Providers who have the requisite knowhow and skills, can align to the business vision, and be futuristic in their approach. A scalable partnership will ideally involve application modernization, Azure Microservices, APIs, Azure Container Services, Azure Automation and DevOps in a scalable, robust, and iterative manner. Wipro's cloud Services works at the intersection of cloud, mobility and analytics to create simple, effective and future-ready digital solutions, firmly planting your business into the future. Reach out to us at marketing.cis@wipro.com to understand how you can leverage Wipro's Application Modernization Services to future-ready your business, today.   [i] Statista.com,Accessed August 2020,https://www.statista.com/statistics/870924/worldwide-digital-transformation-market-size/ [ii] MarketsandMarkets,Accessed August 2020, https://www.marketsandmarkets.com/PressReleases/application-modernization-services.asp [iii] Azure Growth and Market Share, Accessed August 2020, https://www.parkmycloud.com/blog/aws-vs-azure-vs-google-cloud-market-share/ Rajiv Kumar Head – GM & Presales Head - Cloud, Cloud & Infrastructure Services, Wipro Rajiv has about 21 years of experience in the IT Industry. He has played a key role in developing next-generation transformative offerings like Azure Stack and rapidly growing the cloud practice across geographies. He is a member of the Association of Enterprise Architects and has many leading certifications like TOGAF, Azure MCSD and AWS Solution Architect, among others. You can reach him at rajiv.kumar@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Why IT Operations Need Artificial Intelligence?

Related Articles Contact Wipro Please fill the required details to access the content Why IT Operations Need Artificial Intelligence? Performance and Cost Optimization with AIOps October | 2020 The key driver for continuous technological advancements has always been the intent to increase human efficiencies and enhance quality of life. This ultimately results in cost optimization, rapid production, and enhanced quality. Information Technology (IT) is no different. It is the core enabler for every business, driving overall technological advancement for modernization and cost optimization. Wipro has been enabling the transformation of physical data center based infrastructure to cloud-based SaaS and containerization for multiple customers. Our experts leverage Docker & Kubernetes for a channelized DevOps pipeline to transform everything in IT as an application or a software service – be it infrastructure, network or an end application. AIOps plays a crucial role in implementing DevOps pipeline on containers (See Figure 1). This helps allocate the required capacity to the right resources at the right time in an agile manner. At Wipro, we leverage AIOps to understand available capacity and determine where and when it is required. Figure 1: Moving to cloud based SaaS and containerization   AIOps: Enabling true capacity optimization on cloud and containers Digital Cockpit, designed by Wipro's Business Service Management (BSM) team leveraging machine learning (ML) and application of data sciences, helps us develop solutions for true capacity optimization on cloud and containers. We treat monitoring as the insight intelligence providing the trigger points for: With our business-focused solution, we take a proactive approach to performance analysis based on application environment data and AIOps platform connected performance insights. This helps treat each IT component as an application and use everything as a software service. Table 1: Applying Wipro's AIOps solutions to real world problems   Building a new paradigm for next gen DevOps At Wipro, we provide visibility and clarity to the most complex multi-cloud environments by bringing together data from disparate sources so that IT teams can analyze and understand data in context. This also stops applications from failing or running slowly by isolating the probable cause, while linking patterns or anomalies to events. Our AIOps story in DevOps is aligned to: To provide an application like experience as an AIOps service, Wipro makes the DevOps journey free of resourcing efforts. This helps DevOps focus on real development operations. The key to a flawless DevOps pipeline is knowing what resources are required when, and from where they can be allocated. While containerization is the natural answer for this, it can work in perfect sync only when the system is intelligent enough to continuously run environmental scans to report on availability and optimize capacity. Table 2: Adopting futuristic DevOps with AIOps   Becoming operational ready with AIOps Figure 2: DevOps with AIOps   AIOps is becoming an inevitable component in EaaS-driven DevOps due to the concept of continuously

training machines from machines within and applying the ML techniques on ever-evolving data from multiple operations channels. As agility is dependent on mutating demand, it makes business sense to move from current DevOps to futuristic DevOps with AIOps to drive insights for optimization. Ankur Jalpota Global Practice & Business Head for BSM & AIOps, Wipro Ankur works with technology partners in advancing and modernizing the tooling space and aligning the overall offering with the ongoing evolution journey. He is an evangelist for humanizing technology that focuses on end customer usability and ground level business impact. Ankur has played key roles in developing next-generation transformative offerings and executing growth strategies at Wipro in AI & Cloud. You can reach Ankur at ankur.jalpota@wipro.com   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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The Future of IT Field Services

----- Arcticle source ----- https://www.wipro.com/infrastructure/the-future-of-it-field-services/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content The Future of IT Field Services Digital Delivery Model for Cost Optimization and Great User Experience October | 2020 Workplace services, today, focus on access from anywhere, end user experience, automation, security and cost optimization. This is supported with different technologies like modern device management, evergreen IT etc. However, one of the areas that is still unexplored is end user field services, which is still traditional, and has high turnaround time as well as cost. The crucial questions The answers to these questions lead to the evolution of new age end user field services, which focuses on technology-driven cost-optimized field services. Better user experience In the digital world, user experience is core. Organizations want to provide to the end users a better experience as they work from anywhere, anytime. The key to better user experience is to proactively identify the issues and solve it affects the end user. User experience analytics tool like Wipro UxM combined with proactive problem management helps in providing a better user experience. UxM tool provides the analytical data, which includes historical as well as real time analytics. The power of UxM is optimal when it blends with ITIL best practices. Wipro's UxM framework is one of the UxM tools that blends with ITIL best practices to enable proactive identification and resolution of flaws in end user environment. Automation Automation is another key component that enables a better user experience as well as reduction in mean time to resolve. The experience will be excellent if the UxM identifies the issue in the environment and resolves it automatically. Most automation tools focus on automatic resolution of software or

configuration related issues. Hardware related automation is minimal and is one of the unexplored areas. The users prefer to sort issues on their own and only reach out to the IT department when they are not able to solve the problem. The IT departments or IT service providers need to enable solution for the IT end users irrespective of whether it is a software problem or a hardware problem. There are solutions that can automate hardware related issues as simple as getting a soft drink in a vending machine or doing a transaction in ATM machine. Wipro's Digilocker solution is one among the same, wherein a user can drop his machine and take a new machine and start working. As todays cloud option enable the user data in cloud and profile settings can be pushed automatically, the user can start using the device in no time. Traditionally, getting an accessory like mouse, headphone etc. involved a cumbersome process of raising the request, getting it approved, IT department delivering the device etc. This can be automated by the combination of the workflows in the ITSM tool and vending machine. Access to the Digilocker and vending machine can be enabled through employee access card, which makes it simple for the user to get the device. Hardware remote diagnosis Application that runs over the operating system. Any other issues, like BIOS level issues, cannot be diagnosed with remote support tools. So, remote diagnosis of hardware was an unexplored area for ages. A few solutions like Intel VPro technology helps in remote diagnosis using the chipset technology. These tools along with their hardware monitoring solution help in remotely identifying the hardware related issues irrespective of anywhere, anytime working. Effective resource utilization The number of end user field services IT staff deployed is usually very high in the traditional model, which increases the cost of maintaining end user devices. Lack of automation and absence of remote diagnostics for hardware were the major reasons for the same. IT staff had to be onsite to diagnose hardware-related issues. The IT staff member then has to log a call with the warranty vendor to replace the concerned part and wait for the warranty OEM vendor to dispatch the part and get it replaced. This used to take a long cycle time. With the arrival of automation and remote diagnosis tools, it is a matter of leveraging the OEM support for warranty replacement, which reduces the overall mean time to resolve and ensures a better user experience. Near zero physical field support New age field services shifts from people-intensive delivery model to technology-enabled delivery model that harness the power of automation, remote support tools, OEM warranty support and user experience analytics for a near zero physical field support. Interested in knowing more about Wipro Digital Workspace solutions? Reach out to us at dws.cis@wipro.com to learn how Wipro can help you cut IT services spend with a digital transformation strategy. Safeer Ahamed Director – Digital Workspace Services Delivery, Wipro With over 23 years of experience, Safeer's current focus is on transforming the delivery model for digital workspace services to ensure great user experience. Safeer can be reached at safeer.ahamed@wipro.com   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the

new approach that is geared-up to address the shortcomings.
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Distributed Cloud - Connecting Edge and Core

Distributed Cloud - Connecting Edge and Core November | 2020 Introduction With the advancement of technology transformation, cloudification has become democratized. Cloud and Cloud Computing have become essential commodities for everyone everywhere today. Currently, cloud could be on-prem or public, and the next wave in this transformation is Edge Cloud, which seems to be gathering momentum. In the near future, both edge cloud and central cloud will definitely share equal amounts of the pie. Is this enough though? Have we reached the end state for multi-cloud or hybrid cloud with simply transitioning to central cloud and edge cloud? The answer is an emphatic NO. So what represents the next wave in this multi-cloud transformation journey? Distributed cloud could hold all the answers. This document aims to define and socialize key aspects of distributed cloud, its importance, trajectory, benefits of adoption, and challenges. Definition of Distributed Cloud Distributed cloud is defined as the distribution of public cloud services to different locations outside the cloud providers' data centers, while the originating public cloud provider assumes responsibility for the operation, governance, maintenance, and updates. In other words, distributed cloud is one of the multi-cloud computing platforms that connects the edge with core / central clouds. This connectivity is established from a distributed set of machines in multiple locations, connecting one of the services hub or service. One of the salient differentiators of distributed cloud is that it leverages the features and benefits of Fog computing while bridging, interconnecting Core and Edge clouds. Distributed Cloud and its Importance Today's multi-cloud operandi are experiencing different levels of complexities and challenges. With the increased usage of intelligent devices such as smartphones, sensors, etc., data generation is growing exponentially. All of these new dimensions are adding more complexities, and making it harder to manage, organize, and optimize to get the best outcome from each of these devices. This is adding new challenges as well as opportunities for organizations. As a result, there is a new, evolving set of business opportunities and complexities in a true hybrid, multi-cloud model. These edge and core clouds alone do not fulfill the requirements on a larger scale with the current modus operandi, wherein most of the core services are delivered primarily from central clouds (be it hyper-scaler or On-Prem clouds). This leads to the creation of a new set of delivery models and innovations to deliver efficient, integrated services. In order to address and offer a new mode of services in an efficient but cloudified model (without losing the control), Distributed Cloud explores and consumes core central services efficiently. Key drivers for focus on distributed cloud are due to its uniqueness and the value proposition it brings in addition to advancements

in the industry at large. Some of the drivers and developments are listed below: Thus, Distributed Cloud brings value to cloud service providers by seamlessly leveraging the central services in a distributed manner, without compromising on control and efficiency. Transformation Approach Distributed cloud is going to evolve from the current set of cloud models to both Core and Edge clouds. The journey to transform the current models to meet and suit distributed cloud requirements will be long. Central Cloud Adoption: In this model, the current hyper-scalers will redefine and tailor current services and models to become light, but retain the overall governance and control functionalities. Service Providers Adoption: The other approach is where the service providers such as Telecommunications or hosting or system integrators or hosting providers or a combination, wherein the services are tailored and expanded to adopt a distributed model of services delivery. Edge Cloud Providers Adoption: Since the nature of distributed cloud is closer to edge cloud providers, the latter is naturally a suitable fit to expand the portfolio of services by adopting the governance and control layer functionality to meet and align for distributed cloud. This could be achieved through a large edge cloud, be it near edge or far edge cloud sites of the current edge cloud models. Figure 1 : Cloud Transformation Models   Execution Models With reference the execution models, the distributed cloud are delivered in one of the two ways – Commercial or Community centric. However, it is expected additional models might emerge in due course of time with the advancement of technology and consumption pattern. Figure 2 : Multi-Cloud Architecture Delivery Models   Key Benefits Distributed cloud will add value across organizations with these salient benefits: Key Challenges The trajectory and journey for distributed cloud when compared to other cloud evolutions isn't simple by any stretch of the imagination. This is due to the prevalence of various complexities, multiple ecosystems' involvement, and varied levels of approval entities involved. Location is going to be the key in distributed cloud unlike other clouds. The law of the land defines some of the characteristics for distributed cloud. Some of the key dependencies for this distributed cloud evolution and maturity would be the feasibility and compatibility of hardware abstraction layer sharing capabilities. These components include but are not limited to processors sharing, (DRAM) Dynamic Random Access Memory, and add-on components such as SSDs, GPUs, and FPUs. Conclusion Distributed cloud will definitely evolve over a period of time, bringing enhancements to user experience while simultaneously proving to be economical. Its evolution is based on various socio-economic and political dependencies in addition to technological advancements. This buzz around the concept of distributed cloud will be an integral part of CXO in the long run. Distributed cloud connects the dots of edge cloud and central cloud to make the ecosystem a true multi, hybrid cloud in the future. To know more about its unique capabilities, please contact us at sdx-cis@wipro.com Appendix A1: Bibliography Appendix A2: Taxonomy Acronym Description API Application Programmable Interface CDN Content Delivery Network Cloud Computing https://en.wikipedia.org/wiki/Cloud_computing CPU Central Processing Unit DRAM Dynamic Random-Access Memory Edge Computing https://en.wikipedia.org/wiki/Edge_computing Fog Computing https://en.wikipedia.org/wiki/Fog_computing FPGA Field Programmable Gate Array Intel WWW.INTEL.COM IoT Internet of Things ISV Independent Software Vendor

IT Information Technology NexGen   NIST National Institute of Standards and Technology OEM Original Equipment Manufacturer Open source WWW.Opensource.Com PoV Point of View RA Reference Architecture RSA Rack Scale Architecture SDN Software Defined Network SDx Software Defined Everything SI System Integrator SR-IOV Single Root I/O Virtualization Telco Telecommunication Service Providers Wipro WWW.WIPRO.COM ZSM Zero Touch Service Management Rambabu Kata Ram is an IT professional with 26 years of industry experience in IT, delivery, architecture, practice, and pre-sales. He has a Bachelor's degree in Electronics and Communication Engineering and a Master's in Marketing Management. He can be reached at rambabu.kata@wipro.com. Govindan Kutty Govindan is an IT professional with 25 years of industry experience in IT delivery, solution engineering, and practice development. Govindan currently heads the solution engineering and innovation center. He can be reached at govindna.kutty@wipro.com.   Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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The Innovation Imperative: How to Stay Ahead

----- Arcticle source ----- https://www.wipro.com/infrastructure/the-innovation-imperative-how-to-stay-ahead/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content The Innovation Imperative: How to Stay Ahead November | 2020 Anyone in the tech circles would have heard (and used) the term 'disruptive innovation' more times than they can remember. The tech world is fascinated with overnight success - moral stories and lore abound on how leading companies, at the peak of their powers, missed the ominous signals of disruption that finally delivered the killer blow. Blockbuster's demise and Netflix's meteoric rise is stuff that digital history is proud of.i However, as is the case with most other popular concepts, the disruption theory is unfortunately becoming a victim of its own popular success. Politicians to boardroom CXOs, shop-floor managers to consultants, and pretty much everyone else in between in piggybacking on the term 'disruptive innovation' without realizing what it actually is. Innovation and the consequent disruption are part of a process, not a product. This paper discusses what disruptive innovation really is, how it differs from incremental innovation, and what it takes to get innovation right.   Decoding Disruptive Innovation "Disruptive Innovation" refers to the evolution of a product or service over time, which means that almost every innovation — disruptive or not - starts as a small-scale experiment. What differentiates successful disrupters from the not-so-

successful ones is that the former primarily focus on getting the business model right, more than the product. For instance, take the iPhone – its success is not just due to awesome product quality, but due to the fact that it gave users a convenient way of using internet-centric applications and created an ecosystem of application developers. When such small innovations are applied at scale, they start eroding the incumbents' market share and their profitability. Because disruptive innovations typically take hold at the bottom of the market, addressing the same needs as high-market solutions in a simple and relatively cheap way. Often in all small-scale experiments that go on to become big disruptions, financial rewards are not the driving force for the innovation - they are the outcome. Let's take the example of Google that began as an academic experiment by two PhD students to understand how web pages link to each other.ii The search results in their experiment were simply a by-product of the index they created. Their goal was small and simple - providing a big positive change to the experience of users. Similarly, Uber started with the goal of providing a better service than taxis and had just three cars registered on its app back then. Airbnb, the world's most revered vacation rental company, began when its founders rented out their own loft with an air mattress and free breakfast to make extra money. All of these examples reiterate a simple fact – disruptive innovation in most cases may not be the product or service itself but the process and business model behind it. Most companies make the mistake of thinking of innovation only in terms of new features and products, while real success hinges on two other key factors: a) Business model innovation, and b) User adoption and retention. Let us illustrate this with an example. In 1886, Carl Benz applied for a patent for his "vehicle powered by a gas engine." This was a big invention, but did not qualify as a disruptive innovation. Because the early automobiles were expensive luxury items that could not disrupt the transportation market for horse-drawn vehicles that were used by the larger population. Disruptive innovation in the automotive industry happened only when the lower-priced and mass-produced Ford Model T debuted. In 1913, the Ford Model T became the first automobile to be mass-produced on a moving assembly line. By 1927, Ford had produced over 15,000,000 Model T automobiles. The lesson: the disruption was not the automobile itself but the assembly line approach (business model innovation) that built the automobiles at affordable rates, enabling greater uptake (user adoption innovation). At this point, let's take a step back and come to the story of Uber again. Would it qualify as an example of disruptive innovation or a service improvement? Industry pundits often exclude Uber from the list of true disruptive innovations because of three important factors: The Disruptor or the Disrupted: What Separates Incumbents From Start-ups While the definition of disruptive innovation is clear, the bankruptcy of Kodak in 2012 shook incumbents across industries. The term "disruptive innovation" became a buzzword and began to be linked to the ability to use new digital technologies and business models to disrupt entire industries. The start-ups came to be symbolized with this kind of innovation due to their agility and nimble ways of working that give them the ability to challenge long-held business models. Why do leading incumbents of industries fail to be the innovative disrupter themselves, despite the fact that they have the customer and financial base to maneuver? The answer lies in how most big companies think about innovation. Many large organizations are good at "incremental" innovation

given their existing customer base, and easy access to market research and innovation trend consultants who support these initiatives. More importantly, there is a significant difference between disruptive and incremental innovation. The goal of incremental innovation is primarily to signal that the company is keeping up with trends—it is retaining relevance, and driving continual service improvements to stay competitive. Incremental innovation is also relatively easy to plan, resource, and measure – mostly because it doesn't disrupt anything. In fact it's fun and exciting, like a new feature or a new flavor. Incremental innovation has a feel-good factor attached to it that makes it easier to implement as the typical change management hurdles on the employee side don't stand in the way. Securing management buy-in is easier too in the case of incremental innovation as it doesn't require reinventing the wheel - rather it enables companies to sail better, cheaper, and faster. Fortunately, most big, established companies are good at this kind of innovation. However, when it comes to disruptive innovation, incumbents' main challenges stem from an excess of institutional control and an inability to scale up innovations. In a recent McKinsey survey, many respondents from established companies said that parent companies had hindered the development of their start-ups and limited entrepreneurs' freedom to make independent decisions.iii Viewing Innovation From the 'Experience' Lens Regardless of start-ups or incumbents, a winning formula for innovation in any company should focus on how it will impact user experience – whether they are internal employees or external customers. Identify the opportunities that can improve the experience – even in a small way – and then tie that thought back to product features and/or services to see where disruptive or incremental innovation fits best. Taking an experience-focused approach can help companies marry the methods and pace of start-ups, with the scale of large enterprises – making for a win-win. As businesses navigate turbulent times amid global market uncertainties, innovation will be a key source of current and long-term competitive advantage and getting it right will be a critical differentiating factor for success. References: i https://www.youtube.com/watch?v=4efwN-7MDnA ii https://www.forbes.com/sites/kmehta/2019/02/21/for-big-innovation-think-small/#c5b5b721a6d7 iii https://www.mckinsey.com/industries/oil-and-gas/our-insights/traditional-company-new-businesses-the-pairing-that-can-ensure-an-incumbents-survival Srinivas Kollur Head of Client Solutions & Presales, Cloud and Infrastructure Services (Continental Europe) Srinivas has 20+ years of experience in the IT Industry. He has played a key role in developing next-generation transformative offerings. He is also a Distinguished Member of Technical Staff (DMTS), a select group of technology experts who have consistently delivered customer value through innovative designs and solutions, and have established credibility within peer groups and markets. You can reach him at srinivas.kollur@wipro.com. Click here to download your copy of State of IT infrastructure report 2020 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

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The Advent of New-Age Tools for the Hybrid-Cloud Operating Model

About The Author Related Articles Contact Wipro Please fill the required details to access the content The Advent of New-Age Tools for the Hybrid-Cloud Operating Model November | 2020 In the last decade, organizations have shifted from largely dedicated, private, on-site data centers to a pool of on-demand compute capability – a.k.a. the cloud. Interest in cloud computing is growing at an unprecedented pace. Enterprises have embraced the cloud in their quest to drive innovation, enhance agility, and cut costs. According to Gartner, 90% of all organizations will be using cloud services in some form by 2022[i]. Hybrid-cloud computing: Furthering public cloud growth Data from the IDC (International Data Corporation) Worldwide Semiannual Public Cloud

Services Tracker suggests that the worldwide public cloud services market grew 26.0% year over year in 2019 with revenues totaling $233.4 billion.[ii] This includes infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS). The IDC goes on to note: "The public cloud services market has more than doubled since 2016," suggesting public cloud is becoming the preferred cloud model. Why is public cloud so popular? From a financial perspective, its multi-tenant environment makes splitting infrastructure costs easy. It also offers flexible pay-as-you-go pricing models, and is easy to deploy and configure, even remotely. There are no hardware maintenance costs and no long-term contracts. Instead, public cloud boasts optimized staffing budgets and massive economies of scale. These advantages, combined with reduced redundancy, maximized uptime, and almost no risk of failure, ensure speedy adoption of public cloud across large, medium, and small enterprises alike. However, not everything belongs on the public cloud. Most organizations still keep some of their data in captive or hosted data centers on private clouds for various reasons, the most important being control and security. Regulations and compliance laws like HIPAA, GDPR, and PCI require financial services and energy companies to retain some workload and customer data on private clouds. As a result, even as an organization moves the bulk of its data to public cloud, it's likely to retain some core data in a captive or hosted data center. To simultaneously address demands for cost efficiency, scalability, agility, and security, many organizations partner with multiple public and private cloud services providers, a balance that poses new challenges while resolving others. With hybrid cloud, data moves seamlessly between private and public clouds, giving businesses complete control of the way their data is stored, deployed, and managed. Hybrid cloud can be a catalyst for digital transformation – transforming legacy systems and applications with new capabilities and speed, connecting organizations to different cloud models, delivering flexible IT resources efficiently and at lower costs. Nutanix's most recent Enterprise Cloud Index shows more than 85% of 2,650 respondents cite hybrid cloud as their ideal IT operating model.[iii] "Enterprises plan to aggressively shift investments to hybrid-cloud architectures," the report continues, with plans for steady and substantial hybrid deployment in the next five years. Common challenges to hybrid cloud adoption Cost management IT and management teams sometimes struggle to manage costs with hybrid-cloud models because of unexpected differences between hybrid and on-site resources. Teams often overestimate public cloud usage, for example, adding unnecessary capacity expenses. Because public cloud offers on-demand resource consumption, managing and balancing costs across cloud platforms is important for sustaining the hybrid-cloud model. Compliance From penalties to lawsuits to lowered reputation, the cost of non-compliance is high, so organizations are constantly working to meet various global and regional regulations governing the storage and usage of sensitive business data. On site, compliance is typically handled by the IT operations team and is not an area that the developers are experienced with because of diversified range of tools usage to automate task. Hence, additional training and tooling in hybrid computing is essential to ensure compliance. Security As hybrid environments become more complex, they also become more vulnerable to cyberattacks. The intricate network of infrastructure and related operations means more to monitor and therefore more to potentially overlook, increasing the risk of data breaches.

Provisioning, configuration, monitoring, and governance functions These are perhaps the most complicated and tricky of all challenges to hybrid computing. Traditionally, governance aims to provide oversight and direction for IT, standardize operations, and improve quality. It also tends to slow development because of the process-driven, standardized approach. Before the advent of hybrid-cloud computing, operations and development were two separate silos. In the new era of hybrid, however, flexibility, agility, and on-demand services are key. Hybrid-cloud migration and management are complicated and demanding. As organizations embrace hybrid cloud, they are operating multiple dynamic infrastructures, including containers, VMs, and bare-metal servers. One of the most important elements of successful cloud migration is automating the infrastructure configuration. Setting up automated processes for provisioning, configuration, management, and governance can save time and resources which would otherwise be spent on routine maintenance. The proliferation of cloud automation tools and the survival of the fittest The popularity of hybrid cloud has led to the proliferation of various open-source tools and technologies that can be added to existing programs to improve capabilities like provisioning, configuration management, cost management, self-service, monitoring, reporting. Cloud technology companies offer their own suite of applications and management software. Each cloud management platform comes with its unique strengths and advantages, and integration between platforms and tools can be a huge task, dependent on: Based on the evolution of the cloud computing environment, the automation tools available can be divided into three categories[iv]: Hybrid-cloud computing demands new ways of operation. Enterprises considering long-term adoption will need to consider all the tools and applications, as well as all new and legacy systems involved, to manage a smooth transition and superior performance. Increasingly, enterprises want to choose tools and applications from different vendors, and this trend is likely to continue. Agility and flexibility will be key – qualities to which cloud-native and open-source tools lend themselves. These newer offerings currently dominate the open-source and cloud-native tool stack scenario for automation tasks, suggesting their rising popularity over the old standards of the cloud services market. Partnering your way through transformation Enterprises can increase the success of their cloud transformation journeys and the reliability and of their infrastructure by partnering with experienced global system integrators (GSIs). As specialists who can understand and support converged infrastructure solutions, and offer applications and tools tailored to those solutions, GSIs are well positioned to help businesses embrace the hybrid-cloud model and scale their IT infrastructures. To support consumption-based pricing models, GSIs can team up with their infrastructure partners to offer the optimal cloud model for each organization. Extensive domain experience also helps GSIs deliver industry-specific consulting and implementation expertise. Organizations must remember that complete migration is not the end of the enterprise's journey to the cloud. On the contrary, it is just the start. Managing cloud services is an ongoing effort, crucial to the success of the organization's digital transformation strategy.

References: [i] https://www.gartner.com/en/newsroom/press-releases/2017-04-05-gartner-says-a-massive-shift-to-hybrid-infrastructure-services-is-underway [ii] https://www.idc.com/getdoc.jsp?containerId=prUS46780320 [iii] https://www.nutanix.com/au/enterprise-cloud-index/ [iv] https://

blog.newrelic.com/engineering/best-cloud-infrastructure-automation-tools/ [v] https://www.bizety.com/2020/06/10/automation-and-orchestration-ansible-chef-puppet-saltstack-and-terraform-overview/ Rajiv Kumar GM & Presales Head - Cloud, Cloud & Infrastructure Services, Wipro Rajiv has about 22 years of experience in the IT Industry. He has played a key role in developing next-generation transformative offerings like Azure Stack and rapidly growing the cloud practice across geographies. He is a member of the Association of Enterprise Architects and has many leading certifications like TOGAF, Azure MCSD and AWS Solution Architect, among others. You can reach him at rajiv.kumar@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. ======================

Can Your Network Meet Digital Needs?

----- Arcticle source ----- https://www.wipro.com/infrastructure/can-your-network-meet-digital-needs/ ----- About The Author(s) Related Articles Contact Wipro Please fill the required details to access the content Can Your Network Meet Digital Needs? Smart Network Automation for Business Transformation January | 2021 Networks are the lifeline of all modern enterprises. As organizations embrace digitalization and transformation, the focus shifts to a differentiated approach to strategy, operations, and execution, both from a technology and process perspective. Alongside the evolution of application architectures from monolithic to microservices and cloud native, there has also been increased traction in the automation of network operations. This paper explores the gaining prominence of network automation in enterprise business processes, with special emphasis on Day 2 operations. The paper elaborates on the Wipro-NetBrain partnership in enabling new automation goals and objectives for enterprise networking and also delves on some of the key attributes and benefits of the joint offering in optimizing Day 2 operations. Networking in the era of digital transformation There was a time when network operations were outside the purview of business operations and not considered to be of much strategic value. The advent of SMAC (Social, Mobility, Analytics & Cloud) technologies rendered that belief obsolete more than a decade ago. With the recent global developments ushered in by the new normal, users are now connecting from home and remote locations, off the traditional/corporate network. This transition has driven businesses to reimagine service models that necessitate digital transformation, and aligning of underlying IT modules. In other words, this implies that the network infrastructure has a direct impact on the success or failure of digital transformation initiatives. Enhancing efficiency and effectiveness of Day 2 network operations Network

automation has gained immense traction in the recent past in the all-digital, ever-connected world of people and processes. Network automation is increasingly becoming the cornerstone strategy to enable secure, reliable, responsive, agile, and easily managed networks while maintaining costs and ensuring security. The introduction of DevOps practices has ushered in security and reliability in the software development arena, leading to the development of mature methodologies such as DevSecOps, site reliability engineering, etc. Similarly, in the world of infrastructure operations, the advent of automation has led to steady progress with orchestration, intent-based networks, and even autonomous networks. However, it is crucial to understand well the distinction between hype and reality as these new practices gain momentum. Architecting, building and operationalizing networks whether greenfield or brownfield environments involve Day Zero, Day One and Day Two activities: A key imperative in Day 2 network operations is the blast radius associated with any change carried out on the infrastructure. Hence, many enterprises have 'zero' tolerance for errors arising in the network, as the minutest of changes in the network infrastructure can have dire consequences. In such scenarios, automation plays a significant role. Holistically speaking, network automation has touchpoints through the complete lifecycle of IT systems, right from service design through transition and operations. As such, there are a plethora of solutions available that cater to the different aspects of provisioning, configuration, operations, etc. The next-gen networks deliver significant cost and productivity benefits, accelerating business goals and outcomes. Wipro & NetBrain: A partnership to transform networks Under the umbrella of Wipro Cloud and Infrastructure Services, MNS 2.0 (Managed Network Services 2.0) & NetOps 2.0 are offerings that provide additional impetus and focus on network automation. With the intent of delivering a superior network experience to end-users and improved business service availability, Wipro has infused automation across the spectrum of network services. The NetOps 2.0 approach drives high network efficiency in IT operations and enhances business effectiveness. Partnering with NetBrain, the market leader in network automation, and leveraging Wipro's industry-leading AI-Platform HOLMES™, Wipro has delivered significant ROI for customers across the globe. Figure 1 shows the interface of Wipro AI platform HOLMES. Key attributes of NetBrain automation NetBrain's automaton solutions drive documentation automation, troubleshooting automation, change management automation, and audit and compliance reporting. Coupled with the NetOps 2.0 approach and Wipro's AI-Platform HOLMES™, the solution offers significant advantages. We extensively leverage NetBrain in most Wipro Insightix network solution-led network assessments. Salient attributes of NetBrain: Driving efficiencies for a global manufacturing entity Let us look at how Wipro partnered with NetBrain to enable new efficiencies for a global manufacturing entity. The client was a leading manufacturer of key components for the Telecom industry with world-wide operations. The client has made significant investments to modernize their network infrastructure to enable access, transport and hosting (on-premise and cloud) and also on monitoring and management platforms. However, in the absence of operational automation, they continued to face challenges in analyzing the reasons for slow application response. Other concern areas included, drawing contextual and relevant network diagrams for troubleshooting, the lack of a common set of guiding principles for

managing a multi-vendor network, and the rigid mindset of network engineers to switch to an automated environment. Troubleshooting is both an art and a science, and many times, success becomes a factor of the troubleshooter's ingenuity and expertise. Key aspects of troubleshooting, whether it is for availability or performance-related aspects, include tracing the network path end-to-end, determining the necessary conditions for packet flow through the network (Access control lists, Firewall rules, NAT rules, Policy based routing, and so on), and verifying suitable route paths, link utilization, and device parameters to determine if end users can access applications seamlessly. Wipro leveraged NetBrain automation tool to simplify the process of deploying run books with Qapp (Quick apps) based Scriptless visual programming. Automating the standard operating procedures augmented troubleshooting, and enabled a single pane of glass management. A salient attribute of the solution offering was the ability to integrate with multiple ecosystem partners across service desk, monitoring, management, and log analytics space. Bringing in automation capabilities and experience led to several improvements in the client's network environment. Benefits included availability of on-demand contextual network maps, empowerment of L1 network engineers for easy troubleshooting, significant reduction of cycle time (Mean time to resolve) for incident resolution and a comprehensive view of the entire network, enabled by quick and easy ecosystem integration. Building resilience and responsiveness in networks of the future Amidst the uncertainty posed by COVID-19, the workplace has evolved beyond the four walls of the office to accommodate the flexible space/time requirements of organizations. Reliable, secure networks are at the forefront of every transformation initiative, and this mandates networks to be more resilient, adding in elements of automation, personalization, and configurable services. Effective network automation must break free of traditional silos to bring together all network infrastructure elements, operations, and support systems. The Wipro-NetBrain collaboration aims to reimagine solutions, bringing in strong complementary capabilities around automation tools, processes, and solutions to excel Day 2 operations, empower key stakeholders, and accelerate business outcomes Schedule a discussion with our experts to understand how Wipro-NetBrain partnership can support your organization in enabling automation in networking. Shyam Sundar Venkat Managing Consultant, Cloud & Infrastructure Services, Wipro Shyam Venkat is an IT professional with more than two decades of experience around Cloud Infrastructure, Network Transformation, IT Strategy, Service Management, Site Reliability Engineering, Cybersecurity etc. Settled in Dallas TX, Shyam has led several successful engagements with clients across Industry verticals in technology management, consulting, service delivery and operations. He is also a trained Indian classical vocalist with few performances to his credit. Shyam can be reached at shyam.venkat@wipro.com Satyaki Hosmane Senior Solution Architect, Network Practice Wipro Satyaki Hosmane has over 18 years of experience in the field of information technology, networking infrastructure architecture, and technical delivery. He is an expert in the field of software defined, and traditional and wireless networking. He leads projects on Insightix Network, a framework for network consulting that enables quick and easy transformation to a digital network. Satyaki holds a number of certifications in leading technologies and products like CCNA, CCNP, CCIE (W) and (VCA).

Satyaki can be reached at satyaki.hosmane@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Designing IT operations to deliver incremental business outcome improvements

----- Arcticle source ----- https://www.wipro.com/infrastructure/designing-it-operations-to-deliver-incremental-business-outcom-improvements/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Designing IT operations to deliver incremental business outcome improvements December | 2020 And using the state of current maturity to "redesign operations" that can provide a "singular quality of service". This redesigned operational framework known as Managed Integration Services Framework will use several techniques from structured data analytics to textual analytics, from several different sources, like ticket data, application support data, QA and Testing data, architecture documents to derive the "AS IS ISM (integrated services maturity) of the environment". Some of the areas to look for would be: The gaps in the above areas, combined with the organizational change appetite are then used to define a set of "Integrated transformation programs" combined with an application or business unit specific approach for incremental business service outcomes defined at the beginning, through structured as well as simultaneous changes in the machine, method, and model. This is illustrated in the diagram below. Murthy Malapaka CTO Cloud and Infrastructure Services, North Americas Murthy Malapaka is CTO of Cloud and Infrastructure Services, North America, at Wipro Ltd. Malapaka has nearly three decades of experience in the technology space and has held various technology leadership positions across application and infrastructure architecture domains, specializing in service availability and reliability. In his current role, Malapaka helps enterprises digitally re-architect their operations to run on multi-cloud IT environments Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Predictive Maintenance in Manufacturing using Azure Serverless Architecture

About The Author Related Articles Contact Wipro Please fill the required details to access the content Predictive Maintenance in Manufacturing using Azure Serverless Architecture February | 2021 To have an edge in the fiercely competitive world of manufacturing, manufacturers must shift production to higher values and advanced technology support and offer a new product-as-a-service model. A 2020 Forbes report states that 47% of all the manufactured products will become smart, connected, and capable of providing a product-as-a-service model. Top 5 challenges faced by the manufacturing industry Despite a plethora of opportunities that are integral to the manufacturing industry, specific pain areas need to be addressed soon. Some of them are: Predictive Maintenance It is common among businesses to rely on corrective maintenance. Parts are replaced as and when they fail, which causes the factory to shut down. It also impacts product manufacturing, resulting in unhappy customers. At the next level, businesses practice preventive maintenance, determining a part's lifespan and maintaining or replacing it before a failure. It may cause unnecessary maintenance of machines leading to wastage of money. Predictive maintenance optimizes the balance between corrective and preventative maintenance by enabling just-in-time replacement of components The Benefits of Predictive Maintenance Predictive Maintenance using Azure Serverless Components: Reference Architecture Devices: Devices can be connected to the cloud directly or indirectly. It is done directly using IP-capable devices that establish secure connections via the internet. In the indirect method, devices connect via a field gateway. This enables aggregation and reduced raw device data before transporting the back-end and local decision-making capability. IoT Hub: Azure IoT Hub offers built-in, high-scale, secure connectivity, data, and event ingestion. It also establishes bi-directional communication with devices, including device management with command and control capabilities. Azure IoT Hub can securely connect millions of devices to the cloud from various devices and protocols. Stream Analytics: To process the massive amount of data generated by the field devices in real-time and process this live stream, Azure Stream Analytics is used. Event Hub: Azure Stream Analytics generates an event and sends it to the Event Hub, which triggers background jobs for further analysis. Event Processor: Web Job is used to process the event data received from Event Hub, and a portion of this data is used to train in the ML model. Storage: Storage is divided into warm and cold path stores. Warm path data is required to be available for reporting and immediate visualization from devices. Cold path data is stored for the long term and used for batch processing. We use Azure Cosmos DB for warm path storage and Azure Blob for cold path stores. Dashboard and UI- Web App or Power BI is used to

create and show the dashboard to the end-user to engage in interactive browsing. Machine Learning: It enables systems to learn from historical data and to act without being explicitly programmed. Scenarios such as predictive maintenance are enabled through ML. We use Azure Machine Learning for ML needs. References: Alok Bhatnagar Principal Consultant Cloud and infrastructure Services Alok has more than 16 years' experience in software design, architecture, and development with expertise in cloud-native and cloud-agnostic architecture. He has rich experience working on various cloud platforms like Azure, AWS, and IBM and has leading certifications, including Azure Certified Solution Architect, AWS Certified Solution Architect Associate, and MCSD. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Hospitality Gets Smart and Safe. Thanks to IoT.

----- Arcticle source ----- https://www.wipro.com/infrastructure/hospitality-gets-smart-and-safe-thanks-to-iot/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Hospitality Gets Smart and Safe. Thanks to IoT. February | 2021 IoT in hospitality is not seen just as a supporting technology any more. It is becoming mainstream in enhancing hotel businesses by inculcating safety and improving overall business operations. Major pillars for any hospitality business are customer experience, operational efficiency, and health and safety. Health and safety is emerging as the #1 trend as people adjust to life with the Coronavirus and hotels consider health of their customers the utmost priority. During this pandemic, hotels have started to reimagine the processes and are adopting new technologies to provide a safer environment to their guests. Some of the IoT and analytics-based safety initiatives include The IoT advantage in the hospitality industry Apart from health and safety, IoT is also changing the way products and services deliver value and redefining the guest experience by providing self-check-ins, personalized recommendations, and solving real-time queries in no time. IoT is enabling reduction in operational expenses and improvement in staff efficiency by providing smarter facilities, which includes smart bin monitoring, smart parking, and smart restrooms and utilities management. It even enables tracking of worker staff efficiency. Integrated energy management, which includes smart lighting, intelligent HVAC controls, and smart equipment with health monitoring and predictive maintenance capabilities along with usage analytics and insights, helps tackle the issue of huge energy consumption. Reimagining customer experience with IoT Besides providing customer experience through faster reservations, and quicker check-in-

check-outs, personalized services and better room experience are equally important. Customer experience is being enhanced through IoT by enabling multiple use cases such as Figure 1: Customer journey inside a smart hotel With the tremendous benefits of IoT, big hotels are lowering their labor costs while redefining guest satisfaction in an entirely new way. Making a guest feel safe and special is the biggest achievement in the hospitality sector. Interested in knowing more about how IoT can help transform your business to meet the new requirements in the new normal? Want to know how we can help empower you for a resilient future? Connect with our IoT experts Tanuj Chawla Pre Sales Consultant and SME - IoT, Cloud & Infrastructure Services, Wipro Tanuj plays a key role in consulting for IoT in the US and APAC Geos. He has expertise across multiple industries including Retail, and Oil & Gas. You can reach Tanuj at tanuj.chawla1@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Leveraging Digitization to Drive Customer Experiences in BFSI in the New Normal

----- Arcticle source ----- https://www.wipro.com/infrastructure/leveraging-digitization-to-drive-customer-experiences-in-bfsi-in-the-new-normal/ ----- About The Author(s) Related Articles Contact Wipro Please fill the required details to access the content Leveraging Digitization to Drive Customer Experiences in BFSI in the New Normal COVID-19: A catalyst in the Digital Journey February | 2021 Abstract Banking and Financial Institutions (BFSIs) have been at the forefront of digital transformation initiatives with data at the epicenter of banking innovation, in an attempt to fuel performance and improve customer experiences. Competition from a variety of segments including fintech startups, alternate credit companies, retail giants and internet behemoths, complemented by globalization are accelerating digitization at banks. Ever evolving and tightening regulatory restrictions are further fueling this transformation which has been propelled to the next level with the pandemic. This paper studies the impact of next-gen technologies and digitization including IoT, Cloud, and 5G on productivity and modernization of operations at banks and financial institutions. It further delves into how these technologies can be leveraged to offer solutions that enable banking in the new normal. Reimagining banking in the new normal Even as banks in the last decade have been embracing digitalization and moving to a client service model that requires minimal contact with their customers, COVID-19 has brought with it huge challenges to the BFSI sector, triggering changes in both customer behavior and

banking operations in the long run. Consider this: consumer usage of digital banking surged with 68% of Indian consumers using online or mobile banking to conduct financial transactions. 48% of respondents expect to use contactless payments instead of cash or card in the post-COVID worldi. The new normal is forcing BFSIs to implement digitization beyond the customer-facing layer, and develop an integrated architecture encompassing all aspects of banking. Financial organizations are focusing on priorities in four key areas in order to overcome the challenges brought on by COVID-19: Optimizing processes to meet evolved customer expectations: While digital banking has been on the rise globally, a country like India is still driven heavily by physical transactions at the bank. BFSIs need to quickly implement technology-enabled processes to adapt to the new normal to deliver customer satisfaction across branches and retail outlets. Customers have become increasingly health conscious and COVID-aware, and are looking for ways to transact while prioritizing their health and safety. Banks need to leverage technology, AI, machine learning, data, and human resources to innovate and digitize the delivery of products and services providing for seamless, contactless experiences. Connectivity: While some largescale BFSIs have started leveraging the cloud, others still need to ensure connectivity across all their operations and transactions for a seamless experience in the new normal. The pandemic has led to an increase in online banking activity, nudging financial organizations to embrace digitization and a hybrid multi-cloud model to enable an array of services including payment gateways, online fund transfers and transactions, digital wallets and more, all aimed at driving a unified customer experience. This connectivity needs to be extended on the ground to banking experiences, identifying, aiding, and mapping the customer journey within the bank through kiosks, facial recognition systems, thermal scanners, digitized ledgers and more for a safe banking experience. Security: As banks embrace technology at speed and scale, ensuring data security is another key concern. The dependence on digital banking in recent times and the ensuing tech upgrades on premises have left the industry vulnerable to security threats, heightening the need for tighter security, both for physical devices and data. Regulatory compliance: For BFSIs operating across boundaries, ensuring compliance to evolving regulatory requirements is another huge concern. Regulators increasingly want to make sure that boards are engaged, and capital and liquidity standards are maintained per norms, and effective risk management practices are in place even as BFSIs pull out all the stops to ensure uninterrupted customer service and deal with wildly fluctuating and unprecedented economic and market conditions. Riding the digitization wave for positive customer experiences As BFSIs embrace large-scale technology upgradation and digitization in an attempt to limp back to normalcy, IoT - along with 5G and the cloud - is transforming the way banks are operating post COVID. Seamless customer experiences and transactions while ensuring employee safety and maintaining productivity, renewing operating models to support customers, leveraging technology to minimize operational disruption to processes and mitigating risk will be key. Banks are buying out legacy assets and shared services carve-outs and entering into long-term integrated technologies and managed services support engagements that will further their digital transformation strategy. IoT is bringing the banking world closer than ever before, offering clients a

completely connected and integrated experience by servicing all their financial needs across devices including tablets and mobiles. Enabling digitized transactions and pay-from-anywhere models, every IoT-enabled device has the ability to become a Point of Sale (POS) device. Banking transactions and queries can now be carried out from the comfort of the customer's home or within the safety of the bank with the increased use of connected devices including voice activated and facial recognition software that require minimal touch. IoT also enables device tracking and spend analysis on-the-fly, offering better protection from cyber-fraud. The growth in 5G adoption will further increase productivity levels with connected devices and help optimize the digital banking experience. Cloud is the core technology at the forefront of digital transformation in BFSIs. It provides an infrastructure fabric for other technologies such as mobile, automation, artificial intelligence, social computing, Internet of Things (IoT), analytics, and blockchain, to name a few. Cloud technologies such as virtualization, Infrastructure-as-a-Service (IaaS), and Platform-as-a-Service (PaaS) can help banks improve cash flow by moving from a Capital Expenditure (CapEx) to an Operational Expenditure (OpEx) model. Risk Profiling Systems, Early Warning Systems using Predictive Analytics, Non-Performing Assets (NPAs) monitoring are applications which can be built on a cloud technology infrastructure. The banking industry has been an early adopter of cloud and these new technologies will drive domain transformation in the future. Leveraging transformative technology solutions Even as the banking industry adapts to work-from-home, it will require an active workspace for routine business operations with employees present to service customers. How then can banks ensure people safety and well-being in the new normal? Wipro's 'Health COV-ER' solution leverages the power of IoT, cloud and analytics, helping BFSIs manage their employees returning to work with a system driven, thoroughly designed process aimed at ensuring workplace safety and compliance. Health COV-ER is truly comprehensive with a hassle-free work employee schedule and attendance management, health assessments, and integrated contact tracing solutions. This is a SaaS product designed to help BFSIs fortify and strengthen their business, while ensuring customer and employee safety on-premises. The 'Health COV-ER' solution features applications for seamless management of all people at the bank including employees, contractors and vendors, and customers by supporting visit/ work scheduling and detailed health assessment and monitoring. The solution helps banks resume branch operations easily in the new normal with integrated mobile communications, easy-to-fill digital forms and social distancing mechanisms that can be tracked with the latest technology. Some of the salient Health COV-ER features that drive workplace transformation and productivity include: Smart workplace solutions for employees: These include an integrated, interlinked set of solutions designed for workplace safety. Features comprise detailed health assessment of employees and self-declaration via the app for COVID testing and other critical ailments, QR code generation based on the health declaration form, and staggered time-based entry with automatic notification. Other features include a touchless attendance system integrated with an active global directory, online seat booking for employees with a track on occupancy ratios, energy management, dashboard reporting, and secure admin approvals. Customer solutions: These include thermal scanning for temperature entrance before approval of entry, video analytics

and BLE-based social distance alerts, crowd sensing and heat map generation, facemask detection and social distance violation detection measures to maintain customer safety and health while at the branch. The app supports touchless customer onboarding. Alarms are auto-generated on violation of any of the pre-set norms and thresholds. Real-time data on customer footfall at the branch can be leveraged for multiple business cases to help drive superior customer experiences. Customers who are in the queue or waiting to be served can also leverage the app to check on nearby branches with lesser wait times. The data also helps management analyze the volume of business against the number of customers. Virtual Queue Management and Reservations for customers, and in a pandemic situation, the use of touchless and a more hygienic way of communication with BFSI employees. Reservations in the form of pre-booking of available slots 24 hours prior to arrival at the location, where customers can plan their journey way ahead of time. Integration with government apps and data bodies: Data on COVID infected customers or employees who are restricted access to the campus will be further integrated with government health / COVID monitoring data, including apps such as Aarogya Setu of India. This will help facilitate contact tracing efforts to identify COVID positive cases and control the probable spread of infection, thereby complying with government norms and regulations per specific geographies and adhering to local laws while protecting personal information of individuals. Data center maintenance: Given the volume of sensitive information banks process, data centers are sacred and core to the successful working of banks. The Health COV-ER solution helps monitor data centers effectively and maintain workplace hygiene and safety. These new-normal solutions in the current pandemic scenarios could benefit from: Remote device management and asset management: Mobile and remote devices have been around for a while now and have become an inseparable part of our lives. There was a time when desktops were considered primary IT assets and were managed. However, today, mobile devices have overpowered desktops. This means they also need to be managed and maintained as they fall under IT asset management. The solution offering includes provisions for remote monitoring and maintenance of devices and bank assets securing the organization from physical asset thefts and data loss. Few questions that need attention, considering the excessive use of remote devices in organizations nowadays: Here are some core functions of remote device management: Seizing the moment to go the extra mile to serve individuals with integrity and sensitivity Technology and skill upgradation – imperative to the new normal Providing restricted banking hours, flexibility, security, and safety while ensuring availability of omni-channel customer service and banking transactions is the way forward through COVID-19 and beyond. BFSIs will have to adapt in more ways than one, with the use of technology and skill upgradations to thrive in the new normal and build a resilient operating model, as blockchain, AI, and open banking become more popular. The focus must be equally on employee re-skilling and up-skilling as it is on technology upgradation. Digitization must enable new value creation for customers, delivering on expectations across the value chain. Digital transformation will enable agility, security, and enhanced productivity for BFSIs if harnessed well and right, paving the way for a new decade of banking experiences. The overall business landscape has essentially been redefined, as the COVID-19 pandemic is likely to considerably fast-track the

shift to digital. Customer behavior and desired communications are radically changing, and while customers continue to progress digitally, simultaneous digital transformation will continue rapidly. In addition, as a catalyst, COVID-19 also presents a unique chance to gear up and take stock of digitalization with the help of technology interventions such as IoT, ICT, AI, AR-VR. They can also build or create value in the emerging ecosystem. References Vaishali Deshmukh Managing Consultant Wipro Vaishali has 15+ years of experience as a trusted advisor. She is responsible for global consulting for IoT and the Smart Cities portfolio cutting across verticals. Vaishali also has experience in design thinking, business strategy, opportunity assessment, financial modelling, and business case development. You can reach Vaishali at vaishali.deshmukh@wipro.com Deb Kumar Mondal Enterprise Architect. Deb Kumar comes with 15 years' experience providing full stack solutions on multiple technologies and Domain. He has vast experience in technology strategy, building Enterprise-level architecture, and cloud migration. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Network on Autopilot Mode

----- Arcticle source ----- https://www.wipro.com/infrastructure/network-on-autopilot-mode/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Network on Autopilot Mode AI-Trained Intelligent Networks Cut Through Complexity February | 2021 Networks are becoming increasingly complex, making effective and efficient network management a challenge. With new and emerging technologies and the increasing adoption of cloud, users expect faster network speeds and seamless network availability. In addition, security threats are more advanced and agile. As the network incorporates several devices, tools, applications, systems, and now, work from home users, the complexity escalates. A larger scale of network amplifies the potential for failure. Networks now need to be intelligent. Artificial intelligence (AI) and machine learning (ML) will be critical in automating network operations and optimizing end user experience. This paper looks at how AI, ML, and automation can change the existing network operations and simplify the life of network engineers. It explores how businesses can leverage AI/ML to make a true self-healing autonomous network, going beyond automation and work done by bots. Effective network operations in a new age technology world With millions of applications developed every day, the 'networking' stack plays a vital role in ensuring secure and any time access, regardless of where the applications are hosted - on premise or on the cloud. The pressure on the network to quickly adapt to new and emerging technologies while ensuring seamless user experience only amplifies the network's complexity

and the efforts it takes to manage it. There are myriad issues that can come up on a daily basis, based on the size of the infrastructure and the design complexity. A wrong VLAN on a port or misconfiguration of a VLAN can cause multiple ports and circuits to go down as the ports may get blocked due to spanning tree. A small change, misconfiguration or incident can have a significant impact on the business. Robust change management and incident management systems help in avoiding such issues. However, network complexity gives rise to many such scenarios, and solution doesn't come easy as one size does not fit all. For instance, checking a layer 2 issue when there are 10 switches to manage is radically different from a landscape with 100 switches in a domain. There is no efficient solution that can help in simulating such issues, as replication of the existing configuration and the device sets adds to complexity and additional requirements. Simplifying configuration with software-defined networking Software-defined networking (SDN) has eased the configuration part by segregating the network control plane from the forwarding plane. It has enabled a 'single plane of glass', wherein all the nodes can be managed and controlled from a single controller and management dashboard. The traditional configuration is abstracted with user-friendly graphical user interface. The time spent on configuring routing policies by logging into individual routers/switches command-line interface is dramatically reduced by pushing the same from the single user interface, which, in turn pushes to all the respective nodes where the policies need to be configured. However, even though the configuration part is simplified, the alarms or events have increased and have become more complex. Consider this - the connectivity from the user to an application as a single entity has multiple components like LAN (either wired/Wi-Fi), WAN (either traditional or software defined) plus where it is hosted -- in the data center or the cloud. Each of this is monitored by its own respective controllers, and each logs the alerts/ incidents to the organization's IT Service Management desk. An application can slow down due to network latency or high response time from the application server itself. Earlier, these were marked as network issues. Now, leveraging new gen solutions, we are able to garner better insights into these issues and classify these in two different domains – network and applications – thereby, ensuring issues are assigned to the appropriate teams for resolution. Similarly, an overlay tunnel would have gone down because of the underlay device's port which is either flapping or has gone down. In such scenarios, each endpoint logs its own events - the SD-WAN controller would log an incident for the tunnel going down and the underlay device would log an event for the port going down. With multiple incidents being logged from multiple controllers and the underlay devices, ITOps find it very difficult to correlate each of them. With separate teams handling issues from different components, the correlation becomes even more difficult. The focus of the operations teams is on configuration and troubleshooting. The configuration part is now simplified with next-gen solutions, but troubleshooting has become more complex. Is there a solution that can ease the troubleshooting or issue resolution process as well? The answer is a resounding 'yes'. Intelligent network with AI and ML Networks need to be intelligent to meet the dynamic needs of the digital age. AI and ML play a critical role in enabling this by automating and infusing intelligence in network operations.   Figure 1 highlights a solution that listens to all alerts/events generated by different endpoints (network

devices, SDN controllers, SDWAN edge devices, Wi-Fi controllers, etc.). The ML model is trained to learn from these events and then correlate them to the project as a single issue, which the operations team can look into. This helps all the teams find the root cause faster, enabling quicker resolutions, while reducing the MTTR (mean time to resolve) significantly. In addition to this, the AI/ML-based solution can also help in predicting issues in the system. For example, the interface utilization is monitored by the solution and it learns the pattern of the traffic - the time stamp at which the traffic surges/dips. Over a period of time, the solution will predict the utilization at a given time in the future. This helps in capacity planning which was previously fraught with human errors over spreadsheets and multiple logics. Wipro is developing a bot that listens to the incidents and follows a defined standard operating procedure for that particular incident. This approach helps in reducing the time taken by an L1 engineer to perform basic troubleshooting. Automating the L1 task enabled Wipro to reduce 110 person-hours for managing 60 sites of a customer. With the robust power of AI and ML, solutions that learn the types of issues and their resolutions can be developed. Once the model is trained, it will provide the fixes for the issues raised. Eventually, issues will reduce by virtue of co-relation and the solutions as autosuggestions. If there are more matches with the fixes that are suggested by the solution, then the solution can provide the fix with data modeling. Putting networks on autopilot mode A network that can fix and optimize itself without human intervention will revolutionize network management. AI and ML can train software-defined networks to learn to help with network management using operational data. Automation, AI, and ML will drive network management into the autopilot mode and the future. Neelakantan R Automation and Network Lead - CIS Network Practice Wipro Neelakantan has 11 years of experience in the field of Information Technology and Network Infrastructure. He has expertise in SDN, SDWAN, Network engineering, Automation and Project Management. His key area of focus is to benchmark various technology solutions and develop applications that further enhance user experience. He holds multiple industry leading certifications like CCNA, CCNP, VMware Certified Professional - Network Virtualization (NSX-T), Red Hat Certified Ansible Automation Specialist, Red Hat Certified Delivery Specialist – Container Platform, Cisco Black Belt on DevNet, ACI, DNAC and SDWAN tracks, and Aviatrix Certified MCNA. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Get more out of your public cloud investments with SD-WAN

Get more out of your public cloud investments with SD-WAN March | 2021 The massive wave of public cloud adoption has placed SD-WANs, or Software Defined Wide Area Networks, firmly in the spotlight. The advances made in cloud technology by leaders like Microsoft, Google, and Amazon have made it easy and cost-effective for enterprises to move away from their traditional datacenters and adopt cloud. While cloudification is moving applications to a central location, users are now distributed across geos. A recent analyst study shows that 32% of IT budgets will be allocated to cloud within the next 12 months1. An imperative of public cloud is to have a secure, application-aware, intent-based network. And SD-WAN is the answer. As investments in public cloud grow, we expect to see a proportionate increase of interest in SD-WAN. Traditional WANs worked using one or two gateways and expensive Multiprotocol Label Switching (MPLS) networks and complex security policies to keep the enterprise connected. This made connecting branch offices an expensive exercise—more hardware had to be added, more security processes monitored, and more infrastructure maintenance to be provisioned. Besides, traditional WANs demand long lead times to set up new branches and they require traffic to be backhauled through a datacenter which often became bottlenecks. For the last decade, service providers like British Telecom, Telstra, Deutsche Telekom, Movistar, Vodafone, AT&T, and Jio provided the services needed for these WAN networks. But because MPLS is expensive, it became one of the reasons for enterprises to move away and look for more reliable Internet-based networks. SD-WANs for geographically spread-out businesses SD-WANs take the pain out of network configuration and operations while reducing capital and operational expenditure. They make use of high-speed busines class Internet and local Internet breakout to send traffic toward cloud. This also means it has a major impact on the network business of traditional providers. Their customers increase bandwidth usage because they have access to bigger pipes at lower costs on the Internet. This also has the effect of reducing the costs associated with MPLS. Overall, it is a major win for enterprises. There are deeper problems associated with using traditional provides. As businesses expand across geos, providers with a limited footprint may not be able to support their customers. For example, a provider may have strong operations across the US but none in Europe. To overcome this, providers partner with each other across geographies. There is a downside to this. It makes client contracts, processes, and provisioning complex, messy, and expensive. Take the case of Europe. Each country has its own dominant network provider. They know their region, understand the underlying business nuances, and are very aggressive. An engineering, manufacturing or pharma company with operations spread across Europe will typically want to realize the cost benefits offered by

network providers in each region. As an example, they will want to pick the best provider at the best price point. Having multiple and diversified providers across countries can quickly add to technological complexity, management overheads, and developmental blind spots. These developments have led to a clear outcome: Unable to compete with local providers, the behemoths of telecom find that bandwidth consumption is down, and they cannot modernize services to retain customers. They have no incentive left to continue providing network services. This has opened the doors to System Integrators (SIs). The importance of SIs in the world of SD-WAN SI can break the barriers to a single provider while ensuring that the advantage of lower pricing provided by multiple geo-specific providers is not lost. SIs can tie together the best-of-breed providers, manage contracts, drive technological enhancements, and ensure that network experience remains world-class while costs are managed in line with customer expectations. Given the pressure brought about by the COVID-19 pandemic, businesses across Europe – as is true for businesses across the world – have become cost conscious. There is significant pressure on them to reduce run budgets. A quick and effective way to do this is by moving to a well thought out and carefully strategized SD-WAN paradigm. On paper SD-WAN appears perfect and has appeal. But enterprises are hesitant to take the leap. There is an inherent fear that their users may not have access to the same experience they have become accustomed to. Unlike a datacenter, that could be in one or two locations and are easy to monitor, an SD-WAN may affect users. This fear prevents enterprises from discussing SD-WANs with SIs. For effective implementation of SD-WAN, CTOs across enterprises must identify business uses cases that bring value and have the highest/ fastest ROI. Does it reduce costs? Does it provide visibility into applications? Does it allow administrators to prioritize traffic based on application criticality? Does it improve user experience? Does it have lower maintenance costs? Does it enhance agility and security? Does it permit automation to be used to speed up configuration, deployments and reporting? The answers to these questions will determine the exact solution. Learning from adjacent industries The experience of large, diversified customers who have made the call (for SD-WAN) shows that the technology provides robust and reliable solutions to resolve these questions. One customer, a manufacturing major in over 1500 locations, has modernized its network using SD-WAN. We need to examine industry segments like Retail and Consumer Packaged Goods leading the way with public cloud adoption. They are successfully choosing SD-WAN. The Banking industry too has identified significant opportunities in public cloud and will soon shift to SD-WANs. Typically, businesses with a large multi-geo e-business component are more enthusiastic about public cloud – these are the businesses to look up to for best practices and methodologies that lead to successful SD-WAN adoption. With large technology providers like Microsoft, Amazon, and Google making it simpler to adopt public cloud, SD-WAN is unavoidable. And for businesses in Europe, characterized by a variety of network providers, getting an experienced SI onboard to implement the SD-WAN strategy is an immediate imperative. Anand Jayaraman Anand Jayaraman is the General Manager & Head - Cloud and Infrastructure Services for Continental Europe. He has over 24 years of experience in progressive sales and technology. His domain expertise includes Cloud & Platform models, IoT, Digital, and Blockchain. He is proficient in managing multi-location delivery, hybrid data center and multi-

cloud operating models, Workplace transformation and Process transformation. Anand is currently based in Frankfurt, Germany Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Containers are growing in popularity. Have you considered secure containers though?

----- Arcticle source ----- https://www.wipro.com/infrastructure/containers-are-growing-in-popularity-have-you-considered-secure-containers-though/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Containers are growing in popularity. Have you considered secure containers though? March | 2021 In an increasingly interconnected environment, information is exposed to a growing number and wider variety of risks. Threats such as malicious code, computer hacking, and denial-of-service attacks have become more common. Implementing, maintaining, and updating information security in an organization is more of a challenge. The number of cyberattacks is increasing alarmingly. Ransomware is leading the way in modern cybersecurity events. Cybercrime damages will cost the world $6 trillion annually by 20221. For many organizations, information is their most important asset, so protecting it is crucial. Also, with the increased popularity of microservices and containers, many organizations are moving more and more toward containerized environments due to the unparalleled agility, and cost and time savings that containers offer. In this paper, we will explore some of the security threats for containers and how organizations are mitigating them. However, like all other software, containers and containerized applications too can fall prey to security vulnerabilities of various kinds, including bugs, inadequate authentication and authorization, and misconfiguration. The first of these challenges stems from an obvious fact: breaking your application up into containerized services (and perhaps microservices) requires some way for those services to communicate. And even though they're all potentially running on the same Kubernetes cluster, you still need to worry about controlling access between them. After all, you might be sharing that Kubernetes cluster with other applications, and you can't leave your containers open to these other apps. Controlling access to a container requires authenticating its callers, then determining what requests these other containers are authorized to make. It's typical today to solve this problem by using a service mesh Like Istio. Just like VMs, containers can still be compromised through various attacks, or left vulnerable through misconfigurations or unpatched components that can

lead to unauthorized access to your workloads and your compute resources, and even the potential to recreate your application (and its data) somewhere else. Perhaps the other most obvious source of security issues in a containerized environment is problems lurking within application images themselves. Flawed or malicious software isn't the only threat. Poorly configured images can also be a source of vulnerabilities. For example, an image might launch an extraneous daemon or service that allows unwanted access from the network, or it might be configured to run with more user privileges than are necessary. Secrets stored within images, such as authentication keys or certificates, are another danger to watch out for. Pulling images only from trusted sources, such as private container registries, but a poorly configured registry can also be a security issue. Access to the registry should require encrypted and authenticated connections, preferably using credentials that are federated with existing network security controls. Any efforts to secure container images can be rendered meaningless if the registry can be easily compromised. Also, the registry should undergo frequent maintenance to ensure that it doesn't contain stale images with lingering vulnerabilities. But in the last couple of years, a great deal of effort has been devoted to developing software to enhance the security of containers. Fortunately, best practices for securing containerized infrastructure are emerging. The National Institute of Standards and Technology (NIST) has published "NIST Special Publication 800-190: Application Container Security Guide": a set of guidelines that can serve as a useful starting point and a baseline for security audits which is worth referring. How to mitigate security risks in containers Some ways to mitigate the risk in containers are by locking it down, especially the management layer of multi-container orchestration platforms needs to be tightened with two-factor authentication, data encryption at rest, configuring the orchestrators in separate networks, i.e. low sensitive workloads must be separated from High sensitivity workloads. In addition, workloads should be distributed such that each host runs containers only of a given security level, include end-to-end encryption of all network traffic between cluster nodes and mutually authenticated network connections between cluster members. One of the more serious concerns arises when the container runtimes that launch and manage containers—software such as containers, CRI-O, and rkt—themselves contain vulnerabilities. These flaws can lead to "container escape" scenarios where an attacker could potentially gain access to other containers or the host operating system itself, so admins should make installing runtime security patches a high priority. The host OS represents the most critical target for attacks, if compromised, it can expose all of the containers running on it. For this reason, running a pared-down, container-specific OS that limits the number of installed components to the bare minimum of software required to create and manage containers. Fewer components means fewer potential vulnerabilities that can be exploited. Google has some renowned in-built security standards to mitigate the risks for containers as follows: Infrastructure Security: Container infrastructure security is about ensuring that your developers have the tools they need to securely build containerized services. Identity and authorization On Google Kubernetes Engine, use Cloud IAM to manage access to your projects and role-based access control (RBAC) to manage access to your clusters and namespaces. Audit logging: On Google Kubernetes Engine, Cloud Audit Logs records API

audit logs automatically for you. Networking One can create a network policy to manage pod-to-pod communications in your cluster. Use private clusters for private IPs and include Google Kubernetes Engine resources in a shared VPC. Compliance Google Kubernetes Engine features many compliance certifications including ISO 27001, ISO 27017, ISO 27108, HIPAA, and PCI-DSS. Google Kubernetes Engine uses Container-Optimized OS (COS) by default, an OS purpose-built and optimized for running containers. COS is maintained by Google in open source. Automatically upgraded components On GKE, masters are automatically patched to the latest Kubernetes version, and you can use node auto-upgrade to keep your security up to date by automatically applying the latest patches for your nodes. Customer-managed encryption keys Users in regulated industries may need to be in control of the keys used to encrypt data stored in GKE. With customer-managed encryption keys, one can pick a key from Cloud KMS to protect your GKE persistent disk. Application layer secrets encryption By default, Kubernetes secrets are stored in plaintext which are encrypted by GKE. Workload Identity Your containerized application probably needs to connect to other services. Workload Identity uses a Google-managed service account to share credentials for authentication, following the principles of least privilege for application authentication. Managed SSL certs In GKE, HTTPS load balancers need to be associated with an SSL certificate. You can obtain, manage, and renew these certificates yourself, or have Google automatically obtain, manage, and renew those certificates for you. Latest Trends & Players in Container Security: Security will continue to be a key issue because of shared operating systems. Significant vulnerabilities impacted Kubernetes, causing IT operations to reconsider their deployments. This is another reason why Google will continue to attract more users with their secure and scalable offerings. Google is delivering ease of use, reliability, and less risk around containers. Having the market presence and global reach, infrastructure partners with the scale of Google will provide the necessary resources for containers and orchestration to truly reach the next level of market performance. More specialized container security software has also been developed. For example, while Twistlock offers software that profiles a container's expected behavior and "whitelists" processes, networking activities, and even certain storage practices, so that any malicious or unexpected behaviour can be flagged. Polyverse takes advantage of the fact that containers can be started in a fraction of a second to relaunch containerized applications in a known good state every few seconds to minimize the time that a hacker must exploit an application running in a container. References   Santosh Harinath Santosh Harinath is the GCP lead for Cloud Practice. He has diverse IT experience spanning 22 years. He has worked with global IT giants like Novell, IBM, Telstra & currently works with Wipro. Santosh has been involved in large DC sizing, migration & optimization deals. He has rich cloud experience in sizing & setting up of the colocation, PVT & Public clouds. He holds a BE in Electronics, Masters in Management from IIMB. Santosh is also a certified professional in GCP, AWS, Azure, VCE, Softlayer, CNE, CCNA etc. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network

Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. ===================== ----- Arcticle source ----- https://www.wipro.com/infrastructure/how-to-build-the-enterprise-of-the-future/ ----- Contact Wipro Please fill the required details to access the content How to build the enterprise of the future April | 2021 Cloud adoption is getting tricky. With so many choices, it's easy to make a decision that could set you back months. But with some insider knowledge, you can chart a clear path to success. "Building the Enterprise of the Future," a new report from Wipro, highlights what enterprises need to know to break free from traditional operational perimeters and access the boundaryless world of partnerships and accelerated growth. You'll learn simple ways to evaluate your cloud needs and build business resilience by examining essential trends, platforms, and services for 2021. With all the disruptions caused by COVID-19, businesses need solutions that will outlast the pandemic. If you're looking for a long-term strategy, one that will balance business change with operational stability, then this is for you. =====================

Augmented Reality is No Longer Only about Field Service

----- Arcticle source ----- https://www.wipro.com/infrastructure/augmented-reality-is-no-longer-only-about-field-service/ ----- About the Author Contact Wipro Please fill the required details to access the content Augmented Reality is No Longer Only about Field Service April | 2021 In a highly competitive environment, customer service is the key to success in any business. Uninterrupted and efficient services, particularly in the case of industries like manufacturing, telecom or energy, are critical. The maintenance of assets and critical equipment has a direct correlation to the provision of these services. And these two synergistic aspects of service and maintenance further impact the performance, productivity, product quality, and eventually, customer satisfaction. However, service and maintenance are also resource, time and cost intensive. Today, cutting edge, innovative and disruptive technologies such as automation technologies, Internet of Things (IoT) and augmented reality (AR)/virtual reality (VR) have enabled a paradigm shift in visibility, efficiency and profitability while maximizing uptime of critical devices and machinery. The potential for augmented reality According to research by Grand View Research, Inc., the global augmented reality market size was USD 17.67 billion in 2020. It is estimated to reach USD 340.16 billion by 2028, with a CAGR of 43.8% from 2021 to 2028[1]. PwC estimates that AR and VR have the potential to boost global GDP by USD 1.5 trillion by 2030[2]. With the new normal setting in after the COVID-19 pandemic, the demand for remote assistance and collaboration to improve workflow management is increasing. AR-based applications can help in tracking, identifying and resolving technical issues. In addition, the growth of smart phones, wearables, smart glasses etc. is enabling the adoption of AR for technical teams as well as customers. AR and VR in field

services Imagine a scenario where a technician is responding to a customer complaint about a specific equipment. The L1 or L2 technician assigned is not necessarily the expert. They may have to refer to a manual, check with an expert or return for another visit after consulting with an expert in the organization. The expert may also need to be called upon to provide services if the problem is not resolved. All this takes up time and cost. With the help of an AR headset, the technician seeks the help of the expert. The expert, present at a remote location, visualizes the overlay of the equipment and guides the technician in real time to resolve the problem. The overlay can be made up of video or audio recordings, manuals or other information that can be made readily available to the technician on the job. AR has created a perceptual reality that the expert is able to visualize. This saves cost and time of multiple visits or employing higher number of experts. In turn, it also boosts customer satisfaction as the issue is resolved quickly with minimal interventions. AR/VR platforms transform field services by enabling hands-free, offline/online viewing of workflow instructions for training, maintenance, and inspection. These applications enable novice workers to connect with a remote expert who can guide them in performing the workflow better. In addition, they can: For industries with high requirement of field services, the use of AR-based solutions offer several benefits – increasing worker efficiency, accelerating issue resolution time, reducing travel expenses and minimizing costs, and increasing the number of tickets handled. Post the pandemic, the potential for AR has increased manifold. Social distancing and lockdowns have severely hampered field services. AR-based applications can help prevent physical interaction for service calls and training. They enable companies to diagnose issues remotely and deploy expert resources with AR-based applications only for complex in-person jobs, thus reducing the risk to the employees and customers. Companies can diagnose issues remotely to prioritize operations and reserve their expert resources for AR-assisted service to new technicians and more complex in-person repairs. Research has indicated that with an average of around 84,000 service incidents per month[3], over 40% require an in-person, on-site dispatch to resolve. Augmented reality has reduced human errors and unnecessary calls significantly, for better and faster task performance. Yet, the adoption of AR remains untapped. The Strategies For Growth℠ 2019 Field Service Management (FSM) Tracking Survey[4] revealed that only 13% respondents were using AR or VR in their field service operations, while about 34% were likely to incorporate the use of AR and VR in the next five years. Benefits of AR applications across industries With an evolving business landscape, shifting customer preferences and high competition, it's easy to imagine how AR/VR technologies have found a place across several industries. And the use of AR is not just limited to field services. It has expanded to various other operations, reducing downtimes, improving services, reducing costs, and enhancing productivity. Let's take a look at some use cases. In the manufacturing industry, AR can ensure efficient operations by reducing production downtime, quickly identifying the problems and keeping all processes functional. A classic example is the aircraft manufacturer, Boeing, which has deployed AR to enhance productivity and reduce errors in their operations. The company uses several devices from tablets to Microsoft's HoloLens to Google Glass, which help to keep workers hands-free with their eyes on the job. They have also leveraged Upskill's Skylight software to reduce wiring time in some aircrafts

by 30%[5]. In addition, AR is a valuable asset in training of employees in the manufacturing industry. While in person training is challenging in these times, there is also the element of safety while training for critical machinery. Deploying the use of wearables or tablets can easily help in training. Telecom companies typically have towers and other equipment in remote areas. The use of AR can help in planning equipment inspections, which require highly skilled and expensive professionals. With the help of AR, the inspection can be carried out remotely, thus saving time and costs. In addition, AR-based applications can also be deployed to improve overall equipment performance with regular pre-determined inspections. Telecom giant, Vodafone's Dutch arm, VodafoneZiggo, first piloted remote customer assistance technology powered by artificial intelligence (AI) and AR. Following this, Vodafone UK replicated the use of the AR platform, resulting in a 12% improvement in first call resolution (FCR) and a 68% improvement in customer satisfaction[6]. Field support is a critical service criterion for the utilities sector. However, there are several diverse use cases for AR across the utilities process value chain. These include: assessment and restoration during storms/outages, visual inspection of vegetation on their transmission and distribution lines, construction or new connection of underground gas pipeline, and seeking expert help or collaboration with other crew members during maintenance onsite. AR can significantly help in training novice technicians and help utilities overcome the challenge of an ageing and retiring workforce. AR devices have come a long way and now meet the intrinsic site requirements related to safety and environment - a critical need for utilities. AR has the capability to completely transform the way healthcare is rendered. It can dramatically improve the quality of patient treatment, and enhance the performance of medical professionals. AR is not only changing the way doctors learn about the human anatomy, but also helping them diagnose patients more effectively by overlaying CT scans and other imagery onto a patient's body. AR glasses allow surgeons to perform complex surgeries that once required monitors and endoscopic cameras. Mayo Clinic, the global leader in medical care has recognized the growth of new and disruptive technologies in the world of medicine. To address the unmet needs of patients, providers and the health care system, Mayo Clinic Cardiovascular Medicine formed the Virtual Reality Innovations Group. Researchers in this group explore the application of these innovative technologies to improve patient care. Augmented reality has proven to be significantly beneficial in several industries. AR technologies in education have helped redefine learning methods, especially those for differently abled children. Museums are using AR-based applications to make the experience more informative and enjoyable at the same time. The automotive industry has long been using AR. Back in 2015, Hyundai launched the augmented reality owner's manual app[7]. It was their version of the traditional owner's manual, allowing consumers to use their smartphone or tablet to get information on repairs, maintenance and other vehicle features. The use of AR for military training and combat exercises is well known. It is being frequently used to enhance training, provide situation awareness, and ensure safety. AR and VR: The technology of the future With COVID-19 and the limitations imposed by it, the adoption of AR and VR is accelerating. These technologies are rapidly changing the way we live and the environment around us. Their rapid evolution also means that they will perhaps be something completely different even 5 years down the road.

Research has indicated that there will be approximately 2.5 billion AR-capable devices (smartphones and smart glasses) -- by 2023, and around 30 million VR devices (including mobile, standalone, console and PC-based). The growth in AR is expected to be higher, with its applicability across a wide spectrum of industries. Moreover, AR provides an overlay of features onto the real world, compared to VR, which simulates the environment. Nevertheless, the specific use cases for these two technologies have tremendous potential to enhance customer satisfaction, improve training quality, reduce manpower costs, and ensure safety of service providers. We build augmented reality solutions that have the potential to redefine your business and improve efficiency, accuracy and user experience. For details, connect with us on ask.cis@wipro.com References Amalrani Meenakshi SK Solutions Architect - IoT, Cloud & Infrastructure Services, Wipro Meenakshi has over 15 years of experience in presales, technical consultancy, and product delivery of IoT solutions. She plays a key role in the IoT initiatives across multiple industries. You can reach Meenakshi at amalrani.meenakshi@wipro.com =====================

2G/3G is Shutting Down. You Need an Effective Strategy to Migrate IoT Devices to New Network

----- Arcticle source ----- https://www.wipro.com/infrastructure/2g-3g-is-shutting-down-you-need-an-effective-strategy-to-migrate-iot-devices-to-new-network/ ----- About the Author Contact Wipro Please fill the required details to access the content 2G/3G is Shutting Down. You Need an Effective Strategy to Migrate IoT Devices to New Network April | 2021 Change is inevitable. Mobile Network Operators face the constant need of upgrading the network to support the rise in global mobile data usage and increasing traffic enabled by emerging IoT applications.   Many operators across the globe have already announced shutdowns of 2G and 3G networks and some of them have stopped supporting 2G networks. The entire landscape of cellular connectivity is changing with the sunset of cellular networks and the continuous growth of 5G networks. Enterprises worldwide still use 2G and 3G for various IoT use cases and applications. For these businesses, the questions today are around the life expectancy of those networks, how long 4G LTE networks will be viable, and if 5G will mature soon enough for their needs. Impact of 2G and 3G sunsetting on existing IoT deployments More than 50% of cellular connected IoT deployments today are 2G or 3G. Changing the communication module of IoT devices due to network sunset is challenging, and requires investment in people, cost and time as it may force hardware modifications or revisions. If an organization's existing IoT deployment is based on communication modules that is designed to use 2G or 3G, then sunsetting can cause many device compatibility problems. The IoT deployment has to be reconfigured to support newer cellular based technologies. Transitioning to new networks Before making tough decisions, enterprises must do a detailed and thorough review of the inventory of their connected device offerings. They need to consider these factors for

transitioning the existing IoT deployment based on 2G/3G network: After evaluating these factors, enterprises must prepare a comprehensive plan for phased migration of devices in the existing IoT deployment to new network. The approach has to be based on minimizing the cost of migration with minimal disruption to existing operations and long-term implications as cellular networks continue to evolve. Making the change with the right migration strategy No matter what approach is considered in transitioning to the new network, it is important to consider deploying eSIM technology based SIM. This will ensure your solution has connectivity for the entire lifecycle and will also provide you the capability to change connectivity provider without needing to physically swap SIM cards for always-on connectivity through a carrier-independent over-the-air platform. It is also important to consider implementing a solution that supports remote configuration and firmware updates of devices. The aim is to minimize the need for costly site visit, truck rolls and professional services that can have a huge implication on cost of migration and maintenance activities. Are you prepared for the 2G/3G sunset in order to avoid blackout and business disruption? Wipro will help make your transition seamless. For more details, connect with us on ask.cis@wipro.com Aravind Sorake, Senior Architect - Cloud & Infrastructure Services, Wipro Aravind has industry experience in the areas of Consulting, Business Development, Pre-sales, Solution Design and Software Development. As an experienced IoT and Smart Cities professional, Aravind has worked extensively with companies around the globe in providing innovative and cutting-edge solutions. Aravind has special interest in cellular communication technology trends and IoT. You can reach him at aravind.sorake@wipro.com =====================

Adaptive Governance to Thrive in an Ever-Changing Digital Ecosystem

----- Arcticle source ----- https://www.wipro.com/infrastructure/adaptive-governance-to-thrive-in-an-ever-canging-digital-ecosystem/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Adaptive Governance to Thrive in an Ever-Changing Digital Ecosystem April | 2021 Abstract: In the 1990s, the third industrial revolution (sometimes referred to as the Digital Revolution) gained prominence, with telecommunications, automation, and digital electronics providing significant breakthroughs. The growing power of the internet, information, and computing made it a pivotal decade for the years ahead. However, IT was still a spectator to the business strategy due to limited contributions to business value. Times have since changed. Today, IT, once an auxiliary behind-the-scenes function for the business, has catapulted to the center of every company's transformation goals, driving business disruption and innovation. Add the Cloud to the mix, and you have a protagonist in this transformation story. Not only does the Cloud convert buzzwords like agility, customer experience, scale, and cost efficiencies into action, it also ties in very closely to business objectives as an able partner

for success. Consider Volkswagen who, through its partnership with AWS, is implementing the Industrial Cloud to bring its production and logistics platforms into the Cloud. The platform will aggregate data from all machines, plants, and systems in all factories to integrate more than 30,000 locations1 In recent times, cloud transformations have been structured and delivered by the Cloud Center of Excellence (CCoE), which leverages the governance function to ensure that the cross-functional organizational staff can drive adoption of the Cloud guiding principles through the overarching framework. A key area where the CCoE needs more power to wield the Cloud baton is countering the ever-changing market dynamics, which nascent Cloud organizations cannot decipher. The first of this two-part point-of-view series looks at ways to address this issue. Adaptive governance: What does it entail? Adaptive governance provides a flexible and responsive governance framework that helps align with fluctuating external environments – with seamless business and IT interconnections, processes, risks, structures, and stakeholders woven in. The focus is on the current and evolving view of the industry, competition, and external market forces. This governance model keeps the CCoE transformation unaffected by dynamic environments and enhances the Cloud adoption rigor. It is time for elevated conversations around sustained business improvements and growth. Governance needs not just to be fit for use and fit for purpose but also be fit for the future. It needs a dynamic outlook to survive and thrive amidst the uncertainty, complexity, and interconnectivity of the global business environment. Organizations must improve resilience and prepare for disruption if they want to remain relevant and deliver value for shareholders and stakeholders. While a standard governance model can bring awareness and service adoption, adaptive governance drives competitive advantage. Evolution of governance Historically, IT governance traces its genesis to the early 1990s. It was spun off as a derivative of corporate governance and was positioned primarily to link an organization's strategic objectives, business goals, and IT management. It has broad connotations and interpretations across the business space2 Primarily, IT governance is a framework that provides a structure for organizations to ensure that IT investments support business objectives. A set of policies, procedures, and guidelines keeps the business and IT spaces aligned and informed of the best use of investments (in processes, people, and technology) to further organizational goals. In the business technology landscape, multiple interests need to be factored in: shareholders, customers, competitive interests, government, and advisors. If set up and executed correctly, governance leads to increased agility in deploying solutions, better business value, and a tight cost structure. Often, one of the most noticeable areas where governance execution fails is the explosion of costs through overruns and penalties. Consider the case of Facebook, which incurred $5 billion in penalties for privacy violations from its partnership with Cambridge Analytica3. A well-defined corporate and IT governance strategy offers a better understanding of risks, regulatory policies, and requirement adherence. How a Cloud Center of Excellence helps customers on their Cloud journey A Cloud Center of Excellence (CCoE) helps an organization adopt a Cloud-first and Cloud-native approach. It ties into the organization's vision and provides the direction to the Cloud. The CCoE provides the structure and governance across different customer landscapes, complexities, expectations, and maturities. It also helps uncover deeper issues and challenges that need comprehensive thinking and

execution, like advocacy, building a Cloud-aligned culture, promoting innovation, scanning for opportunities, threats, and remediations. Building a CCoE and advocating the Cloud agenda across an organization is not easy. Strong sponsorship from the leaders – not just from IT but from Finance and each business line – is needed. Typically, many transformations do not take off or meander because the value delivered is not clearly outlined to the organization, making the transformation a leap of faith. What can make this leap of faith a leap of conviction is leveraging a governance model that can define and refine the cloud objectives, setting the appropriate metrics that align to outcomes, and rigorous tracking and course corrections to achieve them. Discrete and adaptive governance Discrete governance centers around static and siloed elements and has an internal focus on an organization's interconnected functions. It manages to work well with smaller-scoped Cloud engagements that are either just starting or are localized in the organization. Their impact on Cloud transformation journeys is limited because the cloud journey has many moving parts: the internal workings of the organization, the external market forces that demand a quick and scalable move to the Cloud, competition trying to seize an early mover's advantage, and customers needing features quicker than the changing seasons. Table 1 outlines the differentiating parameters between discrete and adaptive governance.   Parameters   Discrete Governance   Adaptive Governance Synergy Builds the governance function in silos. Has limited synergies. Provides a tactical perspective. Builds synergy between multiple Cloud initiatives and has a well-rounded view to scale effectively. Has a strategic perspective. Suitability Suits transformation programs that have standard processes, delivery mechanisms, and smaller groups. Struggles to provide optimum results when overlaid with many external groups, themes, and objectives. Suits large Cloud functions and company-wide initiatives.   Better suited to navigate ambiguity and complexity. Agility and Efficiency More efficiency-focused than agility-focused; less agility to change tracks. Efficiency and agility focused. Able to move faster and change tracks as needed. Advocacy Advocacy is limited to granular objectives and, in many cases, is limited to tech with tools and platforms. Advocacy is better with key, quick wins in a dynamic environment. Also helps recover faster from failures. Business Outcomes and Value Delivery Measures and delivers against existing metrics and objectives. Can define and refine business objectives based on expected outcomes. Empowers business for decision-making; investments with value-added solution enablement. Continual Improvement Based on after-the-fact feedback. Reactive to changes. Anticipative and proactive, based on continual re-scoping of CCoE needs. Provides a governance for governance model that is intended for continual improvement. Better suited for auditing compliance and performance. Cloud Maturity Progression Formalizes standards and functions and provides Cloud value. Matures and grows the Cloud organization; sustains and enriches cloud value. Innovation Centricity Less innovation-centric and needs significant effort and investment to innovate; risks adding inefficiencies. Closely ties into tech innovation themes to deliver, measure, and enhance Cloud value. Demand Management Limited and ineffective demand to opportunity translation. More cohesive; utilizes enterprise architecture-led business demand and tech enablement. KPIs and Metrics Measurement using static key performance indicator (KPI) scorecards have less traceability to the expected outcomes. Effective,

clutter-free key performance indicator (KPI) scorecards with actionable data points suited for current and evolving business outcomes. Table 1: Differences between adaptive and discrete governance Our next paper will further explore how to align with an emergent strategy to drive better business outcomes, empowering the Cloud Center of Excellence (CCoE) to drive digital transformation. We will also talk further about the adaptive governance model and how integrating adaptive governance can deliver results. References Nikhil Warrier Cloud Consulting Partner Nikhil Warrier is a Cloud Consulting Partner with Wipro's iCORE Consulting group and advises customers in their cloud strategy, governance, and operating model transformation journeys. He is in continued pursuit of creating value across the business and technology continuum by converging business strategy with technology enablers. He can be reached at nikhil.warrier@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Aligning with an emergent strategy to drive better business outcomes, empowering the Cloud Center of Excellence to drive digital transformation

----- Arcticle source ----- https://www.wipro.com/infrastructure/aligning-with-an-emergent-strategy-to-drive-better-business-outcomes-empowering-the-cloud-center-of-excellence-to-drive-digital-transformation/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Aligning with an emergent strategy to drive better business outcomes,empowering the Cloud Center of Excellence to drive digital transformation April | 2021 Setting up Cloud transformation initiatives in an organization takes work. It is even tougher to get it going and growing. Delivering a successful Cloud transformation needs to focus on value. There is a need for standardized value delivery with quicker prioritization (and de-prioritization) of Cloud workstreams. Often, some workstreams begin in multiple pockets and in different orders of magnitude, all of which need to be transparent to each other and must orchestrate together. Employee and customer experiences through incremental and consumable changes in action become crucial to building on the momentum. The progress serves to propagate value and awareness across the larger organization. Throughout the adoption path, an alignment to business and IT objectives is required for better benchmarking, traceability, and value

realization This paper delves into how an organization can increase Cloud maturity, scale, and responsiveness to the expected business objectives. A key element of adaptive governance is a scaled agile framework (SAFe) that helps the CCoE scale the organization's cloud transformation journey. A CCoE aligned to an adaptive governance model needs an underlying agile framework to transform the Cloud agenda from the individual team level to portfolio and then to the program level. SAFe combines agile and lean system thinking practices, delivers enterprise Cloud programs of value, helps align business and customer context, and widens the scope of functional planning and value delivery1.   The Adaptive governance operating model The operating model for adaptive governance is structured around quickly understanding and navigating through decisions that impact business outcomes. Business environments undergo constant changes due to external forces, which include newer industry regulations, competition entering newer markets at a faster pace, advisors with newer projections for the overall industry, and some industries taking a bigger hit than others during a crisis (the travel and hospitality industry, for instance, during a pandemic). Organizations need to be open to changes, able to strategize and modify directions, and accelerate on demand to ensure that their market advantage is sustained. Adaptive governance provides the framework and the models that can align to internal and external changes. It can also identify areas needing a change in strategy and execution to ensure that business outcomes are met and exceeded and modify the transformation charter accordingly for the future. Some governing elements of the framework are listed below: The scaled agile framework provides stability and structure. Another critical constituent is the availability of current and accurate organizational data – interconnected with business and IT – in the form of business and IT dashboards. The data's recency and accuracy are paramount to ensuring that every milestone is measured, captured, and understood. There is a need for robust data architecture to convert data into information and then to insights. The four types of analytical categories listed below provide details: The next part of the model is the information correlation plane. Data from the business processes, applications, infrastructure, security, and cost dimensions are captured using automated tools and systems and correlated further. The integrated information feeds into the adaptive governance maturity assessment model and helps provide recommendations to revise the business and technology charter as needed. This process helps in driving business outcomes and ensures that the required business value is provided. Adaptive governance maturity assessment and the journey toward actionable results Evolving and driving business values and outcomes need synergies across businesses and the application-infrastructure layers. These synergies need to manifest across both the strategy and operations phases. Defining the expected business value helps determine the proper business outcomes for the organization. These business outcomes then translate into organization-wide metrics that track and measure the outcomes and position them for success. The metrics / key performance indicators (KPIs) that are thus created are more aligned to the business and help measure vital factors impacting the business. It is important to note that metrics are not outputs and are only a means to an end. The validity of the metrics is vital, and they must be made actionable, leveraging the adaptive governance maturity assessment. Adaptive governance maturity assessment The adaptive governance

maturity assessment helps drive the metrics into action. Across the entire cloud organization, through a series of contextualized questionnaire responses, the maturity of the organization is classified into the following maturity levels: Each level determines a step toward keeping up with and ahead of changes. As the organization's maturity improves, it becomes more adept at navigating the change. The first two levels – Aligned and Optimized – constitute a discrete governance maturity for the organization, where it is competent to tackle standard scoped deliveries. The next three levels – Integrated, Enterprise, and Ecosystem – bring in the adaptive color to the organization to scale and grow with the Cloud. The Cloud Center of Excellence is typically in a nascent/rudimentary stage during the Aligned and Optimized governance levels. The measurement model also includes tool-led insights and qualitative assessments through comprehensive questions and ratings to deliver scorecards that check for hits and misses. Ratings and predictive analytics help tune the metrics from the bottom up. The operating and assessment models help the organization scale seamlessly between discrete and adaptive governance and encourage further steps to tune and redefine the Cloud charter when needed. Measurement to action Through the metrics-based assessment, there is a clear baseline indicating where the organization stands, and the recommended actions are based on the measurement-to-action principles: Delivering the actions The Cloud Center of Excellence owns the actions prescribed by the maturity assessment model. The group orchestrates the actions through its core and extended functions across the business and tech realms. These could be around a Cloud cost optimization exercise from the cost and economics function, driving business ideation to tech translation through the enterprise architecture group, or moving batches of mission-critical workloads to the Cloud by the migration and transformation office. Scaling Cloud adoption with the adaptive governance framework Scalable Cloud delivery is understandably a huge mountain to climb. However, with adaptive governance by its side, a CCoE can help align and refine its Cloud vision and implement an agile strategy that achieves optimum business outcomes. It is essential to keep the governance function always staffed and not look at it like a SWAT team in a crisis. Retaining an active focus on integrating objectives, metrics, and actions brings a higher chance of success in Cloud transformations. References Nikhil Warrier Cloud Consulting Partner Nikhil Warrier is a Cloud Consulting Partner with Wipro's iCORE Consulting group and advises customers in their cloud strategy, governance, and operating model transformation journeys. He is in continued pursuit of creating value across the business and technology continuum by converging business strategy with technology enablers. He can be reached at nikhil.warrier@wipro.com   Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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An Experience-Centric Digital Workplace: Why It Matters and How to Build It

An Experience-Centric Digital Workplace: Why It Matters and How to Build It May | 2021 A digital workplace experience has gone from being a nice-to-have to an absolute imperative in just a few years. According to Gartner, by 2020, the most critical competitive differentiator for 30% of organizations will come from the workforce's ability to creatively exploit digital technologies1. While the traditional workplace was already in a state of evolution, thanks to widespread digitalization and changing workforce dynamics, the outbreak of the COVID-19 pandemic has pushed the accelerator. Forced to adapt almost overnight to 100% remote working model, most organizations are struggling to ensure consistent network performance, robust security, and employee productivity while simultaneously building business resiliency. Most organizations have a laser-sharp focus on their customer experience but fail to replicate the commitment when it comes to their employees – the starting point of all business outcomes – from efficiency and productivity to profitability, innovation and growth. As organizations prepare to operate in the new post-COVID reality, the employee experience and digital workplace culture will prove to be critical enablers for business resilience, adaptability and agility. This paper discusses why a digital workplace is critical for organizations of all sizes today and how to build one quickly at scale. The workplace experience isn't about technology; employees matter most Contrary to perception, a digital workplace has less to do with technology or architecture and is more drawn towards the employee experience (EX) that drives the workplace experience (WX). Digest this – 66% of employees feel overwhelmed due to difficult and restrictive technology at work. While most employees love their personal tech (mobile apps, smart home devices, etc.), few can say the same about workplace tech. That's because enterprise tech solutions are mostly deployed in silos, have fixed capacity, limited choice (of access, device, etc.), and basically lack the efficiency and convenience that modern users as well as business needs demand. Modern users need integrated solutions that let them work flexibly anywhere, anytime, and on any device of their choice. They do not wish to concern themselves with the backend complexity of corporate IT and that's exactly what IT's aim should be too. This expectation is driving a much-needed change in how enterprises think about the workplace experience. While Technology Thinking dominated the period around year 2007 (tech silos and pipeline-driven tech focus), the rise of Industrialization around 2014 gave way to Services Thinking driven by industrialization of services with the primary goal of optimizing costs. Cut to today and the enterprise scenario is dominated by Platform Thinking with a sharp focus on product and innovation, and

leveraging platform interconnections to deliver superior customer and employee experience. However, the capabilities of an IT management framework designed for an era of desktop computing are not able to keep up with these new demands for convergence of end-user computing activities. CIOs need to embrace a modern IT infrastructure, with more agility than ever today, given that remote working is also adding steam to demands for a converged workplace experience that supports not just Work from Home (WFH) but Work from Anywhere (WFX). Technology experts believe that industry convergence will be the primary trend in the immediate future. Mobile solutions, cloud computing and the Internet of Things [IoT] will gain prominence over the next five years as the workplace is no more confined to a brick and mortar structure Creating a digital workplace is one of IT's biggest challenges: Here's what you can do Creating a workplace experience sans borders requires IT to empower end users to work independently as well as collaboratively from anywhere. This means tailoring the workplace experience to the specific needs of each user group and ensuring that the right information is available to the right users at the right time – quickly and securely. This is a formidable challenge for IT as three key roadblocks stand in the way: #1 Ensuring cyber and information security across the digital workplace: A digital workplace introduces more end points and devices (BYOD), making it difficult for corporate IT to enforce security policies and control access. Most companies let their employees use their own device to access business applications. That's because employees expect a frictionless experience irrespective of whether they use their own or corporate devices. This leads to increased risk of data breaches, theft and phishing scams, causing organizations heavy legal, financial and reputational losses. Clearly, perimeter-based security systems are insufficient in a digital workplace environment that extends beyond borders. 83% of CIOs believe mobile security threats are a major problem2. What to do: Digital enterprises must employ a zero-trust security approach that verifies all aspects of a connection — including the device, its applications, users and networks — before granting access. #2 Making the workplace experience seamless: This requires creating and maintaining the infrastructure and networks to deliver data, applications and connectivity across devices in a frictionless manner. With new-age digital technologies such as IoT, 5G, and AI making significant impact on the way we work, the need for modern infrastructure, high-speed, and reliable network connectivity is soaring. What to do: Digital enterprises must embrace network modernization through Software-Defined Networking (SD-WAN) to drive intelligent bandwidth allocation depending on prioritization of application criticality, and other key factors. This will help pool/virtualize WAN resources, enforce app security, and reduce hardware footprint. Adopting a bi-modal IT operating model also ensures greater underlying flexibility in infrastructure and services. Enterprises must align network to user needs, define performance for apps and users, and enable datacenter grade robust security at the edge of the enterprise.   #3 Driving effective change management: Workforce transformation is one of the biggest factors that can make or break the success of a digital workplace. While effective change management is about getting all functions to support and embrace workplace changes, three departments in particular i.e. Facilities, IT and HR, should be in sync. What to do: Organizations should articulate clearly to employees what the digital workplace will do for them, how it will impact

their day-to-day activities, and how it can help them be more productive, collaborative, and give greater control over how they use enterprise IT services. Share frequent updates on implementation, ask for feedback, and motivate employees to drive greater uptake and adoption of digital workplace tools.   How Wipro's digital workplace solutions are leading the change   Wipro's suite of Digital Workplace solutions extend across the entire employee lifecycle (Pre-hire support, onboarding, employee assistance, productivity & security, as well as offboarding assistance). We deliver persona-driven services with a laser-sharp focus on employee experience and service design. As enterprises adapt to the new normal, our Wipro Live Workspace services backed by solid consulting experience will help define the most logical roadmap for workspace maturity. References Wipro will help you transition seamlessly from a physical to digital workplace environment leveraging our ready-to-use accelerators and frameworks. For details, connect with us at ask.cis@wipro.com. Srinivas Kollur Practice Director, Cloud & Infrastructure Services, Wipro Srinivas has 22 years of industry experience on various facets of infrastructure management services and global work experience. In his current role, he drives pre-sales and solution design of cloud and infrastructure services. He also guides new IP development and monetization. As a subject matter expert on Digital Workplace Services, Srinivas represents Wipro in various internal and external forums to discuss the challenges and opportunities, and help our customers design and drive the transformation roadmap. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =======================

How Airports Can Create Contactless Passenger Experience

----- Arcticle source ----- https://www.wipro.com/infrastructure/how-airports-can-create-contactless-passenger-experience/ ----- Related Articles Contact Wipro Please fill the required details to access the content How Airports Can Create Contactless Passenger Experience May | 2021 COVID-19 has clearly accelerated awareness for safety, healthcare and increased hygiene. It has unfolded new consumer expectations while traveling and created the demand for safer air travel. Airports now need to maneuver through the crisis and come up with solutions to understand passengers' new requirements and manage them effectively. The concept of touchless/ contactless passenger experience has gained traction to ensure adherence to COVID-related restrictions and health concerns. Innovative technologies like touchless body temperature detections, and facial recognition are becoming the new norm. Innovative ideas and technologies are critical to creating tech-savvy airports that deliver exceptional passenger experience

in the new normal. Technologies such as artificial intelligence (AI), machine learning (ML), Internet of Things (IoT) and the convergence of 5G with cloud capabilities are bringing significant transformation to the travel experience. Challenges at the airport Travel bans, partial lockdown and restrictive quarantine measures continue to impede travel industry recovery. Human interactions and inadequate staff at screening checkpoints, baggage handling and security often lead to long queues. These long queues could compromise social distancing norms and lead to health risk. Additionally, most airport infrastructures have maximum capacity utilization, which weren't designed to adapt to social distancing regulations. Inconsistencies in flight schedules due to country-specific restrictions lead to significant delays at the airports. Overcoming these challenges requires operational flexibility, collaboration, and technological readiness. Redefining the airport experience with innovation Touchless technology innovations have become critical in supporting airport recovery. These are enabling a move from manual processes to digital services. Automation and touchless technologies have increased the efficiency of airport management at various passenger touchpoints. New age passenger experience Touchless technology means no manual input of data or in other words, low or no direct contact with systems. Although sanitization measures are implemented, the systems do not need constant monitoring due to lack of direct contact. Passengers are assured of sanitized restroom with robots disinfecting within regular intervals. User-friendly mobile applications help airport visitors to navigate the premises. Many airlines now use mobile apps to communicate with customers on flight details, alerts and status reports. Customizable apps such as Wipro Health CO-VER can be used at airports to track, educate, and alert visitors about social distancing measures. In the context of the current pandemic, the use of immunity passport can prove convenient to passengers. Similar to a paper-based certificate, the digital health passport can be applied to enable human mobility. Passenger time optimization Biometrics and digital identification could become new travel passports to eliminate manually-intensive operations. Facial identification using biometric device could replace a physical passport. You could go straight through the boarding gate with the facial recognition access, allowing time optimization. Applying biometric devices can eliminate long waiting time at immigration checkpoints. With the introduction of biometrics in airports, passengers can benefit from fast-track services. Recently, Dubai Airport1 implemented a new biometric system that uses AI technology at smart gates to prevent passenger clusters, improve passenger time optimization, and to enhance touchless experience. A passenger with machine-readable passport can access the smart gate and proceed. Smart baggage kiosks Self-service bag drop (SSBD) is an automated technology designed to give control to the traveler. Implementing self-service baggage drop-offs can exponentially enhance passengers' experience. This will result in reduced queuing and check-in time and enable stress-free journey. It will allow the passenger to print bag tags, boarding passes and drop-off baggage by using customer-friendly interface. Built-in sensors, cameras, and smart kiosks at the airport will promote substantial benefits to the passenger as well as the airport management. It will enable fewer manual workforce, time optimization, and convenient check-in. With the steady increase of passenger footprint per year, the need for space optimization is a priority. Enhanced lounge experience The use of AI at

airports has the ability to convert data into usable intelligence for improvement in operations and passenger experience. Sanitizing robots and self-service automated stations at the airport-lounge can further promote touchless solutions. It can potentially enhance premium, tailored experience for travelers looking for comfort. Turkish Airlines has recently applied Apple's iBeacon technology that connects with other iOS devices to enable lounge users to access popular books[1]. Similar concepts can be configured to bring about more intelligent and innovative technology to foster user experience across the lounge. Grab, a mobile ordering device used by airports is another example. Passengers can order meals through their own devices with a scan of a QR code without downloading the app and without any human interaction. Smart airports with touchless technology The events of 2020 have plummeted traveler confidence. Technological innovation has lifted some pressure off and restored assurance. Although these innovations enhance safer travel, they do raise questions on personal data security and privacy protection. Stakeholders in the travel industry are finding ways to address these challenges while investing in innovative platforms to enable better customer service. Implementing cloud-based digital transformation in the travel industry has provided a breakthrough in contactless passenger experience. Investing in cutting-edge technologies at the airports can promote sustainability, resilience and efficiency and mitigate future disruptions. Wipro is helping leading airports adapt to the new normal. To know how we can support your transformation journey, contact us at ask.cis@wipro.com. References 1 Future Travel Experience; Dubai Airport introduces facial recognition to fast-track immigration processes; Feb 2021; https://www.futuretravelexperience.com/2021/02/dubai-airports-introduces-facial-recognition-to-fast-track-immigration-processes/ 2 Future Travel Experience; Dubai Airport introduces facial recognition to fast-track immigration processes; Feb 2021; https://www.futuretravelexperience.com/2021/02/dubai-airports-introduces-facial-recognition-to-fast-track-immigration-processes/ cessed March 6, 2021. About The Author Saravanan Palanisamy Lead Solution Architect - IoT, UK – Cloud & Infrastructure Services, Wipro Saravanan has industry experience in the areas of Solution Design, Pre-sales, Consulting and Software Development. As an experienced IoT and Smart Cities professional, Saravanan has worked extensively with companies around the globe in providing innovative and cutting-edge solutions. Saravanan has special interest in Smart Buildings and Retail technology trends and IoT. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Modern Businesses Need Next-Gen SD-WAN

----- Arcticle source ----- https://www.wipro.com/infrastructure/modern-businesses-need-next-gen-sd-wan/ ----- Contact Wipro Please fill the required details to access the content Modern Businesses Need Next-Gen SD-WAN May | 2021 Without a dependable, agile, secure, efficient, and ubiquitous network, it is impossible to succeed in the pandemic-altered world With the emergence of virtual digital infrastructures and hybrid work styles becoming the norm, organizations must have an advanced and secure SD-WAN platform to deliver the wide-area connectivity necessary to operate. Next-generation SD-WAN is becoming a priority with rising demands for supporting the dynamism and flexibility a modern business needs. The most important and impactful characteristic of an advanced SD-WAN is a design that utilizes orchestration, which delivers a single point of control for all aspects of the SD-WAN. Wipro's joint thought leadership paper with Cisco - Upgrading to a New Digital Network that Empowers Hybrid and Multi-Cloud Applications – explores the growing relevance and demand for secure SD-WAN platforms and delves into critical aspects like Wipro has teamed up with Cisco to offer an improved approach to modern SD-WAN deployments. Wipro's #WANFreedom integrates the company's comprehensive lifecycle services for SD-WAN and the highly regarded Viptela SD-WAN solution from Cisco to deliver improved agility, speed, security, employee experiences, and network dependability. For more information, click here.
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What Can Design Thinking Do for IT Operations Automation?

----- Arcticle source ----- https://www.wipro.com/infrastructure/what-can-design-thinking-do-for-it-operation-automation/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content What Can Design Thinking Do for IT Operations Automation May | 2021 Think about your best-in-class experiences as a consumer. From renting an apartment through Airbnb for your vacation to streaming a video on Netflix, it is certain that design thinking techniques contributed to those superior experiences. There is no single definition for design thinking. At its core, design thinking represents a deep understanding of customer's goal, envisaging various possibilities to meet the goal and finally creating innovative solutions to prototype and test. The most widely accepted process of design thinking is from the Stanford d.school which comprises five iterative processes in design thinking including - Empathize, Define, Ideate, Prototype, and Test. How can we apply Design Thinking to IT operations automation? Today, we find that most organizations that have implemented automation are dissatisfied with the outcome and are looking to enhance the impact of automation to gear towards large-scale transformation. Such a

problem statement requires a systematic approach to identify, assess and deploy automation while tracking the value of realization in parallel. Large-scale transformation will not be fully realized unless a scalable approach to IT operations automation is defined. Let us map design thinking process to required automation activities and understand if it helps in quicker realization of value from automation. From the above table, it is evident that Design Thinking principles vastly contribute to facilitate planning of IT operations automation. This human-centric design process helps in shifting focus from individual task automation to end-to-end process automation resulting in large-scale transformation, higher returns and superior customer experience. To know more about how you can start scaling automation projects with design thinking, reach out to us here Priyank Jain Automation Practice Manager – Cloud & Infrastructure Services, Wipro Priyank is an Automation evangelist who is passionate about applying technology to solve enterprise IT problems and helping clients transform their automation journey. He has 12+ years of experience in the IT industry across various domains including Strategy, Business Planning, Automation, GTM, & sales enablement. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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How to build a boundaryless data-driven enterprise

----- Arcticle source ----- https://www.wipro.com/infrastructure/how-to-build-a-boundaryless-data-driven-enterprise/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content How to build a boundaryless data-driven enterprise June | 2021 Introduction Enterprises today face new and ever-growing challenges as unprecedented change drives the critical need for agility and resilience. This change is not only forcing organizations to re-think their whole business strategy; it's fast-tracking digital transformation and the adoption of more agile, secure, and intelligent infrastructures.   IDC recently predicted that in 2022, enterprises focused on digital resilience will adapt to disruption 50% faster than those fixated on restoring existing business/IT resilience practices[1]. So, for any forward-thinking enterprise, building resilience is essential to enabling competitive advantage, which is only achievable with real-time, data-driven insight. By 2023, 60% of organizations will have started to implement DataOps programs to reduce the number of data and analytics errors by 80%, increasing trust in analytic outcomes and the efficiency of Gen D workers. Additionally, 50% of organizations will adopt a "data supermarket" strategy to unify data storage, access, and governance capabilities to deliver a consistent data experience and maximize data value.2 We've explored how

boundaryless data storage and autonomous operation in digital transformation are now the driving force behind the data-centric approach enterprises need to take. Preparing for exponential data growth The COVID-19 pandemic has accelerated data growth globally, leading to a rapid increase in data consumption and fuelling the continued evolution of the Global DataSphere that's dominating the 21st-century enterprise. According to IDC: Monetize and modernize: Data storage ecosystem Enterprises have an opportunity to harness the power of data; it is now crucial to their success. But an old solution can't be integrated into a single server room – data isn't something that can easily be packed in a box. That's where the data storage ecosystem plays a significant role. To harness the true potential, the underlying storage should: Many businesses are on the path to digital transformation to enable agility and flexibility while reducing complexity and time to market. Cloud is increasingly becoming the preferred route for embarking on this journey, but CIOs need the ability to select the cloud that meets specific workload requirements related to data storage performance and services. Wipro's autonomous storage operation powered by Pure Storage accelerates digital transformation with a multi-cloud infrastructure that supports enterprise objectives. It's creating transformational impact with the ability to offer full-scale autonomy, enhanced SLAs, and efficiency: Wipro and Pure Storage®: Driving business outcomes According to IDC, by 2022, strategic partnerships will be formed between 40% of market-leading IT and OT vendors to deliver a holistic solution. For customers, this is set to reduce integration and deployment costs by 20%6. Wipro and Pure are already achieving this strategic partnership to offer compelling, cost-effective, managed environments. Wipro brings leading knowledge and experience in driving outcome-based transformation, from consulting to end-to-end strategy execution with a technology infrastructure engineered as a service in a hybrid cloud ecosystem. Pure brings the simplicity, flexibility, and efficiency to maximize results for enterprise and cloud-native web-scale applications on-premises and in the public cloud. Together, Wipro and Pure give organizations the capability to transform digitally and drive outcomes: improving time to market, achieving the "first time right" approach, improving flexibility and agility, and driving cost optimization. The joint solution provides: Benefits include: Autonomous storage operation simplified with Service Theatre Wipro's Service Theatre is a fully programmable platform that extracts complex technologies and delivers outcome-driven automation assets, which are discoverable and used as managed API. Service Theatre radically simplifies and centralizes automation asset creation with its theatre concept and balances it with an efficient consumption and reuse model that provides new services aligned to changing business demands. This element ensures it performs Day 2 tasks (lifecycle management). Code Orange: Evergreen storage and Wipro - Pure as-a-Service™ The service is built on Pure's flexible consumption models, combined with added solutions to minimize or eliminate the financial impact of change. In this model, customers only pay for the storage they need when they need it, whether on-premises or in the cloud. So as business needs change, budgets can be flexed up, down, or out - with no upfront investments, over-provisioning, and complicated leasing requirements. The simple, agile, and Evergreen platform enables any organization to turn data into intelligence and advantage. Everything's included in the price, so there's no additional capital for refresh in future

years. It's the smartest way for enterprise customers to combine the best of a traditional on-premises storage solution with a subscription to continuous innovation. The advantages Conclusion: Deliver data-driven transformation By 2023, 60% of leaders in G2000 organizations will have shifted their management orientation from processes to outcomes, establishing more agile, innovative, and empathetic operating models[7]. With its comprehensive data management capabilities, Wipro's unique proposition, powered by Pure Storage, enables enterprises to leverage an outcome-driven cloud-native architecture and deliver the following use cases: Multi-hybrid cloud Pure Cloud Block Store™ combined with FlashArray™ allows workloads to be replicated and extended across multiple on-premises, hosted, and AWS or Microsoft Azure public clouds, providing a true hybrid cloud experience. The service is managed centrally with Pure1® and Service Theatre, which offers the flexibility to move data seamlessly. It enables applications to be built and run quickly and easily from anywhere, driving innovation and reducing time to market. Pure as-a-Service complements the service further by offering a single data storage subscription. The 100% OPEX model also means customers only pay for the storage they use. High availability and resilience ActiveCluster™ delivers a proven 6x9s of availability on a single array, so in addition to being extremely reliable, it's also fully integrated with no additional license costs. The Pure-hosted Pure1 is the first-ever Software as a Service replication mediator, enabling disaster recovery without the need for a third data center. Container storage Portworx®, the #1 Kubernetes data storage platform, guarantees that data and next-generation microservices-based applications are secure and available 24/7, without disruption. Enterprises can run any cloud-native data service in any cloud, using any Kubernetes platform for built-in data protection and hybrid-cloud mobility. The combined strength gives customers a simplified, cost-effective, and efficient unified system where data can be managed from anywhere. Reference Imran Ahmed Practice Head Wipro leads the storage and backup domain within Wipro as Practice Head. He was instrumental in industrializing cloud-based vertical-specific solution models for highly regulated environments, focusing on compliances required in multi-hybrid cloud deployments. Imran is a key influencer, addressing challenges and de-risking roadblocks in the client transformation journey, which has led him to introduce Zero Friction Transformation Services for industries to tide over the challenges of implementing a frictionless experience from idea to operations. He has successfully addressed data security, privacy, and localization concerns alongside the overall cyber-defence strategies of enterprises. As a thought leader within the cloud and data center industry, he has presented in various CXO-level forums and events. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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A New Era of Connectivity and Sustainability with IoT

----- Arcticle source ----- https://www.wipro.com/infrastructure/a-new-era-of-connectivity-and-sustainability-with-iot/ ----- Contact Wipro Please fill the required details to access the content A New Era of Connectivity and Sustainability with IoT July | 2021 As global economies chart the course to reverse the fiscal downturn caused by pandemic, a massive shift in consumer behaviour such as rapid adoption of digital outlay and a collective overdrive into conscious and ethical buying decisions, will place sustainability at the center of all global recovery plans. Adoption of emerging technologies such as IoT, AI, ML, and 3D Printing to synchronize business cycles with larger sustainability goals will drive the recovery plan forward for both, governments and businesses. This paper explores how smart and futuristic technology solutions have a pivotal role in ushering in the new normal without compromising the environmental benefits generated during the pandemic, such as improved air quality and ecological restoration. Early adoption of these technologies has produced evidence to support tangible business value as well as quantifiable environmental benefits.   =====================

Is Your IT Strategy Delivering the Best Employee Experience?

----- Arcticle source ----- https://www.wipro.com/infrastructure/is-your-it-strategy-delivering-the-best-employee-experience/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Is Your IT Strategy Delivering the Best Employee Experience? Wipro's Device as a Service solution – WaaS360 – focuses on experience to drive right decisions August | 2021 Before one understands WaaS360, Wipro's Device as a Service solution, one would need to know the insights that led us to build this device-focused service from the ground up. In our experience, we have observed that while our clients' endpoints landscape is growing or changing fast, the traditional services around that landscape have not kept up to speed and in fact, have not seen much change in a long time. The number of endpoint options to be managed in a highly complex global ecosystem is increasing rapidly, but there is little to no accountability to ensure good customer experience on these devices. This gets further complicated by the fact that the market is rapidly evolving, bringing with it a whole lot of challenges that are getting more pronounced by the day. This is making an already-uphill task of maintaining good employee experience using legacy services a perpendicular climb. Let us highlight some of the major concerns that plague this arena to understand the gravity of the situation we are dealing with: The state of employee experience When the going gets tough, the tough get going. But concerns have been going on for so long now that the second part of that popular phrase now seems to read

differently. We have been observing that companies are faced with very difficult choices nowadays. Decision-makers are not debating which option is better but rather which option is the lesser of two evils. For example, whether to make upfront capital expenditure and do a big-bang hardware refresh every few years, leaving little cheese for core business activities or to bleed due to a thousand cuts, incurring cost of finance, leasing out hardware, and managing it all (and trying to look happy while at it). Somewhere in all of these concerns and sub-optimal elements, the employee experience went out of focus. Clients earnestly do try various glasses on every now and then to make that picture less blurry, but they are often left wanting for more. Reimagining choice and experience with WaaS360 Wipro's WaaS360 is a genuine attempt to address precisely this fundamental disconnect – how to provide the best choices of the time to our clients while elevating employee experience in a way that makes good business sense. We manage the whole arena under WaaS360 for our clients, providing maximum benefits at an optimized TCO (and succeeding while at it). Customer experience need not necessarily be lost in translation anymore. WaaS360 is not just a bunch of hardware packaged together with some services and it's not just financial re-engineering. With WaaS360, Wipro has built a proposition from the ground up that is greater than the sum of its parts. We understand that the devil usually lies in the details and we are tackling the details head-on when building this custom (which, thankfully, is easy given its modular and flexible nature) solution for our clients. If you were to ask me why Wipro WaaS360, I would answer the following: I'm not claiming that we've solved the 'event X' problem but I can assure you that your company will have more resources for its core business activities while you have a great experience on the devices and services we provide. If you are interested in learning how Wipro is helping our clients achieve their vision of transformation through DaaS, we should talk. Connect with us at ask.cis@wipro.com. Vikram Singh Product Manager – WaaS360 (Worldwide), iCORE–CIS, Wipro Vikram has 8 years' experience in software & Android app development, consulting, business development & product management. Currently, he manages WaaS360 offering globally while helping customers across industries address challenges of workplace & enhance their employee experience. He's an alumnus of IIM Kozhikode and has strong interest in gadgets and latest tech trends. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

The Future of Edge Services Delivery

The Future of Edge Services Delivery Secure Access Service Edge August | 2021 Figure 1: The 3Cs model SASE at a glance A cloud native architecture, SASE is used to deliver connectivity and security services in a complaint manner to an edge estate. Initially coined by Gartner, it was widely accepted within the information technology (IT) and telecom industries. Backhaul connectivity constraints, including latency, are addressed in a controlled manner to ensure the distributed data is secure. SDWAN and SASE are both edge centric solutions, though SDWAN focuses on connectivity while SASE refers to security and compliance. It is essential for both the technologies to work together to make the ecosystem more secure, robust, and seamless to access and consume services from anywhere in the world. Figure 2: SASE core components and characteristics SASE landscape and current market dynamics The SASE model, its end-to-end integrated ecosystem landscape, and its key components and elements are depicted in Figure 3. Figure 3: SASE – End to end landscape view Currently, the SASE market is a crowded space with various technologies and vendors bringing their own points of view. In the near future, great convergence and consolidation is expected. Here are the three types of solution providers and their focus areas: Some of the vendors providing SASE technologies as a whole, in addition to the major players mentioned earlier are Versa Networks, Cato Networks, Fortinet, Aruba, Cloudflare, Perimeter 81. The vendors in this category are emerging technology companies that can offer differentiated value propositions. Analysts' predictions SASE adoption models1 As SASE evolves as a model and framework, and the transformation models require time to mature, the existing models have some advantages before becoming full-fledged matured models. Key approaches for SASE adoption include process, people, measurement, technologies, and strategy. The strategy will be a combination of short, medium, and long term. Parameter Current Models Future Models Benefits Use cases Challenges Currently, there are no industry wide frameworks and standards for SASE because it is evolving and there is a long way to go before we have a SASE with widely accepted, recognized frameworks and standards, measurements, and KPIs. Wipro's role and value proposition Wipro plays multiple roles with respect to SASE, including that of a system integrator, a consumer, and a solutions or strategic partner. Wrapping up SASE is fast becoming an essential model that every company will have to adopt and maintain, as well as follow the maturity curve, until the overall industry governance, framework, and standards are apparent. Working from anywhere without compromising security and compliance is a necessity, so SASE is integral to the ecosystem. Wipro is poised to deliver differentiated offerings through joint solutions created in partnership with established and startup technology vendors. To learn more about how Wipro's solutions and

unique capabilities can help your company achieve a seamless digital transformation, please contact us at sdx-cis@wipro.com Rambabu Kata Senior Consultant, Wipro Rambabu Kata (Ram) is an IT professional with 26 years of industry experience in IT, delivery, architecture, practice, and pre-sales. He has a Bachelor's degree in electronics and communication engineering and a Master's in marketing management. Govindan Kutty Practice Director – Data center & Hybrid Cloud Practice at Wipro Govindan is an IT professional with 25 years of industry experience in IT delivery, solution engineering, and practice development. Govindan currently heads the solution engineering and innovation center. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Wipro Partners with Palo Alto Networks to Deliver Managed SASE

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-partners-with-palo-alto-networks-to-deliver-sase-key-to-enterprise-networks-for-effective-digital-acceleration/ ----- Efficient and effective networks - The bloodline of digital acceleration SD WAN – Accelerate the journey, but don't neglect security Secure access service edge (SASE) – The future of SD WAN and security Wipro's managed SASE in partnership with Palo Alto Networks Connecting safer and better Related Articles Contact Wipro Please fill the required details to access the content Wipro Partners with Palo Alto Networks to Deliver Managed SASE August | 2021 The COVID-19 pandemic has compelled companies to rethink and realign their business strategies. Digital adoption and transformation are not new concepts; companies have been trying to adopt digital technologies in order to scale their businesses for nearly two decades now. However, the pandemic has brought into focus the critical need for companies to be resilient, agile, and secure. 2020, hence, became the year of accelerated digital transformation, with companies now reevaluating their strategies for an end-to-end digital overhaul. A survey by the Boston Consulting Group (BCG) among more than 5,000 respondents indicated that over 80% felt digital was helping them get through the economic slowdown resulting from the COVID-19 pandemic. In addition, the survey also pointed that 65% of the companies expected to increase their investments in digital transformation in the future. The key learning from the pandemic is that digitally mature companies demonstrate growth and resilience by focusing on technological investments. The 2021, Deloitte Digital Transformation Executive Survey revealed that the digitally mature ones (50% of the survey respondents) were able to improve

profit margins and annual revenues as compared to companies lower on the digital maturity curve. Less mature companies were restrained by legacy systems and the resultant inability to enhance their customer offerings. At the crux of this digital transformation is the cloud. Cloud offers the flexibility, speed, and the ability to experiment with reduced risk, in an attempt to make digital transformation more successful. However, simply moving legacy applications to the cloud will not enable digital transformation. Cloud adoption has to be an integral part of the overall digital transformation strategy and journey. A company's digital transformation journey traverses different phases including goal setting, planning, executing, and managing risks, with the cloud playing a key role in anchoring this journey. The increase in remote working necessitated by the pandemic puts tremendous stress on companies to ensure robust networking technologies, including adequate security measures. It is estimated that nearly a quarter of the global workforce will be working from home at least for some days in the week by the end of 2021 alone, and these numbers are expected to increase further in the next few years. To meet these growing demands of companies, networks must cater to both multicloud and digital strategies. Resilient networks are, therefore, the bloodlines of the digital transformation initiatives across companies today, and network modernization is a critical element in accelerating the transformation efforts. Agility remains a key criterion for the network's capability to rise to the challenges of the new normal. In this scenario, legacy networks are just not up to the task. Companies need to identify areas of automation, underpinned by software defined networks and better security. While cloud adoption entails moving applications to single or multiple cloud platforms, users are distributed across the globe. It is therefore imperative for the public cloud to have a secure, application aware, intent-based network. The growing adoption of the public cloud has placed software defined wide area network (SD WAN) firmly in the spotlight. SD WAN is the integration of multiple wide area network (WAN) tools and products bundled with a single pane of glass management. It is a software-based approach to building and managing networks that connect geographically dispersed offices with software defined networking (SDN) principle of separating the control plane and data plane for the WAN. Companies leverage SD WAN to securely connect branch offices to their corporate networks using the internet or technologies like 4G/5G that connect from anywhere. This replaces the need for traditional and expensive multiprotocol label switching (MPLS) connections, dedicated firewalls physically at the branch, or proprietary hardware. However, the challenge is that SD WAN uses a networking overlay or an SD WAN fabric that doesn't include complete security and access control that companies need to protect and defend their network in a cloud environment. The security still relies on the legacy model of packet routing, forcing it to fit the cloud ready enterprise. This results in manual intensive security operations, which create substantial administrative overhead for networking and security operations teams. In addition, delivery of essential branch services such as security is inconsistent, further adding to cost and complexity across a company, making SD WAN a less than compelling proposition. Cloud adoption, infrastructure automation, and the availability of cost-effective, high performance WAN connectivity, such as broadband and 4G/5G are the three key pillars fundamental to transformation. As companies deploy cloud

and other new age technologies, they gather vast amounts of data, all of which is stored across data centers, public and private clouds, software as a service (SaaS) applications, mobile devices, and many more. However, placing the right security controls for their data, the right access controls for their applications, and configuring the right tools is a challenge. To combat these concerns, companies often use multiple point products to secure web gateways, support application firewalls, and secure virtual private network (VPN) remote access. However, since these products have their own policy management protocols, interfaces, and logs, administrative challenges, in addition to increased costs and complexity, threaten the companies' security posture. Traditional network approaches and technologies can no longer provide the levels of security and access control required by modern digital companies. This is where secure access service edge (SASE) comes in. A SASE solution provides mobile users, branch offices, and other locations with secure connectivity and consistent security across the globe. It offers companies a single, centralized view of their entire network, enabling them to easily identify and track users, devices, and endpoints, applying their networking access and security policies. SASE ensures multi branch and multi cloud network security while connecting users to their applications and data in a cloud environment securely. The shift to migrating data and applications to the cloud provides clear organizational benefits such as lower costs, improved performance, and enhanced agility, but it also presents a set of unique challenges. Legacy architectures with complex and costly security ecosystems limit the visibility of threats and slow down the business. SASE is a model that provides the right path for companies to modernize their enterprise for security, speed, growth, and cost reductions. Wipro's SD WAN managed offering, #WANFreedom, is powered by Palo Alto Networks Prisma® SD-WAN. Prisma SD WAN is the industry's first next generation SD WAN solution that makes the secure cloud delivered branch possible, delivering a return on investment (ROI) of up to 243%. It ensures exceptional user experience with app defined policies, simplifying network, and security operations using machine learning and automation. Palo Alto Networks Prisma Access, a complete cloud delivered security platform that protects all application traffic for companies to safely facilitate secure remote workforces, is seamlessly integrated with Prisma SD WAN. This integration enables companies to transform their networking and security infrastructure while realizing market-leading ROI. This SASE solution combines a global high performance network with the next gen SD WAN to simplify the delivery of consistent security at scale while ensuring optimal work from anywhere experience. Wipro and Palo Alto Networks have combined forces to define a managed service delivered through #WANFreedom and secure Internet access services, to enable companies to embrace digital transformation and deliver cybersecurity success with SASE. Digital transformation, fueled by the cloud and new disruptive technologies, has forever transformed the way companies work. Networks and network security must evolve at the same pace. SASE has brought about the convergence between network and security capabilities, simplifying the adoption of the cloud and the next normal of remote working. Solutions such as SASE become a powerful tool for companies moving forward as workers and networks will be widely distributed, ensuring both agility and security for the company. To know more about Wipro's partnership with Palo Alto Networks in delivering SASE,

please click here About the Author Apurba Dutta General Manager and Global Head for Wipro Network and Infra Security Practice Apurba has over two decades of IT experience, helping customers across the globe in transformation solutions. He has managed business units – P&L, Sales, Delivery -- working with ecosystem partners to modernize the core and help enterprises create digital foundations. In his current role, he works closely with internal and external stakeholders, advisors and analysts, and helps customers fast-track to future by adopting different commercial models (As a Service), innovative solutions, IPs, and network /security platforms. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Sustainability: A Race to Achieve Net Zero with IoT-led Digital Solutions

----- Arcticle source ----- https://www.wipro.com/infrastructure/sustainability-a-race-to-achieve-net-zero-with-iot-led-digital-solutions/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Sustainability: A Race to Achieve Net Zero with IoT-led Digital Solutions August | 2021 Global enterprises are realigning their corporate objectives to reconcile the gap between sustainable operations and their financial goals across the value chain. The drastic shift in attitude recorded in the past decade is an encouraging indicator of the changes that lie ahead. Global enterprises are setting up sustainability goals as an integral part of their corporate strategy and not just as an ad hoc activity to generate a positive brand image. Carbon neutrality and net-zero emission targets are critical milestones that many companies aim to achieve within specified timelines. Striking the right balance between the total contributed emission against the amount removed from the atmosphere is at the core of the net-zero principle. However, approaching this as an abstract concept will not take companies any closer to achieving these goals. Energy consumption and usage distributions largely remain unpredictable due to the complexity of operations and the size of an enterprise. Corporates lack a unified view of their energy footprint across the value chain and often fail to predict an opportunity to conserve energy and reduce emissions. This paper explores the ways smart technologies, including IoT and AI analytics, can enable enterprises to identify untapped potential in reducing their global carbon footprints for a sustainable future. Unified picture of global emissions Scientists and climate experts endorse a rapid and simultaneous adoption of technology-led solutions across different sectors and sub-sectors to

accelerate the drive towards net-zero emissions. A unified view of existing energy consumption and proportional emissions is critical to decarbonize on a global scale. The combined energy consumption of industries, electricity and heat, buildings, and transportation sectors alone contribute towards three-quarters of global emission. This is closely followed by agriculture and cement, and chemical industries through direct and indirect use of fossil fuels. Although the pandemic induced lock downs and restrictions temporarily reduced emission levels, the predicted upward trajectory remains unchanged. [1] At the brink of a climate catastrophe The core reasons for adopting any new technology have always focused on generating business value and augmenting financial outcomes. Decades of such a myopic approach to climate change have brought us to the brink of an unavoidable climate crisis without collective and conscious efforts. The scope for action involves a range of proactive and preventive measures with every stakeholder involved, from individuals, corporate organizations to governments across the world. A mere 1.5-degree Celsius increase in temperature triggers rapid desertification in some parts of the world while drastically altering weather patterns in other regions. In 2019, weather-related disasters started a mass displacement of 24.9 million people in Southeast Asia and some parts of Africa[2]. If the current emission levels continue, over 200 million people living in climatic hotspots will become climate refugees by 2050 due to cataclysmic environmental disasters[3]. Holistic transformation for sustainable growth The UN-mandated integrated approach towards SDG 2030 calls for building a holistic outlook towards several critical issues affecting the planet. The synergy of individuals, academia, corporates, technology, and financial resources is required to reach these ambitious targets. A paradigm shift in the corporate brand perceptions of consumers is pushing enterprises to adopt a well-rounded transformation strategy to position themselves as 'social partners' and not just as another corporate entity operating for profit. This shift in approach is driving critical changes in society's environmental, economic, and social fabric. The focus on climate protection drives, including crucial initiatives such as reducing resource consumption, responsible waste disposal, restoration of biodiversity, and water neutrality, has a cascading effect on the entire value chain of companies for sustainable and environmentally responsible growth. Corporates can leverage smart technologies such as IoT and AI analytics to devise a customized plan that fits their operational needs for a successful net-zero journey. "Net zero Emissions Must Be Met by 2050 or COVID-19 Impact on Global Economies Will Pale Beside Climate Crisis, Science is clear: if we fail to meet these goals, the disruption to economies, societies and people caused by COVID-19 will pale in comparison to what the climate crisis holds in store. And so, our shared responsibility is equally clear: redouble our efforts to recover from the economic and social crisis and get on track to achieve the SDGs [Sustainable Development Goals] and build a sustainable, inclusive and resilient future." – Antonio Guterres, UN Secretary – General Challenges in adopting effective sustainability strategies A responsible corporate citizenship model must go beyond the ceremonial sustainability report publications or half-hearted measures that come with no follow-up actions. Enterprises must demonstrate a clear, comprehensive, measurable action plan that is transparent to all stakeholders, including the customers, employees, and investors. Clearly defined goals within a specified time frame with periodical access to data

and performance metrics should be integral to enterprises operating across different sectors. Initiatives like "Transform to Net Zero" set a clear target to cut GHG emissions by 50% by 2030. The governing principles convert commitments to action plans with focused efforts on data-led innovation, policy engagement, transparency, and accountability. This cross-sector initiative aims to accelerate the transition and encourage collaboration to achieve a net-zero global economy.[4] As one of the founding members of this climate leadership initiative, Wipro is at the forefront of catalyzing the transformation by working closely with policymakers, business partners, and other stakeholders. Digital technologies under the IoT umbrella are predicted to reduce global emissions by up to 15 percent in the next decade – or one-third of the 50% reduction [1]required by 2030 through its customizable solutions and versatile applications. Corporates operating in 'high emission' industries such as manufacturing and oil and gas are leveraging data-led analytics to compose a comprehensive action plan to reduce their carbon emission and related costs. By synchronizing assets, people, and products, cloud -based connected devices can streamline data flow to assess asset performance and product quality with crucial information on equipment health and maintenance status[2]. Digital twin technology can predict malfunction and significantly reduce unplanned downtimes. Deployment of intelligent technologies such as IoT sensors can also communicate and store data in the cloud for an in-depth analysis to develop models to predict any malfunction before it occurs or forewarn the crew of possible repair work. This significantly reduces the costs associated with repairs, production disruptions, or possible workplace accidents due to equipment damage and positively impacts the surrounding environment. IoT and AI solutions have a range of applications that can maximize renewable energy distribution models. Smart grid technologies combined with real-time data inputs can disrupt the production of electricity and distribution to domestic and commercial consumers with an accurate estimation of power usage to predict supply and demand. IoT technology with machine learning capability and AI-backed analytics can make renewable energy solutions like solar panels and wind turbines more efficient and cost-effective. The energy wasted in transmission lines can be drastically cut down with reduced dependence on fossil fuels.[3] Smart farming based on IoT technologies enables farmers to reduce waste and enhance productivity ranging from the quantity of fertilizer utilized to the number of journeys farm vehicles make. This enables efficient utilization of resources such as water and electricity. IoT smart farming solutions are a system built for monitoring crop fields with the help of sensors (light, humidity, temperature, soil moisture, crop health, etc.) and automating the irrigation system. Farmers can monitor the field conditions from anywhere.[4] Policymakers and governments around the world are embracing smart technologies to leverage data insights and cost efficiencies. Building smart cities and special environmental zones using IoT technology could be a game changer for city corporation authorities. Cities consume 78% of the world's primary energy and account for over 70% of carbon emissions.[5] Smart technology will be a key lever in enabling cities to achieve important zero-carbon goals using technologies for effective management of street lighting, waste disposal, parking data, crowd control, public transportation, and utility services. Many multistory buildings and shared workspaces implement smart building management systems such as IoT sensors to control HVAC (Heating, Ventilation, and Air

Conditioning) for better occupant experiences and effective resource management for reduced maintenance costs. The facilities management team often has access to multi-site visibility on occupancy and deep insights into HVAC and energy consumption. Building management technology enables automatic monitoring, managing, and proactively controlling systems to maintain key parameters such as air quality, temperature control, etc. with remote access to buildings. Powerful AI-backed data analysis tools give deep insights and provide real-time data to detect patterns in the energy consumption of an entire facility for customized occupant experiences and higher cost efficiency. A careful step in the right direction The true potential of IoT technology lies in its power to give real-time data from multiple sources with powerful AI-backed analytics that presents enterprise-wide data in a single pane view for an accurate prediction model. If enterprises can predict their contribution to global emission and view the costs associated with it, both financial and environmental, the action plan to offset the emissions can be fine-tuned to meet the combined goal of sustainability and business value generation. Powerful AI-backed data analytics can empower governments and enterprises with critical information to plan a circular economy that focuses on end-to-end activities from production to consumption to achieve optimized output in the most environmentally responsible way. Global economies, industries, corporates, and individuals are at a crossroad to take decisive action. With smart and futuristic technology, net-zero is not an abstract or improbable task, but rather an achievable target that can be reached with systematic actions and long-term plans. Corporations like Wipro are committed to achieving net-zero carbon emission before 2040 by positioning sustainability at the core of their business model. Many global corporates are emerging as influential climate leaders to enable business transformation to accomplish the net-zero targets[6]. The action plan consists of business transformation, collective actions, and systemic change in the way the value chain of each industry operates to create business value. A successful transition from sustainability commitment to implementation relies on the adoption of smart technologies that have the capacity to generate incremental value with deeper insights. Technology will be a key enabler in the race to meet net zero and its versatile application across different industries will help generate positive and promising results with measurable performance metrics in reducing emissions either directly or indirectly. These technology enabled solutions must be used ethically and with total transparency and accountability by governments and corporates around the world in the race to win net zero targets and for a sustainable future. If you are interested in learning how Wipro can help you achieve your sustainability goals, connect with us. Reference Vaishali Deshmukh Managing Consultant, Wipro Vaishali has 15+ years of experience as a trusted advisor. She is responsible for global consulting for IoT and Smart Cities portfolio cutting across verticals. Vaishali has experience in business strategy, opportunity assessment, financial modeling, and business case development. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of

hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

OT and IT Convergence: Why You Need IoT Managed Services

OT and IT Convergence: Why You Need IoT Managed Services August | 2021 Over the past decade, information technology service management (ITSM) using the information technology infrastructure library (ITIL) and other standards has become a widely used, proven approach in most large companies. This helps IT teams to take a structured approach to service management — enhance service quality, increase transparency, boost accountability of IT teams, enable compliance, and most importantly, drive customer satisfaction. Unfortunately, in most companies, operational technology (OT) systems like supervisory control and data acquisition (SCADA), building management system (BMS), human machine interface (HMIs), servers, programmable logic controllers (PLCs), relays, real time automation controllers (RTACs), and other intelligent electronic devices are excluded from the ITSM processes. There are many reasons for this, including lack of skills, tools, and change management. Figure 1: IT and OT systems The processes, policies, and service management agreements for IT systems are not always applied to the OT systems. This poses a challenge for the holistic management of IT and OT functions. Why OTSM is critical for business success Forward thinking global companies are now converging their IT and business processes with a focus on service, enabled by the technology and operations side of the business. This holistic and seamless approach to OTSM is more critical than ever before. To reap the real benefits of IT/OT convergence, people, systems, and processes related to IT and OT need to work in tandem as part of the strategy. The emergence of new technologies and the proliferation of networked OT systems have made it easier today to predict and manage errors, faults, and challenges. IT/OT convergence enables real time decision making, reduction of unplanned downtime, and the most efficient use of equipment and staff in response to changes and problems. Aligning IT and OT systems can also eliminate unneeded hardware and software, reduce capital, and operational expenses. While IT-OT convergence is imperative, policies, processes, tools, and the teams for OT need to be customized to ensure sensitivity to the OT environment. Figure 2: Benefits of operational technology service management IT-OT convergence simplified with IoT Device connectivity through IoT has allowed companies to provide better customer convenience and increase operational efficiency, and this feature can be further leveraged to improve OTSM by the convergence of IT and OT. IT-OT convergence is a step-by-step journey that requires integration of existing silo systems, applications, and end-point devices/controllers for a holistic view, correlating and coordinating incidents, and defining the actions to rectify incidents in an efficient way. Estimates indicate that the total

installed base of IoT devices is 13.8 billion in 2021, and expected to grow to 30.9 billion by 2025. To have an intelligent system, IT and OT information must be converged. Let's consider the example of a utility company. In the event a tower is faulty, OT will take note and notify the monitoring team. The monitoring team may have to visit the tower, without prior knowledge of the nature of the fault. By using IoT and other emergent technologies, the utility company will be able to come up with a list of possible reasons for the failure and the remedy. It's likely that the fault can be repaired remotely without dispatching a team to the site. Integration of the IT and OT systems makes this possible. Further, predictive analytics has a critical role in maintenance activities. Major benefits include reduced time to resolution, increased efficiency of service to customers, and enhanced productivity and life of the device. Additionally, companies can save maintenance costs and reduce management resources. Connecting the dots with Wipro's OTNxT solution OTNxT built on Wipro Smart i-Connect (WSiC™) IoT platform, acts as a bridge and enables IT-OT convergence. The framework helps in building the specific elements needed for each OT environment. WSiC™ OTNxT provides the required protocols, drives, and application programming interfaces (APIs) for integrating OT systems and applications for monitoring the health parameters of OT assets and associated applications. WSIC's inherent ITSM tool can be integrated with existing ITSM tools and alerts identified in the OT estate can be converted into incident tickets, which can be shared with onsite technicians using the workforce management tool with a clear description of the fault identified. There are plenty of ways that your enterprise can benefit from Wipro's OTNxT solution. To learn more, connect with us at ask.cis@wipro.com. Amit Verma Senior Solution Architect – IoT at Wipro Technologies Amit Verma has 19 years of experience in consulting, pre sales, technical delivery, and business development in IoT, and IoT platforms and solutions. He has technical expertise in device engineering, industrial operational technologies, and IoT platforms. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Announcement Blog : Wipro and Palo Alto Networks: Committed to Digital Acceleration with Secure Networking

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networking/ ----- Related Articles Contact Wipro Please fill the required details to access the content Wipro and Palo Alto Networks: Committed to Digital Acceleration with Secure Networking September | 2021 The COVID-19 pandemic and its implications have accelerated the digital transformation journey for many organizations. In the last decade, organizations across the globe have been undergoing a radical shift in the way they operate, thanks to rapid adoption of cloud and online collaboration, infrastructure automation and the availability of cost effective, high performance wide area network (WAN) connectivity, such as broadband and 4G/5G. As enterprises move their workloads to the cloud and cloud-based architectures, they expect lower cost, higher performance, improved agility, and enhanced user experience as well as security. The pandemic simply sped up this process for organizations. While 2020 became the year of accelerated digital transformation, it also underscored the need for organizations to be both secure and agile. The sudden shift in work dynamics like work-from-home or hybrid work models put the spotlight on managing and securing networks. The shifting of devices, services, users, applications and data beyond the enterprise perimeter have reinforced the need for secure access for employees working from home. Enabling this secure remote workforce is the key to support business continuity. And as the cloud becomes essential to run businesses, organizations are now re-working their network to cope with complexities of legacy wide area networks (WAN) and enable connectivity between users, data, and applications residing in the cloud. Secure access service edge (SASE): On the right path to networking Traditional network approaches and technologies no longer provide the levels of security and access control that digital organizations need. The growing adoption of public cloud has placed software-defined wide area network (SD-WAN) in the spotlight. Simply put, SD-WAN is a software-based approach to building and managing networks that connect geographically dispersed offices with the software-defined networking (SDN) principle of separating the control plane and data plane for the WAN. Organizations leverage SD-WAN to securely connect branch offices to their corporate networks using Internet or technologies like 4G/5G that connect from anywhere. This replaces the need for traditional and expensive Multiprotocol Label Switching (MPLS) connections, dedicated firewalls physically at the branch, or proprietary hardware. However, the challenge is that SD-WAN leverages a networking overlay or an SD-WAN fabric that doesn't include a complete security and access control solution that organizations need to protect and defend their networks in a cloud environment. This is where secure access service edge (SASE) comes in; a service model that provides the right path for organizations to modernize their enterprise for security, enabling speed, growth, while reducing their costs. SASE is the convergence of WAN with network security services like secure web gateway (SWG), cloud access security broker (CASB), firewall as a service (FWaaS), and Zero Trust Network Access (ZTNA) into a single, cloud-delivered service model. Wipro's Managed SASE with #WANFreedom SD-WAN, powered by Palo Alto Networks Wipro has been relentlessly pursuing the delivery of managed next gen SD-WAN transformation services. Wipro helps customers secure their connectivity to multiple clouds, optimize their application experiences and accelerate their digital transformation journeys. Wipro's managed Network services solution, #WANFreedom, provides comprehensive lifecycle services, spanning consulting, planning

and design, implementation, and managed services. Wipro's as-a-service model powered by an integrated automation platform creates a cognitive digital networking infrastructure, which is secure and dynamic and has the flexibility to access multi-cloud services. It also supports new applications in its digital transformation journey with reduced overhead. The managed services model allows Wipro to deliver optimal cost-effectiveness and reliability to its customers by re-architecting their WAN, enabling support across distributed applications in a hybrid multi-cloud environment, monitoring, maintaining, and managing services continuously. This drastically improves application performance resulting in increased business productivity, agility and reduced costs for IT. Wipro Managed SASE delivered with #WANFreedom SD-WAN, is powered by Palo Alto Networks Prisma® SD-WAN the industry's first next-generation SD-WAN solution, seamlessly integrated with Prisma® Access, the most comprehensive cloud-delivered security platform that protects the security organization's traffic, applications, and users across all locations. This integration enables organizations to transform their networking and security infrastructure while realizing unprecedented ROI. This SASE solution consolidates all of the networking and security capabilities organizations need into a single cloud-delivered platform, transforming network security and allowing organizations to enable flexible remote workforces. It provides complete security for all application traffic while ensuring an exceptional user experience. SD-WAN coupled with security services are essential for today's digital enterprises to accelerate their transformation journey and stay ahead of the competition. Secure networking solution by Wipro and Palo Alto as Managed SASE Platform is critical for remote work and multi cloud adoption. Wipro's services and Palo Alto's technology innovation are the right fit for purpose platform for customer IT Landscape to enhance application experience for users." Said Apurba Dutta , General Manager and Global Head for Wipro Network and Infra Security Practice. Paving the way for a secure future Through our partnership with Palo Alto Networks, we will continue to enable organizations to embrace digital and network transformation with SASE. We aim to offer a clear strategy and bring the capabilities to help our mutual customers overcome their challenges in the wake of the current pandemic and a radically changed digital landscape. Wipro can help you drive digital transformation with security optimization. Looking for more information? Reach out to us at ask.cis@wipro.com About the Author Apurba Dutta General Manager and Global Head for Wipro Network and Infra Security Practice Apurba has over two decades of IT experience, helping customers across the globe in transformation solutions. He has managed business units – P&L, Sales, Delivery -- working with ecosystem partners to modernize the core and help enterprises create digital foundations. In his current role, he works closely with internal and external stakeholders, advisors and analysts, and helps customers fast-track to future by adopting different commercial models (As a Service), innovative solutions, IPs, and network /security platforms. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the

new approach that is geared-up to address the shortcomings.
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How to Realize the Potential of IoT

How to Realize the Potential of IoT The Need for a Programmatic Integrated Platform-Based Approach September | 2021 The all-pervasive and ubiquitous Internet of Things (IoT) has made an indelible impact on our lives and businesses. The internet connected the world and the emergence of the IoT further consolidated these connections. Gartner's definition succinctly encapsulates its essence – "The Internet of Things (IoT) is the network of physical objects that contain embedded technology to communicate and sense or interact with their internal states or the external environment." The IoT connects billions of devices, giving businesses an opportunity to enhance productivity, efficiency, and innovation. According to Statista, there were 13.8 billion installed and connected devices globally in 2021, and they are estimated to increase to 30.9 billion by 2025, creating a deeply connected web of devices. IoT enables seamless access to unprecedented amounts of data. Even in its nascent stage of evolution, the potential to impact business outcomes is tremendous, and is poised to bring in the next evolution in connectivity. The global market for IoT end user solutions is expected to reach $1.6 trillion by 2025. Today, IoT is no longer just an emerging technology, but a game changer propelled by the pandemic. The IoT is enabling global businesses to build on the foundations of artificial intelligence, machine learning, big data, and the cloud to unlock new possibilities for the future. The Vodafone 2020 IoT Spotlight report, based on a survey of over 1,600 businesses, has revealed that 84% of businesses credit IoT technology for maintaining business continuity during the pandemic. In addition, about three fourths of the respondents now indicate an accelerated adoption plan. Leveraging IoT use cases for business transformation As companies across industries embark on digital transformation programs to engage with the digital economy, they are looking to connect physical assets with the IT ecosystem to increase operational efficiency, optimize usage, and improve the reliability of assets to generate new business opportunities. With sensors connected to the equipment, machinery, and various other assets, the IoT has found its place in use cases across industries. These connected assets are enhancing the potential to generate and utilize data, to leverage analytics, and to provide key business insights across operations and customers. In recent years, companies have also realized the benefits of cost efficiency, security, agility, and collaboration through integration with cloud platforms and edge computing. The manufacturing, energy, retail, logistics, and transportation industries have been the most prolific users of IoT for business transformation. However, to realize the full potential of digital transformation, integration with the operational systems is critical. Let's take the example of a manufacturing unit, where a faulty part has been

detected. The operations teams will resolve the problem based on the current assessment. However, several factors need to be considered – when was the last time the part failed, how was it repaired, what spares were used, was the material available in the inventory, what skills were required, and so on. Also, it is unclear if these were mapped against how critical the part was to the operation and its potential future state. To ensure such predictability, the convergence between IT and operational technology (OT) is paramount. The quintessential IT-OT convergence Device connectivity with the IoT enables companies to offer better customer experience, improve operational efficiency, and reduce time and effort. How can this be made possible? As mentioned before, the answer lies in the convergence of IT and OT, which bridges IT and OT data and platforms in near real time so that information can be harnessed as a virtual single system, enabling visibility and business process rigor across the organization. Today, the data flow between IT and OT has increased significantly, enabled by IoT technologies and other methods such as in memory databases, advanced integration methods, artificial intelligence, machine learning, and analytics. In Wipro's conversations with several customers, we found that IoT decisions were still taken by the business. In theory, this is an ideal approach, given that business owners must focus on solving their specific business problems. However, there are several challenges underpinning this problem-solving approach. Siloed approaches do little to foster organizational development and growth. Each department has access to an incredible amount of data that can be managed, utilized, and controlled much better to increase overall business functions. Siloed working results in a lack of holistic view. Take the example of a retail store. A store manager's focus is on layout planning, increasing footfalls, enhancing customer retention, and so on. The warehouse manager has different priorities – ensuring products are retrieved and stored properly, supply is adequate, etc. Each of these units may have its own legacy platforms, point solutions, or varied solutions built on standard platforms, disparate databases, etc. What's lacking is a holistic approach to ensure that the store runs smoothly in all aspects.   In manufacturing, this becomes even more complex. There are several systems deployed that could include – supervisory control and data acquisition (SCADA), manufacturing execution systems (MES), logistics and supply chains, warehousing systems, among others. Large manufacturing companies are likely to have even 50 or more different vendors for different technologies and databases. Managing these suppliers and ensuring return on investment is a challenge for chief information officers (CIOs). CIO and CDO initiative – A strategic and programmatic approach to IoT Today, CIO and Chief Digital Officer (CDO) organizations are increasingly looking at IoT as a bigger initiative across the organization. A survey by IDG indicated that 67% of CIOs are moving towards a strategic role in the organization, focused on revenue generation and customer centric initiatives. Most organizations have made significant investments in IoT based technologies, but the lack of an organization wide IoT strategy prevents the realization of their full potential. There is a need for a strategic and programmatic approach in IoT initiatives, which means that organizations must take stock of the actions already undertaken and craft a future roadmap for better business efficiency. Here, a platform-based approach plays an important role. This is not to imply a radical change, but rather a consolidation is recommended. Most vendors offer seamless

integration across platforms. For instance, Wipro Smart i-Connect™, our multi-domain, ready to deploy IoT solution can be seamlessly integrated with Azure or Amazon Web Services (AWS), or any other platform. For a CIO, better control constitutes a strong technical roadmap, an effective strategy, and therefore larger benefits from use cases with cross references, cross linkages, and analytics. There are several benefits in adopting this approach. Vendor consolidation can simplify operations and therefore, vendor management. Technology costs will reduce. In addition, technology consolidation of infrastructure with the option of choosing the right base technology will benefit the organization in the long run. Last, but not the least, it will improve the ability to drive outcomes. Today, we estimate that only 30% of IoT pilots see production. This does not imply that the balance 70% have failed; rather they have not been able to realize the envisaged benefits. An integrated approach offers the capability to cut across service components, including systems, processes, data, and applications. While this ecosystem can deliver unprecedented efficiencies and innovation, no single platform can encompass the length and breadth of IoT. While there are a variety of platforms that can handle device integration, aggregation, presentation, monitoring, controls, artificial intelligence, and analytics, what is needed is a holistic and integrated approach to IoT implementation. An integrated programmatic approach is not a one-time event. Nor is it an inexpensive, quick fix solution. Organizations must conduct a thorough cost benefit analysis of their current use cases. Then, they can decide which initiatives to migrate to the new environment. At some point, there may still be a smorgasbord of technologies, databases, and point solutions. The idea is to have a long-term view of the expected benefits that is aligned to the strategic roadmap of the organization. Linkages must be established and integration must take place. Take stock, make your strategies, and move in a programmatic integrated platform based approach. If you are interested in learning how Wipro is helping our clients achieve their vision of IoT-led transformation, we should talk. Connect us About the Author Ashish Khare General Manager,.Cloud & Infrastructure Services, Wipro Ashish heads the Smart City and IoT initiatives at Wipro and plays a key role in consulting for IoT and smart city, covering integration, management, and business operations. With over 25 years of experience, his current focus is on new technologies and solutions, especially around IT-OT convergence. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

AI is Driving a Big Change in Change Management

----- Arcticle source ----- https://www.wipro.com/infrastructure/ai-is-driving-a-big-change-in-change-management/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content AI is Driving a Big Change in Change Management September | 2021 Traditional ITIL-based method of change management is no longer effective. The rapid expansion of application and infrastructure is making manual change management increasingly stressful. Maintaining change records of every object of configuration items is challenging. In a complex IT environment, it is usual to keep manual documentation of planned and approved changes at a very high level. A complete list of the bits and bytes that will be changed is not feasible. Due to the interdependencies between applications, even a minor change can affect the entire business process. Cloud-based changes are even more rapid and difficult to manage round the clock, and around the globe. The current approach: Incident management after change execution Gartner estimates that 85% of performance and availability incidents are the result of change. The incident management process, mostly, starts as soon as the incident is recorded in the information technology service management (ITSM) tool. Technical support teams begin troubleshooting and use logs, performance metrics, and application traces to try and restore service as soon as possible. The support team faces tremendous pressure to restore business service as quickly as possible. The typical approach is to restart the service, restore the last known good configuration, spin a new cloud instance, etc., thus creating a lot of panic, pressure, and business loss. While this approach may restore the business service, it takes considerable time and expertise to root out the problem. If the root cause of the problem is not identified quickly, one is only treating its symptoms. Also, the issue will eventually recur unless a permanent solution is determined and implemented. What is the challenge? The key question is — "what, when, where, who, and why changed?" Tracking and tracing each change at the granular level is difficult. There is no practical way for companies to keep track of all unauthorized changes, which keep unfolding behind the scenes. Every second, thousands of IT specialists modify the system. Manual documentation of planned and approved changes is kept at a very high level since it is not feasible to list every bit and byte that will be changed. What if a machine could track all object changes based on both the previous and modified attributes? This would enable IT specialists to view which specific configuration parameters were modified, which files updated, and which attributes of the database schema object altered. AI for tracking and analyzing changes Currently, only a few artificial intelligence for IT operations (AIOps) tools provide root cause analysis. Most tools are useful only for pinpointing the problem or partially finding the cause, but a human touch is essential. With Wipro business service management (BSM), customers have access to state-of-the-art change analytics solution. AI-based prediction is used to detect risky changes and outages, as well as identify the root cause of incidents. Change analytics offers one of the best ways to

leverage artificial intelligence and machine learning (ML) capabilities, and is your in-house AI-based auditor that keeps track of granular changes. Based on 10 years of research and development, this product comes with many prebuilt algorithms that detect unauthorized changes with risk measures attached. With change analytics, you will experience less incidents, avoid outages, speed up mean time to recovery or mean time to restore (MTTR), and improve productivity. Figure 1 includes a number of key practical applications of Wipro's change analytics solution. Figure 1: Wipro's BSM AIOps solution — Key practical applications The future of change analytics Change analytics will redefine the IT Operations space. Breaking data silos is important to get insights and draw intelligent correlations. Knowing what actually changed in your environment reveals powerful insights for delivering and operating critical business applications. To reduce root cause turnaround time from weeks to hours AI based analytic approach is the demand of every business. To reduce IT pain points Wipro change analytics is the solution. Wipro's BSM AIOps will deliver immense value to your business. For more details, connect with us. BSM practice team Co Author:Sachin Gujar, Senior Architect, Wipro Ltd. Sachin Gujar is a Senior Solution Architect with Wipro's Business Service Management and AIOps tools practice team. He has over 18 years of experience in enterprise end-to-end infrastructure monitoring solutions, tools architecture solution designing, transformation, transitions, and automation. His core vertical clients include financial services, manufacturing, hi-tech, retail, healthcare and services, and energy and utilities. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Reimagine Your Networks with Flexible Cisco Plus Offerings Delivered at Scale by Wipro

----- Arcticle source ----- https://www.wipro.com/infrastructure/reimagine-your-networks-with-flexible-cisco-plus-offerings-delivered-at-scale-by-wipro/ ----- What We Think Contact Wipro Please fill the required details to access the content Reimagine Your Networks with Flexible Cisco Plus Offerings Delivered at Scale by Wipro A Panel Discussion September | 2021 The ongoing battle against the coronavirus pandemic, and the resulting move to digital business, has forced leaders in every organization to re-think their digital transformation strategies. A digital infrastructure is essential and must support the business at all times. IT teams need to develop a strategy that balances agility and resilience for the business. Join host Aaron Goldberg from IDG, and the guest panel featuring thought leaders from

Cisco and Wipro for a virtual panel discussion on Reimagining Digital
Networks. Panel Members: =====================

Reimagining Remote Field Support in the Hybrid Work Era

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Wipro Please fill the required details to access the content Reimagining
Remote Field Support in the Hybrid Work Era September | 2021 The
COVID-19 pandemic brought in many changes and established a new
normal. New age remote working, or the 'hybrid work era' is one of the
markers of the new order. Today, organizations are offering their employees
the flexibility of working from the location of their choice — office or home,
or even a location of their personal preference. This huge shift calls for
digital workspace providers to take the workspace to where the users are,
while maintaining the basic principles of operations which is "system
stability, performance and agility" without compromising its security
perimeters and ease of operations. The ongoing crisis is proving to be a
critical time for field service organizations. To ensure business continuity,
many are turning to innovative technologies to overcome these new and
unforeseen challenges. Challenges in meeting remote system support
requirements With a drastic surge in the number of employees engaged in
remote work, an obvious outcome is the increase in the number of issues
faced by them and need for more support. The safety of employees and
customers, while ensuring business continuity, is top priority for digital
service providers across industries.   Disruption in field-support and device
dispatches: The abrupt shift to remote work combined with zero change to
responsibilities to deliver on time has altered user expectations. For field
services, balancing user expectations of seamless experience sans any
device failure or interruption is a challenge. With stringent restrictions in
place in view of safety, IT enterprises are constrained to rethink the legacy
service systems approach of 'hands and feet support' and 'device
dispatches'. Adverse user experience: Due to the prevailing restrictions,
inordinate delays in dispatches of devices are inevitable. The prolonged
downtime for mean time to resolve (MTTR) adversely impacts the user
productivity, in turn affecting user experience and the organization's
bottom-line. This leaves some pertinent questions to be answered. Is there a
solution available that can minimize hardware breakdowns that contribute
to system's stability and system performance? Even if there is a device
break-down preventing boot-up / start-up, can a solution help fix it remotely?
Can a solution isolate a virus-infected machine from the corporate network
and still troubleshoot it remotely at the Bios level? Lack of preparedness and
dearth of solutions – especially remote-control ones: Most businesses were
not ready for the pandemic-level disruptions, with only 2% believing that
their businesses could run at 'normal' levels, according to a survey by Help
Net Security. The hybrid work era has also brought in a huge demand for
more devices as people work from home. This is quite evident from the 8%
CAGR expected in the global computers market by 2025, which will be a

$500 billion industry. These numbers are indicative of the potential risks and challenges in end user device management. It is widely accepted that end user devices are at the core of workplace technology. However, the non-availability of a remote management solution which can help administrators to remotely troubleshoot / isolate problems that lie beneath the operating system (OS) layer only exacerbate the problem. Leveraging technology for adaptability There is a strong need for enabling innovative ways to provide remote field support in the new normal. The IT enterprises focus should be on providing an integrated and stable workplace with cost effective out-of-band (OOB) remote management capability. Obviously, all these should be provided without compromising the system security and performance that can contribute to enhanced digital employee experience. Leveraging a combination of in-band and out-of-band management holds the key towards effective remote field support. With in-band management, the remote session can be established over the OS layer. However, a prerequisite is that the device needs to be powered on and the user to be signed-in to the device. In contrast, OOB management establishes a remote session at the bios level leveraging Transport Layer Security (TLS) communication. Since this OOB management is provided below the OS layer and runs on the hardware level, it does not require the device to be powered on. Table 1 provides a high-level comparison between in-band versus out-of-band remote management: In-band remote management Out-of-band remote management Devices need to be powered on and connected to a network source (Internet/Intranet) Need active OS running on the device   More features as software controlled   Completely agent based and dependent on active service running under service section of OS   Devices need to be connected to a power source with an active Wi-Fi/LAN   Device need not be running on the OS   Chipset + SW Agent controlled   KVM is in-built at the chip level, so bios level mouse and keyboard remote control is possible   It complements and enhances the traditional remote management tool Table 1: Comparison between in-band and out-of-band remote management Wipro recommends an integrated and stable platform that minimizes system disruptions at the thermal, electrical, and mechanical levels contributing to system uptime and user productivity. This platform benefit users by: Transformative technology with Wipro + Intel® Collaborating closely with Intel®, Wipro has leveraged amalgamated integration via the Intel vPro® platform to enhance its remote field support services, in response to the paradigm shift to remote working at scale and other pandemic challenges. The result is TruRemote, part of Wipro's LiveWorkspaceTM offering. Being a part of the Out of Band remote management services, it allows administrators to remotely take control of devices at the chipset/bios level, as needed. TruRemote leverages OOB remote management to connect to home or office devices from anywhere in the world through wired or wireless connections. This offering is powered by a collection of computer hardware technologies from Intel®, including: The hardware based Intel AMT allows Wipro to provide continual out-of-band connectivity independent of the OS allowing flexibility to fix a broader range of system issues across multiple devices including personal computers (PC) and laptops based on the Intel vPro platform. Used in combination with Intel processors and network controllers, it is a key component in the hardware-enhanced manageability and security strategy. Intel End Point Management Assistant software as part of Intel AMT allows Wipro to remotely and securely manage

devices on known Wi-Fi networks beyond the firewall too. Table 2 illustrates various use cases where Wipro's TruRemote can provide remote field services for devices: Use cases / Sample scenarios resolved using TruRemote Blue Screen on Death Login issues / Laptop booting issues Any ticket that involves Restart, Reboot, Format, Re-Image and Patching Troubleshooting of unattended machines – Sales Kiosks, Stores PCs or Factory PCs Bios password issues – Resolved without sharing the admin password with the users Encryption password issues – Resolved without sharing the admin password with the users Trust relationship error / Domain related issues Isolate virus infected machines from the corporate network and remotely troubleshoot over the internet Table 2: Various errors that can be remediated by TruRemote While the novelty of remote work can be refreshing, it can pale just as quickly when user device issues that require immediate remediation crop up. For example, the blue screen of death or the inability to boot the device due to various reasons. It is observed that 8% to 12% of the overall tickets that are escalated to and resolved by field support Services, at least 25% to 30% can be resolved with TruRemote. In a sample space of 1000 relevant field service tickets, it is a direct cost saving of $ 200K annually. In addition, assuming a productivity downtime of at least 24 hours for a next business day support, this is at least a million dollars in potential savings. User experience and customer satisfaction are realized additionally as intangible benefits. Sheer numbers for the total productive downtime due to varying field services resolution times is staggering. In this hybrid work era, obviously, innovative solutions that minimize device downtime and maximize productivity are the need of the hour. Recognizing these needs, Wipro has created customized and amalgamated integrations for Intel vPro™ Platform with other software components that allow remote support teams to achieve: Seamless remote working COVID-19 has necessitated changes that are here to stay. Barring some industries or services such as healthcare, aviation, manufacturing, etc., remote working is possible. Regardless of when the pandemic subsides, we are likely to witness significant increase in remote working than ever before. The new ways of working have given rise to new technologies that ensure the availability of devices and the flexibility to the remote worker, while ensuring device security. Wipro's TruRemote is a definitive step in that direction. Such technologies will remain relevant for the new way of working besides spurring future innovations. If you are interested in learning how Wipro is helping our clients empower their field support teams, connect with us About the Author Lakshmi Narasimhan Practice Director – Digital Workplace services, iCORE–CIS, Wipro Lakshmi has two decades of experience in Business development, pre-sales, Consulting and Program Management in the IT Infrastructure services domain where he leads engagements with existing client relationships. His role focuses ensuring that Wipro's clients get the value of the larger DWP practice. Lakshmi also manages the Wipro TruRemote offering while helping customers across industries with out of band remote management solutions. This offering is also integrated as part of the larger DWP offerings – Live WorkSpace™ and WaaS360. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions

Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Strategy to Build Secure Multi-cloud Networking

----- Arcticle source ----- https://www.wipro.com/infrastructure/the-strategy-to-build-secure-multi-cloud-networking/ ----- Related Articles Contact Wipro Please fill the required details to access the content The Strategy to Build Secure Multi-cloud Networking October | 2021 The data center is no longer the center of gravity. Today, applications are distributed across data centers, multiple public clouds, and Edge. The current network architecture cannot meet the related performance and reliability expectations. Cloud adoption continues to expand as agile development, swift deployment, and unrestricted scale become the new normal for customers across industries, sizes, and geographies. Distributed hybrid multi-cloud deployment, decoupled cloud services from a centralized physical location can potentially address client concerns around operational control, performance, and geographical location of the services, providing fuel for a new growth engine. This paper discusses how to approach conventional network design, including security and operations, as organizations transform to hybrid multi-cloud environments. Multi-cloud: An effective cloud strategy A Gartner survey revealed that 81% of organizations using the public cloud were currently working with two or more external providers. Further, if you have anything on-premises or at a co-location, this means you need at least 3 networking consoles for configuration, troubleshooting, reporting, analytics, etc. And the improper and inefficient network connectivity would lead to poor cloud application performance and major productivity challenges. The networking world continues to evolve to meet the high cloud and as-a-service demands. Enterprises are searching for better programmability, automation, orchestration, and data center interoperability to build private clouds or cloud-based data centers. By the end of 2022, the number of enterprise network teams using a SaaS-based console to manage data center networks will increase by more than 10 times to over 1,500, according to Gartner's new 2020 Magic Quadrant for Data Center and Cloud Networking. Organizations have entered a new era of application centric computing where they are quickly adopting multi-cloud architectures. They are choosing more than one public cloud service provider, and empowering end users with a choice of the best components for their use cases. It is also helping organizations avoid circumstances such as a single point of failure and vendor lock-in. Not leveraging a multi-cloud approach makes organizations fully reliant on one public cloud service provider for all their cloud-related services, and in such cases, there is a possibility that some of the services may not offer the best value to address specific use cases. Key reasons for adoption of Multi-cloud architecture Choice of service No single cloud service provider poses the best set of services to meet all the requirements of an organization. However, a multi-cloud environment allows

enterprises to select the best service from multiple vendors for their specific use cases. Reduced vendor lock-in A multi-cloud environment allows enterprises to choose the best service from different cloud service providers delivering to their specific requirements. Empowering organizations to choose services from multiple vendors will eventually help them not only to distribute workloads across multiple providers but also reduce vendor-specific dependency. Low latency Latency plays a crucial role while deciding the cloud strategy. Choosing a service and infrastructure closer to users will offer better performance. When an organization plans for multi-region deployment of an application to provide a uniform and seamless user experience, a multi-cloud strategy empowers them to choose the closest services and infrastructure from multiple providers. Improved disaster recovery Multi-cloud environments help organizations to improve the management of their disaster recovery by adding the flexibility to choose redundant servers from different cloud providers. A multi-cloud arrangement allows replicas of applications in two or more clouds. In case of downtime in one cloud, all relevant requests can be redirected to the applications hosted in the other cloud. This arrangement can also be extended to multiple regions to achieve greater resiliency. Challenges of Multi-cloud While multi-cloud deployment becomes the new normal, there are some challenges that organizations face at the beginning of their journey - Figure 1: Top five network challenges in modern multi-cloud environments Network requirements for evolving multi-cloud environments Organizations need to recognize that in order to successfully migrate and optimize applications and workloads across on-premises locations and public clouds, new network architectures will be required. Specifically, a network architecture, that facilitates distribution of applications while maintaining security, configuration policies and ensuring performance, will be essential. To be successful, organizations should partner with providers who deliver: Ideal multi-cloud network architecture Organizations adopt different public cloud and hybrid cloud environments to build their IT infrastructure to leverage larger benefits such as flexibility, performance, agility, and cost savings. However, the major bottleneck occurs while interconnecting workloads scattered across on-premises data center and multiple public clouds. The need of today is an application-aware architecture that offers consistent network services across all technology silos and specifies service details that are fundamentally decoupled from the underlying infrastructure, allowing them to be applied through policy translation administered dynamically by the centralized controller with complete visibility of business applications. The key components of an application-aware cloud-ready network architecture are: Figure2: Software defined Multi-Cloud Network architecture Software-defined multi-cloud network solution benefits The software defined multicloud network solution enables flexibility to address changing needs by adopting "cloud-aware" network architecture with following benefits: Wipro's multi-cloud network services Wipro's highly skilled team of network experts helps customers in their cloud journey with consulting, planning and designing, transformation and management services covering the end-to-end lifecycle. The right path to multi-cloud networking At the heart of the network paradigm is software-defined networking that helps automate network workflows and consistently maintain a healthy information security posture. The other aspects of network transformation include increasing network bandwidth utilization

and establishing flexible but security-conscious controls that support both on-premises and public cloud workloads. Wipro's Software Defined Multi-Cloud Network Solution can deliver secure and simplified cloud connectivity with single pane of glass network management and visibility. There are plenty of ways that your enterprise can benefit from adopting an ideal multi-cloud network. To learn more about how Wipro can help in your transformation journey, connect with us. Click here to download the report About the Author Hareesh P V Senior Solution Architect, iCORE - CIS, Wipro Ltd. Hareesh has 18 years of experience in the field of information technology, networking infrastructure architecting, and technical delivery. He specializes in software defined, traditional and cloud networking areas. Currently, he leads the cloud networking practice globally within Wipro's Cloud & Infrastructure Services. He holds multiple industry leading certifications, which include Cisco Certified Internetwork Expert Routing & Switching Lab Certification, AWS Certified Solution Architect Associate and Microsoft Certified Azure Solutions Architect Expert. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Stepping towards near-zero field support assignments with Wipro's Virtual Walk-In

----- Arcticle source ----- https://www.wipro.com/infrastructure/stepping-towards-nearzero-field-support-assignments-with-wipros-virtual-walkin/ ----- About The Author(s) Related Articles Contact Wipro Please fill the required details to access the content Stepping towards near-zero field support assignments with Wipro's Virtual Walk-In October | 2021 The ongoing global pandemic has irreversibly entrenched work-from-home and hybrid working models into the work environment for the foreseeable future. This has also transformed the way in which the digital workplace managed services are offered to enterprises. Organizations are now gearing up to meet the challenges of these new models and in parallel striving to maintain service delivery standards toward sustaining employee experience. Continued and uncertain lockdowns and the newly introduced social distancing norms have had a lasting impact on field support services resulting in longer resolution times on reported issues as well as support requests. This in turn, has had an adverse effect on user experience. Single window for 100% ticket resolution While remote field support can resolve and remediate several issues, hardware issues and device replacement requests need in-person support. In our experience, 90% of the tickets can be resolved by service desk with in-band remote support capability, while 10% tickets are escalated

to field services. Traditional remote support models can assist in resolving issues related to installation, configuration, updates / upgrades and other operating system related tickets. Other issues that require field support services cause an end-user down time leading to cost overruns and productivity loss and subsequent delays to business outcomes. In addition to coping with these issues, enterprises are hard pressed to manage asset warehousing, shipment and tracking. While a request for in-person support is expensive in terms of cost and time, it cannot be completely avoided. If a request or an issue cannot be resolved by the traditional remote support model, the next step is to request for field services. In a typical scenario, this resolution which could result in a field engineer dispatch or new device shipment can invariably contribute to a downtime of 24-48 hours. This is where the Virtual Walk-In eliminates the need for on-demand field support services. Benefits beyond ticket resolution 'Near-Zero Field Support' for escalation of tickets is the key objective of Wipro's Virtual Walk-In solution, there are several other advantages clients can gain from Virtual Walk-In The various benefits include: Wipro's Virtual Walk-in – a win-win story The Virtual Walk-in is a combination of a range of cutting-edge technologies that has made our promise of near-zero remote resolution of IT issues and requests a reality. The key value propositions of Virtual Walk-In are: Apart from the 4 traditional support channels such as phone, chat, web and email, Wipro's Virtual Walk-In is the digitized touch service support for employees to experience human support virtually. This offering is vastly beneficial to enterprises which are spread across a large geographical area or a cluster with smaller groups of employees or even branches across small towns, retail stores, large campuses with multiple blocks and research facilities where downtime can prove expensive.   The support comprises the following elements: As a result of the integrated solution of Virtual Walk-In the customer can seek to achieve: Would you like to explore how Wipro's Virtual Walk-In can benefit your organization? Deepa Raghavan Solution architect, Cloud & Infrastructure service, Wipro Deepa is a certified change practitioner with nearly 2 decades' industry experience in pre-sales, practice, consulting and transformation in the digital workplace domain. She performs a techno-business role, currently leads the key alliances for LiveWorkspace™ and various product and practice development initiatives. Lakshmi Narasimhan Practice Director – Digital Workplace Services, CIS, Wipro-iCORE Lakshmi has two decades of experience in Business Development, Pre-sales, Consulting and Program Management in the IT Infrastructure services domain where he leads engagements with existing client relationships. His role focuses on ensuring that Wipro's clients get the value of the larger DWP practice. Lakshmi also manages the Wipro TruRemote offering while helping customers across industries with out of band remote management solutions. This offering is also integrated as part of the larger DWP offerings – Live WorkSpace™ and WaaS360 Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

A Green Future with Smart Energy Management

A Green Future with Smart Energy Management October | 2021 Energy management is crucial to conserve ecosystems and natural resources for enhancing energy efficiency, optimizing energy usage, and leveraging renewable resources for energy generation. This helps reduce energy consumption, mitigate wastage and losses, and improve overall carbon footprint resulting in improved operation and maintenance. In order to achieve energy management, it is crucial for engineering operations and facility management teams to identify its main objective, which can be either reducing cost of energy or minimizing environmental impact while ensuring production and quality. However, reducing overall operational cost requires effective utilization of energy across infrastructure systems for large and distributed footprints. Figure 1: Energy management challenges and opportunities Taking a 7-step approach to energy management Effective energy management means getting a holistic view of energy consumption across procurement, usage, operations, and monitoring. Also, energy performance management is not a one-time activity, but a continuous process for improvement which requires establishing effective energy management practices and processes to guide the energy management program based on the type of business, size and industry (see Figure 2). The 7-step energy management approach includes: Figure 2: Energy management approach Build a dedicated energy team, institute an energy policy, and implement steps for energy efficiency based on regular assessment of energy performance. Conduct technical assessments and audits for existing infrastructure through data gathering, analysis and evaluation. This helps establish the baseline matrix, benchmark past performance and conduct comparison between facilities, industry average and best practices for measuring future results of efficiency. This also helps conduct periodic evaluation of energy usage for all major facilities and functions in the organizations. Set performance goals to drive energy management activities and promote continuous improvement. For intended results, develop effective strategies for financial gains. Develop a roadmap to improve energy performance with a detailed action plan to ensure a systematic process to implement energy performance measures. However, it is crucial to regularly update the action plan and reflect on recent achievements, changes in performance and shifting priorities. This requires defining technical steps, targets, and determining roles and resources. Implement a phase-wise plan to cater to different measurement levels within the overall energy ecosystem. This is crucial to continuously assess the action plan to monitor KPIs and make modifications for achieving larger set goals based on the awareness, commitment, and capability of the people. This requires creating a communication plan for key audience, raising awareness in the organization, building capacity, and tracking and

monitoring progress regularly. Evaluate progress by reviewing energy usage data and compare activities of the action plan to your performance goals. This helps create new action plans, identify best practices and set new performance goals. This in turn helps measure the effectiveness of projects and programs implemented, make informed decisions about future energy projects, reward individuals and teams for accomplishments. In addition, this helps document additional savings opportunities as well as non-quantifiable benefits that can leveraged for future initiatives. Provide and seek recognition for energy management achievements for sustaining momentum and supporting the energy management program. This helps validate importance of the energy management program for internal and external stakeholders. Smart energy management for real time tracking and energy monitoring Organizations can collect real time energy consumption data by connecting equipment through SDKs and industrial protocols over the network or by adding smart sensors that can collect data and share it over the IoT network with centralized IoT application and tools (see Figure 3). IoT based solutions can help organizations not only connect various data points through smart connected things but also collect and analyze real time energy consumption data by constantly monitoring equipment. This is crucial to improve maintenance and downtimes. At the same time, smart energy management solutions can help understand real-time status of electrical equipment based on availability of data points for humidity, ventilation, and air-conditioning systems. This helps optimize the energy usage. *ECM – Energy Conservation Measures, ECC – Energy Command Center Figure 3: Energy management solution architecture Additionally, a smart energy management solution can also provide early warning about potential faults that may degrade the overall performance of the assets resulting in increased energy consumption (see Figure 4). Figure 4: Tracking and analysis with smart energy management solution Energy consumption optimization through actionable intelligence By designing and implementing an energy management plan and system, organizations can monitor load consuming elements and provide actionable intelligence to optimize site energy consumption. This also helps get access to key data including energy data, fuel data and temperature data for enabling potential savings of the O&M and OpEx. An enterprise level view of the total energy consumption across the network, as well as proactive monitoring, availability management and performance reporting of the energy asset helps create well defined Energy Performance Index for all relevant stakeholders. The end result: increased visibility into energy usage due to timely availability of data leads to improved asset lifecycle, winning CSR strategy, and reduced carbon footprint. If you are interested in learning how Wipro is helping our clients achieve transformed energy management system, connect with us. Pradeepsingh Bhangu Senior Consultant - Cloud & Infrastructure Services, Wipro Pradeep has extensive experience in data centers and IoT solutions, with a focus on energy monitoring and management solutions. His specializations include consultancy, project management, audit & benchmarking, and operations & maintenance. Pradeep has worked with various customers around the globe, delivering innovative and cutting-edge solutions. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes

- to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Modernizing the Workspace with VDI to Run your Business in the New Normal

----- Arcticle source ----- https://www.wipro.com/infrastructure/modernizing-the-workspace-with-vdi-to-run-your-business-in-the-new-normal/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Modernizing the Workspace with VDI to Run your Business in the New Normal October | 2021 Business environments today have irrevocably been altered. To reduce the impact of the pandemic on business continuity, improve operational resilience, and enhance employee productivity, organizations across the globe deployed work-from-home initiatives. Over the last one year, as businesses slowly resumed with some level of normalcy, organizations sought ways to empower employees with tools to return to work. The hybrid or flexible working models have become a preferred option for organizations across industries. Research by PwC indicates that among nearly 1,500 executives and office workers, 55% expected to be back in office about 3 days in the week, and work from home the rest of the week. With the trend expected to continue over the next few years, desktop virtualization technologies have assumed importance for the flexibility, convenience, and security they offer to the business. Virtual desktop infrastructure (VDI) technologies can enable and simplify the process of adapting to the hybrid or flexi models of working to ensure data security, business continuity and enhance employee productivity. Transforming desktop infrastructure VDI is not a new technology, adopted by organizations across the globe to outsource application development and infrastructure management. Over 2 decades, the technology has offered significant value to companies. To overcome the constraints imposed by regulations and data security norms, organizations adopted VDI technologies to gain cost advantages offered by the offshore locations. Today, enterprises are moving to virtualized desktops due to the immense value of rapidly and securely provisioning apps, workspaces, and data to mobile, distributed, and global workforce. Access to enterprise technology services means more collaboration, higher productivity, and less unproductive time due to end point hardware issues. VDI and its impact on business continuity and growth VDI enables a virtual desktop environment, where business applications and other data are available to end-user devices from centralized data center locations, either on-premise or on the cloud. In traditional server setups, an operating system is installed on top of the hardware of a physical server. With virtualization, an additional layer is created between the hardware and operating system, enabling the operating system to run inside each virtual machine. Broadly, VDI hosts desktops that

enables users to securely access enterprise data on their personal desktops, laptops, tablets, and smartphones. Changes on a parent desktop image can be quickly mirrored to virtual desktops in a desktop pool to create flexible workspaces at scale. Today, the VDI technologies offer several advantages to organizations beyond enabling the hybrid or flexible work models. With partial lockdowns, mandatory quarantines, and constantly evolving situations, organizations are offering employees the flexibility to meet the challenges and opportunities created by the new way of working. First, users can access the organization's data only through virtualized desktop and the VDI is managed through central servers. Hence, centralized image deployment, policy management and patch management, and application portability can be managed seamlessly. Second, it offers users the flexibility to access their desktops from anywhere. Organizations can provide the desktop or the laptop to the employee. Some organizations even offer the 'bring-your-own-device' policy to their employees, further enhancing the employee experience. The onboarding time for a new employee is reduced when the employee uses their own device. A company procured device would typically take about 24 – 48 hours or even more to be shipped to the employee. Third, human resources (HR) and recruitment teams have the choice of a global base to hire from. With the employee working from anywhere in the world, they are able to attract and retain the best talent for the job. Companies are also able to save on expensive real estate costs. In addition, with zero or reduced commuting time, stress levels is reduced, resulting in improved productivity. Particularly in the service industry, which is concentrated in large metro areas, real estate can be optimized. Also, organizations can leverage desktop virtualization and other next gen technologies to modernize the offices and set up collaborative centers in the space available. Challenges in adopting VDI While VDI technology has greatly facilitated the flexible working models, there are some inherent challenges in adopting this technology. VDI is not a single technology, but a complex amalgamation of several complex technologies including networking, computing, storage, and so on. Organizations need to evaluate and choose right technology components that meet their business needs, assess the applicability of the VDI for different business units to maximize its value. Second challenge is ensuring consistent user experience. Any issues in the network or the data center can impact the VDI performance. Any modifications or challenges in the firewalls, active directory, or DNS will impact the VDI, thereby slowing down the device at the end user. In addition, bandwidth requirements will vary as per the applications used, type of work performed, and so on. Audio-video collaboration, screen sharing, and other collaborative platforms require higher bandwidth. Many organizations address this challenge by providing the appropriate broadband or other connectivity to their employees. Third challenge is user expectations and organizational change management. There are some fundamental differences between physical laptops/desktops and virtual desktops. Users expected complete control of their environment; however, with virtual desktops running in the data center users will be given selective control on desktops to change desktop settings, configurations based on user persona. It is critical to communicate the difference between physical and virtual desktop environments to end users and manage the expectations. Is VDI adoption commonplace? Despite its vast benefits, the adoption of VDI has been slow. However, the pandemic has accelerated adoption. The key

challenge to rapid adoption is that VDI is not a one-size-fits-all technology. Organizations need to assess their application landscape, feasibility, TCO, and several other factors before adopting these set of technologies. In 2020, a survey among 500+ companies by Spice Works indicated that the VDI adoption rate was 32%. The survey also indicated that nearly two-thirds of the companies were expected to leverage desktop virtualization by 2021. Research by Global Market Insights, Inc., has estimated that the VDI market will reach $30 billion by 2026, growing at a CAGR of 17%. Wipro's approach to VDI Wipro's approach to VDI is a holistic solution, addressing the challenges of customers today. Right from the technology stack, implementation, architecture, delivery of the services is done in the 'as a service' model. Wipro virtuadesk™ approach provides an enterprise-grade virtual workplace, enabling access to remote desktops, laptops, and operating systems anywhere, anytime. As previously mentioned, there are several factors at play. Hence, based on the best of breed components, Wipro offers a variety of reference architectures. Moreover, the requirements across industries need to be addressed. Industries such as finance, healthcare etc. are heavily regulated. To integrate the platforms in the VDI network, compliances need to be considered. Retail operations will have multiple geographic locations where VDI needs to be implemented. Wipro virtuadesk™ is a transformative application and desktop delivery platform, powered by artificial intelligence, analytics, automation led managed services. With a simplified operating model, this complete desktop virtualization solution is designed to deliver the best performance and user experience, with agility. Wipro's packaged solutions combine leading cloud and hyper converged infrastructure technologies, to deliver workplace transformation and seamless user experiences. Wipro virtuadesk™ offers an as-a-service model that leverages simplified and integrated architecture for a cloud-hosted desktop, to deliver an unconstrained experience. It includes critical features such as service monitoring, service management, service automation, service visualization, enterprise marketplace, application performance monitoring to enable a modernized and consumption-based framework. The solution also helps optimize costs and scale quickly. It enables businesses to update enterprise software tools and allows employees to run multiple operating systems on the same machine. They can also use their own devices to enhance productivity while ensuring data and application security. Key differentiators of Wipro's VDI solution Consulting & assessment framework: At Wipro, we recognize that not all roles and employee profiles are fit for VDI. We leverage a scientific approach to analyze the applications and users, identify the applications fit for delivery, and create a mapping of the applications used by users. Wipro's VDI implementation starts with a comprehensive user profile and application assessment. Leveraging our patented tool to conduct the assessment, we gather data from our clients that includes - types of users, applications used, location of the applications, how are they governed by the regulations, and so on. Based on the assessments, we create different personas and recommend the VDI application to deliver the right level of compute memory and storage systems depending on the needs of the job profile. To ensure continuous benefits from the VDI environment, we monitor the usage over a period of time to optimize the desktop configuration. This helps us to ensure that 100% engagements are successful. Standard reference architectures & deployment automations: Wipro created reference architecture and

deployment automations for all leading technology stacks that can bring in standardization and improve time to market. With customer locations across the globe, the deployment automation platform ensures that all environments are managed in a consistent manner to reduce deployment cycles. Standardized processes enable us to deploy on-premise VDI environment in 50% lesser time. User migrations & change management: When migrating to the VDI environment, effective change management is critical. Wipro deploys a comprehensive platform to plan and execute user migrations. The users that will be migrated, phases of migration, communication modules, number of changes in one instance, and other critical details are communicated to the users in an efficient manner. The platform also offers hyper care once the migration is completed. Users are provided with self-service links and a remote help desk is enabled. Application life cycle management: Wipro implemented a comprehensive application delivery and life cycle management platform integrated to VDI platform to streamline application management. One of the challenges in desktop environments is application lifecycle management, application updates, patch management, license management on end points. To reduce these risks, the applications are moved to centralized delivery wherever possible, using application layering technologies. The application updates are streamlined and managed by the back-end team in a centralized manner. The framework also identifies which applications can be delivered through the centralized model. User experience management: Another key differentiator is the desktop monitoring and analytics. Wipro has implemented a comprehensive monitoring framework to monitor user experience, behavior and their productivity by leveraging AI and Machine Learning (ML) technologies. Any challenges faced in the end-user device are investigated and fixed proactively. Performance issues and the root cause of the application performance are highlighted through the platform. There are several solutions available today. However, many of them fail to focus on more subtle elements like personalization, configurability, and user experience, which are critical in ensuring productivity. These elements also address the inherent network-related challenges, multi-location availability, and security while employees work remotely. Solutions that cannot scale existing enterprise investments in virtualization or offer the commercial flexibility of a pay-as-you-go model will not be beneficial to organizations in the long term. What separates Wipro virtuadesk™ is its hybrid/multi-cloud capabilities that ensure any device, anywhere, anytime availability, including the full benefits of VDI and desktop as a service. VDI is here to stay As the adoption of VDI continues to grow, a holistic approach to improve user experience and ease of user onboarding will ensure success. There is no cookie-cutter approach. Organizations must re-visit their business strategies with out-of-the-box thinking. New technologies are transforming industries across the world. Take the example of the automotive industry. A domain for hard-core engineering, the automotive industry today recruits talent with design, IT, AI, and automation skills. Similarly in retail & consumer care industry, with the rising popularity of digital channels and e-commerce, the retail market scenario has changed. Online payments, evolving supply chains, AR/VR for better user experience, etc. are trends that necessitate an employee base with a completely different set of skills for the industry. Interestingly, there are close to 11 million job openings in the US alone, with lesser number of job applicants today. Organizations can take advantage of

flexible workspace platforms like VDI to tap talent with next gen technologies skills and knowledge to hire and retain talent from anywhere in the world. Security of applications and end-user accessibility can also be addressed using desktop, application virtualization technologies. Organizations have a plethora of technologies to ensure that the data and the applications are secure. In addition, with Bring Your Own Device (BYOD) policies, employee satisfaction can be enhanced. A critical aspect in the success of the VDI environment is the cloud. At Wipro, we recommend a hybrid, multicloud strategy to optimize disaster recovery. Applications can rest on the cloud, whether public or private or a combination of the models. Complemented with the right end point policy, the appropriate tools and technologies to identify the right set of applications and users, preparing the applications optimized for the VDI environment, proactively addressing migration challenges and efficient user experience management will ensure successful adoption with minimal impact to the business. Instead of DIY, VDI platforms enterprises can take advantage of productized DaaS offerings like Wipro virtuadesk™ to improve the time to market and optimize total cost of ownership (TCO) as well as avail ever green service offering to deliver great user experience to employees.   To know more, please write to ask.cis@wipro.com Seshu GVK General Manager, Cloud & Infrastructure Services, Wipro Limited. Seshu has two decades of IT industry experience across multiple domains—Telecom, Energy, High-tech, Healthcare, Consumer, Banking & Financial Services—covering product development, enterprise application development, infrastructure management. Currently, he heads Wipro virtuadesk™ practice globally in Wipro. Wipro virtuadesk™ is a complete desktop virtualization solution that enables customers to easily secure, provision, and share applications and data, for a collaborative and mobile workforce. Designed for fast and secure deployment, Wipro virtuadesk™ minimizes the risk in desktop virtualization implementation Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Discover the Digital Workplace

----- Arcticle source ----- https://www.wipro.com/infrastructure/discover-the-digital-workplace/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Discover the Digital Workplace October | 2021 In the ever-competitive war for talent, digital workplace savvy companies are winning the war in attracting and retaining talent. The workplaces of today are altering every aspect of business operations and performance. As the distinction between the employees' professional and personal life dissolves, the workplace of today demands unprecedented digital ways of communication, collaboration, and support.

The industry today acknowledges digital workplace experience as a key to innovation; implying that organizations that have fully implemented technologies like the smart workplace, mobility, automation, artificial intelligence, analytics, and connected employee tools are leading business transformation journeys. The speed of adopting a digital workplace has never been so fast paced. The corporate world has started measuring the CxOs workplace on digital maturity. This contemporary approach is maturing rapidly as generation Y workers are moving into leadership and decision-making roles, and they tend to be almost fully digital and focused on driving adoption. With this profound change, the CIO organization is looked upon as a business partner to enable rapid progress. Today, IT organizations are taking all possible initiatives to create the workplace for tomorrow. So, the real question is, though all of the technologies we talk about are already here – albeit still in uncommon usage, what is the successful transition to a digital workplace and how can we better deliver innovation in the working environment? What is digital workplace experience? Before we jump to a conclusive definition, it is essential to understand the meaning of the personal digital experience. Let's answer this question: what do Google, Amazon, Facebook, YouTube, and Netflix have in common? The simple answer is a 'consistent and intuitive personalized experience' that is accessible anytime and anywhere and using any device. The digital workplace experience is the spectrum of technology touchpoints for work that is based on the employees' individual persona and removes the barriers of collaboration with the organization. These technologies are designed and delivered in a coherent way that is mobile, smart, instant, and intuitive. Why adopt a digital workplace strategy? Experience today is more important than the technology, and the gap between the organization and the personal digital environments can hinder the organization's ability to succeed. There is an immediate need to evolve the current workplace from a technology-centric approach to a user-centric approach. IT and HR leaders focused on the digital workplace should together strengthen the technology planning, as a poor employee experience fuels employee disengagement and dissatisfaction, in turn limiting their interactions with customers and the internal organization. How to design the ideal digital workplace roadmap? The employee is the new customer. Organizations are formally adopting strategies which have leadership support, aligned with expert execution through change management specialists, to design their modern workplace services. Let's look at a few examples of how organizations have invested in technology to create a modernized workplace. The path for implementing a digital workplace starts with taking a user-centric approach of studying employee technology, human needs, and the use cases for business. This design-led approach is a specialized study to understand what matters to people and business. The study is performed by a group of craftsmen specialized in design, strategy, technology, and marketing. They work closely with corporate employees to plan, write and produce the most needed and best-fit technology and non-technology solutions. Personas are an excellent tool for the understanding of who your employees are and what they really want from the organization. With personas, it becomes quickly apparent that the digital workplace is not an out-of-the-box, one-type-fits-all product that can be implemented in any organization. Instead, it is an interwoven set of tools and applications published as per the users' needs. Persona journey maps give great insights into different groups of employees, their

motivations, digital needs, business requirements, and what they need from the organization to perform better. The employee digital experience score card recently made its debut in the workplace technology environment. These smart tools can immediately extract valuable actionable insights from any device, process or software used by the employee. The metrics that matter most to the business are the ones that measure the intelligence of IT, and the ones that increase the speed and agility of understanding the business and employee needs. Machine algorithms and cognitive platforms are allowing us to proactively fix issues even before the users report them. One of the hallmarks of employee experience design is the creation of an enterprise-level marketplace that delivers personalized software, tools, and content across the arc of the employee journey. The key here is integrating the backend systems and processes for service rendering automation. The touchpoints of these catalogs are persona-based, and the services can include everything from virtual machine images, mobility, facility, or the HR services. Mobile apps are central to the omni-channel experience. Organizations are now embracing IoT and location-based services and applications to improve workforce engagement and experience. From smart workplace to smart parking and smart conference rooms, the future of the workplace will be defined by the seamless connections of networks, sensors, and mobile apps that will overcome all physical barriers. Tech-enabled smart pre-boarding is a new way to impress employees. Onboarding service catalogs and VDI route new hires to an online pre-boarding process that includes payroll, compliance, policies, benefits, etc. Today, corporations based on personas give options to employees to choose their own devices and accessories during the pre-boarding process. Organizations believe effective onboarding sets the tone for a great employee experience and forms a critical component for new talent attraction. AI and cognitive platforms are playing a key role in transforming the modern workplace. The chatbot performs far more complex tasks and instantly provides employees with data and information as opposed to just doing low-value repeatable tasks like password resets or printer setup. The bots are trained to perform guided actions to fix problems and execute service requests like booking conference rooms, travel, hotels, etc. These bots can easily be accessed over mobile devices, or PCs to provide instant support to the end-user community. The digital workplace is adding new dimensions to businesses globally allowing companies to grow and compete. This pace of this change is only going to accelerate; the global CxOs have already placed digital workplace transformation at the heart of their corporate strategies to drive growth. Innovation today is not something that happens only in the board room; it is clear that people and innovation in the workplace are equivalently essential assets. In a world where new-age technologies are disrupting industries, there's an opportunity for organizations to reinvent their culture of innovation and create a modern workplace that engages and empowers people to do their best work. Redesigning the traditional workplace is about changing your approach to technology, social networks, and leadership practices. Digital workplace showcases the energy and flexibility of the modern organization, and it has proved to be more productive, responsive, and creative. So, are you ready?   To know more, please write to ask.cis@wipro.com Ankur Sachdeva Ankur Sachdeva leads the Digital Workplace Practice at Wipro. He is responsible for defining, incubating, and creating the product roadmap and strategy for the digital

workplace, mobility, automation, analytics, collaboration, and employee experience. He has over 15 years of work experience and is based out of New York, US. He holds a Bachelor of Engineering and a Master of Business Administration degree and multiple certifications in ITIL, cloud, and other workplace technologies. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Transforming Finserv Workspaces for Millennial Workforces

----- Arcticle source ----- https://www.wipro.com/infrastructure/transforming-finserv-workspaces-for-millennial-workforces/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Transforming Finserv Workspaces for Millennial Workforces October | 2021 Technology has transformed the face of the banking industry. It is now an enabler of modernization, innovation, and the digital economy through real time actionable analytics and insights driving informed decisions, creating competitive advantage, and enhancing the customer experience. Banks are now a one stop shop for all financial products and services round the clock. Technology enabled products and channels have opened up new market opportunities and delivery channels leading to increased productivity, efficiency, flexibility, and scalability of banking transactions making even the smallest of transactions virtually viable. Evolution of the banking industry: Retail banking to mobile banking Traditionally, banking was confined to the functions of accepting deposits, providing loans, carrying out financial transactions, and offering wealth management with a suitable set of workforce trained to carry out these day to day functions efficiently and securely. The tediousness involved in using these services through physical bank offices paved the way for the evolution of internet banking, e-banking and fintech startups equipped with modern workspaces and best of the breed workforces. In the recent years, fintechs have evolved into well-established financial institutions and are proving to be a huge competition to the traditional banks. To remain competitive and relevant for customers, banks have to embrace the culture and service model of the fintechs either through partnerships, acquisitions, or by building in-house startups to transform themselves into future ready financial services organizations. They need to revolutionize the way they offer products and services to the end customers through branchless banking, hire new talent for building next gen banking solutions, and explore new channels of service delivery and modern workspaces. Significance of talent management in the banking industry In the ever-evolving financial services sector, acquiring, training, retaining and developing workforces can be one of the major factors in

deciding the success of any organization. The talent management practices in this sector are experiencing a transformational shift due to rise of millennial workforces. Employers are now trying to better comprehend the motivations, needs, and expectations of the millennials and aligning their policies and practices to create working environments which can nurture multi-generational workforces alike. To keep up with the trends shaping the future of the financial services sector, organizations are required to onboard new talent trained in next gen technologies such as digital currency, biometric security, mobile applications, user experience, artificial intelligence and machine learning, and analytics in order to implement sophisticated financial services like branchless banking, mobile app based services, remote KYC authorization with biometrics, integration with ecommerce platforms, next gen customer acquisition, loyalty management solutions etc. While these skills are essential, they are not easily available in the market due to huge demand across industry verticals like consumer, automotive, manufacturing etc. which are developing next gen offerings like autonomous vehicles, virtual retail stores, on demand manufacturing etc. With organizations across industries looking for similar skills, it is imperative to attract and retain the best talent. Organizations need to have the HR and workspace policies that support the hiring of the talent irrespective of their location and provide them with necessary tools and applications to make them productive without compromising on the aspects of intellectual property and data security. It calls for a flexible and hybrid workplace which is resilient and secure, and enables employees to work from 'anywhere, anytime, and on any device.' Need for workplace transformation Due to the ever evolving ways of working, organizations have reconfigured themselves in a mode that strikes a vital balance between physical as well as virtual workforces enabling greater connection and collaboration. Organizations are now leveraging technology for enhancing human connection and building social capital while the culture of distributed working continues to evolve. Bankers and advisors are leveraging digital capabilities and channels for building customer relationships, financial advisory, and executing sale of financial products and services. Technology is creating workplaces and workspaces that aren't only equipping teams with better tools and accelerators of service delivery but also empowering them. Technology has enabled both remote as well as flexible ways of working. Remote ways of working refer to the location where work takes place - office or home. On the other hand, flexible ways of working refer to the working schedule - when and how often the work is taking place, the extent to which work responsibilities are held individually or shared, the working hours/ shifts, and the type of employment model. Remote working is the enabler of flexible ways of working and eventually leads to long term savings on operating expenditure by the organization, increase in job attractiveness, efficiency and productivity as well as overall employee wellbeing. Organizations need to adopt good virtual practices to encourage engagement within and among their teams, ensure adoption of digital ways of working, fostering informal interactions within the teams to maintain a sense of belongingness and connection while ensuring security and resiliency of the infrastructure and applications connecting them. Transforming employee experience and empowering workforces Millennial employees are becoming main consumers of the workplace environment given the increase in demand for next gen skills. Based on the gamut of

available employment options, they are driven to search for suitable roles and organizations which can enable better performance and career growth. The workforce today demands flexible work location, hours, and the choice of devices they would like to use to get the work done. In some cases, flexibility in work location and hours takes precedence over the pay and other aspects of the job. This trend is driving HR and IT leaders of the enterprises to reinvent the workplace services with flexibility and employee experience at the core. At the same time, it is critical to maintain the security and compliance requirements that need to be considered as an integral part of the solution rather than as an afterthought to avoid user experience issues. Virtual desktop infrastructure (VDI) as a technology helps organizations to enable seamless working experience across devices with different form factors, operating systems, enterprise managed, and unmanaged devices with enhanced security and controls. With the use of virtual desktop infrastructure services, organizations can create irresistible working experience for their employees during the employee's journey through: Handling these aspects with the use of VDI services will not only help financial organizations in attracting and retaining the best talent in the market but also will eventually lead to development of better products and services to ensure customer delight. The way forward The future of the banks lies in their ability to innovatively reimagine their user experience journeys, enhance and personalize the employee experience, the way they utilize tools and technologies for ideation, innovation, collaboration and finding new ways of solving customer challenges and enhancing customer experience.   To know more, please write to ask.cis@wipro.com Seshu GVK General Manager, Cloud & Infrastructure Services, Wipro Limited. Seshu has two decades of IT industry experience across multiple domains— Telecom, Energy, High-tech, Healthcare, Consumer, Banking & Financial Services—covering product development, enterprise application development, infrastructure management. Currently, he heads the Wipro virtuadesk™ practice globally at Wipro. Deepti Mishra Product Marketing Consultant, IP & Business Solutions, Wipro Limited. Deepti is a consultant with over 3 years of experience in Product Marketing and Pre- Sales. She currently focuses on all the aspects of inbound and outbound marketing for the IPs and business solutions of Wipro in collaboration with the business teams. She has experience in developing marketing strategies, creating collaterals and driving campaigns, events, and thought leadership. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Why Your IT Service Desk Won't Be There Tomorrow

----- Arcticle source ----- https://www.wipro.com/infrastructure/why-your-it-service-desk-wont-be-there-tomorrow/ ----- About the Author(s) Related Articles Contact Wipro Please fill the required details to access the content Why Your IT Service Desk Won't Be There Tomorrow December | 2021 Service desk as a concept has evolved over time and has embraced technological advancements to address the needs of the modern workforce. In today's world, with employees having the flexibility to work from anywhere, anytime, the IT service desk has gradually emerged as a crucial enabler in implementing an effective strategy for digital workplace transformations. It now becomes imperative to transition from a reactive, manual intervention-based service model to an intuitive, digitally enabled model to reprioritize the service desk objectives and support employees effectively and efficiently to ensure business continuity and their productivity irrespective of the location, devices, or channels. Considering the millennial workforce's affinity for personal digital touch points with the likes of Amazon and Uber, organizations are now envisioning their service desks to offer consumer-like experiences to their employees, leveraging smart technologies such as AI, analytics, and automation. Research indicates that millennials are more open to using a variety of emerging means to get the IT support they need. Instant messaging (71%), video chat (54%), and the use of mobile apps to resolve IT issues (54%) are most popular. To achieve the envisioned service desk, the transactional first level IT support in the workplace will moderately be substituted by zero-touch service desk - an intelligent, automated approach to resolving trouble tickets without any active involvement of the service desk agents. It promotes self-healing, knowledge base portals, and self-service actions routing the service agents' skills towards high priority issues. This transformation of the traditional service management was imminent as over-burdened service desk agents were resolving improperly assigned incident, problem, and request tickets in an untimely manner. Ineffective resolutions resulted in negative employee experiences and reduced productivity levels. The pandemic acted as a catalyst in driving this further due to the surge in the ticket volumes accounting for the remote working employees. Challenges such as limited visibility of service experience levels, lack of intelligence in the system, emerging trend of BYOD, and aggravated pressure on the agents, compelled organizations to reduce costs and enhance productivity while optimizing the service desks. Hence, there is a need for organizations to reimagine and build an effective support system which is all- predictive, proactive, and pre-emptive. The future-ready service desk must have a foundation of intelligent employee-centric integrations that will lead to the evolution of the service desk to an enterprise desk that can sense employee sentiments, seek feedback, and pre-empt issues. Persona-driven approach The service desk of the future will not adopt a one-size fits all model but will incorporate persona-driven methodology that will help in creating user profiles of the employees basis the role, devices, workload, etc. The desk will

then use these profiles to offer hyper-personalized resolutions aligned to the business, by identifying the devices and ascertaining the criticality of the issues as per the profile. Experience management The service desk will evolve into experience desks that will map the employee journey to identify "moments of truth" in the service levels. The employee's experiences will be quantified with data to understand their sentiments and ensure that their expectations are being met. The outcome and value-based service desk with an XLA based approach will continuously move towards improvement to build customized knowledgebase by taking feedbacks for all digital touchpoints in the journey. Automation integration Evolution of the service desk with minimal human intervention will happen with zero-touch and automation capabilities. This will help in reducing the volume of service desk tickets and simplifying the process of ticket creation and resolution with automated ticket routing, to the appropriate agent skilled for that issue and intelligent swarming for end-to-end agent accountability for that ticket. The service desk is also becoming leaner with shift-left initiatives, wherein the level 1 tickets will be shifted to self-help and the other requests will be resolved through automation. The IT teams are maturing, wherein they now look at unreported issues or the ones with the potential to disrupt the employee's work continuity, rather than just addressing the raised tickets. The changing workforces are placing emphasis on having proactive maintenance to address issues before problems arise, and the modern service desk must have the capability to meet these demands. Hence, the network and the device performance are proactively measured and monitored consistently to identify, diagnose, and remediate anomalies and issues using self-healing AI-driven automated capabilities. This approach prevents the issues from happening in the first place, reducing the tickets and improving employee productivity. It is observed that millennials attempt to fix workplace issues themselves as they do in their personal lives. According to Gartner, "end users require an IT self-service portal where knowledge is readily available, where passwords are easy to reset, and that is very intuitive to use". Hence, an effective portal, accessible from multiple channels with a cognitive virtual assistant will allow the employees to find the answers easily around how-to requests, technical support, IT equipment ordering, and password reset requests. Resolving the latter issue with self-service information on automated password reset tools, for example, can save organizations the costs of supporting this type of request via more expensive channels. The employees should also be able to access service desk support from any device, anytime, anywhere. Analytical metrics The real-time data retrieval for conducting analysis of the data can help the agents in monitoring the employees' ecosystem and identify potential issues to proactively resolve them in an automated manner. The analytics and reporting will capture the historical data and the feedback data which can be beneficial in visualizing a trend to create a hyper-personalized strategy. Service desk has come a long way in terms of transformation. There is no doubt that the service desk of 2030 will look completely different from what it looks like today. For an evolved service desk equipped with advanced capabilities and focused on employee experience, organizations will have to aggressively invest in its transformation to enhance productivity and satisfaction levels. To envision these digital workplace transformations with the futuristic service desk, Wipro offers a user-enablement platform, myUnihub which is integrated with cognitive virtual assistants and real-time

digital experience monitoring capabilities and stages consumerized experience enabled through harmonized multichannel interfaces supported by smart automation and data insights. With Wipro's design-led process backed by data accelerators, organizations can experience agility and flexibility in their service model while enabling next-gen employee experiences. Riya Bansal Product and Practice Development Manager, Digital Workplace Services, iCORE–CIS, Wipro Riya has work experience in Communication Networks, Business Development, Product Marketing and Management. Currently she is developing and managing digital workplace offerings that help Wipro's clients in enhancing the experiences and productivity of their modern workforce.   Lalit Mehar Presales Consultant, Digital Workplace Services, iCORE-CIS Wipro Lalit has work experience of solution designing in the field of service desk and device management. Currently he is designing solution for clients in end user services offering. He brings in a cross functional business acumen and has strong interest in new-age technologies. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Bringing about IT-OT Convergence: Leveraging IoT Ecosystems to Manage Infrastructure Better

----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Bringing about IT-OT Convergence: Leveraging IoT Ecosystems to Manage Infrastructure Better February | 2022 With fast-evolving technological capabilities and customer expectations, there is increased dependence on operational technology (OT) today. However, as IT and OT converge, OT systems are becoming highly complex to manage, and increasingly vulnerable to malicious attacks. To navigate the new paradigm, businesses must apply IT best practices in OT services management. Increased customer expectations, evolving capabilities in IT and data analytics, and continuous disruption in an increasingly competitive business landscape is accelerating the dependence on operational technology (OT). However, due to the isolated nature of OT environments and lack of transparency and standardization, centralized process improvements and efficiencies of scale are not possible in OT domains unlike their IT counterparts. Moreover, as IT and OT converge, OT systems are

becoming highly complex to manage, generating more data than organizations are able to process meaningfully, and are increasingly vulnerable to malicious attacks. To navigate the new paradigm, businesses must draw from the best practices in IT and embrace the shift towards OT services management. Navigating the current operational technology landscape Operational technology (OT) is an integral aspect of the world economy, driving factories, energy generation, transportation, and utilities. These technology systems combine hardware and software components, and physical devices to monitor infrastructure and manage changes over time. The rapid advancements and developments in technology have also transformed operational technology, further driving the convergence of OT and IT systems. While OT systems were isolated from the internet in the past, they increasingly require data and analytics to function optimally. sales for OT hardware and software have increased due to IT-OT convergence and are projected to reach $33 billion by 2028. Operational technology today spans across different technology systems such as programmable logic controllers (PLC), distributed control systems (DCS), supervisory control, data acquisition (SCADA), Integrated Building Management Systems (IBMS), POS, cameras and handhelds. It combines hardware and software components to monitor and control physical assets in industries as diverse as telecommunications and retail. With each passing day, the dependence of enterprises on operational technology is increasing. The increasing adoption of automation across sectors has resulted in wide swathes of areas being integrated with OT. However, such massive adoption also means increasing exposure to the risk of OT systems failure or malicious attacks, and increases the need for enhanced systems to manage the technology. Only 8% of OT leaders reported no intrusions over a 1 year period, according to a 2020 report by Fortinet. The continuous and optimal functioning of OT systems is critical for the bottom lines of organizations. As OT systems become more complex and sophisticated, companies need to devise carefully framed strategies and frameworks to manage them, with enhanced monitoring and control capabilities. Islanded OT systems and the need to manage them more effectively A clear difference can be observed in the way IT and OT environments are managed, monitored, and integrated with larger technology ecosystems within an organization. Devices such as PCs and laptops and cloud-based servers are managed systematically within a clearly defined framework but once one enters the realm of power grids and building controls, things start to become more loosely defined. Differences in underlying architecture have kept IT and OT separate or 'islanded' even as data flows between the two fields have increased over the years. A degree of separation between the two has traditionally been maintained for operational integrity and security, and due to lack of support. OT systems often feature embedded devices operating on specialized technology developed by OEMs without open management interfaces, requiring specific and compatible tools to reconfigure them. Centralized management and remote execution of tasks is a key component of IT management that allows for scalable solutions and optimization of processes. However, in an OT environment, specialized and local resources need to be present to oversee or manage the actioning of various processes. Often, OT systems are managed by manufacturing engineers, process control engineers, or controls technicians. When sophisticated manufacturing machinery is involved, centralized software updates could, in the event of an error, knock

the entire production line out of action. From patching to configuration, training processes need to be developed for OT resources to better manage their systems. While this is a sufficiently sophisticated and evolved area in the field of IT, it is lacking when it comes to OT. The IT-OT convergence has given rise to the Industrial Internet of Things (IIoT) which provides businesses with the ability to collect vast amounts of data and leverage analytics to gain business insights in unprecedented levels. This means that data is growing exponentially in OT, necessitating better systems for managing this increasingly lucrative and vulnerable information. IT/OT convergence is an increasing aspect of the evolving enterprise world. As digital technologies pervade the physical systems and machines on plant floors, it gives rise to the question of applying IT methods to managing OT environments. There are concerns that IT processes don't take into consideration the intricacies and specialized details typical of industrial situations. However, industrial environments often run on unsupported technologies and are not optimized for how systems interact. This calls for change. While IT processes cannot translate into OT environments directly, it is a useful approach. OT cannot be isolated from IT and IT methods cannot be directly applied in an OT environment. A balanced approach is key. Leveraging best practices and management frameworks from IT As business processes became increasingly integrated with technology and IT, IT services management (ITSM) emerged as a structured methodology for organizations to streamline and manage IT services. ITSM encompasses the designing, planning, operating and controlling aspects of IT management. In the realm of IT, ITSM empowered businesses to enhance value to customers, improve quality of service and increase transparency, accountability, and compliance. In the realm of OT, operational technology systems management (OTSM) must emerge as an approach that mirrors ITSM and draws from its best practices to drive efficiencies. Information Technology Infrastructure Library (ITIL) is a framework that brings together the best practices in IT support for delivering consistent and continual results for organizations. It helps organizations deploy service management in cost-effective ways and drive business outcomes through clearly defined processes. Resource optimization is central to ITIL and involves regular reviews of processes for identifying areas for possible improvement. Businesses are not pressured to accept all practices defined under ITIL but only those that are meaningful and practical to them. ITIL processes must drive desired business results. If this is not achieved, then corrective actions are initiated and the processes are modified to drive the desired outcomes. ITIL process owners ensure that individuals in relevant roles action these processes. Process owners list and monitor KPIs, ensure synergy and collaboration across the system, drive effectiveness of processes, ensure targets are met, conduct reviews, and ensure training of personnel. OT systems management must be aligned with the different stages of the ITIL lifecycle. Initially, the strategy stage ensures that the OT strategy is aligned with the overarching organizational strategy. It is crucial for this stage to be implemented perfectly for future stages to be effective, as they are built upon the strategy as a foundational layer. Next, the planning and design activities for the OT strategy are executed. This ranges from service level management to information security management and availability management and draws from the plans formulated during the strategy stage. During the transition stage, the updated or new services are built and tested and transferred into operations. It involves various

aspects such as configuration management, change management (in case of an altered process), service validation, and deployment. After the transition stage, the services are operationalized in a live environment. This stage encompasses aspects such as incident management and problem management. The final stage is continual service improvement which leverages processes from across the previous stages to ensure that improvement areas are always worked on to offer ongoing optimization. This involves service reporting and measurement, service level management processes, ROI optimization, and improvement in processes. IoT ecosystems as a way of managing OT systems An IoT managed service framework such as Wipro's IoT NXT can act as a bridge between IT and OT, and offer flexible and reliable solutions for managing infrastructure. With such a solution, organizations can monitor their OT infrastructure on a 24x7 basis, ranging from sensors, gateways, controllers and equipment. They can ensure effective asset monitoring and management. A solution such as IoT NXT allows for integration with IT services management (ITSM) tools, and drives enhanced results across service automation, incidence management, and contract management. Businesses can take advantage of service management and automation, integration with BSM tools, and device management. Additionally, IoT NXT paves the way for effective management of IoT networks, cloud environments, and data centers. The administrative processes for databases can be streamlined and enhanced. The increased convergence of IT and OT leaves buildings, plants and factory floors incredibly vulnerable to a wide range of cyber security threats that are constantly evolving, from ransomware to data theft. With an IoT management framework, organizations can adopt the best practices from IT to counter threats of this nature and avoid potential damage to their bottom lines. OT managed services solutions allow organizations to leverage the power of analytics in areas such as predictive maintenance. Smart analytics allows organizations to implement corrective measures ahead of time by conducting simulations of real-world situations and by implementing impact analyses. Constant monitoring and superior management capabilities unlock possibilities for continuous improvements in enhancing use-case efficiency and driving business results. Stakeholders can measure asset failure probability reliably. Meanwhile, operational analytics boosts the success rates of health and maintenance efforts for equipment. It leads to cost savings by preventing the need to deploy personnel for maintenance when fixes can be implemented through remote means. It helps to avoid elaborate and inefficient practices in traditional scheduled maintenance efforts and identify the areas that actually require attention, thereby avoiding wastage of productivity and costs. It helps optimize the usage of machinery to extract the most value out of them, prolong their life span, and minimize downtime. IoT NXT combines efficiencies that are achieved in facility management, workforce management, process management, and tools. Process standardization is ensured to drive consistent outcomes, and programs such as Lean and Six Sigma help to translate this into a reality. Proactive communication with stakeholders and a strong governance model further enhance the effectiveness of OT service management. Wipro's IoT NxT GCC, enabled by Wipro Smart i-Connect™ along with ServiceNXT, allows for a highly efficient operating and governance template for OT management, with the organic platform enabling businesses to navigate complexities seamlessly while offering modularity, scalability and security. This empowers

organizations with the flexibility and customizability they need to drive non-linear business growth. They can proactively update systems to fortify them against potential threats, and deploy automation capabilities to streamline key operational tasks. Organizations can improve their process documentation through consistent reporting and monitoring. Security controls can be embedded into systems with improved endpoint visibility. OT agility is enterprise agility Leveraging the best practices from IT in OT environments can help organizations harness data more effectively and manage change successfully using standardized processes, protocols, and unified interfaces. Businesses can make proactive decisions that are guided by data-driven insights and leverage scalability and flexibility. People and processes across IT and OT domains can collaborate seamlessly to drive the organization forward. Customers, partners, suppliers, and other stakeholders can engage in more effective ways. Lifecycle maintenance costs can be reduced and support enhanced, and stand-alone projects can be replaced by an overarching platform that offers scalable solutions to the entire OT and IT fields. To navigate the new paradigm, enterprises must embrace the change and become more agile through efficiencies. The timeframe from ideation to innovation can finally decrease as information becomes more easily available and actionable. Saravanan Palanisamy Lead Solution Architect - IoT, UK – Cloud & Infrastructure Services, Wipro Saravanan has industry experience in the areas of solution design, pre-sales, consulting and software development. As an experienced IoT and Smart Cities professional, Saravanan has worked extensively with companies around the globe in providing innovative and cutting-edge solutions. Saravanan has special interest in smart buildings and retail technology trends and IoT. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Internet of Vehicles (IoV): Revolutionizing Transportation of Tomorrow Riding on 5G and Edge AI

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Transportation of Tomorrow Riding on 5G and Edge AI March | 2022 Increasing digitalization has led to the proliferation of data. The Internet of Things (IoT) is a technological evolution that has thrived on the availability of this limitless data. Despite the business impact of the pandemic, enterprise spending on IoT was expected to grow 24% by the end of 2021. By 2030, it is estimated that there will be 25.4 billion IoT devices across the globe. IoT is no longer a nascent technology, but a game changer that is enabling global businesses to build on the foundations of artificial intelligence, machine learning, big data, and the cloud to unlock new possibilities for the future. The transformational phase in IoT led technology revitalization has greatly benefited two sectors: automotive and transport. 5G wireless communication has been a catalyst in this transformation. The advancement in Industry 4.0 and IoT has given a significant impetus to the market for connected and autonomous vehicles. The premise of 5G technology is essentially based on the assurance of ultra-high speed data transfer and low latency, which means quicker response times and better reliability. Today, several vehicle manufacturers leverage IoT to connect to cellular networks for real-time navigation, driver assistance features, connected infotainment, and emergency services. With the advent of 5G, applications such as autonomous driving, Vehicle-2-Vehicle (V2V), Vehicle-2-Infrastructure (V2I), Vehicle-2-Network (V2N), and Vehicle-2-Pedestrian (V2P) communications will receive great impetus. The reliability, availability, speed, and lower latency of 5G has the potential to enable a Vehicle-to-Everything (V2X) environment. Gartner estimates that the share of 5G-enabled cars that are actively connected to a 5G service will grow from 15% in 2020 to 74% in 2023, reaching 94% in 2028. By 2023, the automotive industry will become the largest market opportunity for 5G IoT solutions. Gartner further estimates that it will represent 53% of the overall 5G IoT endpoint opportunity in that year. The 5G era is expected to bring in network and service capabilities that previously were not available. The combination of 5G, IoT and Edge AI will facilitate the change to smart transportation or mobility. In this paper, we explore the different dimensions of mobility and the critical role of 5G wireless in bridging the gap and creating innovative services that can leverage the connectivity options for vehicles in the near future. The next step for the automotive industry: Internet of Vehicles (IoV) In simple terms, Internet of Vehicles (IoV) can be described as a network that utilizes sensors, software, and technology to connect vehicles to their relative environment (entities such as pedestrians, traffic management equipment, other vehicles, pedestrians, parking lots, and so on) and exchange data. At the base is the IoT domain which has changed the face of the transportation and traffic management systems to a more advanced and interconnected system which will allow vehicles to communicate with each other as well as with road side infrastructure. IoV has originated from an older technology called Vehicular Ad Hoc Networks (VANETs). In its conventional form, VANET enabled cars to form spontaneous wireless connections with other vehicles and devices. Today's technology enabled and modern cars have approximately 100 million lines of software codes. IoV combines this with smart devices to access and communicate information with the ecosystem. The connected vehicles in future will have a large number of connected end-points and a high volume of data exchanged. In the future, any vehicle will have the capability to connect anything at any time in an entirely flexible, reliable and secure way.

5G communication will be key for this network connectivity requirements to deliver the required services. With its incredibly low latency, high speed of communication, and availability of high volume of data communication, 5G is most suited for vehicle to infrastructure connectivity. 5G and Edge: Two key technologies to facilitate IoV The crux of this technology is communication and the speed at which the communication takes place. This is enabled by a variety of interconnected entities – hardware, software, network, and the communications service providers. The ultimate aim of IoV is to ensure safety of the vehicle and its environment in addition to enhancing the vehicle maintenance. Hence, within the IoV infrastructure, there are 5 key connections that need to be established: Vehicle-to-Vehicle (V2V), Vehicle-to-Human (V2H), Vehicle-to-Infrastructure (V2I), Vehicle-to-Roadside Unit (V2R), and Vehicle-to-Sensors (V2S). Conventional wireless communication methods are incapable of providing the latency and availability required for the IoV infrastructure. IoV requires real-time insights on the vehicular movement, road traffic and other factors, make predictive analytics, and initiate the corrective actions for better vehicular movement and traffic management. Edge computing is a critical part of IoV, enabling moving vehicles to connect to the surrounding environment and communicate to the compute infrastructure for data analytics and inferencing with very low latency. Complex analytics and calculations can be performed in the Edge servers to meet the requirement of low latency and bandwidth efficiency thereby reducing the cloud burden and delay. 5G and Edge computing are inextricably linked, with their combined ability to deliver such complex and low latency requirements. IoV draws support from 5G communication technology which is capable of ultra-reliable low latency communications (uRLLC), enhanced mobile broadband (eMBB), and massive machine type communications (mMTC) by incorporating techniques such as massive MIMO (multiple-input multiple-output), network virtualization and Edge computing. Mobile edge computing has proven to be an enabling technology for IoV, providing the potential solutions for sharing the computation capabilities among vehicles, in addition to other accessible resources. Edge AI and analytics, another important aspect in IoV, basically entails the collection and analysis of data at the sensor or device level. It enables the decision making at the edge, further enhancing the agility of the vehicular sensors and reducing risks. Another noteworthy technology is 'beamforming', an enabling technology within 5G. This technology is used with phased array antennae systems to help focus a wireless signal on a specific device, rather than spreading the signal in all directions, thereby resulting in direct communication. Beamforming transceivers are integrated into massive MIMO arrays at both the device as well as the cell-site ends. These technologies hold the promise of bringing down the IoT connectivity speeds to almost instant data delivery with less than a millisecond of delay, thereby enhancing the reliability of the communication. Given the complexity of communications in this technology, artificial intelligence (AI) is deployed in the antenna, which directs the beams to the receiving devices. In addition, beamforming technology also allows radio waves to bounce off buildings to enhance the reliability of signals that are not directly in the line of sight. It is estimated that every year, approximately 1.3 million people lose their lives in road accidents, while 20 to 50 million people are injured, many resulting in permanent disability. It's also widely accepted that a large majority of these accidents occur due to human errors. Considering these

statistics, the importance of IoV in elevating road safety and reducing road accidents cannot be undermined. The purpose of the IoV technology is to ensure safety, in addition to faster travel, reduced energy consumption, and better vehicle maintenance. It also results in higher vehicle lifecycle. The most important contribution that IoV can make is in road and traffic management, with real-time assessment of the situation. Over a period of time, with the increasing use of autonomous vehicles, the number of sensors and software available to provide the data will increase. This, in turn, will provide better data points to the technology to make the split-second decisions, reducing road accidents and other untoward incidents. Key benefits that IoV provides in enhancing the overall transportation infrastructure include: The use cases for IoV are not just limited to vehicles, but to the traffic and transport ecosystem as well. Fuel and electricity resources can be optimized through smart signals and lights that assess the conditions of the traffic on the road and operate accordingly. IoV technology can also have a deep impact on the environment, resulting in reduced carbon emissions with better vehicle management and maintenance. Connected vehicles are an important step in reducing the carbon footprint and improving the overall environment. Raj heads the new-age-solutions team with the charter to develop IoT solutions for the 5G era and is also part of the global Smart City team as Practice Director at Wipro. He plays a key role in consulting and business initiations with global clients. He has 28 years of experience and has expertise across multiple domain areas with proven track record for innovative technologies, customer centricity and a passion for excellence. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Embracing Business Growth with Azure VMware Cloud

----- Arcticle source ----- https://www.wipro.com/infrastructure/embracing-business-growth-with-azure-vmware-cloud/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Embracing Business Growth with Azure VMware Cloud March | 2022 Building your business in the cloud is no longer a question; it is a necessity. Freeing yourself of legacy systems, inflexibility, and the need for agility in an increasingly volatile marketplace requires platforms that allow you to meet customer demands and the need for digital interaction. Enterprises need to have the courage to rise beyond the daunting migration complexity and push forward with effectively moving existing workloads from on-premises environments into the cloud, refactoring applications, finding appropriate skills so you can embrace new innovative technologies to unlock new

opportunities and growth. The Microsoft Azure VMware Solution, a jointly engineered offering from Microsoft and VMware, can streamline your shift to the Azure VMware cloud and power up the transition while reducing customers' long-term costs. Azure VMware Solution is a private cloud infrastructure-as-a-service that runs natively on dedicated bare-metal Azure infrastructure. Jointly engineered by Microsoft and VMware, the Azure VMware solution offers the ability to quickly and seamlessly migrate or extend existing VMware workloads from on-premises environments to global Azure infrastructure, and modernize the applications using Azure native services. Customers get to protect their VMware investment by leveraging the existing tools and skillsets while ensuring operational agility, innovation, and stability that Azure native services offer. While customers can capitalize on great price benefits for Microsoft applications, they can modernize their existing applications running on VMware by integrating with the Azure native services management and security. The organizational benefits of extending on-premises workloads to the Azure VMware cloud go beyond upgrading to more relevant technology. Some of the significant advantages include the ability to use VMware's enterprise applications and tools powered by the flexibility and velocity of Azure, reduction in time and cost of migration, and better cloud economics due to lower TCO compared to traditional native on-premises cloud environments. While other players in the market help organizations with their cloud journey, the Azure VMware solution offers a unique set of features that sets it apart. These include- Let us explore the use cases for customers to drive benefits from a migration to the Azure VMware solution. For enterprises with an extensive application landscape on VMware, transitioning to the Azure VMware cloud can yield positive cost reduction, improved agility, or capability to adopt high value-chain services, leveraging the existing VMware licenses. Customers can also reduce TCO in the long-term by a shift to the Azure VMware cloud instead of renewing their on-premises VMware contract. Another compulsive reason for embracing the Azure VMware solution is accelerating automation, as VMware provides an excellent array of automation tools for managing day-to-day operations. Wipro FullStride Cloud Services strong Microsoft and VMware competencies, has ensured that we are the trusted partner of choice for leading enterprises looking to create a strategic roadmap for risk-free migration to to Azure VMware cloud, and if required managed services. Wipro is a Microsoft Gold Partner and a Managed Service Provider (MSP) expert partner for Azure. With a Leader positioning by Everest PEAK Matrix® 2021 for Microsoft Azure capabilities and a robust talent ecosystem of experienced cloud professionals, Wipro FullStride Cloud Services' business profile includes seven Microsoft advanced specializations with 3,800+ Microsoft Azure certified professionals.. Wipro FullStride Cloud Services possess an extensive portfolio of industry-leading cloud-related capabilities and experience. Our promises include: With its extensive partner ecosystem and deployable, ready skills, Wipro provides a single-pane-of-glass experience for seamless multi-cloud management. When you choose Wipro to accelerate your Azure VMware cloud journey, you can also leverage our ITIL framework service management, continuous process improvements, Cloud Center of Excellence, and the promise of Wipro best practices and quality. Azure VMWare Service: Leverage the power of best of worlds Azure VMWare services enable you to retain your native attributes while integrating native services from Azure, and at the same time, extend

the entire automation built with VMware workload in the data center to Azure. With Azure and VMware shaking hands to bring best-in-the-class benefits to customers, you can now have the best of both worlds to transform and run your workload without any compromise. To know more, contact Azure-Marketing@wipro.com.   Rajiv Kumar GM. Practice & Presales Head - Cloud, Cloud & Infrastructure Services, Wipro Rajiv has about 23 years of experience in the IT Industry. He has played a crucial role in developing next-generation transformative offerings like Azure Stack and rapidly growing the cloud practice across geographies. He is a member of the Association of Enterprise Architects and has many leading certifications like TOGAF, Azure Cloud architect Expert, Google Professional architect, and AWS Solution Architect.   Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Site Reliability Engineering: Making Your IT Systems More Scalable, Reliable, and Efficient

----- Arcticle source ----- https://www.wipro.com/infrastructure/site-reliability-engineering-making-your-it-systems-more-scalable-reliable-and-efficient/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Site Reliability Engineering: Making Your IT Systems More Scalable, Reliable, and Efficient April | 2022 A holistic approach to reliability should incorporate reliability principles in the DevOps pipeline to form 'DevRelOps'. An evolving business landscape, increasing customer expectations and the 'new normal' created by the COVID-19 pandemic make time-to-market a critical parameter for business success today. While IT has always been business-critical, it is also mission-critical and life-critical in some industry contexts. With that in mind, the DevOps mindset has focused on feature velocity to bring in new features in shorter cycle times. However, while organizations need to improve the resiliency and security of their IT systems, the focus on reliability cannot be diminished.. In more recent times, instances of high cost of downtime are evident. For instance, in March 2019, a 14 hour outage for a social media company cost $90 M. The past decade has seen a tremendous transformation in the IT landscape with the evolution of application and infrastructure technologies leveraging cloud, Internet of Things (IoT), artificial intelligence (AI) and so on. This has given rise to a situation where distributed systems have become the norm. While every organization strives

to provide the best possible services to its customers, many a time, the misalignment between business and IT results in a disconnect on the specific service level objectives. With digital as the core for every business, service reliability plays a crucial part in meeting the expected business outcomes. While the aspiration may be to achieve 100% reliability, it is almost an impossible feat, as the cost of providing five-nines reliability (99.999) is humungous, if not impossible. SRE: An enhanced approach to meeting reliability requirements   How this is addressed by SRE Trust is the bedrock of businesses. Unreliable services can leave a permanent dent in the minds of the customer and specific actions need to be taken to improve reliability. Improved user experience with SLO driven methodology. Defining the right SLOs is extremely critical to establish benchmarks and set the right expectations of the stakeholders.   Reduce mean time to detect (MTTD) and mean time to respond (MTTR) with observability. Observability helps in enabling the right logs, traces and metrics as a feedback loop instrumentation of the systems is carried out on an ongoing basis by developers. Wipro's SRE Portfolio Wipro's Cloud Infrastructure Services focus on providing end-to-end services encompassing consulting, transformation, migration, and operational services across cloud environments in several industry verticals. Wipro envisaged the need for SRE in the context of next gen IT ops early on and has created a portfolio in this area. We have seen tremendous uptick in the pilots around SRE across many of our clients with different levels of adoption maturity. In 2019, Wipro created an SRE team. The team was chartered to deliver SRE services across all life cycle phases (consulting, design, build, and operations) and resource domains (people, process, and technology). The portfolio includes consulting and technical services to help customers define, plan, prepare the organization, implement, and operate an SRE practice that meets their specific needs. What benefits customers most is the fact that Wipro is an end-to-end player in the enterprise IT space and has extensive capabilities in incorporating SRE practices at the business, development and operations levels. To have a strong and focused approach, Wipro brings in a multi-work stream engagement model comprising a multitude of major service lines - cloud and infrastructure services, digital application services, cybersecurity risk services, and analytics; working in tandem with our business verticals such as healthcare, telecom, and utilities. Wipro has around 20 different services in the SRE Service catalog. While some of them enable clients to jumpstart SRE, the others focus on specific dimensions of SRE such as automation, user experience, architectural design patterns, service level objectives, and others. Illustrative set of SRE services a) The Wipro Jumpstart SRE enables customers to put an SRE practice, Center of Excellence (CoE), mindset, and culture in place with reliability at the core. It starts with understanding the overall business context and criticality, establishing the right priorities, conducting a maturity assessment, and creating a high level plan for establishing an envisioned target state operating model. Depending on the specific needs of the customer, the focus areas would encompass understanding the service criticality for the overall business, establishing the right service level objectives with value stream mapping, arriving at the right governance model, and inculcating the SRE spirit across the organization and the SRE way of working. To build this further, we collaborate with client stakeholders to evaluate the progress and chalk out the next steps in terms of identifying the specific value streams to

be taken up to arrive at the target state operating model. b) SRE observability and monitoring: Wipro's approach for SRE services is built on an ecosystem supported by two operating models: Wipro's strategy is to have a top down and grassroots approach to establish the effectiveness of IT system operations to business outcomes. Towards that end, we establish the right KPIs and SLIs to be monitored from a user experience standpoint. The right kind of observability setup helps us in monitoring the required SLOs and also helps in reducing the MTTD and MTTR. Key outcomes Jumpstart SRE Monitoring & observability Achieve critical business insights and improve IT operations in incident management and blameless post mortem Review critical design patterns such as load shedding Enterprise digital operations center Let's take a look at how two organizations benefited from engaging with Wipro for SRE: If you are interested in learning how Wipro is helping our clients to achieve their vision with a strong and focused approach to site reliability engineering, we should talk. Contact us here. *Gartner, "Emerging Technologies: Site Reliability Engineering Delivered as a Service", Craig Lowery, Brandon Medford, George Spafford, April 13, 2021. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.   Santanu Kumar Patro General Manager & Practice Head - SRE, Cloud Advisory and Consulting Santanu Patro has about 20 years of experience in IT and close to 15 years' experience in Advisory & Consulting. Being a techno-evangelist, he has been developing future ready solutions/services to meet the ever changing requirements of an enterprise, and leading a team of IT therapists to solve enterprise challenges. Shyam Venkat Managing Consultant, CIS Shyam Venkat is a seasoned IT professional with more than two decades experience in the field, specializing in cloud infrastructure, network transformation, IT strategy, service management, site reliability engineering, and cybersecurity. Based in Dallas (TX), He has performed multiple leadership roles in technology management, consulting, service delivery and operations across multiple clients across different industry verticals.   Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Expanding the transformative potential of IoT with blockchain

----- Arcticle source ----- https://www.wipro.com/infrastructure/expanding-the-transformative-potential-of-iot-with-blockchain/ ----- Exploring the current IoT landscape The benefits of blockchain IoT About the Author Related Articles Contact Wipro Secure updating capabilities Organizations can efficiently address outdated IoT issues as the safety of blockchain allows for the secure transfer of code on IoT devices. Testing this capability has yielded satisfactory results, with an open-source blockchain utilized for firmware updates over a wi-fi connection. Enhanced privacy Enhanced data management Improved scalability Better authentication Automatic connection IoT-IoT IoT blockchain Hybrid IoT blockchain — adoption and challenges There are technical and operational limitations to the widespread adoption of IoT blockchain technology. Foremost among them are the challenges in scalability and storage in blockchain networks that maintain centralized ledgers. This issue happens when storage on edge nodes is inefficient as intelligent devices at the edge are ill-equipped to handle high-volume data or high computational demands. But even though IoT blockchain is an emerging technology in its nascent stage, it is seeing adoption from significant technology organizations, including the IBM blockchain platform, which allows businesses to leverage IoT blockchain and cognitive computing. Organizations have implemented blockchain across industries spanning from BFSI to agriculture and smart homes, supply chains, and smart contracts. Unleashing new efficiencies with IoT blockchain While the application of blockchain in IoT may not be a mature field yet, it will have a considerable impact shortly. Blockchain today suffers from a lack of regulation and consistency across geographies. Improvements in the standardization and regulation of blockchain technology will increase IoT blockchain's commercial practicality and feasibility for enterprises and businesses everywhere. With its transparency and peer-to-peer communication, blockchain has the potential to drive security improvements across industries. It will pave the way for a new kind of interconnectedness and efficiency for businesses everywhere. Please fill the required details to access the content Expanding the transformative potential of IoT with blockchain April | 2022 Internet of things (IoT) technology is witnessing rapid adoption across industries. However, the architecture of these networks, combined with their centralized compute and storage resource needs, present significant security risks. With applications across a broad spectrum of industries, the internet of things (IoT) is enabling businesses to harness valuable data, analyze it, and make informed data-driven decisions. While this data provides tremendous value, the introduction of blockchain ensures the maintenance of data authenticity and immutableness without any compromises. Integrating blockchain technology into IoT networks addresses security concerns (end-to-end traceability, data privacy & anonymity, identity verification & authentication, confidentiality, data integrity, and availability) while increasing transaction speed, data management, and processing efficiency. While there are limitations currently holding back blockchain IoT in its current form, its application and impact in the field of IoT are inevitable. However, enterprises are leveraging

blockchain technology for its unique range of features, equipped to enhance the functioning of IoT networks and usher in a new paradigm for intelligent, data-driven organizations. In 2021, there were 13.8 billion units of installed and connected IoT devices, which can grow nearly three times to reach 30.9 billion units by 2025. With rapid developments in IoT technology and its accelerated adoption, industries can now capture data from various sources, glean insights, and leverage them to guide their business decisions. However, can businesses completely trust IoT data and operate confidently based upon the authenticity of the information contained across these devices? The vulnerabilities of IoT devices and their traditional centralized architecture drive home the impracticality of placing complete trust in IoT information in the current scenario. But, blockchain can ensure confidence in the data captured by IoT networks by designating each device its unique identity at the time of creation and allowing the validation and verification of that identity across its lifecycle by leveraging its distributed ledger technology. Device identity protocols enable each device to have a public blockchain key for control over its identity and the ability to maintain an immutable history of events that organizations can track over time. Impact of blockchain on IoT: Key differences in IoT implementation with and without blockchain Blockchain is a distributed ledger technology that combines with IoT to make machine-to-machine transactions possible. The technology records transactions in a database, verify them from multiple sources, and enters them into a shared ledger distributed across each node. Thus, the impact of blockchain on IoT presents several benefits, wherein an intelligent device can function autonomously without depending on a centralized authority. The technology can also track the communication between devices. The synergy between blockchain and IoT creates a path to address critical IoT issues. Some significant benefits include secure communications, peer-to-peer architecture, database redundancy, privacy in data exchange, and automatic additions of new IoT devices. Table 1 offers an example of data exchange in IoT with and without blockchain. IoT + Blockchain Centralized Low Openness Low High High Blockchain technology circumvents the need for central deployment of servers and databases. It ensures IoT-related operations in a distributed, secure manner with little opportunity for faults. Blockchain consolidates the capability of IoT devices to scale up security and transparency in the ecosystem. While blockchain ensures scale and decentralized infrastructure, IoT enables intelligent operations. There are several use cases across industries. For instance, the pandemic saw different initiatives proposed to implement COVID-19 certificates so that individuals with such credentials could be exempt from the physical restrictions to carry out certain activities. The blockchain-based platform can be a promising approach due to its decentralized and transparent features for securely sharing COVID-19 vaccination certificates. The focus on privacy proposes a hashing algorithm that enables users to store the information on the blockchain anonymously using an ID created from their iris. In this case, the blockchain can store vaccination certificate data and a hash of the user ID. Let's consider a use case in another industry. IoT sensors provide details through sensors, GPS, shipping details, etc., in supply chain functions across organizations and industries. Combining blockchain enhances reliability and traceability, storing the gathered data securely in the blockchain. Blockchain can benefit this business nexus across data management and financial and operational

functions in the automotive industry. The convergence of blockchain and IoT technologies   Figure 1: Blockchain IoT networks Integrating blockchain technology into IoT networks enables device-to-device transactions. These transactions get recorded and stored in the blockchain's distributed network across many nodes. Multiple sources then verify this record. By leveraging the capabilities of blockchain technology in IoT networks, smart contracts automatically trigger transactions among IoT devices when they meet pre-determined conditions. This technology creates the perfect environment for the autonomous functioning of smart devices by removing the need for a centralized authority while enhancing the security and tracking of device-to-device communication facilitated by smart contracts. While blockchain's architecture offers a range of benefits due to its decentralized nature, some challenges exist. IoT platforms have a client-server model with a centralized authority. Organizations should develop IoT platforms in a decentralized manner to ensure compatibility with blockchain, necessitating the IoT sensors to handle their storage and compute resources instead of utilizing centralized resources. Data decentralization and security IoT device data is often stored and managed by centralized servers, leaving vulnerabilities that malicious actors can exploit. With a central storage location, the risk of network failure is high. With data computation and storage spread across a vast range of devices numbering in the millions, the network becomes invulnerable to the loss of a single device, server, or central network. This capability contributes to the resiliency of IoT networks with blockchain technology. The network has high fault tolerance and can operate even with multiple offline nodes. High-level security is ensured by authenticating and authorizing encrypted device data with distributed ledgers. Blockchain can validate transactions by concealing the connections between devices while preceding third-party implementation options. Organizations can avoid data leaks and hacking incidents with blockchain's ability to optimize IoT protocols and supply encryption. Blockchain streamlines data management significantly by allowing devices to transfer data directly among them instead of transmitting data via a centralized server, reducing the number of transactions. The absence of IoT gateways and intermediate devices optimizes data processing time. Furthermore, blockchain-enabled intelligent contracts can convert much of the traditional IoT processes into automated processes. By driving efficiencies in data management across edge devices, organizations benefit from reduced costs for IoT device maintenance and data transfer. The decentralized nature of blockchain IoT networks allows for improvements in transaction speed and coordination between connected IoT devices, which, combined with the ability to share data, paves the way for better scalability. Decentralized PKIs, used by blockchain networks, are superior to centralized PKIs since only the user has access to the personality identification hidden key. In contrast, the network provider accesses the open key. These keys are cryptographically generated, making them invulnerable to hacking attempts. With blockchain technology and smart contracts, automatic commands and messages are possible in IoT networks, enabling data analysis and scenarios such as automatic filling of custom documents.   Different approaches for implementing IoT blockchain This method makes blockchain integration into IoT networks relatively straightforward, using only a sharing register for data storage. Routing mechanisms ensure that data transfers take place out of the blockchain, driving higher transaction speed and reducing lags. Moreover, this approach

enables offline capabilities for IoT devices. With the IoT-IoT approach not requiring significant workflow changes for devices on the network, it is relatively a simple solution. It only needs replacing a cloud/server with a blockchain for the transfer, storage, and data extraction. Here, IoT devices interact through the blockchain, which serves as a kind of cloud for the traditional IoT network, leading to tracing improvements, communication security, workflow automation, and capacity. However, the increased complexity of this mechanism can also lead to delays. It is an approach that requires significant modifications to the workflows of IoT devices and blockchain development. Additionally, it will require a blockchain with high speed, capacity, and zero fees. Here, the blockchain stores some types of information while sharing most of the data and communication across IoT devices. While it offers a range of advantages, the low delays and high working speeds required of the IoT devices are not practical. Notably, this approach enables fog computing to overcome the limitations of IoT devices and blockchain. Organizations can use this method to store, extract, and analyze private data. Using edge devices instead of a centralized cloud translates into savings in operating costs. Virendra Singh Delivery Head-IoT, iCORE-CIS Virendra heads the global IoT new-age solutions delivery team. He plays a crucial role in providing next-gen IoT solutions to clients worldwide and developing innovative support capabilities for the global IoT practice. With 24 years of experience and expertise across multiple domains, Virendra has a proven track record for complex solutions delivery, customer-centricity, and a passion for excellence. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Intelligent buildings to smart buildings with IoT

----- Arcticle source ----- https://www.wipro.com/infrastructure/intelligent-buildings-to-smart-buildings-with-iot/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Intelligent buildings to smart buildings with IoT April | 2022 The Building Management Systems (BMS) we see today serve the same purpose they did when first introduced in the late 1800s in the European countries and the 1990s in India: While there has been much technical evolution, such as the shift from pneumatic systems to computer-based control systems, from simple ACAD drawings to BIM models, most buildings remain energy inefficient and difficult to maintain, and often don't fully serve the occupants' needs. By disrupting long-established BMS models with IoT systems, there are significant opportunities to improve building efficiency in a variety of ways, which in turn will lead to cost savings and the

development of innovative services. Building planning and construction methods are also changing by leveraging IoT technology to reduce power consumption, increase energy savings, and create more sustainable buildings. The world is now reimagining commercial and public buildings, emphasizing health, safety, and energy efficiency. Today, technology plays a critical role in creating dynamic smart buildings that streamline maintenance, offer better experiences for occupants, and improve ROI. Intelligent building solutions integrate smart technologies to transform how a building performs. The B-IoT provides end-to-end smart solutions, from smart building consulting to controls contracting, master systems integration, integration platforms, command and control user interface, and digital engineering services. IoT systems connect various sensors and smart devices to a local or cloud-based controller from an architectural perspective. Sensors often collect and transmit real-time data about their environment that the controllers can then use to offer both immediate and long-term responses. Predictive and adaptive algorithms can help controllers execute simple and complex operational responses. IoT systems are somewhat reliable in their architecture and consist of three primary layers: The size and scope of today's IoT systems also differ; they can range from a small number of sensors in a residential building to millions of gadgets on complex factory floors and within large commercial buildings. Customer privacy and security are critical and are sensitive factors that developers should consider to make an IoT system sustainable in the long term and on a large scale. Building management system offers a specific series of distinctive constraints and possible solutions in energy. The notion of a "smart building" is getting progressively more widespread. A smart building is equipped with modern technologies to automate procedures, particularly HVAC controls, and contain energy consumption. A smart city includes various IoT systems dedicated to parking availability, traffic optimization, weather preparedness, public transit, and building sensors. IoT architecture comprises four components: There five most common application types of IoT are: Schematic of the system arrangement of IoT architecture Here are critical areas where building automation with IoT can significantly impact. Traditionally, these were all standalone with no integration. However, these are seamlessly integrated into a smart building today, enabling control, data flow, and energy optimization. 1. Facility management & operations We can do a lot about maintenance in the IoT world, specifically predictive maintenance. Having equipment out of commission or in disrepair can translate to potential health and safety concerns on the premises. Unexpected issues are bound to arise, often not visible to the naked eye. Sensors can detect potential problems before anyone in the office or home becomes aware and will send alerts and information to building managers so that they can act immediately, staving off what could be a costly breakdown of a system or piece of equipment. This feature also reduces tenant disruption and saves money in the long run. Facility managers need to oversee many different aspects and measurements of their buildings, such as humidity and carbon dioxide levels. These measurements ensure the safety of the building occupants, minimum operational costs, and consistent conformity to regulatory restrictions. By taking advantage of predesigned building automation IoT solutions, facility managers can begin monitoring their buildings in real-time and repurpose the resources previously tasked with taking manual readings.

With pre-packaged dashboards, hierarchical data privacy rules, alerts, and triggers, facilities managers will be well on their way to supporting an IoT-enabled HVAC solution. 2. Sustainability The current sustainability goals and environmental restrictions play a significant role in designing intelligent buildings of the future. Effective power management, integration of IoT systems for green energy, and self-sustainability capabilities are integral parts of most smart buildings today. There is not necessarily a "best" application for the IoT applied to building energy reduction because each application has custom goals based on the building characteristics and location. For this reason, it is difficult to compare the cost and installation difficulty of an IoT application.   2a. Energy efficiency Energy efficiency has long been at the core of BMS implementation. IoT technology can identify critical areas of energy wastage and cost minimization, creating smart energy. One can use the sensor-generated data at the building level to optimize and regulate HVAC equipment. By making relevant adjustments, you can save on both energy and costs. New builds are already introducing building automation systems widely, but you can also retrofit them to existing buildings to give you the energy-saving benefits of a smart building.
      2b. Water management The average person spends about 90% of their time indoors, and the average family uses around 300 liters of water each day, while the average office worker uses up to 30 liters per day while at work. With water resources becoming scarce, monitoring and saving water is imperative. Embedding IoT-enabled sensors in water supply channels give the data we need to monitor and control. These IoT sensors can alert facility managers to initiate temporary measures and store data historically.
3. Security & safety Access control is a fundamental security aspect for every building and organization where restricted access is necessary, including schools, hospitals, offices, warehouses, data centers, and even hotels. The primary driver of access control is safeguarding people and protecting physical and intellectual property. Most of us probably already use key cards, but IoT adds another layer. With key cards and connected 'checkpoints,' remote access control is possible, with remotely lockable doors and the ability to track and program door access. 4. Occupant comfort A smoothly run building or facility keeps the occupants comfortable. Smart buildings with IoT sensors & cloud technologies can support this. Many of the above areas contribute to occupant comfort, with indoor temperatures, air quality, lighting, and humidity playing into occupants' well-being and productivity. IoT sensors monitor all of these and allow you to fine-tune them as you go, helping you to maintain an optimal and healthy indoor environment. Data from sensors can also help you accurately assess traffic and usage in different parts of the building to prioritize things like cleaning activities, ensuring good sanitation and well-maintained amenities. There are various ways to detect user comfort using IoT systems and otherwise. User comfort is essential to measure as this must be maintained or improved when implementing an energy consumption-reducing IoT application. The addition of occupancy and comfort-sensing allows the system to perform what users desire instead of overheating, cooling, lighting, etc. Additionally, you can use the occupancy and activity details to tailor energy systems only to regions that require it, in either the long or the short term. This adjustment could be as simple as automatically turning on and off lights or allowing predictive HVAC control based on long-term occupancy patterns. Conclusion Building IoT offers the promise to transform one of the largest

business markets. Over a third of all energy is consumed in buildings, making them a critical component of any global sustainability response. At the same time, buildings, by nature of their high occupancy densities, are central to security considerations, including health securities that the pandemic has further brought into sharp focus. We believe that the next 5–7 years will see a massive transformation of buildings, with IoT solutions likely being one of the key enablers. N.J.Abraham Project Delivery - IoT & Smart Campus NJ is a part of the Delivery Team of IoT & Smart Campus with CIS Wipro. He handles key Global Projects. He has 23 years of experience in the IBMS & IoT Industry and has worked in multiple technical domains. He has worked in Global Organisations handling various mid & leadership roles. He has a proven track of handling mission critical projects, complex technologies, customer centric and a zeal for excellence. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

The buzz around SASE.

Is it worth all the hype?

----- Arcticle source ----- https://www.wipro.com/infrastructure/the-buzz-around-sase-is-it-worth-all-the-hype/ ----- About the Author(s) Related Articles Contact Wipro Please fill the required details to access the content The buzz around SASE. Is it worth all the hype? April | 2022 The paradigm shift in the IT infrastructure Digital transformation has created a massive wave across every line of business, be it healthcare, banking & finance, manufacturing, or telecom. The advent of new-age technologies like cloud, AI, analytics, software-defined networks, automation, and blockchain has propelled seeking possible IT transformations that are cost-effective with minimum human intervention. The demand & supply model has raised the bar of consumer expectations that further triggered us to align our business initiatives to consumer needs, and guess what? The outcome is a win-win for both the consumers and the suppliers. It began with storage virtualization (vSAN), giving rise to server consolidation to fit into the new architecture model. The progression in storage and compute virtualization won't solely suffice to accommodate the shifting IT landscape. Organizations must transform the underlying network infrastructure and elevate it to realize a full-fledged IT modernization. The advent of virtualization and adoption of multi-cloud & hybrid cloud technology coupled with anywhere-workspace has been the early drivers for software-defined technology, be it compute, server, or network space. The software-centric approach can achieve scalability, flexibility, and adaptability that helps optimize both CapEx and OpEx savings. Evolution of Networks over the years Let's take a look at the

evolution of wired networks. Legacy infra was a hardware-based siloed architecture that failed to achieve customers' dynamic business needs, rendering the overall design obsolete. It started with OTN (Optical Transport Networks) carrying voice signals giving rise to ethernet and MPLS networks carrying data and video frames. With the exponential increase in data, IoT, and adoption of edge and cloud computing techniques, we gradually transitioned to cost-effective, scalable & vendor-agnostic software-defined networks to address the challenges witnessed by legacy infrastructure. SD-WAN has essentially revolutionized the WAN virtualization space by decoupling the network functions from the underlying physical infrastructure. The overlay model helps establish direct connectivity to on-premises or cloud devices, unlike the traditional MPLS link connectivity that traverses through the hub site first, adding to latency and backhauling of traffic. However, SD-WAN primarily focuses on covering wide-area connectivity with limited security functionality built on a box that fails to deliver the security aspects of Edge at the micro-level, diving deep into users, devices, and applications. This is where the concept of SASE kicks in. Introduction to SASE Traditionally, organizations bound security to premises with perimeter firewalls, which is no longer relevant after introducing VM & distributed workforce. A granular level of protection attached to workloads with intrinsic security at every layer of infrastructure induces the need for unified networking and security as the envisioned design approach. Endpoint & last mile security and easy accessibility to the cloud are imperative to today's distributed/disjointed workforce. One can define SASE, i.e., Secure Access Service Edge, as the convergence of WAN and security, consumed as a cloud service model. With the SASE approach, a secured experience for every user on-prem, cloud, branch/ DC, or remote is possible with direct onramp connectivity to the cloud. The local secured internet breakout for users to access SaaS applications/generic internet services is possible with the SASE framework, which would otherwise require complex firewall HW implementation at all sites. SASE and the SD-WAN overlay model cater to a complete end-to-end portfolio of services, including virtual WAN link connectivity, secure internet access, cloud web security, and ZTNA (Zero trust network access). One can enable security features on service edges called PoP-over-cloud or proximity to public cloud gateways. This approach helps overcome multiple VPN mesh inter-connectivity, adding cost and network complexity. The overlay model is carrier-neutral and supports any underlying infrastructure like ethernet, MPLS, LTE, and internet. The SASE Pitch A potential SASE solution pitch could be any of the following: Kudos to all SASE players like VMware, Palo Alto Networks, Fortinet, Cisco, and Zscaler, for anticipating the need for top-notch security and extending their offerings during the COVID pandemic when most of the resources worked remotely. They have played a significant role in driving the business growth with minimum security breaches ensuring a hassle-free, safe environment. SASE-The future Network security features cannot be compromised and will continue to be the driving force to protect the overall infra, edges, and workloads. Convergence of networks & security becomes an integral scope for end-to-end secured connectivity. SASE enhances the security capabilities manifold, ensuring a safe and protective edge. Solutions going forward must be centered around SASE to stay relevant in today's growing distributive set-ups. If SDN is the new norm, SASE is the future. I can't possibly think of any potential disrupters

for SASE today, so I will wait and watch to see what the future unfolds after SASE. Apurba Dutta General Manager and Global Head for Wipro Network and Infra Security Practice, Cloud and Infrastructure Services – iCORE, Wipro Limited Apurba has over two decades of IT experience in helping customers across the globe in transformation solutions. He has managed large business units– P&L, Sales, Delivery, and competency -- across geographies, while working with ecosystem partners to modernize the core and help enterprises create Cloud and Infrastructure foundations for their future-ready digital businesses. In his current role, he works closely with internal and external stakeholders, advisors and analysts, and startup ecosystem partners to help customers fast-track to the future. Nisha Thoniparambil Lead Administrator, Cloud and Infrastructure Services – iCORE, Wipro Limited Nisha is electronics engineer with over 10 years of total experience in Network domain, sales enablement, strategic alliance management, and presales & pursuit development. She is presently working as a Lead Administrator for the Cloud and Infrastructure Services team where she enables alliance-led business growth for software-defined networks. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Adopting IoT Technologies to Rejuvenate Dairy Farming

----- Arcticle source ----- https://www.wipro.com/infrastructure/adopting-iot-technologies-to-rejuvenate-dairy-farming/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Adopting IoT Technologies to Rejuvenate Dairy Farming May | 2022 Dairy farming is considered as one the core functions of agriculture for long-term production of milk. Large scale dairy farms are utilizing modern and innovative technology for automating the milking system and maintaining the health parameters of the cattle. Today, dairy farmers focus more on precision farming by monitoring and developing a database for information provisioning and capturing competitive market data. To ensure sustainability and remain competitive in the market, dairy farmers need to monitor variety of data sources like cattle feeding, calving, nutrition, insemination, and the process of milk production. However, they also face several challenges such as: Impact of IoT on smart farming Today, Internet of Things (IoT) is making a significant impact on milk production. Global milk production to meet the demands of the growing population needs to be enhanced with technology. With this technology, farmers can enhance and improve several dairy related activities such as ascertaining the right time to milk cows, increasing the shelf life of the milk and so on. In dairy farming, the Internet of Things (IoT)

plays a crucial in the monitoring of resources by connecting multiple and heterogeneous objects in mixed dairy farms (which produce milk from cattle and cultivate feed grain for livestock), such as buildings, machinery and vehicles or even living organisms like cattle. The IoT Sensor and Edge Computing (EC) enable resource monitoring and traceability in the value chain, allowing producers to optimize processes, provide the origin of the produce and guarantee its quality to consumers. IoT technology leverages multiple sensors for collecting various data points and data transmission with low power and bandwidth for communication. Adaption of smart sensors and techniques (data sensing methods like pressure sensing, volumetric sensing, sensing schedules etc.) help to improve resource efficiency, are environment-friendly, enable transparency and data security. These techniques maintain a real-time view of the milk levels, monitor the health of the cattle, warehouse management, and safe transportation access. IoT platforms and integrated AI engines, gateways, LPWA networks and smart sensors push the industry into a real revolution. The latest technologies are being introduced to automate many of the processes. IoT and data-driven techniques are creating greater opportunities for smart dairy farming. IoT can support farmers with wearable sensor devices to keep them aware of the status of every animal. The sensor-based system can effectively and correctly detect the illness of the cattle before it affects the milk production. IoT serves as an important foundation for cattle breeding by tracking real-time cattle information such as activity, temperature, and pulse. This crucial information can then be used to conduct a thorough analysis to determine cattle oestrus. Increase in milk yield, reduced labor and medicine treatment costs, and increase in the revenue of dairy farms are the most exciting benefits of this technology. This technology has also received close attention from dairy product enterprises and animal breeding initiatives. IoT and AI based technological methods can be used to minimize the negative factors and enhance those factors that positively affect the production. For instance, an artificial intelligence (AI) model developed based on IoT sensors in milking systems can provide data to help farmers determine when the cattle should be milked or to help the farmer change the feeding pattern. These data can be further enhanced to maintain quality of milk and help to understand production. The state of the art framework by combining IoT sensor, IoT platform and AI solutions should be focused on different aspects of smart dairy farming to assist the farmers increase the milk yield by using different techniques and innovation. Figure 1: Outlines how IoT can be used for various touch points The technological adoption of IoT and AI based approach helps in creating innovative methodologies for production (milk yield) and the process of dairy farming. Process innovation can be different for different sets of activities that are performed at several levels in a smart dairy farm. In a dairy farm, the milking process is viewed as a singular process; however, there are several activities that are performed in the farm such as feeding, cow monitoring, and preserving milk. The intervention of IoT can be in different processes and procedures like the feed system to sense the hunger needs of the cows and automatically feed them. It can also proactively monitor automatic heat detection that will assist in reproduction. Assessing health and monitoring cows for disease detection and prevention will help the farmer to locate any animal that needs medical attention. Smart dairy farming includes real time sensors that collect data from cows with the help of wearable smart collars, machine

learning data analysis, and cloud-based data centers that manage data and support the farmer in order to manage quality of dairy products as depicted in Figure 2. IoT and AI technology adoption can play a significant role in the dairy industry to simplify the operations for milk producers and meet the increasing demand for quality dairy products. The technological advancement in IoT can help minimize environmental issues, decrease the use of resources, and enhance animal health by using advanced sensing and data analyzing technologies. IoT based technology can be used in farm management to reduce costs and make operations efficient. Here are some key outcomes: Health monitoring: Monitoring and tracking of cattle health data like heart rate and other vital signs of a cow can help farmers in early diagnosis of health issues and provide correct medication. Monitoring of anomalies in milk production: It is essential to understand cattle behavior and milk production by monitoring continuously and comparing the regular patterns. Each animal can be tagged with a unique identification number to help track the animal's production and understand their health patterns. Tracking of automatic water and food supply: Technology driven future for the dairy industry New-age smart techniques using IoT devices will help farmers with increased milk production, advanced monitoring of cattle health & anomaly detection, thereby streamlining the business and processes. Although smart dairy farming using IoT gives various features to a common farmer, it may be a costly affair at the beginning; yet offers the promise of cost recovery with longer usage. IoT helps in efficient monitoring of the feeding and drinking method which can lead to better nutrition of cows, and more milk production. The system with overall architecture, better adaptation of technology, and versatile design can make IoT-based farming more efficient. Sampath Kumar Rangadurai Sr. Solution Architect - IoT, Cloud & Infrastructure Services, Wipro Sampath has over 22 years of experience and plays a key role in presales and technical consultancy for IoT / Smart City initiatives. He has extensive experience in IoT/OT technologies across multiple industries including Engineering, Construction, Oil & Gas, Retail, Manufacturing, Healthcare, Logistics and Transportation. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Cloud-Powered Digital Backbone

----- Arcticle source ----- https://www.wipro.com/infrastructure/cloud-powered-digital-backbone/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Cloud-Powered Digital Backbone May | 2022 A backbone for digital transformation Our world today is unquestionably digital. New technologies from augmented reality to artificial intelligence (AI) are changing the way we live, and the worldwide pandemic has only accelerated this reliance on technology. This

rapid rise in technology is requiring enterprises to transform from click and mortar to digital first. To understand this transformational journey, we need to consider the building blocks of this transformation. Digital transformations start with the creation of a "digital backbone." A digital backbone enables an enterprise to react to the rapid changes and new requirements of a digital world. It is the digital thread that weaves several systems, including networks, gateways, hosting services, user interfaces, cyber security, and middleware in a unified backbone to bring out digital insights for enhanced digital omni-channel engagements. A digital backbone comprises of an enterprise-specific architecture built out of data services, next-generation networks, smart platforms, agile processes, and automation capabilities that enable digital insights. Each one of these blocks encapsulates an important element of the corporate's business. In this context, the digital capabilities of a company are mapped onto a set of building blocks, which in turn can easily be joined together to create new and specific solutions. Figure 1: Digital Backbone Digital Loops A digital loop is the connection between customers, employees, suppliers, operations, products, and services into a single digital fabric. A digital backbone is vital to build digital loops that cover end-to-end processes and operations for organizations. Figure 2 Digital Loop Digital backbone in manufacturing In the post-pandemic world, the manufacturing and supply chain have come under extreme stress and are challenged on multiple fronts. Manufacturers are going through a period of disruptive changes which require them to provide sustainable operations and bring innovation at speed, using service-based business models with a laser sharp focus on EBITDA improvement. Using the digital loop, organizations can bring all the issues in focus and rely on the digital backbone to meet the challenges faced by the manufacturing industry. In the context of manufacturing, the digital backbone enables a construct called "lights out manufacturing." It represents a manufacturing paradigm where every action on the manufacturing floor is executed solely by automated processes and intelligent systems without the need of human intervention at any stage. Lights out manufacturing considers fixed (hard) automation, programmable automation, flexible (soft) automation, and totally integrated automation (TIA). All process decisions are either handled by automated systems (IoT sensors, CCTV, robots, computers, AI, automatic assembly machines etc.) or remote controlled and monitored by engineers in another location. Essentially, the factory floor becomes the proverbial "black box" where raw materials go in on one side and a finished product comes out on the other side. Building the digital backbone To build a digital backbone ubiquitous by design, manufacturers need to uplift their existing core services and capabilities in three areas. Figure 3: Building manufacturing digital backbone Personas System of engagement System of record Bringing scale to the digital backbone Fully automated, lights-out manufacturing can only be enabled by processing huge volumes of data at scale. Figure 4: Bringing Scale to the digital backbone Using cloud technologies, the industry champions are not only meeting but also beating the challenges. The cloud-based digital backbone acts as the foundation on which we can build and deliver the future capability that companies require. Cloud enables and delivers on-demand SaaS services and applications that are easily accessible and rapidly scalable; in turn, this will enable companies to provide more services to their end customers, better customer experience, and build new

products. If the manufacturing processes are already automated to some degree, then cloud computing provides a viable next step for building the digital backbone. Digitalisation of the core enhances financial performance and increases speed throughput in all parts of businesses, and reduces NVA (non-value-added) time and efforts. Cloud-powered digital backbone essential for transformation We are witnessing how a vast majority of the companies are looking to transform not only manufacturing operations but also all aspects of their business. This transformation focusses on their customer's outcomes and changes manufacturer's mindset and business from end-to-end. A cloud-powered digital backbone helps organisations across industries in: Thus, a cloud-powered digital backbone is critical for any industry looking to beat the challenges of hyper scaling in an EBITDA-friendly way of bringing forward rapid innovation and keeping customers delighted. Gaurav Parakh Director - Azure Business & Cloud Strategic Pursuits, iCORE – Europe Gaurav is a Director at the Cloud Europe team at Wipro. Based in UK, he provides consultancy and advisory services to Wipro's key customers. Gaurav has 22+ years of experience in international business and IT consultancy in cloud, open source, digital transformation, go-to-market, and business development. He has been instrumental in launching multiple tech start-ups from ideation, build, to exit across cloud, 3D printing, and AI. He holds an MBA in International Business from Ecole Nationale des Ponts et Chausses, Paris and a Bachelor of Science degree from the University of Bradford, UK. You can reach Gaurav at gaurav.parakh@wipro.com Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Evergreen IT or Nevergreen IT – What's the Ideal Enterprise Strategy?

----- Arcticle source ----- https://www.wipro.com/infrastructure/nevergreen-it-whats-the-ideal-enterprise-strategy/ ----- What are enterprises spending on? Why do you need an evergreen IT strategy? What will enterprises derive from Evergreen IT? About the Authors Related Articles Contact Wipro Please fill the required details to access the content Evergreen IT or Nevergreen IT – What's the Ideal Enterprise Strategy? May | 2022 Enterprises across the globe are spending millions of dollars on procuring world class IT assets, both software and hardware, for their employees to improve productivity and increase efficiency. The cost of managing an IT estate to propel the required business outcomes proves to be expensive as these organizations retain and are largely dependent on legacy systems.

There is a persistent challenge of maintaining the technical health of the organization's enterprise systems. Vendors are constantly changing their release schedules and the battle to manage the underlying technology components such as the operating systems, databases, browsers, and development code requires continuous focus. Enterprises struggle to execute transformation projects as the businesses do not understand nor have a a clear plan of action to maintain "Evergreen IT". This is predominantly because of lack of visibility into the IT estate and unavailability and/ or poor utilization of planning and management solutions, making maintenance of IT estates overly expensive. Why do organizations need to invest in automation? Workplace automation is no longer a luxury. It's now essential to accomplish monotonous and complex workplace processes in a manner that can better utilize the strength of the manpower of the enterprise. The key to mitigating these issues lies in allocating both the right people and the right technology to the Evergreen process. Smart automation solutions, from vendors like Juriba, can be used to speed up the entire process of implementing Windows updates, from planning the deployment to testing all applications and managing the change. Some organizations create dedicated teams within IT departments to focus on the Evergreen process year-round, while others outsource the responsibility to free up the time of their in-house staff. Both strategies are equally valid and yield benefits. Enterprises can: Consumer demands are rapidly changing, and most organizations are working towards digital transformations where adaptations to changes in lightning speed is the call of the hour. Microsoft (MS) is a classic example of how this is done. In 2015, Microsoft announced that Windows 10 would be its final iteration of its operating system. However, MS has now launched Windows 11. Both these OS will be adopting an Evergreen model, meaning that there will be a continuous flow of small, incremental enhancements to either operating system, until Windows 10 reaches its end of life in 2025. Every second Tuesday of the month, Microsoft will release new security patches and new features in updates due in the spring and autumn of each year. The same applies for Office 365 updates as well. Post COVID-19, the hybrid working model is here to stay and majority of the global organizations are embracing it. Gone are the days where most of the OS updates would happen over 12-18 months. With a shorter support window, the cadence is now set for 6 months. How to keep your estate evergreen? Globally, enterprises don't account for "orchestration" in the context of enabling and managing a modern workplace. Migration efforts have not been synchronous across the enterprise leaving organizations to spend millions every year to execute transformation projects and still not be evergreen. Wipro's Evergreen IT services enable you to achieve a high rate of efficiency while allowing you manage, upgrade, and orchestrate all activities involved in maintaining an enterprise-wide evergreen IT estate rather than a poorly managed nevergreen IT estate.   Enterprises have typically tried to utilize new systems and cutting-edge technologies without having a clear plan of action for managing existing IT estate. This leaves a huge gap to measure, maintain and transform the IT estate in an efficient manner. Listed below are the top outcomes enterprises can ensure an Evergreen IT: Evergreen IT is critical to improve productivity and end user experience. The design and processes are key to effectively manage transformations and maintain IT assets. It shifts the focus from "keeping the lights on" to driving digital

transformation — making an organization more agile, competitive, and secure as the IT estate is always up-to-date and compliant. Evergreen IT is here to stay, and we must embrace it. Indeed, in many ways, the Evergreen approach can be seen as a landmark stage in the journey towards 'Everything-as-a-Service', in which all IT requirements will be met with subscriptions. Payel Basu DWS Practice Strategy, Product Evangelist, Wipro Payel is a Practice Development & Strategic Leader with nearly 15 years of industry experience pre-sales, practice, consulting, and transformation in the digital workplace domain. She performs a techno-business role, and currently leads the key alliances for LiveWorkspace™ and various product and practice development initiatives. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. ======================

A holistic approach to scalability and business outcomes in the IoT

----- Arcticle source ----- https://www.wipro.com/infrastructure/a-holistic-approach-to-scalability-and-business-outcomes-in-the-iot/ ----- Related Articles Contact Wipro Please fill the required details to access the content A holistic approach to scalability and business outcomes in the IoT An ISG-Wipro research paper exploring the market changes, challenges and responses driving enterprises toward a holistic approach to the Internet of Things (IoT) May | 2022 As enterprises work towards digital transformation, the Internet of Things (IoT) provides crucial linkages between physical objects and the digital realm. Digital transformation does not entail just modernizing the systems and processes; it helps in service improvement, cost control and better business outcomes. IoT is a critical element in the transformation technology because it supports companies to improve their operational efficiencies. And, big data, cloud computing, and edge computing are key technologies that drive the demand for enterprise digital transformation. In this research paper, ISG delves into the challenges and responses that drive enterprises towards a holistic approach to the IoT. In addition to the features of scalability, interoperability, and security, key benefits of this approach include: Finally, you can also read Wipro's perspective on the IoT and how we strongly believe in the IT-OT convergence to achieve cross functional goals. The impact of IoT on global business and its role in digital transformation is unquestionable. This report provides a dual perspective – from ISG, a leading research and consulting organization, and a practitioners' perspective from Wipro. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications,

People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Realizing the Potential of Smart Buildings with the Internet of Things (IoT) and Other Emerging Technologies

----- Arcticle source ----- https://www.wipro.com/infrastructure/realizing-the-potential-of-smart-buildings-with-the-internet-of-things-iot-and-other-emerging-technologies/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Realizing the Potential of Smart Buildings with the Internet of Things (IoT) and Other Emerging Technologies May | 2022 The use of building automation is not a new phenomenon. In fact, with the rapid advancement in technology and the development of IoT making connected devices a reality, the concept of building management has undergone a paradigm shift. Data by the United Nations indicates that until 2019, the overall global population in urban areas had increased to 55.7%. The concentration of people in urban areas in developed countries is almost 81%. In comparison, 51% of the developing world population lives in urban areas, implying that urban areas have a greater concentration of workplaces. Also, with the growing population, environmental concerns are amplified, reinforcing the idea that smart buildings are not just about managing building infrastructure or operations. A smart building also addresses other aspects such as occupant experience, their health and safety, energy management, sustainability, and cost efficiencies, resulting in heightened user experiences. Smart buildings: the growing need and opportunity It's no surprise that the market for smart buildings is growing exponentially. A Markets & Markets report evaluated the smart building market at $66.3 billion in 2002, which can grow by a CAGR of 10.5% to $108.9 billion by 2025. The report further elucidates that the drivers for this growth include: A smart building uses sensors to collect data related to different aspects of the building. This data is of significant value to facilities managers. The newer technologies help measure asset functioning and overall asset health. With the IoT, building managers can now easily compute the efficiency of assets and equipment in real-time, with prompt notifications enabled via integrated and interconnected systems. Using sensors deployed through the interconnected systems helps enhance asset life and ensure occupant safety. Sustainability – driving the need for smart buildings Buildings and building construction contribute to one-third of the global energy consumption and almost 40% of CO_2 emissions. Smart buildings go beyond just employee productivity and safety. They contribute significantly to energy savings and sustainability. With growing awareness and the drive to reduce the carbon footprint and improve energy efficiency,

smart buildings have the potential to be significant contributors. Data is critical to facilitating energy management. The convergence of IoT and other technologies such as AI, sensors, and smart data ensures abundant data availability, making it simpler to track energy usage and consumption. The prudent use of technology in smart buildings provides efficient energy consumption management and monitoring. Smart technology for smart buildings in the new normal Before the COVID-19 pandemic, organizations had already leveraged the new age technology stack consisting of IoT, artificial intelligence, machine learning, and digitization extensively to make rapid changes in workplace infrastructure, facilities, practices, and how employees worked. In the present context, the significance of these technologies in business success is manifold. Today, IoT is one of the key technologies that enable smart building systems. IoT enables facility systems to work synergistically, enabling the seamless management of temperature control, ventilation, occupancy, elevators, common area usage, and overall employee and visitor comfort through a single pane of view. Plus, this can be done on-site or remotely. Today, IoT sensors are helping companies save energy and costs. Future-thinking companies are no longer creating a physical workspace for every employee. Occupancy sensors and other smart technologies provide accurate data about workspace utilization, thereby enabling the business to free up unutilized workspaces. A contactless desk booking system can further enable seamless and smart operations. A smart attendance facility for employees working from home can help workspace planning and, in turn, provide valuable data to the human resources (HR) team. With the growing impact of social distancing, the sensors can detect employees who do not follow safety protocols and alert the relevant teams, making contact tracing seamless and effective. Visitors can be monitored successfully, right from arrival on the premises through the parking slot allocation to the specific conference or meeting rooms they are in. With sub-optimal occupancy in office spaces today, IoT-enabled sensors can detect hazards, control temperature, regulate lighting, and help in energy saving to provide a better work environment. Figure 1: Wipro's Smart Building solution Framework Research indicates that smart buildings increasingly use augmented reality (AR) and digital twin technology to streamline building operations, automate maintenance and repair processes, and facilitate health & safety requirements, primarily due to the pandemic. A digital twin is a virtual representation of a physical asset (the building or building system) that enables an asset operator (facilities manager) to derive actionable insights into the asset's performance and health. Sensors provide data on the asset's operating conditions and key performance parameters that describe the asset's real-world behavior. When you combine real-time and historical operational data with physics-based scientific insights from asset design, a unique digital representation of each asset emerges– the digital twin. Wipro's smart building solution – towards a better future Wipro's smart building solution leverages the IoT, digital twin, and augmented reality technology stack. The solution monitors, analyzes and manages the operational systems in a smart building. The Wipro Smart i-Connect™ (WSiC™) IoT Platform is a powerful and flexible smart buildings platform. Its vendor-agnostic technology and open-source interfaces based on IT standards are well-suited for controlling all intelligent building systems. As a central component of a facility control center, WSiC acquires, interprets, routes, processes, and visualizes the data from thousands of

devices and sources. The platform controls and monitors different equipment and systems. Wipro has designed WSiC to join different systems for building an intelligent building control center. Amit Amit has over 20 years of industry experience in Cloud & Infrastructure Services, including solution architecture, technical consulting, strategic partnerships, and product delivery of IoT solutions. He plays a crucial role in the IoT initiatives across multiple industries and is passionate about leading and working on emerging technologies. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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ISG Momentum Report: The Curious Case of the "Anywhere Operations"

----- Arcticle source ----- https://www.wipro.com/infrastructure/isg-momentum-report-the-curious-case-of-the-anywhere-operations/ ----- Contact Wipro Please fill the required details to access the content ISG Momentum Report: The Curious Case of the "Anywhere Operations" Exploring the Future of Workplace Freedom Powered By Technology and Innovation June | 2022 "Anywhere Operations" is a term that is gaining significant traction in the IT ecosystem as a derivative of the pandemic crisis when companies were forced to transfer their operations beyond the confines of the physical office space to continue business as usual. Anywhere Operations is an operating model that enables a remote or hybrid workforce to achieve location independence for most operational activities. The ISG Momentum report explores the principal tenets of achieving Anywhere Operations. It also demonstrates Wipro's innovative, next-gen offerings like Wipro FullStride Cloud Services' Boundaryless Enterprise (BLE) and Enterprise Digital Operations Center (EDOC) with Wipro Holmes™, LiVE Workspace™, and WANFreedom, that are capable of accomplishing these pre-requisites. Download the report to learn: Download the Report
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Six steps to putting HR on the path

to corporate strategic partner

----- Arcticle source ----- https://www.wipro.com/consulting/six-steps-to-putting-hr-on-the-path-to-corporate-strategic-partn/ ----- Contact Wipro Please fill the required details to access the content The Human Resources function struggles to fulfill its potential as a strategic business partner. In most organizations, HR is reactive when it needs to be proactive, and it's had mixed results when it comes to balancing costly in-house expertise with less costly external resources to create and deliver a seamless set of value-added services. Transforming HR has been promoted and written about for at least 20 years, and certainly there have been improvements in how the function operates during that time. Yet, most attempts to achieve strategic business partner status have fallen short— and for reasons that are fairly common among different types of businesses. Chief among those reasons is that HR hasn't yet completed the process of transformation. The solution? In our work with global organizations we've identified six key steps that HR functions must take to set itself on the path of being welcome at the table as a strategic partner. Six Steps Toward Transformation 1. Separate HR Operations from HR Strategy. While HR strategy and operations are equally important, there is often confusion between them within the HRBP role. What's needed is to establish clearly distinct roles to free strategists to focus on diagnosing and developing solutions to meet business needs, while enabling business partners designated as operational to execute strategy and provide general support. With better defined roles you can adopt a strategic approach to sourcing and developing HR experts, rotating talent into HR from other areas of the business and vice versa. And, you can reduce costs over time since you'll no longer need to pay a premium for all HRBP candidates in pursuit of senior influencer competencies. Once you've defined the operational role, an organization can more easily create flexible pools of operational HRBPs configured to support specific business units, functions, or geographic areas. Working together, the company's HR strategists, the Centers of Excellence, and the business can diagnose needs, develop solutions, and hand off execution to these flexible pools. They are a powerful way to manage supply and demand and prevent individual HRBPs from becoming overwhelmed or under-utilized. Key activities to begin this step include assessing how your people spend their time, determining if they are delivering what the business needs, and investigating organizational options for separating operations and strategy. 2. Customize your HR services and prioritize HR investment appropriately. There must be a clear alignment between the business, HR strategy, and the HR service portfolio. Further, HR service levels should be differentiated and assigned costs. Certainly all business units will receive some mandatory or required HR services, but other HR services should be selected—and paid for—by business units on a needs basis. Create a service catalogue from which

business units or functions can select the type and level of discretionary services they need. For example, units directly involved in revenuegenerating activities may require different services and a higher level of investment in people-development activities than other business units. Differentiating HR services ensures that HR is better able to target services, prioritize investment, and size itself appropriately. It also clarifies what the business unit is accountable for versus HR and service-level expectations. Differentiating HR services ensures that HR is better able to target services, prioritize investment, and size itself appropriately To test your ability to differentiate HR services, start by determining if the right HR services are being provided at the right level to the right groups. Consider which groups will benefit from receiving a greater or different level of HR investment than others, and then formulate your catalogue detailing service options. 3. Harmonize HR policy and standardize lean processes. Many global organizations wrestle with the challenges of having numerous variations in processes and policies. This perpetuates large teams and hinders the possibility of pushing further transactional work to the shared services center. It also limits the chance of freeing up strategists, and turns HR into policy enforcers rather than business partners—the very situation we're trying to rectify. While business and legal impediments make it impossible to harmonize and standardize all global policy and process variants, it should be done wherever possible. In fact, the evolution of shared services is towards multi-function, globally shared services, with up to 85 percent standardization and a hybrid in-house/outsourced approach. The ultimate model is Global Business Services, with true globally standard customer-centric processes. But this doesn't mean treating all customer groups the same. It means standardizing processes where standardization makes sense. Within this step, assess where process and policy variance is essential, and use technology and outsourcing options to harmonize and standardize all other activities. 4. Integrate HR systems, automate activities, and clean your data. Loosely coupled or poorly integrated HR systems are the epitome of inefficiency. Not only does a lack of integration create extra manual effort, it also makes data quality harder to manage. Getting data accurate and consistent in one place is a challenge; having to do the same across a complex HR applications portfolio is even more so. But data quality is a user experience issue. Poor quality data creates a negative user experience—both for those working inside the function and those customers receiving HR service. Tidying up the applications estate in conjunction with a rigorous focus on key global data items, and implementing consistent terms and conditions, can lead to streamlined policies, processes, and data. This, in turn, can lead to a large reduction in any ongoing shared service maintenance costs. Keep in mind that in the context of applications "tidying," some vendors describe the benefits of a "unified" approach (housing in a single application) as opposed to an "integrated" approach, highlighting a difference in outcome. It's obviously self-serving to their architecture and approach, but the concept behind it is a good one. If there's no budget for direct investment available for estate improvements, outsourcing should be considered to gain access to technology. And, you should always consider a data approach alongside any review of sunset opportunities in your current systems. 5. Identify outsourcing opportunities and manage vendors effectively. We believe that HR functions should capitalize on opportunities to outsource processes and services to reduce

cost, manage compliance risk, and access technology. Conduct a thorough assessment of HR services and processes to identify those that are ripe for outsourcing—either now or in the future. The assessment should target activities which can be done better or at a lower cost by a third party and aren't core to your business. When selecting a provider, cost should be balanced with quality. Effective client-side vendor management capability should be in place, underpinned with service-level agreements to avoid services falling short of expectations. For those 60 percent of HR departments already outsourcing some aspect of HR, take stock of how you can incentivize better service delivery and analytical data interpretation that can drive upstream improvements in HR policies, processes, and technologies. 6. Build managers' capability to manage their people and market HR services to the enterprise. Customer interaction is an aspect of the HR model that's often overlooked. If you want the HR service delivery model to function smoothly, you must help managers understand their people management responsibilities and be successful and efficient at using the technology and information that's available. It is essential to promote HR services and access points, and educate and develop managers to ensure they can discharge their people management responsibilities. Top companies drive this by focusing on both manager induction and development programs. The induction should include awareness of typical people-management tasks, how to perform these tasks, and where to go for help and information. Emphasize the practical, as building strong, rounded people managers is the role of longer-term development programs. Key activities to achieve this step include developing a multichannel marketing and communications plan to promote services and keep customers abreast of changes. Deliver appropriate education as a compulsory feature of management and leadership cadre induction and training courses. It is essential to promote HR services and access points, and to educate and develop managers to ensure they can discharge their people management responsibilities. A Structured Approach to Becoming a Strategic Business Player At the ground level the issues can be complex. Start by focusing on what needs to be fixed by understanding what customers need and their perception of how well you're delivering on that need. Understand fully how your current HR staff spends their time and what their work experience is. You can learn this through focus groups, interviews, and a time/activity allocation survey. With that knowledge you can determine which of the six areas you need to address first—and to what extent—so that you can improve customer service, achieve cost effectiveness, and deliver value to the business. HR is a critical component of all organizations. But it has traditionally been seen as a transactional, not strategic, player. If HR functions want to evolve from being followers to being leaders on the corporate team, they must be better positioned internally to address key workforce challenges. They must offer real and perceived value to the business. Focusing on the six steps above will put you on the path to transforming your HR organization into a value leader that deserves a role as a strategic partner. Get in touch: global.consulting@wipro.com.
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The Global Supply Chain Goes Collaborative

In today's era of high customer expectations, businesses naturally aspire to the highest levels of service, from order confirmation to guaranteed delivery dates. At the same time, it's imperative that they develop the ability to secure business continuity—to anticipate and mitigate possible supply chain disruptions, both local and global, that can range from political to environmental to economic and can seriously disrupt operations without warning. Yes, most companies have invested in sophisticated enterprise resource planning (ERP) systems within the confines of their own organization; and many have gone further, expanding to include point-to-point connections with external partners. But if businesses are to succeed in both quality customer service and business continuity, they must take a new approach to supply chain management—specifically, the ability to orchestrate suppliers, assemblers, and distributors to a level of accuracy unheard of just a few years ago. Achieving that requires a shift to a singular view of goods and services among all entities that touch the supply chain. From Insularity to Integration Only a few years ago, companies were busily drawing up policies around how to close off and protect their supply chains. Now, to beat the competition it's all about collaboration. Indeed, in a recent supply chain trend analysis, Gartner took it a step further, focusing on the concept of "co-opetition"—the idea that partnering with potential competitors can be a transformational differentiator. Yet, many companies are still using specific and limited point-to-point connections. Certainly that insular approach had value in its day. You could protect the integrity of your company's system while selectively sharing information with your supply partners as needed. But taking this approach today makes little sense. Each dedicated connection point requires its own contractual framework, information exchange protocol, systems, and data security arrangements—essentially a new wheel must be reinvented every time another connection needs to be made. It's a high maintenance model with limited flexibility, especially in the current business environment. At the highest level of collaborative maturity we see organizations taking full advantage of today's communications and analytics technologies by fully integrating suppliers and customers into the core supply chain through a common architecture, such as a portal via Cloud technologies or rolling out a standard interface to suppliers and customers. This full integration and collaboration allows all parties to enjoy seamless end-to-end visibility of relevant supply chain processes and movements, and facilitates the collection of data that can be used for after-event reporting and management, forward-looking predictive analytics, and, of course, smarter supply chain decision-making. It appears to be an obvious solution, so why aren't more businesses adopting it? Although the technologies are there, most organizations have to radically re-think their policies and business

processes. But, consider how a collaborative approach could enhance your success if your plan is to expand your business into new markets, whether geographical or product-related. In either case, expansion requires significant upfront investments and a strong network of local support which could take years to establish. Now imagine you could "set up shop" through integration and collaboration with suppliers and customers, and have the ability to instantly add or remove capabilities based on an agreed global standard. The potential pitfalls of expansion begin to diminish. Preparing for an Integrated, Collaborative Supply Chain One of your initial steps in laying the foundation for a more integrated, collaborative supply chain should be engaging with suppliers and customers to make sure everyone is ready and eager to participate. With buy-in from all parties, begin to modularize each component of the supply chain. A good starting point would be something as basic as agreed-upon definitions. "Open purchase order" can mean different things to different suppliers, for example. Same with "late delivery," "damaged goods," or "stock replenishment." Speaking the same language as your partners is a first step toward standardizing and integrating. Building on this, you'll want to consider rules that lay the foundation of the overall orchestration. So, for example, a rule could determine that if stock is not available at one supplier there's a hierarchy that would automatically route the request to the next available supplier—even if it's more costly—and charge the difference back to the first supplier. On the customer side, start by thinking about your readiness for modern e-commerce best practices. Is your organization ready to commit to a delivery date, regardless of product, geographical distance, component requirements, and order size? If not, what would it take to move you toward this vision? Where does your value chain have its weakest links and what can be done to strengthen them? Putting Technology to Work in Transforming Your Supply Chain One of the goals in establishing this new collaborative, integrated supply chain is efficiency in the face of hyper agility and uncertainty. We're living in a volatile business environment. Assuming you are aggressively addressing the management side of supply chain, there are three disruptive technologies that can assist you in establishing an efficient, seamless collaborative supply chain. The first is Cloud computing. Over the past five years, Cloud has matured significantly, and increasing numbers of businesses are taking advantage of the "utility" aspects of using and paying for IT infrastructure services as and when required—without traditional upfront investments and multi-year deployment timeframes. So, the user would pay the Cloud solution service provider by transaction or by connection. With Cloud middleware, collaborating with other parties becomes truly plug and play. Advanced analytics—or "big data analytics"—used to interpret large swathes of structured and unstructured data is accelerating to the point where rule-based decision-making is replacing what was previously a long-term process of data extraction, compiling reports, and implementing decisions. Affordable "in-memory" computing and faster network connections make it possible to interpret and respond to events with tremendous speed and efficiency. Finally, we have mobility. Information and analytics can now be accessed anywhere at any time—by a sales rep in the field, for example—enabling quick decision-making with better information. So, if you are traveling and receive information on your tablet about a significant increase in demand and you don't know where to supply it from, you can run a scenario across your network to determine

where to source it, and then write that scenario back into your supply network planning and production systems. As an example, consider the Cloud-enabled supply chain architecture shown below: Suppose one of the customers is experiencing volume reductions due to the economic situation in a particular market. As the demand signals reduce and customer stock increases, the core enterprise is able to react instantly by reducing production, re-assigning manufacturing capacity to alternative products, or alerting its suppliers of the expected demand reduction. Similarly when demand picks up again, the customer side pull will be immediately visible through customer stock reductions and increased order frequency. While the majority of the day-to-day decisions would be hard-coded within the rules of the system, human interaction is also important if, for example, certain thresholds are exceeded. In the event of an unexpected factory shut-down or major environmental event, a user alert would be created through, say, a mobile device to which key people involved in the supply chain can respond. The business benefits of this model span the entire supply chain. As demand is constantly anticipated and fulfillment is monitored, inventory levels are reduced, from components and raw materials through finished unsold products and into sold products in customer warehouses. Service levels are increased, and resilience is strengthened without the need to create excessive buffering of products. Supply chain operating costs are reduced, and assets are better utilized as a result of the increased speed of decision-making and capacity prioritization. Collaboration-Enabled Orchestration Technology has made our world an incredibly interconnected "system of systems" and enabled a new age of multi-modal boundless collaboration that opens up almost endless possibilities across the entire supply chain. In the future, we will see more and more supply chains operating with a minimum of human direction. Similar to information networks such as the Internet, they'll be able to automatically reconfigure themselves. Forward-looking enterprises that take advantage of this will dominate tomorrow's market place. In order to differentiate and reach previously impossible levels of efficiency and speed, supply chain strategists need to radically re-think their businesses and decide which markets, operating models, and value creation approaches they want to embrace in order to stay competitive. For more information please contact global.consulting@wipro.com Sebastian Ennulat is Partner, Strategy & Transformation – Consulting Practice, Wipro Limited. Get in touch: global.consulting@wipro.com. =====================

Driving Strategy to Execution

----- Arcticle source ----- https://www.wipro.com/consulting/driving-strategy-to-execution/ ----- Contact Wipro Please fill the required details to access the content Facing financial and competitive pressures of historic proportions, operations and supply chain executives know they have to create and drive strategies that anticipate future challenges while addressing immediate issues.The more accurate and complete the strategic roadmap, the more effective execution will be. Yet, successful strategic planning remains elusive for most companies. One reason is that planning tends to be treated as an annual event rather than an ongoing process. Additionally, many

organizations fail to align their strategies with their processes and technology. As problems occur in such companies, different silos of activity independently make operational changes on the fly that render the strategic plan irrelevant until it's revised the next year. A successful strategic plan is a dynamic, living document of actions that are grounded in the true drivers of an organization's activities. The plan can reflect new goals and ideas, but it must align with existing processes and technology or, at a minimum, define paths toward alignment that can be realistically executed.The way to create such a plan is through a process called Strategy Alignment and Deployment, or SA&D. Converting Strategy to Action As I discuss in my book Driving Strategy to Execution Using Lean Six Sigma (CRC Press, 2012), SA&D aligns a strategy with all areas of an organization and then guides its execution. The alignment piece validates that all proposed changes support the organization's strategic goals, and the execution piece defines specific activities that each part of the organization must complete. In short, SA&D turns talk into goal-oriented action. SA&D starts with three requirements: Models for Success Among the many models for implementing SA&D we advocate Hoshin Kanri and S2E, both of which should be familiar to operations and supply chain executives. Hoshin Kanri is a Japanese approach for managing the direction of an organization to a specific goal. It reinforces a "Plan, Do, Check, Act" model by focusing on four key perspectives: Financial, Customer, Internal Processes, and Learning and Growth. A scorecard is used to track progress and support the governance system. S2E (Strategy to Execution) integrates the best of all the strategy models. S2E defines the high-level strategic parameters of SIPOC (Supplier/Input/Process/Output/Customer) of the organization, and then works out the details of the strategy via priorities, goals, and objective statements. Each objective statement is assigned a list of tasks to be accomplished and given a clear metric that can be monitored. Regardless of which model you select, you will want to develop a three- to five-year plan. During each year's planning process you'll add a new year and subtract an old one to create a rolling strategy. A rolling strategy allows you to focus on the big picture and align your annual and day-to-day activities with larger goals and objectives. Leadership buy-in is also critical to SA&D. Without it, employees have no reason to shift direction. Transformation Starts at the Top As previously mentioned, Leader Standard Work, or LSW, is a key component of SA&D. Instead of every department acting independently—from strategic planning to process elements— LSW creates a single vision and action plan that every group must adopt.Take performance reviews, for example. Instead of each department having its own system (or only evaluating individuals when projects seem in jeopardy) LSW requires a standardized performance review format and procedure. With LSW in place, routine functions are executed in a systematic and repeatable way, eliminating guesswork and facilitating adherence to the strategic plan. An SA&D Turnaround Story Let's put all this together by considering a major high-tech company that lacked organizational strategic alignment. The performance of its R&D program had deteriorated to the point that engineer-developers were pulled from focusing on new, exciting high margin products and assigned to the larger manufacturing pool to maintain the quality of products that were either stable or in decline. Utilizing the S2E model, the CEO hosted the organization's leadership team in three days of SA&D planning. The group identified objectives, metrics, and improvement initiatives that aligned with

the company's goals; and they developed LSW processes for identifying and governing a collection of initiatives around their pain points—poor quality and a lack of new leading-edge products. The output was a consistent organization-wide LSW methodology for identifying and executing initiatives. This became the foundation for a robust governance system where regular strategic SA&D check point meetings were held to ensure progress towards identified goals. The company used Lean and Six Sigma (LSS) to realign the organization with metrics and initiatives that focused on their specific pain points. This required change management and Lean training and team-based Rapid Improvement Events (RIEs), as well as leadership that was actively involved in the organization's transformation process. In the final change management plan, LSS provided the structure and was used to drive initiative execution. Within a year, not only had the organization been transformed and resolved its issues, but there was an unexpected result.The company's performance turnaround was so dramatic that a larger competitor, struggling with similar problems, decided to purchase the transformed company at a premium price. Driving for Success Driving strategy to execution is a big undertaking, so it's important to remember that most organizations require several iterations—years, essentially—of execution to become proficient in the SA&D process.To get started, planners should follow steps similar to the ones outlined in the above example: SA&D is not an overnight fix, but it's a sustainable, even transformative one. Those who stick with it will achieve their strategic plan's goals and objectives on the path of becoming the most competitive organization in their industry. Get in touch: global.consulting@wipro.com.
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Finance Enterprise Performance Management: Transforming Finance

Treasury and Tax Reporting

----- Arcticle source ----- https://www.wipro.com/consulting/finance-enterprise-performance-management--transforming-finance-/ ----- Contact Wipro Please fill the required details to access the content Relevant, current and comprehensive financial, treasury, and tax reports are essential to support good decision-making and regulatory compliance. So why are many companies using outdated methods that often achieve neither goal and create additional problems? Manual maintenance and validation of data sources result in dated reports that can lead to faulty decisions—and the problem is compounded when each unit or division within a company requires individualized reports. If your reporting requirements can't be met at a basic level, consider the impact on your organization when a professional standards organization like IFRS or ASPE inevitably issues new requirements for updating financial processes, validations, and systems.

This document summarizes Wipro Consulting Services' point of view on creating a Target Operating Model and deployment plan to eliminate manual maintenance and validation of data sources, and to create a reporting regimen to support decision-making protocols and meet regulatory requirements. Target Operating Model To improve finance, treasury, and tax reporting, it is essential to redesign the reporting process and rationalize report inventory by assessing information needs and key performance indicators (KPIs). You must automate regular reports and establish end-to-end report ownership, as well as improve self-service capabilities that will enable interactive reporting through executive dashboards. This latter task alone will help provide timely information in a consumable format. The Target Operating Model creates the foundation for driving the decisions made about what your new reporting methodology will look like. It's focused on very specific values that you must incorporate to make your new protocols work and align with the business strategy. These values include strategic insight, financial benefits, improved responsiveness, increased productivity, confident decision-making, and regulatory compliance. By strategic insight we mean that your operational and financial information is aligned, that it's predictive and not historic, and that it is timely and formatted in a way that makes it easy to consume. Financial benefits include improved contract management and compliance, which leads to lower procurement costs. It improves payables and receivables management, which will optimize your working capital, and it contributes to improved productivity, which results in lower staff costs. Improved responsiveness facilitates both better resource planning and reactions to consumer demands, which results in satisfied customers, and the ability to predict and plan for future change and investment decisions. Increased productivity releases organizational capacity, thanks to automation technologies, executive dashboards, and user self-service. Confident decision-making is achieved from data accuracy and integrity that result from established data governance over reported information and a single source of the "truth." Regulatory and statutory compliance is reached as a result of transparent reporting and the ability to adapt reporting to meet changing requirements. With success in compliance, organizations can benefit from incentives from regulators as well as improve their external reputation. We're seeing some companies developing reporting capabilities that focus on specific user groups across finance, treasury, and tax with a single reporting organization. While the objective of this initiative is to ensure data integrity, it offers additional business benefits: Our Target Operating Model is the pathway to achieving these benefits. It is comprised of four integrated components: business processes, enabling technology, organization roles and responsibilities, and data and reporting requirements. Each component is explained below: Component 1: Business Processes Typically, reporting for finance, treasury, and tax can be aligned to the high-level business areas of Purchase to Pay, Lead to Cash, and Record to Report, each with a corresponding process flow. It is important to understand the process flow and pain points associated with each of these processes. Once they are understood, the enabling technology, organization roles and responsibilities, and data and reporting requirements collectively contribute to solving the pain points, resulting in improved reporting. Process Flow: Procure to Pay Procure to Pay, commonly referred to as P2P, refers to the business processes that cover activities of sourcing, requesting, purchasing,

receiving, paying for, and accounting for goods and services. Figure 1 illustrates typical P2P pain points. Some of the reports identified in the P2P business process are supplier contract status (expiring and expired), buying channel analysis, retrospective business order, and supplier payment analysis. Process Flow: Lead to Cash Lead to Cash refers to the business process for receiving and processing customer sales. The pain points of this process flow are shown in Figure 2. Figure 1 – Purchase to Pay: Typical Pain Points Figure 2 – Lead to Cash: Typical Pain Points Some of the reports in Lead to Cash include quotes to sale performance, order fulfilment, billing performance, debt analysis, collection and allocation analysis and invoice/ credit analysis. Process Flow: Record to Report Record to report, commonly referred to as R2R, is the management process for providing strategic, financial, and operational feedback to understand how a business is performing. R2R pain points are shown in Figure 3.The key to effective RTR reporting is the combination of operational and financial information. It is important to provide business users with an insight and ability to track the cost drivers that impact business and financial performance. Component 2: Enabling Technology Once the business processes are detailed, technology plays a key role in implementing them. Adoption can come in two forms: an introduction to new technology, if the existing processes have been manual, or improvements to current technology that incorporate new processes. Of course, regardless of the approach, any introduction of new technology into the system will affect governance Component 2 Pain Points: High technology adoption might lead to less control over unit-specific processes, which could result in resistance to change at the individual or unit level, thereby invalidating the entire change process. Once you have changed processes, the ideal state is to have high technology adoption and high control and governance. Figure 3 – Record to Report: Typical Pain Points To enable scalability, the reporting transition is done gradually across multiple processes—initially with the transactional Procure to Pay and Order to Cash, followed by the consolidation processes of Record to Report and Statutory Reporting. This is done to minimize the implementation risk to business customers through the transition of transactional-based reports, followed by management reporting, with the enablement of greater operational and dashboard reporting. As your organization digs deeper into reporting, you need to ask fundamental questions: What are your reporting objectives? What is your vision? What capabilities do you need to meet those objectives? What controls do you need around it? Figure 4 identifies the balance of technology and control/ governance. For example, a high level of both governance and technology, as represented in the upper right quadrant, would likely be most appropriate for the needs of a large, regulated business, while a Research & Development focused enterprise would need a significant analytical capability requiring a high level of technology and less controls on how information is adapted and transformed. Component 3: Organization Roles and Responsibilities For the Target Operating Model to work effectively, there must be strong governance and a clear understanding of the roles and responsibilities held by those who set and direct strategy, those who establish the processes, and those who actually run and support the system. The relationships between these groups must also be understood, as shown in Figure 5. Figure 4 – Reporting Vision and Capabilities Figure 5 – Roles, Responsibilities, and Relationships Governance Board: This organization has global responsibility for the

strategic fit and direction, policy, compliance, and change control, as well as management of the governance framework. Global Process Owner: The owner controls process refinement, rollout, data compliance, dispute resolution, lead issue resolution, SLA exception resolution, and financial close compliance. IT Application Owner: The IT application owner ensures smooth running of the system, and owns the support model, the execution of upgrades and improvements, the issue resolution and testing of issues, the maintenance of SLAs, and the performance reports given to other teams. Finance Processing: The responsibilities include initiating intercompany transactions, compliance, reference data setup, assisting with issue resolution, and testing by shared service centers, accounting units, and subsidiaries. IT Support Team: The IT support team's responsibilities include issue tracking and resolution, performance monitoring, system tuning, integration, and interface management. Other IT Support: This can include providing assistance with issue resolution, upgrades, and testing. Component 3 Pain Points: Weak leadership means new technology business processes will not be adhered to, technological enhancements will not be accepted in the organization, and a shift from the old to new will not occur. It also means that changes in organization roles and responsibilities will be unclear, and data and reporting requirements will not be clearly defined to improve efficiency. Lack of buy-in from process owners will mean rationalization between process areas will not be achieved. Component 4: Data and Reporting Requirements Data integrity is essential for accurate reporting and is the primary driver for the business process and technology design, as well as the organization roles and responsibilities. As such, information requirements should be established at the start of the design stage and reviewed throughout the implementation. The reporting requirements should be assessed at an early stage to ensure most data can be extracted as a product of the design without additional intervention. Component 4 Pain Points: Failure to involve all information providers and users, and the failure to agree on requirements in the design stages, will result in expensive rework and reimplementation at a later date. Different levels of the organization require their own levels of information. As shown in Figure 6, the executive level won't require the same level of granular data as management, which in turn won't need the level of detail that operations requires. The reporting process moves from manual extraction and manipulation of data from multiple sources to greater automation and transformation from a limited number of sources. This enables greater control over reporting governance, delivery, and analysis that is specifically targeted to meet the needs of the various business customers. While the detail of the data may be different, depending on who the user is, the organization still benefits from having one version of the truth. The Target Operating Model Roadmap A program of this magnitude requires multiple stakeholders and changes to business processes and roles. To get started, you should gather a small senior team to identify the change management program, which should address: Delivery of Reporting Capability Focused on the Needs of Specific User Groups Once you've successfully completed the starting steps, there are still several decisions that must be made before the program roadmap can be defined in detail. These decisions include: Once these decisions have been made, a program management team can be established to plan the project in detail and engage the appropriate stakeholders. A combination of client SME's and third party resources

should be deployed and managed through a joint project governance framework to deliver the project activities as shown in Figure 7. Figure 8 – Change Management Strategy Change Management Strategy A key factor in any program is the change management strategy. Figure 8 shows the key components that must be considered when a change to the Target Operating Model is undertaken. Application of these tools, processes, skills, and principals for managing the people side of change will ensure successful adoption of the new model. Conclusion The difference between where your organization is today and how it will operate in the future once you've improved your reporting capability can be substantial. Improving your reporting capability impacts your ability to foresee and respond to changes in the operating environment resulting in a more agile and responsive enterprise. You can gain strategic insights, resulting in alignments between the goals of each division or unit with the company's overall strategic goals. You can achieve increased productivity, thanks to the application of relevant technology to your processes This increased productivity, in turn, can reduce your operating costs. Plus, better reporting helps improve overall financial management. Additionally, with accurate, timely data sourcing integrated into common reporting processes, decisions can be made with greater confidence at every level within the organization. Finally, you'll have confidence in your statutory and regulatory reporting compliance because any changes in standards are immediately incorporated into your system. Financial and integrated reporting is a fundamental component of any large business organization. It shouldn't be a tangle of incompatible processes based on outdated methods. Streamlining and updating your reporting capability with the appropriate delivery model will enable you to significantly enhance your organization's profitability, competitiveness, and ability to respond to the wider environment that it operates in. Get in touch: global.consulting@wipro.com. =====================

Avoiding Quality Chaos: Knowing Which Tools to Use and When to Use Them

----- Arcticle source ----- https://www.wipro.com/consulting/avoiding-quality-chaos--knowing-which-tools-to-use-and-when-to-u/ ----- Contact Wipro Please fill the required details to access the content Many years ago, when Western businesses considered Japanese products to be substandard, Ford of Canada put a car part out for bid.The winning bid came from Japan, and in the contract that followed, Ford specified there could not be more than 5 percent bad parts. But something was lost in translation.When Ford received the parts, they found a bag at the top of the box with a note reading "We don't understand why you wanted to receive 5 percent bad parts, but we separated them out for you so you would not have any trouble finding them." Well, the days of "Japan Junk" are long gone, and the world now looks at Japanese production methods as the global standard for quality. Businesses

in the U.S and Europe have spent substantial amounts of time studying and emulating those methods, most especially the components of the Toyota Production System (TPS). First, the Quality Circles method was promoted as the cureall for Western quality woes. When that didn't solve all of the problems, businesses moved on to SPC (Statistical Process Control) and TQM (Total Quality Methodology). JIT (Just in Time) was next, followed by Lean, Six Sigma, and many others – all in an attempt to find the single most important element of TPS. But all of this dissecting of TPS missed the point. The magic behind TPS isn't in its individual tools but in the cultural integration of those tools. In short, the key to quality success is the ability to have all aspects of TPS available at all times and to use each approach as appropriate. What is Quality? Before you can strive for quality, you need to have a basic understanding of what quality is; and there is an enormous amount of confusion around that. If it were possible to come up with a standard definition of quality that could satisfy everyone's expectations, then defining "optimal quality" would be easy. It turns out there are entire organizations that pursue Avoiding Quality Chaos: Knowing Which Tools to Use and When to Use Them By Gerhard Plenert Many years ago, when Western businesses considered Japanese products to be substandard, Ford of Canada put a car part out for bid. The winning bid came from Japan, and in the contract that followed, Ford specified there could not be more than 5 percent bad parts. But something was lost in translation. When Ford received the parts, they found a bag at the top of the box with a note reading "We don't understand why you wanted to receive 5 percent bad parts, but we separated them out for you so you would not have any trouble finding them." As covered by 2 a meaningful definition of quality. Despite that—or perhaps because of it—identifying a single practical definition of quality is a nightmare. When we surveyed quality systems users for their personal definitions, here are just some of the answers we got: As you can see, there is no consistency in this list. One individual's definition of quality is extremely different from another's, and it comes down to their individual perspective or focus, whether User, Customer or Supplier. This is quality chaos. To avoid quality chaos, your organization must formulate its own definition of quality and create an accountable, quantifiable process to achieve it because we see that far too often quality is only given lip service. If it's not a critical performance driver, and if it's not measured, then quality won't occur. Quality is not the sole responsibility of some obscure quality department or cost center, it's everyone's responsibility, from production workers to office clerks to management. In fact, it's important to remember that the quest for quality is not limited to production. I've often found myself in organizations that take two days to produce a part and 10 days to process the order. To my mind, no matter the definition, that's not quality. Front office quality is just as important as production quality. Front office employees are the interface with the customer. A rude phone response can damage a company's reputation no matter how good the parts are. But the tools used to increase front office responsiveness and throughput (which is often a measure of front office quality) may not necessarily be the same tools that you would use to improve production floor quality. Addressing Improvement Gaps to Achieve Quality Several years ago I joined a high-tech company as director of quality. The company had a defect rate of more than 14 percent, unacceptable to the company's CEO. When I came into the position I discovered numerous problem areas, including performance measure.

Performance was measured as units produced and lacked a quality component. But there were also problems in the front office, in order processing, in engineering, in shipping. The list goes on. All of these, combined together, resulted in a reputation of poor quality performance. So I set out to define the specific quality failure areas. Everyone had opinions about where the quality failures occurred, and, of course, it was always "the other guy" who was at fault. To get beyond management rhetoric and learn for myself, I took a hands-on approach and physically went to work in different departments. After a couple of weeks it became pretty obvious where the problems were -- they were everywhere. It was a combination of errors, process shortcomings, systems failures and more that resulted in the quality issues. With this information, I developed a plan of attack which included a long list of fixes to improvement gaps: 1. Quality improvement processes and tools   2. JIT   3. Lean After the training was well under way (of course, it's never finished) we initiated a Quality Week. The guiding principle was: "You can do anything to your work environment, change and rearrange any of the equipment, do whatever it takes, but you cannot produce any bad parts." It was basically a plant-wide Lean event. When the idea was first introduced to management they were concerned that they would lose valuable productivity and throughput. And, in fact, the first day was a productivity disaster. Employees took machines apart and rebuilt them and moved equipment around, resulting in a considerable amount of lost throughput. Similarly, the front office was rearranged and copiers were moved. However, by the third day, the lost throughput of the first day was not only recovered, workers were ahead of their normal three-day throughput. And they weren't producing bad parts. The focus on quality, including quality training, continued and by the end of eight months we had reduced the defect rate to below 2 percent. In the following months we brought it to below 1 percent. Additionally, cycle time had been reduced, inventory had been reduced by 40 percent, and capacity had been increased by 20 percent. The capacity improvement was the biggest surprise to management, but it shouldn't have been. Not wasting capacity in producing and fixing bad parts increases the capacity to produce good parts. Was there one magical fix-all quality tool that was employed to solve all the problems in this factory? Not at all. It was a combination of several tools, appropriately applied, that eventually resulted in this success story. The Importance of a Quality Manager Even with the understanding that solving quality issues requires the appropriate application of numerous tools, questions remain, including, "Which quality tool do you use where and how do you avoid the quality chaos that is tangling up numerous companies?" The answer is that you need someone in your organization who understands the options that are available for quality improvement. What are the tools that exist? How and when should they be used? Your director of quality should not be an inspector but, instead, someone who offers guidelines for a quality system and quality tool selection and implementation. He or she should know the tools and be able to direct the appropriate application of the correct tool. A quality manager drives an organization towards a world-class environment. How do you get started? One excellent tool to help facilitate the definition and drive toward quality is found in the Shingo Prize program. This program defines the criteria for organizational excellence and has a specific set of criteria that define this excellence. In summary, quality should not be the source of organizational

chaos. A world-class quality system will focus on building leading-edge quality environments; and a quality director should focus on developing a process for identifying and selecting appropriate quality tools. By defining what quality means to the organization, identifying the correct people, and selecting the best possible combination of tools to create a quality environment, any organization can and should become world class. Get in touch: global.consulting@wipro.com. ======================

Supply Chain Segmentation for Manufacturers: Scrapping the One-Size-Fits-All Approach

----- Arcticle source ----- https://www.wipro.com/consulting/supply-chain-segmentation-for-manufacturers--scrapping-the-one-s/ ----- About the Authors Contact Wipro Please fill the required details to access the content When it comes to supply chains, one size rarely fits all. Different products have different characteristics, lifecycles, and customers that can't easily be shoehorned into a single planning and scheduling methodology. Yet, for generations that's exactly how supply chains were managed—until multiproduct retailers realized that a more customized approach improved their bottom line. You would think manufacturers would jump in too. After all, their world is even more complicated, with supply chains on both the demand and the supply side, and completely different SKUs, since what is bought on the supply end is a different product than what is sold on the demand end. Indeed, often the customer requirements on the demand side place stress on the supply side, which is dependent on parts and components, adding an additional dimension of complexity Too many manufacturers, especially those with multiple products and a wide range of customers, have stuck with passé one-size-fits-all planning models. And by lagging, they're missing out on an approach that facilitates customized responses to managing inventory, and, in turn, increases profits and improves competitiveness. The SCS Framework There are three main supply chain models, two of which are traditional one-size-fits-all models. The newer, third model embraces customization that segments unique requirements that are specific to the product, customer, or market dynamics, and optimizes the needs of various supply chain management elements Many multi-product retailers use this customized Supply Chain Segmentation model (SCS) to optimize margins and improve profitability by dividing products by rate of sale, country of origin, customer tiers, variety, and other criteria. The SCS framework has three main components that together equal a return on availability: Lifecycle: The lifecycle stage of any given product is a key driver in manufacturing segmentation. At launch, for example, you don't yet know demand trends, pricing, competition, and other key factors, which means you require analytics to build the supply chain. In a product's active stage you have more stability and can use ERP and similar applications to manage the supply chain for efficiency and the lowest cost of

service. By the end of a product's life, you face declining demand and must be able to respond by quickly repurposing and redeploying capacity and inventory. Cost of Availability: This involves making estimates based on supply chain parameters that directly affect the cost of making the product and services available to your customer. So, you'd look at lifecycle length and stage, volatility, customization, criticality to the customer, source geography, the rate of sale, the cost of transportation, and gross margins. There are also issues specific to your business, such as seasonality, temperature, hazardous materials, and the like. Customer Segmentation: Customers have different levels of value, so we use customer segmentation to tailor the level of responsiveness and performance. Customers are assigned to one of three tiers, as the value of supporting each tier is different. Tier 1 customers are strategically important businesses that are given a high priority. Tier 2 customers are given medium priority, and Tier 3 customers are given the lowest priority in the hierarchy. By segmenting the customer base we can collect and analyze data derived from each of the groups to determine the return on availability and cluster the products into supply chain segments. Then we combine segments that have similar characteristics to come up with a manageable number of unique segments. Organizations, whether in retailing or manufacturing, typically have four to eight segment groups, each of which has customized customer service levels, risk levels, customer response levels, and inventory management strategies. With SCS you define the structure of the segments and use analytics to test the strategies. The Benefits of SCS Retailers were quick to embrace segmentation because retail is completely demand driven. As a retailer, the product you buy is the product you sell. So, it is often based on just three factors: the type of customer, the size of the customer, and the location of the customer. But, as we already noted, manufacturing supply chains are more complex. As a manufacturer, the products you buy are transformed into something different to sell. Your two sets of SKUs must be managed differently, and you have to do segmentation twice and link the two together because demandside segmentation will directly affect supply-side segmentation. But, as we already noted, manufacturing supply chains are more complex. As a manufacturer, the products you buy are transformed into something different to sell. Your two sets of SKUs must be managed differently, and you have to do segmentation twice and link the two together because demandside segmentation will directly affect supply-side segmentation. If you do poor demand segmentation, you can end up making the produced product availability worse, which could have a negative impact on inventory and operation costs. But if you do it right, you potentially gain a host of wins, including gains in customer service reliability and a better alignment of supply chain policies to customer and product value propositions. You'll be able to simplify your systems, since segmentation facilitates automating where appropriate and applying analytics and planning expertise where they'll offer the best results. With a clearer understanding of where inventory distress is likely to occur, and the ability to apply segmentation expertise, you can cut in half current stock write-offs and discount reductions. And, you'll enjoy greater supply chain talent retention and recruitment because your focus will be on more interesting analytics and retention as opposed to firefighting. Getting Started with SCS For manufacturers, transitioning from a one-size-fits-all approach to SCS can take from six to 12 months, depending on the complexity of the analysis.

But, a pilot program is an excellent way to initiate the process . It starts with data analysis utilizing a segmentation expert. Here you'll develop several distinct segments for both sets of SKUs that will maximize value, and you'll conduct an ROI analysis that can make the case for change and garner support, both internally and among your suppliers and customers. IT change will also come into play. For example, segmentation capabilities will need to be integrated into your ERP software. But the good news is that the outcome is simplification, and that simplification will cost less over time. As you begin to make the transition from simple supply chain management to SCS you must consider these issues and how they relate to your organization: Let's look at a manufacturer that recently undertook this transition. The company was facing increased competition that forced it to look for ways to reduce inventory carrying costs. Additionally, since their product was seasonal, stock-outs meant lost sales. By switching to SCS they felt they would gain more product supply control and reduce costs. With SCS in place, the manufacturer developed a higher level of collaboration with its vendors, resulting in a lower need for inventory buffering that reduced costs. The IT department of course, was very involved. They revised their planning and scheduling systems, and made changes to promote increased data accuracy. With a one-size-fits-all model, the same level of data accuracy and utilization wasn't required, but now it was critical. The manufacturer reorganized its planning and scheduling department along with the roles of the planners. With many products now managed automatically through the production scheduling system, planners were given more flexibility and responsibility with the products they manage. As a result of their move to SCS, the company reduced inventory for their high-demand, low-variability product lines by 40 percent while simultaneously reducing the touch time for their planners to nearly zero touches. Altogether this transition gave them the competitive edge they needed, with greater control of the process and lower costs. More Competitive Approach to Supply Chain Since segmentation has become a strategic competitive differentiator used by many businesses around the world, it's past time for manufacturers to adopt it. We've already seen those that have adopted segmentation analytics build responsiveness to customer demands by reducing stock-outs and increasing on-time deliveries. And, because your retail partners will gain by always having what customers want on the shelves when they walk into the store, as a manufacturer you're more likely to keep their business. That's the power segmentation brings to your organization. By breaking your mammoth supply chain into more manageable chunks, your business will gain the agility and control it needs in a competitive marketplace—and you can focus more on getting products to market rather than putting out fires. Manufacturers who have been stuck in the one-size-fits-all supply chain rut need to step out and take advantage of a more competitive approach with segmentation. Brian Nolf is Partner, Strategy & Transformation – Consulting Practice, Wipro Limited. Get in touch: global.consulting@wipro.com. =====================

Source to Pay: Transforming Invoice Processing and Document Management

Major corporations spend billions of dollars on goods and services, and careful management of the ordering and payment process has the potential to deliver large savings—savings that can be channeled into developing the business. Automation is a critical enabler in reducing costs and improving the quality of data transmission and entry in the Source-to-Pay (S2P) cycle. A large number of invoices from suppliers are received in paper form or through emails as PDF attachments, however, and these must be entered manually into ERP systems or through a semi-automated standalone platform. The result is a complex, labor-intensive process with a high processing cost, limited scalability across divisions, and a lack of business insights for optimizing cash outflow. An automated invoice process management platform which is tightly integrated with an end-to-end S2P process can reduce costs, increase productivity, and reduce the time spent on issue resolution. The Document Management System needs to be able to process documents and invoices received as paper documents, e-mail attachments, faxes and scanned files, and the invoice management process should be linked to the AP workflows to ensure automated processing of the invoices. The solution should be scalable and secure, as well as predictable and affordable. This document summarizes Wipro Consulting Services' point of view on a Target Operating Model and implementation roadmap for large global organizations to create a robust solution for their S2P Invoice Processing and Document Management system Target Operating Model The Target Operating Model (TOM) comprises four integrated components: Business Processes, Organization Roles and Responsibilities, Enabling Technology, and Data and Reporting Requirements. Component 1: Business Processes In the Target Operating Model, the invoice processing/ document management process is integrated into the S2P cycle as shown in Figure 1. Receive Invoice: At the start of the process, the invoices are received by mailroom via various channels and formats, Figure 1: Invoice Processing and Document Management Proces including paper, fax, and email. The paper invoices are then scanned and batched for processing and transmitted to the Document Management systems along with e-mail invoices. The invoice is received at a central mailroom for a region and then prepared for further processing. Pain Points: Invoice Recognition: The OCR system extracts the data from the documents and captures the defined data fields. It can match the extracted data with PO and vendor master data, as well as GL account data, and can enrich the extracted data. The business rules can be defined to enrich the data, reject invoices, and trigger workflow for manual processing. Pain

Points: Verification and Validation: The extracted and transformed invoice data is verified and manually updated, and incomplete or incorrect data is corrected. The system extracts the data from the documents and captures the defined data fields. The verified and validated invoice data is then transmitted to the P2P platforms to post the invoices after the invoices are completed and the approval workflow is executed. Pain Points: Key process design considerations for the Invoice Processing and Document Management Process: Component 2: Organization Roles and Responsibilities To ensure the effectiveness of the Target Operating Model, a strong governance and clear definition of roles and responsibilities must be established. Roles and responsibilities must be defined for those who set and direct strategy, establish the processes, and actually run and support the system. The interdependence of these stakeholders with each other should also be defined, as shown in Figure 2. Figure 2: Interdependence of Stakeholders Governance Board: This global organization is responsible for the strategic fit and direction, policy, compliance, and change control, as well as management of the governance framework. Global Process Owner: The owner controls process refinement, rollout, data compliance, and dispute resolution. The owner also manages the Change Board and leads issue resolution, SLA exception resolution, and financial close compliance. IT Application Owner: The IT Application Owner ensures the smooth running of the system. The IT Application Owner is responsible for the support model, upgrades and improvement execution, issue resolution and testing, maintenance of SLAs, and reporting performance to other teams. Finance Processing: The responsibilities of this group include initiating inter-company transactions, compliance, reference data setup, issue resolution and testing through shared service centers, accounting units, and subsidiaries. IT Support Team: IT Support Team's responsibilities include issue tracking and resolution, performance monitoring, system tuning, integration, and interface management. This element of the organization can be delivered as an offshored managed service. Other IT Support: This group provides assistance with issue resolution, upgrades, and testing. Component 3: Enabling Technology There are a number of available standard Document Management applications that can meet the stated requirements with minimal customization and configuration. The deployment of the application could be accomplished in-house or through the SaaS or managed service model. The in-house development of a Document Management tool may not be the best option, given the number of available off-shelf tools and their level of maturity and sophistication. Moreover, an in-house platform will give diminishing returns with decline in the volume of paper documentation. Figure 3 shows the platforms that could support the invoice processing and Document Management Process. Technology Selection There are a large number of OCR solutions available off the shelf, and a detailed assessment is required to choose the best option for the organization. The available tools are assessed to capture cross-functional and cross-divisional global requirements and determine the best fit for the organization. The key considerations for the selection of the Document Management solution are: Figure 3: Platforms Supporting the Invoice Processing and Document Management Process Component 4: Data and Reporting Requirements Data integrity and consistency are key requirements for the final integrated design and automation across the cycle in order to achieve efficiency and other benefits through the Document Management solution. A common data

structure and harmonized and cleansed data are vital to automating and implementing standardized processes and platforms. A single view of data will also enable improved reporting and accurate performance measurement. Business Case for Large Established Countries and Emerging Countries As an enterprise determines how the business case plays out across each one of its business environments, it must be acknowledged that there may be different existing models to consider: Fully Outsourced Model: The business case for this Source to Pay with Document Management solution may fully impact a company's Business Process Outsourcing (BPO) partner. Companies in a first- or second-generation BPO contract may be locked into a 5- to 10-year agreement in which the partner may consider this type of solution a challenge to their revenue stream. Most companies tend to engage their BPO partner early on to ensure that they are able to get the full benefit of this type of program. Partly Outsourced or Partly Centralized Model: The business case for this Source to Pay with Document Management solution may fully impact the BPO partner as noted above. However, most companies tend to have a mixed model of outsourced large established countries or regions and in-house centralized/de-centralized models across emerging markets. In this scenario, most companies realize that if they have a centralized operational model across emerging markets, they will benefit from these type of programs. Companies with a decentralized operational model across emerging markets in which individual countries may not be fully standardized or fully centralized may decide to defer this type of program until the emerging countries have transitioned into a centralized model across a region or a number of countries to obtain the full benefit. Roadmap The Target Operating Model is the cornerstone of the solution, but how should it be implemented? A program of this magnitude requires the involvement of multiple stakeholders and changes to business processes and roles. To launch the solution effectively, you will need a roadmap that details the people and teams that are required, as well as the key steps that must be taken. Before commencing work on the Target Operating Model, a small team of senior members should be formed to identify the fundamental shape of the proposed program. This team should address: Once these basics have been established, several strategic decisions need to be made before the program roadmap can be defined in detail. These decisions include: Internal to SaaS Model: A number of vendors offer a Document Management solution as an SaaS offering, wherein the capture, preparation and transformation of both paper and electronic invoices is done by a third party. The SaaS model enables the organization to: Figure 4: Target Operating Model Roadmap Availability of Existing Functionality: Some components of the Document Management solution may already be available in the organization in the form of tools such as Kofax, Scan One, or insiders. These assets can be assessed and utilized to perform specific functions and integrated into an overall solution. Once these major decisions have been made, the senior team should appoint a program management team to define the program as shown in the Figure 4 roadmap. At a high level, a combination of program and software development lifecycle management should be applied. Conclusion While invoice processing is not complex, establishing a solution that is efficient, accurate, cost-effective, and manageable across multiple platforms, divisions, and regions has proved to be a common problem faced by large multinational enterprises. By adopting Wipro Consulting's Target

Operating Model, organizations can establish the basis for implementing a Document Management system that is integrated with the P2P cycle and addresses their typical pain points. With the model in hand, organizations will be better prepared to develop their vision for a solution and the roadmap to implementing it. The key decisions that will determine the cost, scope, and duration of the program include the choice between an in-house solution or a SaaS solution, and the decision between in-house or outsourced support for the solution. At a time when organizations are wrestling with a host of business issues around product or service development and sales, managing costs, and optimizing profits, the last thing needed is distraction caused by an ineffective Document Management system. This should be a part of the business that is humming along smoothly. With this key issue resolved, organizations can focus on making their businesses profitable and competitive. Get in touch: global.consulting@wipro.com.

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Market Scan:Why Cross-industry Innovation is Important in Building Supply Chains

----- Arcticle source ----- https://www.wipro.com/consulting/market-scan-why-cross-industry-innovation-is-important-in-buildi/ ----- About the Authors Contact Wipro Please fill the required details to access the content Where is the hotbed of business innovation in your organization? Is it in the creativity of your people, their knowledge and experience? Is it in your technology? How about your suppliers, customers, and competitors? These are the traditional sources of innovation, but they don't have to be the only ones. In fact, some of the best sources of incremental and disruptive innovation can come from outside a company's sphere of contacts and even outside its industry. This is true not only for the company as a whole, but specifically for its supply chain—especially as supply chains become more complex and critical to the bottom line. The search for cross-industry innovation isn't new. Years ago Toyota studied American supermarkets and successfully adopted just-in-time production techniques.The hub-and-spoke model for logistics efficiency that FedEx applied to overnight package delivery was based on methods developed at Delta Airlines; and Dell's demand-driven supply chain model has been adopted by retailers like Tesco, who have used it to better plan and turn their inventories. Even Coca Cola has looked beyond its industry to drive innovation. Their "Freestyle" soda fountain dispensers use a micro-dosing technology that the medical industry developed for dispensing dialysis and cancer drugs. Installed at the point of sale, Coke's dispensers allow customers to create the flavor or combination of flavors they want. How does this innovation help Coca Cola? It provides a lower cost and lower risk model for introducing new products and assessing their performance. The common thread here is that each of these organizations had a mindset of looking outside their own industry for

innovation. CEOs know the value of this approach. In a recent Wipro survey conducted with Forbes Insight, a majority of the more than 300 C-level executive respondents said they believe cross-industry examination is an effective way to foster innovation. But executing that strategy is another matter, as other studies show cross-industry assessment is just not happening. Supply Chain Innovation Basics Typically supply chain performance is judged by various attributes, such as agility, asset management, cost, reliability, and responsiveness.The trade-offs between these attributes tend to be between cost efficiency and responsiveness.The objective is to achieve a supply chain with higher performance—greater responsiveness at the same cost efficiency, or greater cost efficiency at the same level of responsiveness. The pathway to that higher level of performance is typically called a "market scan," which is an assessment process with distinct phases in which each successive phase results in greater quantity and quality of innovation. The output of the market scan is then screened and evaluated to produce consensus on which innovative ideas should be tested and deployed. Innovation Through the Market Scan Process Most companies are familiar with the market scan process and have experience using it to make regular adjustments to their supply chains. Yet too few companies take the first step of conducting a cross-industry assessment—the very step CEOs cite as important to fostering innovation. By limiting their search to their own industry, these companies have eliminated the potential for true disruptive innovation—and in today's competitive global economy, that's like wearing blinders while crossing the street. Cross-Industry Innovation Basics The ability to think beyond your industry is a mindset; but conducting a cross-industry assessment is also a process. It starts with a series of questions, including: What are the objectives and scope of the project? What is the plan for formulating a list of the outside industries and companies that are best aligned with your issues? With these addressed you can formulate a master list of potential companies to scan for solutions. Step two consists of an analysis that has three main tasks: In the final phase of your cross-industry assessment you compile a list of possible actions and technology enablers for supply chain improvements that utilize the ideas gleaned from other industries. These should include how to address the potential pitfalls stated in your hypotheses. The list doesn't have to be exhaustive, but it should set the direction for innovation and drive future initiatives in your organization. Cross-Industry Assessments in Practice To illustrate how this works in practice we can use an example of a leading energy company that needed to improve its operating margins. In the first step, the company identified the objectives and scope of the project and generated a master list of companies for its cross-industry assessment using various external surveys including Gartner's ranking of the Top 50 supply chains in high-tech, CPG, retail, logistics, and commodities.This yielded companies like IBM, Sun, Dell, Home Depot, Best-Buy, Wal-Mart, Colgate-Palmolive, Procter & Gamble, Seagate, and Sony. In the second step, the company conducted an analysis to establish its supply chain pain points, which were then matched to the companies that had faced similar challenges to create the short-list. For example, demand volatility was identified as a pain point, and the analysis revealed solutions developed by Colgate- Palmolive and P&G. The outside-in analysis, which showed low inventory turns, coupled with benchmarking, revealed demand planning and forecasting accuracy as two areas on which the company needed greater

focus. From its analysis, the energy company knew that Sony and Seagate from high-tech and Colgate-Palmolive and P&G from consumer goods had faced similar problems and had implemented collaborative planning techniques to receive demand data and manage stock. The process then entered the final step, in which hypotheses were developed and corresponding recommendations were made.These included suggestions for tighter integration among planning and operations functions, increased supply chain visibility and the introduction of state-of-the-art enabling technologies. An estimate of the benefits and improvements in return on assets by addressing issues around agility and integration, inventory and logistics optimization, and functional improvements, was conservatively calculated to be more than $1 billion annually. All of this information then entered the last lap of the process—screening and prioritization of the most promising ideas, which yielded pilot projects in separate geographic areas to improve operational margins based on tighter integration between business functions and maximization of IT investment as part of a virtual enterprise. In the area of demand planning, inspired mainly by the experiences of P&G and Colgate- Palmolive, the company entered a phase of further investigation of demand planning techniques and methods, which will undergo additional benefits analysis. Market Scan as a Competitive Edge While there is a well-defined process at work here, scouting around for new ideas in completely different industries is as much an art as a science. It takes a special kind of understanding and imagination to see a successful technology or process in one kind of organization and be able to imagine its potential to work in your own company. In addition, to get traction with a cross-industry assessment some organizations may have to undertake staff training to overcome resistance to adopting and adapting innovation from the outside—or perhaps even to see it in the first place. You won't derive the value you seek from a thorough market scan if the internal mindset is strictly "homemade." Finally, organizations that lack the capacity to conduct a comprehensive cross-industry assessment on their own should consider a partner to manage both the outside-in analysis and the development of external sources and ideas. Understanding how to identify companies with the greatest potential may be one of the biggest barriers to engaging in cross-industry innovation; and in the long-run having a partner can help reduce investment costs and ensure that opportunities are not lost. Today and in the future competition often comes down to who has the most effective and efficient supply chain. That makes innovation essential—a drive for growth and differentiation in the marketplace that's not limited by the experiences and knowledge of your own organization and industry. A market scan that includes the cross-industry innovation component is both a process and a mindset. It's a way of systematically expanding your pool of ideas to access the best supply chain practices across industries and organizations. Businesses today can't be held back by the insular supply chain solutions that worked in the past.Today, it's about looking deeper and wider for effective ideas and making them your own. Brian Nolf is Partner, Strategy & Transformation – Consulting Practice, Wipro Limited. Ramanan Sambukumar is Practice Head – CTO Office, Wipro Limited. Get in touch: global.consulting@wipro.com. =====================

Finding New Insurance Ideas In Unlikely Places

Please fill the required details to access the content Western insurance firms have a problem. Their markets aren't growing, product innovation has stagnated, and costs are rising while customer satisfaction is falling. In short, it's a business that's ripe for the kind of change that radically transformed industries like media, telecommunications, and high tech. For inspiration, Western insurers should broaden their scope by scanning countries in the developing world, where insurers are thriving. That fact is not as strange as it may seem. With fewer available resources, and impediments ranging from physical to cultural, insurers in those regions have had no choice but to innovate—and innovation is a key to success that knows no geographic boundaries. While insurers in developed markets have been fixated on risk management, neglecting consumer-facing sources of value, insurers in developing regions have turned a laser-like focus on the customer. By harnessing popular technology, embracing unique sales partnerships, and creating customized products, insurers in the developing world offer a glimpse of the kind of creative thinking that has the potential to jump start the industry in the West. That makes what's happening in places like Kenya, India, and Colombia important for Western insurers to understand. Key Emerging Market Innovations Emerging markets present insurers with significant challenges and constraints. There may not be a developed infrastructure to reach a critical mass of consumers, and purchasing power can be low, with traditional payment options few or non-existent. Environmental factors from drought to flooding to population density may also present impediments. In adverse situations like these, insurers in emerging markets have had to think differently about product development, sales, and claims processing. While insurers in developed countries don't face the exact same set of issues, they can draw inspiration from emerging-market innovations. Product Development Innovation: Most Western insurance products are designed to serve the needs of a majority of potential buyers, which is to say they may not match every individual customer's precise needs. A "good enough" product will typically offer 80 percent of the performance of an insurer's "best" product at 80 percent of the best product's price, making it attractive to a large number of consumers In contrast, the focus in developing countries is micro-insurance products. These hyper-targeted offerings are created to meet precise customer needs while reflecting the realities of poorer populations and their limited purchasing power. A micro-insurance product might offer 50 percent of the coverage of a "best" product at 15 percent of the price. For example, instead of offering across-the-board crop insurance, a micro-insurance provider might only cover a specific loss caused by a specific event. In Kenya and Rwanda, Kilimo Salama offers a low-cost policy covering the cost of a farmer's crop investment—seeds, fertilizer, and pesticides—in the event of a

loss due to extreme drought or excessive rain. By limiting the coverage to the customer's up-front expenses, and by excluding hazards like pests, hail, and certain types of floods, the cost of insurance is kept ultra low. As of 2012, around 50,000 Kenyan farmers were covered, and payouts have been made to over 10,000 farmers, according to Swiss Re, one of the partners in the offering. India's Vimo provides a micro-insurance product for low-wage, self-employed women. Offered through SEWA, a workers' trade union, the insurance costs the equivalent of $1 per month and provides $200 of protection against life, home, health, and accidents. In South Africa, micro-product provider Hollard insures funeral expenses up to $250 for individuals and families. It sells the product for $2 in packaging similar to cell phone starter packs. Transaction Partnering Innovation: Poverty, the lack of infrastructure, and the geographical remoteness of many regions in emerging countries significantly inhibit insurers from reaching and managing customers using methods that are common in the West. But by applying creative thinking, insurers have found ways to connect. In Africa, Kilimo Salama does all of its business through agrodealers and the mobility service provider Safaricom. When an agro-dealer sells the customer seeds, fertilizer, and chemicals, the cost of these "crop inputs" can be insured on the spot for a small incremental price. Scanning a barcode on the bill registers the policy with the insurer and generates a text message to the customer with the purchase receipt and policy number. In Colombia, Liberty Mutual solved the challenge of collecting premiums for its low-cost health insurance by partnering with the local gas company, which adds the charges to the client's natural gas bill. In Bolivia, Zurich Bolivia Group sells medical and life micro-insurance products at branches of BancoSol, a commercial bank targeting low-income customers. The cost is automatically deducted from the customer's savings account. Filipino insurer Beneficial Life Insurance, known as BenLife, partners with telecom giant Smart Communication to offer a mobile micro-insurance service called InsureTxt, which offers accidental death coverage of up to PHP 50,000 ($1,200) for as low as PHP 3 ($0.07) per month, with all transactions completed through text messaging. South African provider Hollard's funeral insurance is sold through Pep, a clothing and small appliance retailer. bank account. Given the lack of infrastructure in developing countries, insurers have to take a different approach, often by enabling customers to benefit from index-based claims that are automatically triggered by defined events. bank account. Given the lack of infrastructure in developing countries, insurers have to take a different approach, often by enabling customers to benefit from index-based claims that are automatically triggered by defined events. For example, Africa's Kilimo Salama uses automated weather stations to calculate whether it owes customers payments on their crop insurance. If so, it transfers the funds to the customer's mobile phone number via M-PESA, a mobile payments service. Look for coverage gaps in your market—gaps that can be filled with niche products to appeal to those who don't have insurance or those who can be upsold with a valueadded extension to a current policy. Providers in other countries use indexing to determine claims for weather-related events. In India, HDFC ERGO offers a Rainfall Index Policy to farm communities against the potential for drought. The claim settlement is based on a rainfall index collected weekly from an India Meteorological Department station. Claims are settled through an automated process. In the Philippines, two micro-insurance providers also

offer index-based weather coverage. Microensure provides crop insurance to rice farmers against droughts and typhoons. By limiting coverage to the cost of cultivation, premiums are kept to between five and 10 percent of the insured value, depending on the weather station and crop variety. Swiss Re insures farmers against crop damage caused by typhoon-related high winds. Damage is assessed remotely based on the recorded typhoon speed and the distance between the farm and the typhoon track. The policy covers the 120-day period of the crop's establishment, flower, and yield formation stages. Also in the Philippines, Coop Life Insurance and Mutual Benefit Services, or CLIMBS, covers the loan portfolios held by cooperatives and microfinance institutions. Its weather index insurance pays out to client organizations when wind speeds or rainfall in their areas breach predefined levels for their respective regions. CLIMBS' premium rate is 3.5 percent of the covered loan portfolio. The Three Levers of Growth To create and serve new markets, insurers in developing regions have innovatively overcome infrastructure, environmental, and societal challenges. While Western insurers don't face the same obstacles, they can profit from insights gleaned from the developing world—insights that can be described as three levers of growth: Identify unique customer needs. Insurers in developing countries have focused on micro-insurance. Translating this to the West means looking for coverage gaps in your market—gaps that can be filled with niche products to appeal to those who don't have insurance or those who can be upsold with a value-added extension to a current policy. Identify potential partners for bundled sales. Insurers in the developing world have forged agreements to capitalize on customer relationships already established by other businesses. As you assess new niche products and services for your markets, ask yourself what types of businesses can help you market and close agreements through bundledsale arrangements Capitalize on consumer mega trends to simplify claims and disbursements. Insurers in developing countries have tapped trends like mobility to break down barriers in servicing customers. As an insurer in the West, you need to regularly and rigorously examine the potential of all new technologies and trends—and the ways consumers are affected by them—to improve the customer experience and grow your revenue base. Some Western insurance providers already are deploying these levers. For example, a U.S. auto insurance company provides a smartphone mobile app for customers to photograph their damaged vehicle and file a claim on the spot. In addition to increasing customer convenience, the app saves the provider money by reducing fraud and the need for loss-adjuster assessments. In France, an insurance provider acknowledged its market's aging demographic by creating a policy specifically aimed at older individuals. By offering extended coverage for items such as prescriptions, dental work, and hearing aids, it motivates seniors to take preventative actions and engage in physical activity. The product has captured a growing category of customers who were previously uninsured or under-insured. The Insurance Innovator at Work It's all well and good to talk about innovation in other cultures, but how do you translate these ideas into an established way of doing business in the West? The first step is to accept that change is an imperative if you want to reach new markets and refine products to meet your customers' changing needs. There's no ignoring low customer satisfaction anymore. Then you have to break away from old ways of doing business Structuring your innovation and embedding it into a process may sound contradictory at first. But innovation

must be entrenched in your organization or it won't be fast enough to grab market opportunities. Structuring your innovation and embedding it into a process may sound contradictory at first. But innovation must be entrenched in your organization or it won't be fast enough to grab market opportunities. The scope of change that is required is not simple and will take time to accomplish. But time is of the essence. The stagnation of the Insurance industry in the developed world makes it ripe for transformation—a change that either will be driven by forward-thinking legacy providers who prepare for it and act, or by upstart providers who see the opportunity and have the agility to jump on it. The three levers of growth gleaned from innovative insurance product development, sales, and claims processing in developing countries point the way to the coming transformation in the West. You will want to be at the forefront of that change, not watching from the sidelines. Mark Foster Collier is Client Partner – Wipro Limited. Get in touch: global.consulting@wipro.com. =====================

Powering the New Supply Chain: Demand Sensing for Small and Medium-Sized Businesses

----- Arcticle source ----- https://www.wipro.com/consulting/powering-the-new-supply-chain--demand-sensing-for-small-and-medi/ ----- Contact Wipro Please fill the required details to access the content The demand-driven business environment spawned by market globalization has strained supply chains to the breaking point. Businesses of all sizes are under pressure to maintain precisely the right amount of inventory to meet customer expectations while simultaneously improving the pace of delivery and keeping operating costs in check. If you fail to meet your customers' expectations, your competitors will win the business. In response to the challenge, large enterprises—including Procter & Gamble, Kellogg, Shell, and Church & Dwight—have embraced Demand Sensing, a no-touch automated supply chain solution that predicts tomorrow's demand based on today's events with a level of accuracy beyond what traditional supply chain tools and processes can achieve. With the potential to remove up to three days of inventory, decrease forecast error by 40 percent, and reduce safety stock by a third, the advantages of Demand Sensing are obvious. Yet, most small and medium-sized businesses have sat on the sidelines of this supply chain sea change, opting instead to restructure their traditional push-pull planning strategies —a costly, complex undertaking that often fails to generate improvements. In our experience, most businesses have been slow to consider Demand Sensing because of the misperception that it only works for major enterprises (i.e., it is costly and time consuming to implement). Yet, by understanding why and how Demand Sensing works in large organizations,

small and medium-sized businesses have the potential to achieve the same or similar benefits. Demand Sensing Basics The traditional Sales & Operations Planning (S&OP) process relies on algorithms that operate in a fairly static manner. Sales orders, stock movements, inventory levels, shipments, returns or other data are fed into systems for sourcing, network planning, production planning, scheduling, and logistics to create a monthly demand forecast. A traditional S&OP monthly forecast might indicate, for example, that the demand for a product will be 1,000 units per week. As the predicted demand fluctuates, the forecast must be manually adjusted throughout the supply chain, and then usually for only a limited number of products/SKUs. Because of the lag time built into the process, the business typically runs a strong risk of having too little or too much inventory against the demand. In contrast, Demand Sensing is an automated process. It records real-time signals from all points in the supply chain and combines them with diverse external business indicators that can include, for example, point of sale data, currency fluctuations and even weather forecasts. Then enormous data processing power and predictive analytics combine to create a kind of artificial intelligence to detect patterns in seemingly unrelated data. The result is daily forecast adjustments that drive informed production and logistics decisions. By automatically adjusting the forecast for every product on a daily basis, Demand Sensing ensures that production is limited to required quantities. More accurate, actionable short-term demand forecasts mean less buffer inventory, higher fill rates, lower expediting costs for labor and materials, reduced production waste, and tighter vendor-partner coordination. In short, Demand Sensing lowers inventory costs, improves product availability, and increases customer satisfaction. Demand Sensing for Smaller Organizations It's clear that Demand Sensing works for large multi-national organizations with make-to-stock operations. But smaller organizations facing similar demand-driven supply chain challenges are just as capable of successfully optimizing forecasts. What most large organizations have that makes them logical candidates for Demand Sensing are: Implementation Options Currently you have a choice of three implementation alternatives for Demand Sensing Deciding among these three options depends on your starting point, your company's strategic goals, and how you measure success. Using a maturity model that evaluates your systems and processes will go a long way in helping you make an accurate assessment and solid decision. We assume that your organization has a single instance, or version, of ERP supporting the supply chain and S&OP process to minimize data errors and connections while ensuring high quality transactional data. But even if that's not the case, the BPaaS implementation option can render this potential limitation moot. Some of the basic issues to consider as you evaluate the implementation alternatives include software and 3 implementation costs, requirements for outside services, internal resources, and operations disruption. There are also ongoing maintenance needs and support costs as well as the cost of integrating this new platform with existing systems. But selecting the best implementation option is just one step. For your project to succeed you must also: As a small or medium-sized organization, you'll probably need the help of an experienced partner to provide an accelerated approach to defining your requirements and specifying the evaluation criteria for a pilot or proof of concept. In a best-ofall-worlds scenario, defining requirements can be done within a few weeks and the pilot project would run from one to three

months. This experience gives you the information you need to ensure that you've developed a solid business case and success factors. With that achieved, you can move into implementation and deployment. Depending on the scope of the project, this could take between three months to a year. With your partner jointly leading the implementation, you'll have expertise in managing any technical, change management, and process compliance challenges. Reducing Supply Chain Uncertainty As increased market globalization continues to pressure supply chains, organizations must step up and embrace technologies that give them an edge over the competition. What better strategy than to have constantly updated, actionable information? Demand Sensing allows businesses to reduce inventory through greater accuracy, and be more nimble in dealing with unforeseen events, such as weather and political upheavals, that can create supply chain volatility and disruptions. Traditional forecasting models can't do that. Demand Sensing supports the process of establishing a platform for integrated planning that enhances visibility across the supply chain while segmenting customers based on expected margin and product profitability. It changes the supply chain landscape, enhancing business decisions that improve profit margins, including facilitating the release of capital that can be invested in other areas. Until now, Demand Sensing uptake has been primarily limited to the world's largest organizations. But the technology can also be a defining advantage for smaller businesses if they have, or can put in place, the right processes and select the appropriate implementation model. The business that has a steady stream of actionable information is the more agile, cost efficient, and better supply chain partner than the competition. How do you enhance the bottom line? In the context of supply chain, you do it with Demand Sensing. =====================

Supply Chain Vulnerability in Times of Disaster

----- Arcticle source ----- https://www.wipro.com/consulting/supply-chain-vulnerability-in-times-of-disaster/ ----- About the Authors Contact Wipro Please fill the required details to access the content While these new business paradigms have resulted in more efficient and responsive systems, the supply chain risk profile has been altered significantly. Many companies have been left vulnerable due to anemic risk mitigation systems, and these systems have yielded to major variations in demand or supply caused by unforeseeable events, both natural and man-made. Caught unaware by such disruptions, these companies have suffered losses of revenue, market share and consumer trust, and in some cases have even faced bankruptcy. Supply Chain Disruptions Can Be Painful In last year's Japan earthquake, tsunami and nuclear crisis, Toyota's operations were affected to the extent that it took over six months before complete recovery was possible. The delay in the launch of two models caused an estimated production loss of over 140,000 vehicles, the company's profits fell by over 30% and it lost its position as the largest automaker in the world. Of course, not all supply chain disruptions are caused by natural disasters. Cisco rode the technology

wave in the 1990's to become the market leader in the network component business, but it had no experience in managing downturns. When the tech bubble burst and demand slowed significantly, the company did not have the capability to track the inventory of products across its geographically-spread supply system. Their systems were designed for high responsiveness, which meant high inventory buffers. Lack of inventory tracking capability resulted in high inventory accumulation which in a bust market led to the eventual write-down of $2.2 billion in 2001 alone. Broadly defined, a supply chain disruption is an unusual spike or steep fall in either demand or supply leading to a huge imbalance between the two. According to Jossi Sheffi, director of the MIT Center for Transportation and Logistics, "The essence of most disruptions is a reduction in capacity and hence inability to meet demand." Companies cannot afford to treat supply chain disasters as 'black swan' events that have a negligible chance of happening. Recent studies suggest that less than 25 percent of Fortune 500 companies are prepared to handle a supply chain crisis and that a $50 million to $100 million cost impact can be incurred for each day a company's supply chain network is disrupted. (Alpaslan, April 2003) As part of a research study on supply chain risk and its impact on equity volatility, Prof.Vinod Singhal and Kevin Hendricks concluded that it could take two years or more for companies to recover from a major supply chain failure. (Hendricks, 2003) What is a Resilient Supply Chain? As illustrated in Exhibit 1, disruptions happen for various reasons and the nature of their impact also varies. For example, a labor union problem can be anticipated whereas a terrorist attack is unforeseeable. Also, the time taken for the impact to be felt differs and is unique to each disruption and to each company. For instance, a fire in a factory can potentially halt operations immediately, whereas the outbreak of an epidemic in a supply zone could have a more subtle impact and will take more time to set in. Companies with a resilient supply chain will be able to anticipate these events better than their peers, and will be able to delay and minimize the impact of the disruption by taking proactive risk-mitigating steps. Following the September 11, 2001 tragedy, U.S. flags, lapel pins and other patriotic objects became extremely popular, but consumers had a difficult time finding them in major retailers like Kmart and Target. That's because Wal-Mart, using its real-time demand tracking and analysis system, responded swiftly to the situation by locking up all the supply resources they could find. Exhibit 1: Categorizing Supply Chain Disruptions Wal-Mart is not the only retailer that knows how to benefit from external supply chain disruptions. Zara, a Spanish clothing retailer, had black clothes on its shelves immediately after the 9/11 events. While the normal lead-time in the garment business is 90 days, Zara was agile enough to assess a market need and respond within five days. Why do some companies do better than others in times of disruption? The answer lies in their ability to detect the disruption and swiftly act on it. While these events cannot be predicted with precise accuracy, their major impacts can be narrowed down to one of five areas: While companies focus on efficiency and responsiveness in traditional "business-as-usual" environments, they should be flexible enough to quickly switch their operation scenarios to adjust for disruptions. A scenario-based strategy for disaster proofing with the focus on impacts of disruptions will not only minimize damage to the bottom line but can potentially help score over debilitated competitors.This is illustrated in Exhibit 2: In Exhibit 2, company B has instituionalized a Business Continuity Plan (BCP) and

invested in visibility systems for early detection of disruptions, whereas company A has not. When a disruption occurs at point T, Company B is able to discover it at point B1 and recover from the disruption rapidly, minimizing the impact of the disruption. Company A detects the disruption only at point A1 and takes a longer time for recovery. Philips was a major supplier of semiconductors to Nokia and Ericsson in 2000 when a fire at a chip plant in Albuquerque destroyed chips for millions of cell phones.When Nokia learned about the incident, they immediately set up a troubleshooting team to assess the full impact of the incident and find alternatives.They rapidly sourced three of the five affected chips from within their existing supplier network with a five-day lead Exhibit 2: Supply Chain Risk Mitigation Framework time. A senior management team from Nokia worked out a deal with Philips to use the latter's capacities in other plants for sourcing the remaining two parts.With these efforts, Nokia was able to make all customer shipments in time. In contrast, Ericsson took several weeks to respond to the situation, and by that time most of the market capacity had already been allocated to Nokia.The impact was devastating for Ericsson, which took a $2.34 billion loss in its mobile phone division, citing not only component shortages, but a poor product mix and marketing failures. Preparing for Supply Chain Disruptions As shown in Exhibit 2, risk mitigation efforts can be classified in three phases: While the strategic vision must take a top-down trajectory, the operational activities need to be implemented from the bottom-up. Based on the efforts required before, during and after the disruption, Exhibit 3 presents a comprehensive framework to build a resilient supply chain: Exhibit 3: Framework for Building a Resilient Supply Chain Proactive Steps:Plan for Disruption Strategic Actions Anticipate Disruption with a Business Continuity Plan Invest in Required Technology Build Resilience through Flexibility Sourcing Decisions Operational Actions Test Your Business Continuity Plan Prioritize Critical Components and Supply Chain Nodes Assess and Monitor Supplier Risk Profile Monitor Your Supply Chain Intelligence   Reactive Steps – Minimizing the Damage Strategic Actions Operational Actions Post-Recovery: Controlling the Damage Strategic Actions Operational Actions The Business Imperative The frequency and severity of supply chain disruptions has increased tremendously in the past two decades of globalization.While investing in supply chain risk management comes at a cost, it is offset by reduced insurance premiums. Besides, companies that have taken steps to mitigate the adverse impacts of a disruption have been able to contain their damages and in some cases have learned to benefit from them.A resilient, flexible, scenario-based supply chain provides a competitive edge during times of major disruptions and is not a choice – instead, it is a business imperative for "best in class" companies. Acknowledgement The authors wish to thank Ms. Charlotte Staf for her creative inputs in designing the frameworks used in this article.

Bibliography Alpaslan, Mitroff. (April 2003). Preparing for Evil. Harvard Business Review. Kevin Hendricks,Vinod Singhal (2003). Empirical Analysis of the effect of Supply Chain Disruptions on Operating Performance

Ramanan Sambukumar is Practice Head – CTO Office, Wipro Limited. Mohanish Makharia is Principal Consultant, Strategy & Transformation – Consulting Practice, Wipro Limited. Get in touch: global.consulting@wipro.com. =====================

Driving Growth Through Strategic Workforce Planning

----- Arcticle source ----- https://www.wipro.com/consulting/driving-growth-through-strategic-workforce-planning/ ----- Contact Wipro Please fill the required details to access the content The Eurozone's double dip recession has finally come to an end, with the bloc growing slowly through 2013 and early 2014. While the recovery is patchy and core nations are faring better than smaller territories, there are strong indications that consumer confidence is increasing. As a result, now is the time for your business to prepare for growth, including investing in your workforce. In fact, you've got a lot to address. Years of economic stagnation have resulted in: To overcome these issues, you need to focus on workforce planning that strategically transitions your current workforce to meet future needs—and, by doing so, elevates HR into a leadership role in the organisation. Leading Practices that Support Business Strategy and Operations According to APQC, top HR performers spend 20 percent of their time on workforce planning compared to 8 percent by low performers. Since businesses live or die by the strengths Driving Growth Through Strategic Workforce Planning By Robert Staeheli and Gareth Cummins The Eurozone's double dip recession has finally come to an end, with the bloc growing slowly through 2013 and early 2014. While the recovery is patchy and core nations are faring better than smaller territories, there are strong indications that consumer confidence is increasing. 2 of the skills and capabilities of the people who work for them, HR leaders must thoroughly assess their current workforce and understand how they need to develop and evolve their people to meet the demands of facilitating growth while facing increased competition. Certainly most organisations do some sort of planning at some level of detail, but how well do they do it? Successful workforce planning uses a sustainable, methodical, repeatable approach that is recognised and ingrained across the organisation. Successful workforce planning uses a sustainable, methodical, repeatable approach that is recognised and ingrained across the organisation The following six characteristics are keys to HR taking a more proactive leadership role. Do they describe what's happening in your organisation? Getting Started It may seem early in the game if you're still feeling the weight of recession. But, in fact, it's never too early to plan for growth. Your first job is to be clear about what you want to achieve through workforce planning. The challenges will likely include providing innovative ways to measure employee productivity and manage talent costs, developing a more flexible workforce, balancing the cost/risk ratio of in-house versus third-party resources and subject matter experts, and aligning workforce planning to specific functions, such as IT, to ensure you have the right people in place to support future technology. It could also include understanding and preparing your business to deal with a more competitive talent environment and creating a talent pipeline, or elevating HR into the role of critical business partner from supporting player With your goals in place, there are six steps you can use now to set the stage for your plan: The

best workforce planning organisations started small and focused on building credibility first through accuracy and then by providing grounded insights into challenges that matter to the business. But most importantly you need to get started. The best workforce planning organisations started small and focused on building credibility first through accuracy and then by providing grounded insights into challenges that matter to the business. Addressing an Environment of Challenges Over the past several years, many organisations have had to deal not just with the challenges of holding a business together, but also with the recession's impact on employees. Employee torpor is a challenge many businesses face, especially in light of the decline of real wages in relation to the cost of living. HR must take part in re-motivating the workforce, but it needs the right tools and levers to help. As the economy inevitably improves, you'll also face other challenges and risks as you implement your workforce plans. Many older workers who stayed on instead of retiring may feel more financially secure and interested in leaving. You'll be recruiting replacements from a very different generation —and managing the complexities of rapid succession planning. Having said that, we are still seeing older workers stay on the job longer. So, you'll be addressing the needs, cultures, and aspirations of different generations. While you don't want to lose the experience and knowledge your older workers provide, you also need the innovative, creative ideas of a younger generation. Navigating this balance means developing a strategy for how to meld this mix to best meet the company's needs. As the economy grows and more organisations begin to hire, not only will you have the opportunity to pick up talent, your competition will have the ability to do the same. The Internet and social media have made it much easier for employees to learn about workplace culture at other companies. How does your business stack up in regard to benefits, flexible working choices, social and ethical commitments, access to new technologies The best workforce planning organisations started small and focused on building credibility first through accuracy and then by providing grounded insights into challenges that matter to the business. 4 and ideas, career development prospects, and opportunities to innovate, travel, or work overseas? Finally, as mentioned above, if you want the business to view HR as a strategic partner, you must determine how you can provide the business with critical workforce analytics and insights—not just for basic operational activities but also in regard to workforce demographics and forecasting future workforce needs— and the people strategies required to achieve them. Do you have the technology in place, as well as the time and competencies, to accomplish this? Greeting the Other Side of the Downturn As we see a glimmer of light at the end of this vast tunnel— and, yes, it's there—HR is well placed to help lead the business forward to meet new opportunities. Your business relies on the quality of its people, making you the fulcrum of what happens next. You have the ability to revive a diminished, disengaged workforce, cut through the challenges the recession has wrought, and take the initiative in establishing a strategic workforce plan that will help drive business strategy. Growth is coming. Your business can't be caught unprepared. A forward-looking plan that addresses what's just ahead as well as the burst of energy to follow will set the foundation for your company's success and place HR in the position of strategic partner. Get in touch: global.consulting@wipro.com.
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Intercompany Reconciliation and Settlement

----- Arcticle source ----- https://www.wipro.com/consulting/intercompany-reconciliation-and-settlement/ ----- Contact Wipro Please fill the required details to access the content Intercompany Reconciliation and Settlement The reconciliation and settlement of a company's intercompany trading balances is a challenge that grows exponentially with the number of subsidiaries. While it's possible to manage a small number of subsidiaries manually, using spreadsheet-based tools or workarounds, there is a tipping point in the growth of each organization that requires a more robust solution. Large multi-subsidiary organizations need either daily or monthly reconciliation and settlement of intercompany balances to satisfy requirements that encompass: Large companies also require a robust solution that is scalable and secure, as well as predictable and affordable. Such a solution isn't available from any of the major ERP or finance software providers, nor is it even in their development program. So an alternative solution is required. This document summarizes Wipro Consulting Services' point of view on a Target Operating Model and roadmap for large global organizations to create a robust solution for the reconciliation and settlement of intercompany transactions. Target Operating Model The Target Operating Model (TOM) is comprised of four integrated components: business processes, organization roles and responsibilities, enabling technology, and data and reporting requirements. They are described below: Business Processes There are two options to consider for the end-to-end process, depending on whether settlement is monthly or daily. These are shown in Figures 1 and 2. Option 1: Monthly settlement of balances In a monthly scenario, the transactions are reviewed and reconciled as part of the month-end close prior to settlement, then reported for group accounts. This approach is better suited to smaller groups with lower volumes of intercompany transactions and data inconsistency. Option 2: Daily settlement of balances In a daily scenario, the transactions are settled daily and reviewed and reconciled throughout the month. This approach avoids a peak in the month-end close cycle, streamlining the reporting for group accounts. This approach is better suited to larger groups with higher volumes of intercompany transactions and data inconsistency. Figure 1: Monthly Settlement of Balances Figure 2: Daily Settlement of Balances Intercompany Trading:This is 'business as usual' trading between subsidiaries using standard P2P and O2C processes but specific intercompany accounts, with liabilities recorded in Accounts Payable or debts being recorded in Accounts Receivable. Pain Point: All data must be correct at the time of entry to enable zero-touch/no rework at the reconciliation and settlement process. This includes standard intercompany vendor/client IDs, currency rates, payment, and trading terms. Failure to establish data standards and trading terms before processing will result in an expansion of the teams required to resolve exceptions. Extract Intercompany Transactions: Transactions are extracted from the subsidiary

ledgers and posted to the solution. Pain Point: It is unlikely that one method of sharing transactions will suit all subsidiaries due to size, volume, local regulations, and the like. Consequently, we recommend three different methods to create options that should reduce resistance to adoption: Settlement Processing: The solution generates settlement transactions, which are payments from the customer to vendor, when the due date is reached for both trading partners. These payments will result in realized currency gains and losses which should be accounted for (separately from any intercompany profit) in the accounts of each subsidiary. The duration between the date of the original transaction and subsequent settlement provides a window for currency forecasting and hedging. Reconciliation: Transactions in the solution are balanced and reconciled monthly using automated routines that report exceptions only. These intercompany balances should also be reconciled to the Group Reporting values at the end of each month. Pain Point: Automated reconciliation is required to enable a scalable solution so that transaction volume increases avoid a linear relationship with support team size. Dispute Management: Disputes can be raised manually by trading partners and manual transactions can be applied to resolve disputes. Since this is a manual process that consumes skilled resources, it should be used sparingly. Reporting: Intercompany balances for group consolidation can be loaded into reporting systems or reconciled with subsidiary ledger balances prior to consolidation. Exception and data integrity reports should also be available to enable rapid resolution of any discrepancies. Additional setup and governance steps are required to: Organization Roles and Responsibilities For the Target Operating Model to work effectively, there must be strong governance and a clear understanding of the roles and responsibilities held by those who set and direct strategy, those who establish the processes, and those who actually run and support the system, as well as their relationships with one another, as shown in Figure 3. Governance Board: This organization has global responsibility for the strategic fit and direction, policy, compliance, and change control, as well as management of the governance framework. Global Process Owner: The Owner controls process refinement, roll-out, data compliance, dispute resolution reviewed and reconciled throughout the month. This approach avoids a peak in the month-end close cycle, streamlining the reporting for group accounts. This approach is better suited to larger groups with higher volumes of intercompany transactions and data inconsistency. Figure 3: Organization Roles and Responsibilities manages the change board, leads issue resolution, SLA exception resolution, and financial close compliance. IT Application Owner: The IT Application Owner ensures smooth running of the system, ownership of the Support Model, upgrades and improvement execution, issue resolution and testing, maintenance of SLAs, and reporting performance to other teams Finance Processing: The responsibilities include initiating intercompany transactions, compliance, reference data setup, assisting with issue resolution, and testing by shared ser vice centers, accounting units, and subsidiaries. IT Support Team: IT Support Team's responsibilities include issue tracking and resolution, performance monitoring, system tuning, integration, and interface management. This element of the organization could be delivered as an offshored managed service. Other IT Support: This can include providing assistance with issue resolution, upgrades, and testing. Pain Point: Transaction values are expected to be very high and there can be realized gains or losses even with

intercompany transactions (for example, missed hedging settlement dates). It is also likely that this application will feed directly into group reporting. Consequently, the entire support network must agree to the priority given to issue resolution and blackout dates for changes. Enabling Technology There are two basic assumptions that must be acknowledged. The first, as we stated previously, is that no off-the-shelf application can satisfy a multi-national company's unique process, organization, and information requirements, so a custom solution is required. The second is that because reconciliation and settlement is a basic accounting function, performed by all multi-nationals, the objective is to have accurate, efficient processing at low cost with no product or strategically sensitive information being shared. With these as givens, technology must be developed that effectively, economically, and discretely fulfills specific business requirements. At a high level, there are two key non-technology questions to be decided that will require technology solutions: 1. How will the solution be delivered? 2. How do we accommodate the multiple subsidiary systems and data formats? The delivery options that follow will help determine the highlevel design and the full-life cost of the solution: The approach for normalizing subsidiary data and extraction to avoid secondary processing includes the following, which will help determine the implementation and support costs of the solution: 1. The technology selected for this solution (Java, HANA, Oracle, etc.) does not need to match the current or future corporate IT strategy, but does need to match the capabilities of the subsidiaries within each organization. 2. Subsidiaries may use alternate ERP systems or previous releases of 'core' systems. The solution should be able to overcome the need for widespread system and data rationalization but should support that change, if selected. Pain Point: It is unlikely that a single method of sharing transactions will suit all subsidiaries due to development plans, system and data constraints, and the like. Consequently, three different methods are recommended to create options that should reduce resistance to adoption: 1. Manual entry directly into the application   2. Semi-automatic transaction extract and posting to a mailbox   3. Fully automated extract and data load with controls and exception reporting 3. Intercompany vendor and customer IDs may also be different among subsidiaries, which may require either: a. A prerequisite Master Data Management project to establish and maintain standard intercompany vendor IDs in all subsidiaries or b. Include mapping tables to be maintained in each subsidiary. Regardless of the above variables, because the solution requires global access, we believe a resilient web or cloud-based solution would be most appropriate. Such a solution would require three layers: Application Layer: Including security, user profiles, transaction processing and controls, reporting, and so forth Web Layer: Including GUI, security, communications, interface processing, and controls Database Layer: Including data management, data integrity and other controls, as well as reporting Data and Reporting Requirements Because the data integrity and accurate reporting are at the crux of reconciliation and settlement, and because they are the primary drivers for the business process and technology design, as well as organization roles and responsibilities, information requirements should be established at the start of the design stage and reviewed throughout the implementation. The data requirements include: Pain Point: Failure to involve all information providers and users and failure to agree on requirements in the design stages will result in expensive rework and reimplementation at a later date.

Roadmap The Target Operating Model is your basic schematic for your solution. But how do you implement it for your organization? A program of this magnitude will require the involvement of multiple stakeholders and changes to business processes and roles. To launch your solution effectively, you need a roadmap that details key steps and the people and teams involved. Before considering the Target Operating Model, a small senior team should be convened to identify the fundamental shape of the proposed program. It should address: With these basics established, you then need to dig deeper and make several strategic decisions before the program roadmap can be defined in detail. These decisions include: Internal or Hosted Solution:The solution is going to operate in a similar way to UK BACS, processing payments between corporate entities. Would you want a similar solution for managing your organization's intercompany payments? What is your organization's risk response for outsourcing payment processes, especially to processes that will transact billions annually? Internal or Outsourced Development: Do you have a development team with scope in the near future to develop a solution? Do you have the organizational capacity to lead and staff a project of this magnitude? Availability of Existing Functionality: Some components required for the reconciliation and settlement of intercompany transactions may already be available in the organization, such as auto-reconciliation tools like Chesapeake and Blackline or Treasury and payment applications. These assets can be utilized to perform specific functions and can be integrated into an overall solution. Once these major decisions have been made, your senior team should appoint a program management team to define the program as shown in the roadmap below. Pain Point: There will be a step change in knowledge, skills and experience required when the program moves from Identifying to Defining. It is a common error for inexperienced program teams to underestimate the resource requirements as well as the level of detail required in the Target Operating Model and in the project plan. Failure to address the full project lifecycle and prepare a detailed vision of the future will result in unexpected over-runs, cost increases and solution gaps. One option is to hire a Solution Integrator with experience of both the business process and largescale development and business change programs. Figure 4: Roadmap At a high level, a combination of program and software development lifecycle management should be applied and follow the roadmap shown in the Figure 4. Conclusion While accounting for intercompany reconciliation and settlement is not complex, establishing a solution that is accurate, costeffective, and manageable across a number of subsidiaries has proven to be a common problem faced by large multi-nationals. By adopting this Target Operating Model, organizations now have a basis on which to develop a custom solution that addresses all their pain points. Fortunately, the lack of complexity in this type of accounting simplifies communications and later adoption. And, since several components of the solution may already be used within your organization, it could reduce the potential cost of a solution and may also help drive its design. With a model in hand, you'll be better prepared to develop the basics of your vision for a solution and the roadmap to implementing it. Remember, your key decisions that will determine the cost, scope and duration of the program include whether you want to own the solution or have someone else host it, and whether you want in-house or outsourced support for the solution. At a time when your organization is wrestling with a host of

business issues around product or service development and sales, managing costs, and optimizing profits, the last thing you need to be distracted by is intercompany reconciliation and settlement. This should be a part of the business that is humming along smoothly. With that key issue resolved, you'l contribute to the success of a more competitive business. Get in touch: global.consulting@wipro.com. ======================

The Origins of Origin's Transformation

----- Arcticle source ----- https://www.wipro.com/consulting/the-origins-of-origin-s-transformation/ ----- Contact Wipro Please fill the required details to access the content From Traditional Utility to Energy Retailer Origin Energy is one of Australia's leading energy companies, exploring, generating and retailing energy throughout Australia, New Zealand and the southern pacific region, with some 4,000 employees. In 2008, Origin Energy's Retail business found itself at a crossroads. The company had certainly been growing over the past 10 years, primarily as a result of a series of acquisitions, to become one of the top utilities in the country with three million customers and some 1,400 employees and contractors. It had 20 percent market share and was the most profitable of Australia's energy retailers. But, deregulation in the mid-1990s meant it was dealing with new competition and several years into a new century the utility was still employing a very traditional way of doing business with customers that included door-to-door sales calls. Origin's customer churn was significant; they were effectively replacing their customer base every four years, according to the Retail General Manager Phil Craig. They recognized the need to grow organically, not through acquisition. That meant they needed to be more customer-centric and expand their product portfolio. In short, they needed to be a more entrepreneurial organization. Their strategic goals were to grow earnings, make Origin Australia's most respected brand, and assist their customers in reducing carbon emissions. Previously the organization had launched a CRM upgrade to help them add more customers, products, and services – but the upgrade did not deliver all the capability required, causing tremendous organizational pain for another 18 months. Not only did this make it difficult internally for Origin's employees, it created poor customer service delivery and couldn't support innovation. Origin's management realized they either had to make continued investments in their existing system to fix it or look for another solution. They opted for a new solution but also came to realize that hand-in-hand with that new solution they needed an organizational transformation that would align the new technology platform with a new operating model and together deliver the desired 'future mode of operation' they sought. Through an involved selection process, Origin chose Wipro to partner with them to achieve these goals. Picking a Partner Initially, Origin's management focused on a new system platform. "Three years ago, it occurred to us that we needed to do something about the technology architecture," recalls Craig. "Our systems didn't talk to each other, we had no single view of our customers in our call centers, and it was costing us

money. We wanted to behave like a strong competitive retail business and we looked at our core competencies and realized we didn't have the actual resources to address sales, marketing, and customer management. We started looking at a new system platform but realized we had the cart before the horse and needed a partner." According to Nazzareno La Gamba, Origin Retail's Strategy Executive, one of the reasons the company embraced Wipro was their focus on continuous improvement, innovation, and organizational cultural fit. A partner who they could trust with the employees they would be transferring; a partner to challenge and evolve their thinking and enable their transformation; a partner to manage and deliver the systems platform. Origin's search began in earnest in February 2008 and eventually they narrowed their choices to three providers, which led to WIPRO being selected as the successful partner and SAP as the technology solution. According to Nazzareno La Gamba, Origin Retail's Strategy Executive, one of the reasons the company embraced Wipro was their focus on continuous improvement, innovation, and organizational cultural fit. The attraction of SAP was that their solution would provide an integrated platform, and as Felicia Brady, Origin Retail's Executive for Capability and Change, points out, "Our pain came from a lack of integration and SAP solved that problem." But, even more important, say each of these executives, the choice of Wipro was the values and cultural fit. "We felt if things got tough, Wipro would want to negotiate with us and find a solution together," explains La Gamba. 'It was more of a partnership type of arrangement we were looking for, instead of just a supplier. We felt we could work with them and it would be a mutual partnership in the long term that would benefit us." Mark Sherratt, a Wipro partner for energy and utilities business transformation, has been the project's lead consultant and recalls that they also had a different approach to the bid than their competition. "We were prepared to go in and do transition work prior to doing the transformation," he notes. "Others wanted to do the transformation first but we wanted them to see some initial benefits as soon as possible. Our advantage is that, to us, transforming an organization when in a global model is not a big issue. We're already a globally distributed company." So shifting low-risk jobs first would give Origin immediate tangible benefits. First, the Transition The transition lifted about 30% of Origin Retail's base of 1,400 employees and contractors and transferred them to Wipro. These were primarily back office processing positions in billing and cash collection. Wipro now looks after account set-ups, billing and credit issues. The project came in on time and within budget. "Our task for the first year was huge – to complete the transition seamlessly, locating the employees to locations in Adelaide and Melbourne," says Manoj Varier, Wipro's Account Director for the Origin account. "It's been very successful and is considered a huge achievement." Craig agrees. "The process went very well, it was a smooth transition and we had external stakeholders here who hadn't realized we had outsourced, which is good," he says. In fact, notes La Gamba, "We were worried about problems with unions and staff, but it went very smoothly. That gave us a lot of confidence that Wipro had the ability to deliver and we realize now that is one of their core strengths." Then the Transformation Essentially, Origin was taking two linked journeys. One was the IT project, the other was business transformation. With the transition underway, Sherratt led Origin's management through a series of workshops that challenged their thinking across business vision, brand and employee

values, customer and product strategy, operational and service excellence drawing on best practices from their local competition, global best practices in energy retailing, and best practices in the telecom, retail and retail banking industries. "Together we identified and prioritized 11 key capabilities for retail," Sherratt explains. "From there we agreed on an achievable set for them and jointly identified the competencies needed achieve those capabilities." Some, he points out, were obvious. They needed to build on their continuous improvement activities, implementing a broader Six Sigma program. Origin needed a stronger focus upon credit risk management; and they needed deeper customer insight, differentiated service management, and improved customer advocacy so they could understand customer issues and solve them more effectively. Additionally, the Wipro team worked with Origin to develop key metrics to drive the new operating model. The define phase of this process took about three months, followed by seven months of design integrated with the 'SAP blueprinting' activity on the systems project. "The part of the work that Mark did in leading the design phase was valuable," says La Gamba, "because for the first time we were able to step back and tackle key strategic pieces. We realized we needed to change and Mark was the catalyst." "We were an organization that was product-led and we needed to make a shift to being customer-led," La Gamba continues. "We would build products and find customers to sell to instead of identifying customer needs and building products to those needs." So, he explains, customer segmentation has changed. It's now based on seven behavioral groups around which quantitative research is done on their needs today and in the future. Product development is now aligned with each segment. The segmentation has also helped Origin profile high-value customers to grow their share of the market in that base. These could be customers who are young families whose consumption would grow over time, customers with an interest in green products, and those who want premium services. For Craig, the design workshop process was critical in that it forced management to stop and think deeply about what they were trying to achieve, instead of just writing out requirements and leaving it to Wipro to build them for them. "It's fed into marketing, sales, operations groups, and segment strategy," he says. "It was a watershed pause in the process that we had our thinking right before launching into the doing and the building. Wipro challenged our thinking but enabled Origin to drive the approach. We could own it. It was a really strong contribution to get Origin to get our own thinking around what we want to do. And that's why it continues to evolve. The workshops drove the way we shaped our culture and our skill development. It's behind how we approach brand, customers, and the link between technology and business outcomes. The legacy will be there for years." A New Platform for Change For all these new transformative concepts to be a reality, Origin needs an IT platform that supports them. That part of the project is still underway and is expected to be completed in the summer of 2011. "This is a world-class system," Craig says. "The SAP solution meets our current needs and we understand they will continue to invest in R&D to drive innovation through their technology, which fits well with our aspiration of growth and innovation. Craig recalls visiting SAP's Melbourne offices and the quizzical response the presenter had when someone asked a question about how data changed as it went through the system. "He didn't understand the question because data never changes, never corrupts or is inconsistent. Everyone there looked at each

other and thought, 'We could go one way and get flexibility or we could get data integrity'. We loved that." The SAP system essentially was developed around Origin's customer service strategy and business processes. A critical component has been the customer self-serve function that will allow customers to manage their accounts and their products and services. Not only will this reduce Origin's cost to serve but it should satisfy customer needs, enable different service levels for different customer segments, and provide customer insights to Origin as they manage customer service and build new products based on customer needs. The SAP system is built and is now undergoing several phases of testing. They have planned for phased releases, and according to Varier, that's when most of the work from the product perspective will finish. The plan is to train all staff not only on the new system, but on processes, so they have a better understanding of the business and the customer experience. "That's the biggest piece of work that's picking up steam now," he says. "We're close to the original schedule and budget, which is almost unheard of," Brady notes, "for projects as large and complex as ours."La Gamba estimates it will be 18 months before Origin starts to see churn benefits. "Once the technology platform goes live, our focus remains on stabilizing the new platform and getting our people comfortable with the new system, and then we'll be able to accelerate our strategy of delivering new products and propositions to our customers. Right now, our focus is on completing testing successfully and getting ready for implementation." For Origin Retail's General Manager, the process began with fixing an unintegrated legacy system and ended up as a revolutionary step for the organization that is turning them into a 21st-century retailer to reinforce a brand that is becoming synonymous with innovation and sustainability. By this time next year he expects the new platform to be up and running, their people trained and confidently using the new systems and processes. "We've changed our structure and changed our culture," says Craig. "We're going to move into an Origin-dedicated building configured to support our culture instead of being spread out. We're touching every part of retail. Every person and the way they do their job day to day will be impacted by this transformation. I'm looking forward to when we'll have everything in place to look into a new world and be a leader there as well." For Kirk Strawser, Wipro's Global Head of Consulting, the Origin engagement is an endorsement of the step change in capability that the consulting group has brought to Wipro over the past three years. "The surprise factor will be the transformational piece," he says. "It's not what we're expected to do. We both modified the SAP solution and targeted a future mode of operations for the customer. It's a rare example of doing the most complex type of transformation. We can help our customers to change the way they do business." =====================

Partnering for Success:

Transitioning from Shared Services

to Global Business Services

Most large enterprises have adopted Shared Services to extract significant savings from their operating expenses. Yet, as the model has become part of the business mainstream, the sharp competitive edge it once provided has dulled. When all of your competitors are using Shared Services to drive out costs, where is your leverage? Moreover, many companies have reached the point of "diseconomy of scale," where the cost of removing expenses exceeds the value of the reduction. Others have found that dramatic decreases in cost structure have limited their ability to develop new products, expand to new markets, conduct M&A activities, or support their risk and compliance requirements. Global Business Services, or GBS, is a philosophy supported by an operating model that seeks to extend the value from Shared Services beyond traditional cost reduction. Evolving from Shared Services to GBS can help you broaden strategies to support top-line revenue growth, improve customer retention, and fuel product development. In short, it can help you recapture your competitive edge. The Competitive Limits of Traditional Shared Services Shared Services functions provide a range of benefits, but the overriding one is cost reduction achieved by consolidating and standardizing back-office processes in a low-cost delivery center. Over time, the model has seen changes, but the driver has always been the same— addressing costs through standardization, simplification and/or labor arbitrage. Given the nature of the work, Shared Services functions accrue abundant transactional, customer, and product data— data that traditionally is used almost exclusively to cut costs. With GBS, however, this wealth of information is used more creatively and productively. Consider the maturity curve illustration on page 2. The baseline for the curve is Functional Shared Services, which focuses on transaction centralization and standardization of a single back-office function, such as HR, F&A, or Supply Chain. At Level Two, Multiple Functional Shared Services leverage the investments made in single-function Shared Services by taking on additional back-office functionalities. At Level Three, the Shared Services organization is integrated into the company's value chain and begins to focus on creating value from its cache of transactional data in a work culture of continuous improvement. This is the essence of GBS. While this evolution is natural and logical, it doesn't happen with a snap of the fingers, which is why most companies have yet to make the transition. Adopting the GBS philosophy of leveraging more value from Shared Services is a start, but you must also

adapt your operations—people, processes, and technology—to create an operating model that supports value enhancement. That means employees will need to be trained to analyze data gathered during the processing and turn it into insights that will create actionable information. Processes will need to be designed to capture key value-add transactional data, and supporting technologies must have an enterprise focus that results in reports and analytics that give business managers new decision-making insights. Capitalizing on GBS So, how can an organization rekindle a competitive advantage with data previously used solely to measure and cut costs? There are four key areas where GBS can have an impact: customer, vendor, employees, and reporting. Let's look first at the customer dimension. Your Shared Services organization collects a tremendous amount of information on customer payments—data that traditionally is used to create transactional cost efficiencies such as the number of accounts receivable issues that are resolved on a monthly basis. But that data also holds beneficial clues to customer behavior. Consider the case of a key customer who experiences a temporary setback and begins to show a pattern of late payments. Insights gleaned through the GBS framework would allow you to proactively offer a customized payment schedule to help them more effectively manage their working capital until their situation improves. Delayed payments would stop, a confrontation over billing would be averted, and the business relationship would be enhanced for the long run. Regarding your relationship with vendors, consider a scenario in which you have an urgent need to increase your regular order of components manufactured by a small strategic vendor. Perhaps you have a 60-day payment cycle that wouldn't give them the cash on hand to expand capacity, which would put you at risk of not meeting the market demand for a key product. By leveraging the GBS framework, your data analysis can identify options to help your vendor and reduce your risk. One option would be temporarily adjusting the pay cycle to 45 or 30 days to provide more working capital. In the context of the company employees, adopting a GBS mindset can help HR manage recruiting and retention more efficiently and lower the cost of business. By analyzing the collected transaction data, along with established industry data, your HR function now has useful information to drive strategy development aimed at talent retention. Your HR function may find, for instance, that salaries aren't the sole driver; other perks, like telecommuting or working off site, may stem defections. Finally, GBS can improve the reporting experience dimension by leveraging the wealth of data collected to develop on-demand reports and analytics with drill-down capabilities. These reports and analytics could be used to not only manage the day-today activities of running a business, but could also be utilized to satisfy regulatory and statutory requirements without having employees spend an enormous amount of time sifting through data to manually generate reports. In essence, GBS functions become more of an advisory service and part of the organization's ecosystem instead of merely serving as a transaction-processing engine Adopting a GBS Ecosystem GBS can be deployed with a pragmatic pilot test prior to being rolled out in a controlled phased-in approach. You'll start by targeting a specific area within your organization and developing a realistic business case and transformation strategy. Start with an area over which you have the most direct control, like your supply chain, which also happens to be rich in data. For example, you could task your GBS team to assess your supply chain data to uncover

intelligence on your sourcing patterns and projections, supplier behaviors and conditions, including their financial health, their ability to help you meet market demand, and their product reliability. That takes us to some high-level steps you should take to adopt the GBS mentality. Clearly, this transition can be complex, as long time expectations shift and dynamics change. It likely will require the help of a third party to see you through the process so you reach your goals. Partnering with an Eye Toward Revenues Today, it's no longer enough to keep scratching out new ways to reduce costs. It's time for smart growth. You already have the fundamentals, but you haven't been using them to their full potential. If you're looking for a competitive edge, you'll find it in the GBS philosophy and framework, which takes data you already have and translates it into actionable information throughout your organization's ecosystem. Evolving your existing Shared Services into Global Business Services morphs the familiar face of cost cutting into a new mechanism that can power your top-line revenue growth, customer and employee retention, and product development. Get in touch: global.consulting@wipro.com. =====================

Agile Change: The Key to Successful Cloud/SaaS Deployment

----- Arcticle source ----- https://www.wipro.com/consulting/agile-change--the-key-to-successful-cloud-saas-deployment/ ----- Contact Wipro Please fill the required details to access the content The rapid adoption of Cloud/SaaS is upending traditional enterprise resource planning for IT. Cloud/SaaS has accelerated development cycles, increased innovation, and reduced costs. But it has also created significant challenges It puts the business in charge with a clear responsibility to achieve a return on investment. But when new IT solutions move from concept to rollout in weeks rather than months or years, the anticipated benefits can be significantly delayed or lost if users aren't brought up to speed quickly. Successful Cloud/SaaS adoption starts with three required changes in the way your organization thinks: Change Management is a key discipline that must be applied in order to obtain the many benefits of Cloud/ SaaS. Without it, those benefits may be lost. The key to success is Agile Change. Agile Change In our experience, a specific change approach is required, using techniques and interventions that support fast-cycle change and can deliver measureable benefits over traditional methods, as shown in Figure 1. Reaping these benefits requires Change Agility—the ability of your organization to be flexible, adaptable, and able to operate in a state of constant flux. Change Agility is built on five principles that guide the way change is managed: 1. Use Business Engagement to Create Early Momentum The promise of a new IT deployment creates a high sense of anticipation, but interest starts to erode when the process spans six months or more. One of the strengths of Cloud/ SaaS application development is its short concept-to-deployment timeline. You can use this timeline advantage to create momentum among user

groups that will support positive anticipation, user readiness, and high levels of adoption. Figure 1: Benefits of Cloud/Saas 2. Embrace Peer-Based Learning Systems You'll benefit from your new systems only when a critical mass of employees can work with them effectively while adapting to the continuous learning curve that Cloud/SaaS requires. To reach that tipping point, each new system must be intuitive and easy to learn quickly. You can achieve this with the knowledge exchange and support experienced between peers, as shown in Figure 2, which illustrates the desired agile adoption path in contrast to a typical ERP implementation. Intuition and peer support won't be enough for everyone, which means you must develop a users' learning platform that's tailored to suit different groups. This can be in a classroom or via online webinar classes or tutorials. Your learning platform can also include vendor forums in which your employees can get assistance and tips. Vendor forums can be two-way, providing a unique channel of influence over vendor development priorities. You'll benefit from your new systems only when a critical mass of employees can work with them effectively while adapting to the continuous learning curve that Cloud/SaaS requires. 3. Adopt Agile Change Methodologies to Support Increased Rate of Change Another advantage of Cloud/SaaS is that the reduction of typical time and cost barriers can drive faster business evolution. But your business has to keep process change in sync with the new, accelerated system upgrade path. This is supported by agile methods that include constant feedback and learning, more frequent smaller releases, user pull at each stage instead of a central project push, and creating a highly collaborative work environment. The shorter the feedback cycle, the faster you can adjust to the customer's need, eliminating the time required to build features that aren't needed. Figure 2: Adoption Curve The Agile Change approach will follow the same principles by creating a learning environment in which the prototype can be developed with input from a wide range of stakeholders and access to the necessary technical expertise. Using workshops that engage stakeholders in each part of the process will result in a solution that is designed to achieve your specific business outcomes. This will happen in a series of iterations, as shown in Figure 3. The first iteration creates a prototype that helps each user group understand the impact on the organization and individual roles. Subsequent iterations capture core requirements and good practices, while the final iteration addresses issues uncovered through testing. Figure 3: Agile Development Cycle Effective communication with staff and between groups of staff and those running the program is essential for this type of iterative development to succeed. A good way to establish and encourage good communication is by mastering blogs, forums, and other online channels. 4. Treat Change as a Core Capability With Cloud/SaaS, the old project mindset is no longer relevant, and business leaders must learn to manage change as an ongoing process. The business must develop the ability to maintain a consistently high and successful pace of change. You can accomplish this by creating a change function in the organization—one that establishes the roles, processes, and tools needed by each part of the business to work through the change cycle. For example, there are five fundamental change roles: With Cloud/SaaS, the old project mindset is no longer relevant, and business leaders must learn to manage change as an ongoing process. While these roles aren't new, they must be embedded in the organization centrally and at the local level to align the business with the ongoing upgrade and development program.

Filling and sustaining these roles may pose a resource challenge for many organizations, so working with an external partner who can provide the appropriate tools and resources can provide a long-term solution. 5. Encourage Collaboration to Maintain Alignment and Make Change Stick The rapid pace of change, freedom from traditional central IT constraints, and local business ownership can cause initiatives to overlap or be poorly aligned across the enterprise. To avoid this, decision processes are needed during and after the deployment to balance local opportunities with central benefits. Traditionally this balance is achieved through a project management office with rules, standards, and compliance reviews. In this new agile environment, harmonization and alignment are realized through collaboration rather than a single decision authority (although central decision-making and coordination roles are still essential). There are three ways you can support collaboration: through forums that quickly spread best practices and better ways of working across business areas; through knowledge management systems that make it easy to publish and share resources; and by developing a culture that seeks collaboration and alignment rather than independence. Agile Change as the Underpinning of Success Cloud/SaaS is facilitating a new approach to using and upgrading software and applications. The rapid pace of development and implementation and its constant iteration have significant implications for business. It can reduce costs and increase innovation and, thus, competitiveness. But if your business isn't prepared for the speed of this new environment, you won't capture the value. Agile Change can help ensure the viability of Cloud/SaaS by creating a transitional path and instilling a culture of constant confident adaptation to change. By adopting the five sustainable levers of Agile Change, any organization can enjoy a greater return on investment Get in touch: global.consulting@wipro.com. =======================

Build it on Blockchain: A sustainable

palm oil industry

----- Arcticle source ----- https://www.wipro.com/consulting/build-it-on-blockchain-a-sustainable-palm-oil-industry/ ----- About the Authors Contact Wipro Please fill the required details to access the content The production of palm oil has risen to unprecedented levels in the past decade to meet its consumption demand. As a result, there is a great deal of public scrutiny into its use, environmental impact, and the sustainability of its supply chain. The industry's initiatives to address growing concerns by developing sustainability benchmarks have made some headway. For example, the Roundtable on Sustainable Palm Oil (RSPO)1 works to implement best practices in production and trade, while leading brands have pledged to be committed to 100% RSPO-certified palm oil and oil products. However, despite their best efforts, only 17% of global palm oil production is certified sustainable.2 In reality, the supply chain is still relatively opaque, making it

hard for regulatory bodies to ascertain whether a producer is genuinely sustainable and for consumers to know they are buying ethical products. There is no foolproof system to trace back the produce to the plantation, and traceability is still in its infancy – and in many cases almost impossible. However, there's good news for producers, regulators, and consumers. Emerging technologies like blockchain could have a transformative impact on the palm oil industry – not only by creating near-perfect transparency in the supply chain but also creating value for its stakeholders, both upstream and downstream. Blockchain to the rescue The financial services industry has already embraced blockchain technology to create more transparency in its transactions and reduce leakages. What's more, there is a precedent for the use of blockchain in building sustainable supply chains. British technology platform Provenance piloted the use of blockchain to bring greater transparency to the controversial tuna fishing industry so that the entire sourcing process – from farm to table – was visible to every stakeholder in the supply chain. We believe that by 2030, the use of blockchain combined with smartphones, RFID, IoT networks, and mobility applications could create a palm oil trading industry with near-perfect sustainability records. While we may realize this vision earlier, there are real technology adoption challenges in palm oil-producing countries that must be factored in. What is a blockchain? Simply put, a blockchain is a tamper-proof, encrypted database that resides with every participating entity – or node – in a value chain. Each of these nodes contains precisely the same transaction records – be it the farmer, producer, transporter or buyer, every transaction in the value chain will exist in every node. Transaction data is encrypted and stored in containers of information called "blocks" which are pushed out across all the nodes. A blockchain can also embed business rules, known as "smart contracts" into the system that apply "if this, then that" logic, making actions free of human arbitration. Building sustainability on Blockchain Blockchain finds an astute place in the palm oil supply chain, where it is capable of closing current gaps in transparency. Exhibit 1 shows the concept of how a digital layer can shift the value chain into a sustainable digital supply chain with an audit trail that runs from end to end. Exhibit 1: Sustainable palm oil supply chain supported by Blockchain technology A plantation worker (1a) tags the fresh fruit bunches to the palm tree using a mobile device. Information such as the tree's location, plantation identity, worker identity, date and time harvested, and batch ID can be captured and uploaded into a blockchain application in near real-time. Blockchain can support the registration process for compliant plantations, which can then be used to check the geolocation data of the harvested fruit bunches (1a & 1b). This not only provides an unprecedented level of transparency, but also contributes to protecting the working conditions and legal employment of field workers, and gives plantations rich data on crop harvesting. Thanks to digital maps with geolocation features, farmers, governments, certification authorities, and producers can maintain digital inventories of the plantations, and implement sustainable land usage planning policy. Another primary concern that blockchain can address in the supply chain is to minimize the spoilage of oil. Palm oil has a propensity to rapidly oxidize or hydrolyze under sub-optimal storage and transport conditions (2a, 2b, 3 & 4). Both these reactions – activated by high temperature, moisture, or impurities – can increase the contents of Free Fatty Acids (FFAs) in the oil, which could prove to be hazardous for human consumption. With blockchain

and IoT-backed sensors, transportation companies can monitor temperature and humidity during processing, storage, and transport, and integrate the data on a blockchain to record out-of-range instances, thus efficiently identifying poor batches. Blockchain's smart contracts can then enforce rules that automatically grade products in a way that only those that meet the highest standards enter the market for human consumption. Similarly, in the palm oil's multimodal transportation chain, shipping companies could use tamper-proof GPS-enabled seals to lock containers, and mobile devices to record product shipment information in the blockchain application. Once the shipment reaches the destination, only authorized personnel can access the credentials from the blockchain application to open the seal and start the receiving process. Finally, retailers can (5) present the end product with identifiers such as RFID, NFC chips or QR codes, enabling buyers to view the oil's journey back to its source. In the age of the environmentally aware and health-conscious consumer (6), this level of transparency will usher in a new era of trust and brand loyalty that is of great value to companies in a competitive age. Addressing challenges to implementation Despite blockchain's many benefits, there are several hurdles to building a truly sustainable supply chain. Some of the prevalent challenges are: Adopting the following four-step approach could potentially address many of the implementation challenges: We anticipate that our aspirational timeline to 2030 will shorten as trust and understanding of blockchain technology deepens, and new enabling technologies emerge to make it easier for users to adopt blockchain, even in the most remote locations of palm oil-producing countries. References This article was originally published at Hyperledger. Jesus Oregui is Partner, Strategy & Transformation – Consulting Practice, Wipro Limited. Kiran Kumar N is Principal Consultant, Strategy & Transformation – Consulting Practice, Wipro Limited. Get in touch: global.consulting@wipro.com =====================

A business architecture primer

----- Arcticle source ----- https://www.wipro.com/consulting/a-business-architecture-primer/ ----- About the Author Contact Wipro Please fill the required details to access the content A business architecture primer Architects who work in the built environment understand that planning is the foundation of design, development and building construction. They rigorously assess current conditions and document their plans to avoid costly construction errors. Likewise, business leaders should implement holistic business architecture as the firm foundation for change within their enterprises. In a business environment, architecture provides a framework for leaders to plan organizational changes and future initiatives, ensuring that their business works holistically towards a unified goal. Without recording business architecture, how can any requirement for change be correctly assessed? As a result of mergers and acquisitions and process offshoring, a business' subject matter experts can often be left believing they have the knowledge to assess and implement change when, in fact, these new structures and processes are no longer fully visible to them. A clear business architecture policy ensures that employees can consistently produce and manage artifacts across the business. It also provides

employees with structural transparency, a granular view of interactions between areas, services offered, and controls in place. Employees can benefit from accessible business architecture at all levels of the business, and for multiple purposes. For example, a business architecture review will highlight where disparate parts of an organization undertake the same process, offering significant opportunities for both process and system optimization. Who benefits from business architecture? Employees at every level of an organization can use clear and accessible business architecture in multiple ways: Senior managers may be held personally liable for operational issues and can analyze business architecture to identify gaps in control frameworks. They can plan future initiatives in a more informed way when they have full visibility of their organization's business architecture. Managers are likely to have visibility of their business structure, but within large companies that operate in siloes, they have no unified visibility into the specific responsibilities and activities performed by disparate teams. Often, they may make assumptions based upon the names of teams; but with processes split across locations, they are unable to see someone's specific responsibilities. This can lead to multiple teams duplicating processes, or inconsistent processes evolving across regions. Without a clearly defined and managed business architecture, there is no way to ascertain whether this is the case within your organization. Subject matter experts are repeatedly approached by business analysts who request details of current processes relevant to their project. This is not only irritating for the subject matter experts, but can also impact their existing 'business as usual' (BAU) responsibilities. To avoid this situation, analysts often gather information from individuals who were previously in the role—a practice that can have serious implications for the project, as BAU processes continually evolve and analysts may capture current processes incorrectly. Project managers/ business analysts are often frustrated by the slow progress of initiating a project because current processes, services or controls have to first be recorded before a target state is mapped and they can begin development. As a result, they may start a project before fully understanding the existing landscape, resulting in coding inefficiencies and delays in delivery. However, they can dramatically accelerate the project initiation if they have consistent business architecture artifacts. "As an architect you design for the present, with an awareness of the past, for a future which is essentially unknown." – Norman Foster Key business architecture artifacts An organization that consistently creates and maintains standard artifacts will provide its employees with structural transparency and a granular view of services offered, controls in place, and interactions between internal and external stakeholders. Business architecture artifact requirements may differ from one organization to the next—for example, some will also have a Business Capability Model. However, the following four artifacts are key to all organizations: Business Model Canvas (BMC) is a high-level overview of a specific business area or team that captures how the organization creates, delivers and captures value. BMC captures a value proposition, key activities, key customers, key partners, key resources, costs, and revenue streams in a one-page format. Business Process Models (BPM) are graphical representations of business processes. These record the initiating event(s), tasks and end event(s) for a specific process. Notation is used to ensure that they are intuitively understood by both business and IT users. Service Catalogue is a list of services provided to either the other areas of the

organization and/or external clients. This includes the service category, high-level description and the internal team responsible. Service Catalogues can be used to link common processes between areas/teams identified in the Business Model Canvas. Key controls are mapped directly to the Operational Risk Catalogue, Service Catalogue and Business Process Models. The controls may relate to an entire process or specific task within a process. Mapping controls to the Operational Risk Catalogue ensures that controls are in place to for all identified operational risks. An organization that consistently creates and maintains standard artifacts will provide its employees with structural transparency and a granular view of services offered, controls in place, and interactions between internal and external stakeholders. Figure 1: Key business architecture artifacts Business architecture best practices The key to producing useful business architecture is to standardize and reduce complexity, whether recording current states or proposing target states. An organization can only achieve this directed (or preferably, if the architecture is produced) by a knowledgeable central team. While anyone within an organization can produce business architecture documentation and models, only documentation and models that have been produced using a standard methodology will be valued across organizational boundaries. Some business artifacts only require a template and description of expected field content; others, for example, Business Process Models, will require precise documentation to complete. Creators of a Business Model Canvas should include a mediated group discussion as part of their planning process. Here are five key points that organizations should adhere to: Current SME involvement – Employees currently performing this task should be included in, and have approval rights on all business artifacts. Engaging contributors across all levels of a team is particularly critical to producing a Business Model Canvas. Ongoing attestation – Business architecture can only be used as a reliable source of information if an organization has an ongoing attestation process in place. A central team should ideally record and oversee the production of artifacts so that these can be produced in a consistent manner. Without the guidance of a business architecture team, artifacts could be modelled at varying levels of granularity, and may be unusable in building a view of the entire landscape. Accessibility – To maximize usage among stakeholders, it is essential to make business architecture artifacts accessible and easy to use. When the organization regularly refers to these artifacts, those responsible for attestation will appreciate the importance of business architecture accuracy. Business architecture mapping – Existing artifacts should be mapped to business architecture artifacts where possible. These could include IT application registers, operational risk classifications, and product categories. However, the mapping should not become so complex that it becomes unmanageable. Standards for Business Process Modelling – BPM should be system-agnostic and use a specific notation. The modelling standards should be recorded in a versioned, continually refined document, to ensure modelling consistency is maintained. BPM documentation must include: After undertaking the initial modelling initiative,an additional subset may be produced with more detailed content for specific purposes. By recording processes using this methodology, areas/teams can find similarities among them, leading to complete transparency for system requirements, and revealing opportunities for the business to automate and rationalize common processes. This is

particularly relevant for organizations that continue to operate with a legacy system of acquisitions. Our opportunity, as designers, is to learn how to handle the complexity, rather than shy away from it, and to realize that the big art of design is to make complicated things simple" – Tim Parsey The importance of communication and consistency Beyond the specifics detailed here, business architecture is only successful when it is grounded in clear communications and consistency. By establishing lines of communication between various stakeholders within the organization, leaders not only ensure that they can adhere to high standards, but can maintain enthusiasm for the initiative and the tasks at hand. Without consistency of use, an artifacts archive that could inform the entire organization will lose its value and become nothing more than a vault of unused artifacts. "It is not the beauty of a building you should look at; it is the construction of the foundation that will stand the test of time." – David Allan Coe Annette Lovell - Managing Consultant, Financial Services – Consulting Practice, Wipro Limited With over 25 years of experience in the financial services industry, Annette Lovell, Lead Consultant in Wipro's Consulting practice, works with clients across business functions, including operations, finance and IT. With deep expertise in business architecture ,Annette Lovell drives largescale change initiatives for Wipro's clients across business functions, including operations, finance and IT. Get in touch: global.consulting@Wipro.com ======================

Blockchain in wealth management

----- Arcticle source ----- https://www.wipro.com/consulting/blockchain-in-wealth-management/ ----- About the Authors Contact Wipro Please fill the required details to access the content Blockchain in wealth management Blockchain is the underlying technology that will bring about the next-generation internet: a transition from a web of information exchange to a web of value exchange. Blockchain technology is increasingly considered a disruptor to the status quo across industries, and the wealth management industry is no different. Cryptocurrencies are the first real-world use case of blockchain technology, and their rise over the past decade has sparked increasing debate about how this new asset class might alter the current financial and economic structures of society. Blockchain is important to the wealth management industry because of two important capabilities. First, they can act as a digital wrapper around any asset; and second, they allow the exchange of those assets on decentralized networks. There are also two reasons why the decentralized exchange of digital assets is vital for wealth management. Firstly, because these exchanges are distributed, they have strong potential to disintermediate many centralized business processes within the financial services industry. Secondly, cryptocurrencies have ushered in a new asset class and Initial Coin Offerings (ICOs) have allowed investors to invest in this asset class without using the banking system. This has opened up new paradigms of resource allocation: investors can participate in a global exchange of assets outside conventional structures, where stocks and other financial instruments trade on centralized exchanges under the supervision of centralized authorities and geography-specific regulations. Technological impact of blockchain Today, the wealth

management industry is running on business models and processes fabricated on decades-old technologies. These legacy systems and processes often result in costly data maintenance and pose severe threats to client-related sensitive data,transactional data and the institution's reputation with clients and regulators. A leak of such data can lead to hefty monetary fines and the loss of customer trust. Additionally, many legacy systems are not flexible enough to implement new workflows as per market needs. Blockchain technology's underlying ingredients including decentralization, consensus, immutability, and faster/cheaper transactions can revamp existing business models to make business transactions more fluid than ever. Blockchain technology can improve an institution's service quality for a range of processes such as client onboarding, asset transactions, and portfolio management. Blockchain brings a whole range of use cases built for real-time settlement models, exchange of money and value, KYC processes, automated investing, and rebalancing of portfolios based on smart contracts. Blockchain technology is gaining traction in the industry from both the client side and regulatory bodies as well. Clients are curious about the new asset class built on this technology, and regulators are interested in embracing this technology for broader purposes, ranging from improving interbank financial transactions to regulatory reporting. What technological leapfrogs has blockchain made over current technology (i.e., Web 2.0)? The existing Web 2.0 primarily evolved on the Open Systems Interconnection model (OSI). In this model, where the network layer and data layer are separate, organizations started working on data structures (data layer) long before TCP/IP protocols (network layer) evolved, and later kept building on top of the new network protocols. The architecture then eventually grew with dependencies on a client-server model, which required more layers of security to be built on top of it. Taking an OSI view, blockchain essentially combines the data layer, the transport of information and cryptographic elements in a single concept: Distributed Ledger Technology (DLT). In a Web 2.0 network, centralized authorities maintain data ledgers and dissipate to participants. On a blockchain network, the data is distributed across various nodes and consumed as per rules defined in the protocol. This storage and distribution of data has implications in the way techno-social systems can restructure organizations, government functions and peer-to-peer exchange. The blockchain is a secure transaction ledger database that is shared by all parties participating in an established, distributed network of computers. Let us define blockchain again in its simplest form: The blockchain is a secure transaction ledger database that is shared by all parties participating in an established, distributed network of computers. It records and stores every transaction that occurs in the nodes, substantially eliminating the need for "trusted" intermediaries. Figure 1: Evolution of web information sharing and web-based technologies Use cases Coming back to wealth management systems, implementing blockchain will allow firms to store a golden copy of reference data in a decentralized manner on a permissioned blockchain (i.e., only the approved list of systems have permission to make changes). In a blockchain environment, an organization can run on two different chains, i.e., one interacting with the external bodies like consortia, and another internal to the firm. Client book building is a critical aspect of the wealth management business; it enables client advisors to understand client needs, bring in new business opportunities and enhance their relationship with existing clients.

Let's look at an example of using blockchains and smart contracts for portfolio rebalancing in client book development. Once clients are onboarded, and their portfolios set up, smart contracts on a blockchain network can actively monitor the client book. A smart contract will be triggered if there is any change in asset allocation within a portfolio or the bulk risk for a single asset class increases beyond a threshold value, resulting in sending alerts to clients and their financial advisors in real time. Figure 2: Portfolio and client book management The client portfolio will be realigned based on the client or advisor response through available channels. Several other rules can be implemented in smart contracts regarding the client's investment suitability review as well. The following diagrams detail two other wealth management use cases for blockchain: KYC and client onboarding Figure 3: Client onboarding Figure 4: Trade booking and settlement Challenges in the near-term and how to respond On the technical front, blockchain is still facing scalability challenges due to its nascent experimental state, and only a few organizations and conglomerates are testing blockchain-based implementations in incubated environments. Also, companies are not sure as of now if they should go all-in on blockchain technology, or run their legacy infrastructure in parallel until blockchain becomes mature enough to minimize operational risks. The majority of banks in developed economies are comfortable using the current technology in their everyday operations. On the regulatory front, only a few development initiatives have been taken on by central banks and governments to lay down the foundational protocol and infrastructure for implementing blockchain. However, this should not hamper growth. Institutions should explore more use cases for low-risk internal applications —like loyalty points for credit cards or internal file transfers—to test the initial blockchain infrastructure and then ramp up to more critical applications. This way, they can identify the possible benefits and opportunities according to their strategic and long-term vision. Also, banks can partner with growing Open Source community platforms like Hyperledger and R3, where they can pool their resources to achieve the desired results in a more focused way. Another way is through inorganic growth—over $1 billion USD has been invested in blockchain startups since the inception of technology in 2009. Fintech players' platforms are close to being production-ready, which have the possibility of integrating with existing business lines without going through painful and costly implementations. Finally, and most importantly, due to the decentralized nature of blockchain, all the participants in the chain—including internal and external stakeholders—should agree to implement the solution. So the only way to address these challenges is to take initiative to lead the change, which means innovating in collaborative environments at the same exponential pace as nimble startups. Experimentation with disruptive blockchain solutions should not be ignored by any wealth management firm. Glossary Blockchain Glossary OSI Model Akshay Arora - Consultant, Financial Services, Consulting Practice, Wipro Limited Manish Ramrakhani - Consultant, Financial Services Consulting Practice, Wipro Limited Manish Ramrakhani and Akshay Arora are consultants in Wipro's Consulting practice, where they serve clients in the global financial services industry. They are currently exploring the use of blockchain in fintech and wealth management, and the disruptive trends shaping the financial services

industry. Get in touch: global.consulting@wipro.com

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Three considerations for enterprise-

wide implementation of intelligent

technologies

----- Arcticle source ----- https://www.wipro.com/consulting/three-considerations-for-enterprise-wide-implementation-of-intelligent-technologies/ ----- About the Author Contact Wipro Please fill the required details to access the content Three considerations for enterprise-wide implementation of intelligent technologies The world has come a long way since the first large-scale automation effort in the 19th century, which saw the industrialization of weaving, with the advent of the automated power loom. Automation has always been about more quickly and efficiently performing tasks that are otherwise time-consuming, prone to error, and not easy to accomplish manually. Hence, organizations have never shied away from any opportunity to automate, as proven by the ubiquity of computers and industrial automation by the latter half of the 20th century, followed by the increase in software robotics currently have made evident.. The ongoing digital revolution, and its accelerating convergence with the physical world, has spawned an array of interesting use cases that extend the potential of automation into cognitive tasks of reasoning and judgment – so far the dominion of human intellect. There's a lot of buzz around various intelligent technologies, some of which are seeing mainstream adoption such as Robotic Process Automation, algorithmic trading, Geographic Information System, and automated self-service solutions - to name a few. Other technologies such as Virtual/Augmented Reality, blockchain, Conversational AI, autonomous transport, AI-driven intelligent automation, and the Internet of Things are in various stages of adoption, tacross multiple industry segments Challenges posed by automation While automation is predicted to increase global GDP by more than $1.1 trillion in the next 10-15 years, many organizations still face significant challenges in realizing its potential and benefits such as a cultural backlash against automation, losing momentum midway, teething issues during IT/OT integration, threats of data exposure and ownership, to name a few. Here are three key considerations for successful enterprise-wide implementation of automation technologies: Automation-centric strategy It is common to see organizations having multiple automation initiatives, with many of them struggling to scale. While sponsored with the best of intentions, these initiatives lack clarity in how they affect organizational strategy, which leads to a hugely overstated/ understated return on investment. Organizations should therefore clearly define the role of automation, determine how it fits into their long-term strategy, and clearly define ownership. Since many governments have

started considering policy responses in the wake of massive automation, organizations should be duly cognizant of not only possible regulatory oversight, but also the broader societal implications of having an automation-centric strategy. Bridging the generational gap Generational diversity in today's workforce has reached levels never seen before. The real differentiator for organizations will be how they bring a multi-generational workforce on board during their automation journeys – they must recognize how each generation perceives automation technologies, and customize training practices for effective adoption. Moreover, they should implement innovative learning models, like mutual mentoring, which enables different generations to come together to learn from each other and help build positive relationships. This will, in turn, ensure complete worker commitment on the automation journey across generations, and help organizations focus on generating tangible benefits from their investments in automation. Active cyber-risk mitigation As seen by the audacity of recent cyber-attacks, organizations are being exposed to cyber threats at unprecedented levels. Still, organizations are held accountable for failing to prevent cyber-attacks and the exposure of personal information. For example, an investigation by the National Audit Office of the UK concluded that the National Health Service (NHS) could have prevented the WannaCry ransomware attack. By far the greatest consequence is the damage to brand image. Since many automation technology initiatives are now often owned by the business side, it becomes imperative to get the IT side onboard as early as possible. When scaling up automation across the organization, IT brings valuable insights into challenges pre- and post-integration, and ensures adequate safeguards are enacted proactively to prevent cyber-attacks. Anticipating disruption before it happens Organizations are facing the high tide of automation powered by the Cloud-Big Data-Artificial Intelligence trinity. The ever-evolving ecosystem of automation technologies brings in both feelings of excitement about its potential, and the anxiety that comes with any business transformation. While no one can avoid increasing automation, organizations can be better prepared to embrace it by clearly defining an automation-centric strategy, bridging generational divides, and actively mitigating cyber-risks. The author would like to acknowledge the contribution of Avdhut Hirave and Alex Veytsman. Vignesh Nainar - Manager, Strategy & Transformation Consulting Practice, Wipro Ltd. Vignesh Nainar is a manager in Wipro's consulting practice. With over 14 year of experience, Vignesh helps clients navigate digital transformation and implement innovative technology solutions to improve business performance. Get in touch: global.consulting@wipro.com
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The case for a smart enterprise data

hub: Why IT and business need to

collaborate

About the Authors Contact Wipro Please fill the required details to access the content The case for a smart enterprise data hub: Why IT and business need to collaborate It is estimated that by 2025, the digital universe (the amount of data created and copied annually) will grow to 163 zettabytes (ZB), or one trillion gigabytes.1 How will your organization manage this data tsunami to your advantage? An antidote to the big data problem is the enterprise data hub (EDH). A data management solution, EDH provides storage, processing, and analytics applications that support both emerging and legacy use cases. The needs of new open source technologies, machine learning, artificial intelligence, and cloud-based architectures are calling for a versatile EDH that promises flexibility, faster data access, and lower costs than traditional data stores. Yet organizations that have built large-scale EDHs without considering their users' consumption needs will fail to reap these benefits. In this paper, we envision the journey toward a "consumption-driven," smart EDH and outline the success factors and pitfalls. Why do EDH projects fail? It is estimated that 85% of big data projects fail due to problems presented by legacy technologies and pre-existing corporate biases.2 Yet many organizations only maintain a technical focus on landing data into an EDH; the end result is a high-cost platform that provides little business value in return, making it hard to justify the program altogether. Here, we name the five pitfalls to watch for when deploying an EDH. Lack of business objective The scope of an analytics project should not be limited to the unique objectives arising from select teams. Companies that do not have robust strategy around analytics beyond a few use cases will struggle to derive value from these projects. Lack of integration across legacy systems In many organizations, legacy systems have multiplied due to mergers and de-mergers, increasing data integration challenges. Lack of data assurance An EDH is usually missing one or more of the key elements of data assurance including data metrics, data quality, data reconciliation, data cleansing, and data cataloguing and lineage. Lack of responsiveness to evolving industry trends and business needs Bound by legacy systems, established organizations often struggle to respond to changing business needs. In contrast, fintech companies can, often, quickly and cost-effectively keep pace with evolving business needs. Lack of agility Established organizations are hampered by a lack of agility owing to multiple stakeholders, long processes for gathering requirements, rigid business processes, and a dearth of input from business teams until an

output is delivered. This lack of agility is another nail in the coffin for data projects. Critical success factors for an EDH Organizations aspiring to make business decisions based on reliable data must create a smart EDH. What does a successful EDH deployment look like? Consistent insight at a lower total cost of ownership Insight gleaned from data should be consistent and repeatable. Any incremental "data items" required for analysis should be cost-effective while data is democratized and available to every user, anytime and anywhere. Data innovation through data consumption patterns Although data consumption primarily focuses on a unified and enriched view, it often leads to new data discoveries, which foster growth and innovation. Revenue growth Consumers now do most of their banking through web and mobile apps. The data held in an EDH can help business users surface insights about these omni-channel customers, including their experiences and preferences, creating marketing opportunities and revenue growth. Improved efficiencies A smart, consumption-driven EDH makes processes more efficient by providing timely and accurate data. Figure 1: The journey to a smart EDH Business focus Establishing a clear business case to support analytics through an EDH is a critical first step. From there, kick off deployment by gathering input from key business stakeholders on how to improve their business or process with data. The business should be involved in every step of the deployment, driving user stories, constantly validating and refining the business benefit and quantifying the return on investment. Data-driven Become a data-driven organization. Know where your data lies and how to access and integrate it to enable a unified data view of the data that can be accessed by the entire organization. Wide lens When designing the outcome, adopt a wide lens and apply these best practices: Data assurance Data must be complete, accurate, available, reliable, consistent, timely and up-to-date. Without this assurance, the business will have little faith in the data provided by an EDH. Be sure to put in place data metrics, quality, reconciliations, cleansing, cataloging, and lineage. Adopt change Ensure that organizational change involving people, processes, and technology are in place to initiate and sustain valuable business outcomes. Figure 2: Consumption-driven business and IT roadmap for EDH Step 1 involves combining the business strategy and vision, engaging stakeholders whilst also agreeing on the technical data consumption and curation needs. Step 2 is the enabling phase, which involves setting up business-driven agile scrums, managing backlogs and creating analytical sandbox environments. Step 3 allows the platform to be used to define business-driven glossaries and design a self-service marketplace. In step 4, we begin to operationalize the EDH by defining the target operating models within the business along with technical automation optimization. The final step in the set-up of a smart EDH involves maximizing the return on investment by decommissioning the legacy processes and technology. Importance of a smart EDH strategy This business-IT collaboration for building an EDH will lead to reduced time to market, product diversity, and higher profits. A well-planned and executed EDH strategy delivers the following benefits: References Amrita Mukherjee Consulting Partner, Analytics and AI Consulting Global Sales, Wipro Limited With over 20 years of experience, Amrita helps Banking and Financial Services clients solve complex business challenges and advises clients on strategies and industry trends on modern analytics platforms and AI. Sukhvinder Phalora Consulting Partner, Analytics and AI Consulting

Consulting Practice, Wipro Limited With more than 18 years of experience, Sukhvinder helps Banking and Financial Services clients formulate data strategies and roadmaps, architect modern data solutions, and implement solutions to improve business performance within Analytics and AI. Hardik Jadav Consultant, Analytics and AI Consulting Consulting Practice, Wipro Limited Hardik helps financial services clients assess features for their data and digital transformation, and designs analytics solutions to improve business performance. Get in touch: global.consulting@wipro.com ======================

Change Management: A Consulting

Add-On? Think Again.

----- Arcticle source ----- https://www.wipro.com/consulting/change-management-a-consulting-add-on-think-again/ ----- About the Author Contact Wipro Please fill the required details to access the content Change Management: A Consulting Add-On? Think Again. Though it is essential to the successful delivery of any analytics initiative or for that matter, any project change management (CM) often gets little attention. Project leaders neglect to include a change mangement component in their planning or, at best, push it to the project's periphery. Since CM does not fall neatly into any of the traditional workstreams or operational functions, the impulse is to bolt it onto the project as a consulting add-on. This means it is usually one of the first items to go when project budgets are under pressure. Yet, both clients and consultants should treat change management as a non-negotiable deliverable. After all, if users do not adopt the new solution, even the most flawlessly executed project will have failed. Indeed, a recent Gartner survey found that only a third of change efforts are clear successes, 16% show mixed results, and half are clear failures.1 The good news is that companies have increasingly adopted this view in recent years, and many have established internal change management teams to help support key enterprise initiatives. Yet these relatively new teams' capabilities and availability may not align well with a given project's focus or timeline. Furthermore, when a company incorrectly assumes that the internal project stakeholders or hired consulting firm is fully equipped to minimize the disruption created by a new project, the consequences range from poor stakeholder engagement to an outright rejection of the new approach, jeopardizing the firm's entire investment. Change management: An imperative for project success Beyond advocating that change management be a part of the project, a project team can take the following actions to ensure post-project continuity for users: 1. Identify the existing client capabilities. From the outset, the combined project team should explore what capabilities the business has developed that can be leveraged to assist with change management. Questions to resolve should include: 2. Create awareness early. Create awareness of the impending changes as early in the project as possible. While the vast majority of projects begin with a degree

of uncertainty, informing affected users of impending changes as soon as is reasonable will help advance overall adoption. Early notification will not only enable users to prepare for the pending changes, but will also provide an opportunity for them to alert the project team to potential issues that were overlooked in the planning phase. 3. Create a transition plan. Many project plans fall short on creating even soft cutoff or retirement dates, leading to the unintentional vestige of legacy processes, systems, tools, and reports. Such oversights jeopardize the entire project, as many users will inevitably return to legacy approaches. The growing list of potential issues and the impact created by these inconsistencies grow exponentially over time as unsupported tools and data linger in the new environment and may be unwittingly used for strategic projects to detrimental effect. 4. Track user adoption. To quote management guru Peter Drucker, "If you can't measure it, you can't manage it." Understanding who in the organization is participating in the change management process is almost as important as creating the process itself. Important leading indicators of user adoption include who has attended training sessions, who has viewed the training videos, and who has attempted to leverage or explore the new environment. At a high level, activity volume can illustrate to program managers a need to throttle up or throttle down training opportunities. It can also help identify potential distractors. In one project that I had exposure to, data analytics demonstrated that a manager who expressed confusion over training materials had, in fact, never logged in to the system or attended a single training session. Enhance project adoption and success with effective change management. Above all, successful change management depends on a robust communication plan. Companies that focus on relevant status updates, meeting reminders, and training opportunities throughout a project significantly increase the likelihood of user adoption and overall project success. Reference 1 Gartner, Manage Change More Successfully, https://www.gartner.com/en/insights/change-management Robert Lund Consulting Partner, Analytics & AI Consulting Consulting Practice, Wipro Limited Robert Lund is a consulting partner in Wipro's Analytics & Artificial Intelligence Consulting Practice. He has 15 years of experience in consulting and leading analytics-focused projects for life science organizations across medical device manufacturers, major pharmaceutical manufacturers, major retail pharmacies and payers. Get in touch at global.consulting@wipro.com ======================

Data Analytics and AI in Retail

----- Arcticle source ----- https://www.wipro.com/consulting/data-analytics-and-ai-in-retail/ ----- About the Author Contact Wipro Please fill the required details to access the content Data Analytics and AI in Retail Creating delightful customer experience If customers have a negative experience shopping with one retailer, they don't have to go far to find another. The advent of online retail has put a staggering number of options within a few taps of the keyboard. A retailer that abruptly discontinues a beloved product will just as abruptly lose that product's customers, while a retailer that sends its customers tailored offers stands to gain their loyalty. Let's take a look at some real world examples: For both online and brick-and-mortar

shops, success hinges on understanding enough about their customers to create individualized experiences—a fact retailers are recognizing. The global retail analytics market is estimated to reach $10.4 billion by 20231 and, according to a JDA Software survey, 40 out of 100 merchandising professionals and category managers said big data and predictive analytics are their top investment priorities over the next 5 years.2 A changing retail landscape Retailers who have embraced digital transformation successfully are gaining a significant competitive advantage in an atmosphere where customer experience rules. And while traditional retailers are adopting digital technologies such as Internet of Things (IoT), mobile, augmented reality (AR) and virtual reality (VR), artificial intelligence (AI) and machine learning (ML) to connect with customers, digital players have recognized the advantages of establishing brick-and-mortar locations to round out the experience they can offer their customers. Here are a few of the most disruptive developments in retail today: How data analytics and artificial intelligence will reshape retail operations To achieve a successful digital transformation, retailers need to do more than simply acquire huge data sets. Artificial intelligence capabilities can equip retailers with the ability to ingest large volumes of data in various formats across locations, learn from patterns, and respond in real time. In our experience with providing data analytics support to a leading US electronics retailer, we saw that artificial intelligence (AI) and machine learning (ML) resulted in 4% increase in sales and 5% improvement in promotion effectiveness. Creating a 360˚ customer profile also helped generate relevant, personalized offers to customers. In addition to helping retailers customize their offers, AI and ML enable predictive analytics, allowing retailers to project the details of a customer's history into the future, and calculate outcomes for events such as product sales or store renovations. Understanding these outcomes vastly increases retailers' ability to prepare for events and respond to customers proactively. Thus, AI and ML offer enormous potential for retailers to deliver compelling customer experience, drive cost efficiencies, and even improve employee motivation. Data analytics, AI and, ML have already begun to disrupt the way retailers do business. Retailers that successfully adopt digital technologies will reap competitive advantages. References 1 https://www.researchandmarkets.com/reports/4392738/global-retail-analytics-market-2017-2023#pos-1 2 https://www.retaildive.com/news/survey-big-data-predictive-analytics-top-investment-priorities/445785/ Karthikeyan Subramaniam Principal Consultant, Analytics and AI Consulting Consulting Practice, Wipro Limited. Karthikeyan Subramaniam is a Principal Consultant with 15 years experience in designing, developing, and delivering innovative data solutions across merchandising, supply chain, and store operations. He plays a key role in helping large enterprises embrace data and transform into business outcome-driven organizations. Get in touch: global.consulting@wipro.com =====================

Delivering on the "last mile": A shift from the traditional supply chain

Delivering on the "last mile": A shift from the traditional supply chain As consumer shopping behavior has shifted, so has the "last mile", the distance between a product's point-of-sale and its final destination. Before online shopping, consumers owned the last mile delivery, transporting their purchases to their home. Today, as people shop online for everything from shoes to sofas, and new technologies continue to spur double-digit ecommerce growth, online merchants must innovate their last-mile delivery experiences or lose customers to competitors that offer superior services. Globally, e-commerce is experiencing high growth CAGR ~10% enabled by next generation technologies.1 The last mile moves to center stage These days, online retailers are playing perpetual catch-up with consumer behavior and desires. Shoppers are demanding both fast and free shipping. With a device in nearly everyone's back pocket, people have easy access to online stores as never before, and this has exponentially spawned order and fulfillment options. Now, customers expect their orders to meet them where they are, whether it's their home, office, or vacation destination. All of this make the "last mile" experience not only pivotal in leaving a lasting impression, but also in gathering additional customer data. Meanwhile, businesses face other challenges related to the disrupted supply chain, with the flow of predictable inventory levels from producers and wholesalers to point-of-sale becoming a thing of the past. All of these seismic shifts should serve to remind businesses that they need to manage both the opportunity and costs of optimizing the last-mile experience in this rapidly changing ecosystem. Figure 1: eCommerce trends for top 10 countries1 Figure 2: Global B2C e-commerce sales and growth – Pitney Bowes Parcel Shipping Index 2 Approaching the last mile challenge Given the supply chain's rising complexity and growing customer expectations from the "last point of sale" to the last mile, businesses must organize their processes and systems to meet the small package and small delivery mandate. While the move from large warehouses to smaller storage spaces in close proximity to dense markets will see low utilization with higher costs, businesses can nonetheless reduce these costs by first consolidating the boxes. Since the cost of delivery would depend on the density of its final destination, the consolidation of freight through aggregated deliveries in a small geography will be key to optimizing the cost per delivery. Figure 3: Component-wise view of the global supply chain footprint Figure 4: Estimate facilities and floor space in US (Source: Annual reports 2017) Figure 5: Last mile distance of new facilities (under 200,000 sq. ft.) for top 15 US cities (Source: CBRE

Research and U.S. Census Bureau) 5 Evolving and emerging delivery options Successfully orchestrating orders to reach the last mile requires a combination of solutions. Currently, these solutions are either emerging (adopted or in process of being scaled), or evolving (in development and under pilots). We can break these solutions down into three areas: Figure 6: Fulfillment solution path Point of fulfillment Delivery medium Point of handover The three areas are brought together through dynamic dispatch and routing, i.e., learning from historic data, factoring situation, location, and business. Autonomous and automated fulfillment centers are active 24x7 to meet the order demand. Because localities vary in their regulations and geographic attributes, so will specific solutions to problems posed by the last mile. Evolving and emerging delivery methods will grow for high density areas, and storage solutions will move closer and closer to the locus of demand. Businesses will make better use of vertical spaces and develop artificial intelligence and bots to ingest data and improve planning efficiency. Ultimately, businesses will expand their partner ecosystems to support their entire supply chain footprint to enable them to keep pace with the ever-shifting expectations of their customers. In short, e-commerce-driven innovations to the supply chain are inevitable. References 1 https://www.statista.com/outlook/243/100/ecommerce/worldwide 2 http://news.pb.com/article_display.cfm?article_id=5784 3 https://www.businessinsider.com/walmart-store-network-gives-it-huge-advantage-over-amazon-2017-10 4 http://www.latimes.com/business/la-fi-amazon-whole-foods-up-dates-whole-foods-440-stores-gives-amazon-1497656959-htmlstory.html 5 http://www.cbre.us/real-estate-services/real-estate-indus-tries/omnichannel/the-definitive-guide-to-omnichannel-real-estate/retailing/what-is-the-importance-of-the-last-mile   Cesar Castillo Senior Manager, Strategy & Transformation Consulting Practice, Wipro Limited. Cesar Castillo is a senior manager in Wipro's Digital Value Chain Consulting practice. Cesar has over 20 years of extensive experience in advising and transforming supply chain and logistics for global organizations. Cesar helps clients to improve supply chain strategy, optimize cash flows and solve multiple complex issues within logistics. Amit Jain Senior Consultant, Strategy & Transformation Consulting Practice, Wipro Limited. Amit Jain is a senior consultant in Wipro's Digital Value Chain Consulting practice. Amit has over 9 years of diverse experience in helping business transformations for leading global organizations. Amit helps clients define digital transformation roadmaps and overcome operational challenges in making their supply chains future ready Get in touch at global.consulting@wipro.com =====================

IoT shines light on contract manufacturing supply chain visibility

IoT shines light on contract manufacturing supply chain visibility The outsourcing of manufacturing that made Southeast Asia the world's factory for decades is evolving to nearshore manufacturing as factories crop up across Mexico in response to demand from U.S. manufacturers. This tactical shift, however, does nothing to solve the longstanding challenge that manufacturers have grappled with: how to gain visibility into the supply chain once production is handed off to the contract manufacturer. Contract manufacturing is like a black box. The order goes in, and the only cue the manufacturer has that the order has been fulfilled is when the goods are received at its dock, or at its customers' dock. If anything goes wrong at the plant—asset failures, scheduling delays, departures from best practices—the costs of outsourcing can add up. These include higher production costs, penalty payments for missed delivery deadlines, and low customer satisfaction that could lead to a loss of future business. Decoding the black box with data The missing link in the supply chain visibility is the availability of data, and the Internet of Things (IoT) can unlock this data. Currently, most contract manufacturing plants don't capture data at the level of assets and material. Even when they do, without infrastructure in place to move data from the plant to the cloud securely, the data that is captured remains sequestered on the premises. The advent of the IoT presents new opportunities to lift the lid on the contract manufacturing black box. Businesses are poised to leverage IoT to solve their supply chain and logistics challenges as various forecasts suggest. According to Gartner, Internet of Things endpoints will grow at a 32% CAGR from 2016 through 2021, reaching an installed base of 25.1 billion units. Total spending on endpoints and services will reach $3.9 trillion in 20211. As manufacturing becomes increasingly networked, companies must devise strategies for data acquisition, processing, and analytics that extend to their contract manufacturers. How the IoT will enable supply chain visibility To maintain the benefits of outsourcing without incurring high costs, companies should work with contract manufacturers that are willing to equip their plants with IoT infrastructure. Technologies such as wired and wireless sensors, secure internet gateways, data staging and processing servers, and edge computing can provide visibility at all the following levels: Figure 1: IOT-enabled supply chain visibility: The entire value chain. Making the shift to IoT-enabled visibility Companies that want better supply chain visibility through the IoT should proceed methodically, using a 5-step process: Once this vision has been deployed, all stakeholders will have access to appropriate key performance indicators (KPIs). Figure 2:

IOT-enabled supply chain visibility at a contract manufacturer: KPIs for all stakeholders Supply-chain visibility has been a challenge for manufacturers for decades. Even truly digital manufacturers have yet to succeed in expanding their digital visibility to their contract manufacturers. The advantages that IoT offers in manufacturing don't end with visibility. Improving data acquisition, processing, and analytics through connected things has the potential to optimize manufacturing execution systems, business models, and revenue streams. Figure 3: IOT-enabled supply chain visibility at a contract manufacturer: The complete journey. References [1] Forecast: Internet of Things — Endpoints and Associated Services, Worldwide, 21 December, 2017 https://www.gartner.com/document/3840665?ref=TypeAheadSearch&qid=aedceec9b9697e9f29e43 Namit Bhargava General Manager (Digital Transformation) & Head of Digital Sales Consulting Practice, Wipro Limited With over 20 years of international, cross-industry experience, Namit works with clients on "Connected" themes enabled by Industrial Internet of Things (IIOT) - Connected Worker, Connected Assets, Connected Plant, Connected Supply Chain and Connected Commerce. In Connected Commerce, Namit focuses on data-driven marketing, account based marketing, customer lifecycle management, optimizing marketing technology stack, marketing research for personas, customer decision journeys and business model transformation. Get in touch: global.consulting@wipro.com =====================

Business after Brexit

----- Arcticle source ----- https://www.wipro.com/consulting/business-after-brexit/ ----- About the Author Contact Wipro Please fill the required details to access the content Business after Brexit Five opportunities to win in the age of trade restrictions In the integrated world of commerce, the results of the 2016 UK Brexit referendum have triggered a global avalanche of speculations and scenario-planning to prepare for various outcomes of the United Kingdom's exit from the European Union. Fuelled by scenarios of job losses, product shortages, and economic slow-downs, businesses are considering relocating their operations, transportation, and logistics to prepare for arguably the biggest impact on international trade since the end of the Cold War. As we enter a new age of dynamic uncertainty, a fragmented, disrupted, and volatile view of the world of commerce is replacing a more stable, integrated view, resulting in a number of shifts in macroeconomic focus. Below, we detail these shifts using Francis Aguilar's 1960s six-dimensional PESTEL framework[1], a tool used to assess macro-environmental factors. Figure 1: PESTEL framework comparison of historic and current macroeconomic outlooks Brexit sheds a glaring light on these shifts, in particular on the political, economic, and legal dimensions. But is all this change for the worse, or are there emerging opportunities for new digital business capabilities that can withstand volatility? We believe there are. As potential trade barriers from Brexit and between major markets such as the US and China increasingly become part of everyday life, digital-age capabilities – coupled with enterprise agility – will become more and more critical to international operations. Here we consider five capabilities that businesses should consider prioritising to not only sustain existing

operations but also expand their digital capabilities and turn current uncertainties into value-generating opportunities. Five opportunities for agile enterprises Value chain risk and resilience management Business impact: In the current operating environment, the main challenge is increased macroeconomic volatility. Value chain disruptions caused by natural disasters, supplier problems, or isolated industrial actions were historically managed through a business continuity framework. Today, the ability of a business to accurately simulate and respond to disruptions in an integrated value chain is becoming a key differentiator. Opportunity: Whether deployed to seamlessly re-route shipments, change schedules for manufacturing operations, launch a new e-commerce portal at speed, or rapidly establish new legal and trading entities to respond to changes in the macroeconomic environment, the ability to manage value-chain risks and maintain operational resilience are becoming corporate priorities. This know-how is key to protecting both revenue and the ability to explore new market opportunities. The way forward: Establish practices to regularly and proactively measure and stress-test operational resilience and address the greatest risk vs impact combination. As well as, establish dynamic business rules and autonomous cells for critical operations. Tariff and trade optimisation Business impact: While most major trading channels for physical and financial flows have long been established and optimised, there are continuous changes in most major markets that require consistent monitoring and optimisation. Opportunity: Consider maritime logistics, where recent developments have created new opportunities in customs clearance and value-added taxation. Smart ports, which allow seamless API-based integration across all physical and information transactions (and recently the legal acceptance of electronic bills of lading in most geographies), are enabling fully digital information flows and much faster transaction processing. The way forward: Baseline and monitor tariffs as part of regular cost-to-serve analysis and explore-optimisation simulations. Consider segmenting major business channels to optimally manage tariff vs the volume of goods shipped. Information brokering Business impact: The age of outsourcing operations and greater use of fungible assets is putting significant emphasis on the core competency of brokering information across a changing array of parties. In most scenarios, these exchanges follow established routes of trading partners and trading lanes. Opportunity: In times of trade restrictions, businesses can leverage information-brokering capabilities to manage and optimise higher complexity information flows and new legal barriers more quickly than the competition. The way forward: Elevate information brokering from its traditional place in the data and information-technology world to the position of a strategic enabler. Consider information-collaboration platform architectures that will allow seamless integration with third-party providers, as well as deep analytics to improve speed and processing volume. Business model redesign Business impact: The new normal is operational agility. Businesses need to rapidly react to the new rules, which will likely continue to evolve. Organisational rigidity, on the other hand, can cause businesses to lose pace with marketplace dynamics and fall behind.Business impact: The new normal is operational agility. Businesses need to rapidly react to the new rules, which will likely continue to evolve. Organisational rigidity, on the other hand, can cause businesses to lose pace with marketplace dynamics and fall behind. Opportunity: Businesses can differentiate themselves by developing a

business service architecture for a modular supply chain, for instance, using fungible assets or micro-services to bridge a changing landscape. Businesses should also continuously redesign legacy operations to remain competitive. The way forward: Regularly review business models (market-to-order and order-to-cash) in order to optimise speed, profitability, and customer-centricity. Enable portfolio segmentation and rapid responses to shifts in portfolio priorities. Actively create new revenue streams Business impact: Trade restrictions are as old as commerce itself and clearly still very much alive in today's world. Trade restrictions in the digital age are the ultimate test of enterprise agility, but business model redesign might not be sufficient to create sustainable future growth. In a rapidly changing world, exploring new ways of monetising information, assets, and volatility will become an important business capability. Opportunity: Digital businesses have embraced the notion of orchestrating anything and everything to satisfy market demand rapidly and economically. Combining established operations or underlying assets such as distribution networks or manufacturing capacity, customer service centres or billing operations in conjunction with a highly developed ability to broker information allows rapid creation of a differentiated orchestrated market offering. Here are a few examples: Figure 2: Illustrative list of differentiated orchestrated market offerings The way forward: Reconsider the revenue-generation potential of your organisation's established assets, information, and business-partner landscape through the lens of digital business enablement to identify revenue streams in new value constellations. The impact of trade restrictions on the global economy will likely result in short term challenges for business. However, this is also an opportunity for enterprises to become more agile and adaptive for future volatilities in global trade. Enterprises that can build agility into their DNA will lead from the front in the future. References 1. https://pestleanalysis.com/what-is-pestle-analysis/ Sebastian Ennulat is Partner and global practice head for Wipro's Digital Value Chain Consulting practice, Wipro Limited. Get in touch: global.consulting@wipro.com =====================

Scaling the pyramid of trust

----- Arcticle source ----- https://www.wipro.com/consulting/scaling-the-pyramid-of-trust/ ----- About the author Contact Wipro Please fill the required details to access the content Scaling the pyramid of trust How banks can leverage AI to become proactive advisors to customers Artificial Intelligence (AI) and Machine Learning (ML) coupled with digital channels could change the way banks engage with customers in real time—from understanding if the customer interacting with the bank right now is likely to churn, to what is the best proactive advice or offer suited for this customer. AI and ML enable real time insights, proactive advice, and automated actions for creating rich personalized customer experiences. They allow mass customization of campaigns and offers at scale while a bank is engaged with customers and online prospects. This article explains why and how banks need to move beyond churn prevention, batch insights, and massive acquisition campaigns to the next level...a future full of real time insights, proactive advice, automated actions, and individual campaigns using AI, ML,

and digital channels. It shows how banks and FIs will need to scale the "pyramid of trust" to enhance the trust they have earned as safe keepers of money and transaction agents to being respected as proactive advisors. Such business transformation will create a spike in the number of prospects onboarded for banks and minimize investments in customer churn prevention and mass acquisition campaigns. No wonder banks are one of the leading adopters of AI and ML. They invested over $4 billion in machine learning in 2018 alone and this is expected to exceed CAGR of 40%[1]. Tectonic shifts in expectations of digital customers Gone are the days of using bank branches as primary channels of acquisition and account opening or answering questions of walk-ins. Also, the days of customer care centers receiving calls from customers seeking answers to questions may be gone in the future. Banks have spent too much time and effort positioning themselves as safe keepers of customers' money and reactive transaction fulfillers. A Celent report[2] on "trust gap" (difference between percentage of adults who trust their banks for the safety of their money and those that trust their bank's advice) explains how retail banks have largely delivered on safekeeping of money and fulfilling transactions but failed to deliver advice and proactive engagement. With digital all of that is changing. Figure 1 shows how expectations of digital customers have changed and how banks will need to climb the 'pyramid of trust' in engaging with these customers across all banking and financial services products. In the 'low trust' zone, at the very least, digital customers expect alerts and notifications and self-service capabilities. For example, competition in the cards industry as well as prevalence of increased fraud have led to prompt informational or fraud alerts from card issuers to cardholder mobiles as well as ability to lock and unlock card usage from mobile apps. However, such capabilities barely impress a digital customer. In the 'medium trust' zone, digital customers expect automated transactions, proactive insights, and customized offers. Some large banks are already giving customized offers but proactive insights are still lagging. In the 'high trust' zone, digital customers expect proactive contextual advice. Once their confidence levels improve, they could be open to automated implementation of advice such as an investment or savings plan to achieve a specific mutually agreed financial goal. Both larger banks and digital challengers are in the race to provide an impressive hierarchy of alerts, advice, and automated actions to engage their digital customers. One can see examples in Royal Bank of Canada's NOMI Insights[3], Commonwealth Bank of Australia's Customer Engagement Engine4 and Huntington Bank's "Hub" with insights and advice features5. Figure 1: Pyramid of trust – How banks can earn their customers' trust "Banks have a vital asset—customer trust. In today's competitive environment, h The Celent report[2] referred to earlier also shows what steps banks must take to close the trust gap with their retail customers and presents case studies from model banks. In the following section, this article takes the use case of campaigns to show a bank can transform itself to climb the pyramid of trust. "Banks have a vital asset—customer trust. In today's competitive environment, however, banks must continually earn this trust. Moreover, they must strive to go beyond basic trust and achieve higher levels of trust that allow them to become valued advisers to their customers." - Alenka Grealish, Senior Analyst, Celent Digital approach to insights and campaigns Figure 2 shows how banks conduct acquisition campaigns today and how they can make them more personalized, engaging,

and proactive using AI, ML and digital channels. Figure 2: Campaigns—Today vs future Today's campaign process (Figure 2) is focused on generating insights for the bank's marketing department and then planning campaigns around these insights. Most of the insights are generated using statistical regression models for descriptive and predictive analytics. There is hardly any use of artificial neural networks (ANNs). Risk of non-acceptance and feedback cycle time are quite high. Marketers have to wait for at least several weeks, if not months, to get feedback on the effectiveness of campaigns. In future, data will be processed as event flows and streams to be able to generate real time alerts with low latency (Figure 2). Auto-encoders using ANNs can generate alerts from streaming data. Banks stuck in the low trust zone will be busy providing alerts and self-service capabilities, albeit smart and useful. Progressive banks will attempt to climb the pyramid of trust using capabilities such as "Do-It-For-Me (DIFM) transactions" (automated mundane tasks). They will leverage ML to generate proactive insights and offers by analyzing data at rest and in motion. As they build more trust with their customers, they will offer proactive contextual advice. As they consolidate their trusted customer relationships, they could finally end up offering "DIFM advice" automated actions to realize mutually agreed financial goals. AI-ML-powered customer engagement will compel prospects to switch banks and reduce the need for banks to conduct mass campaigns. Most ML products offer tools for visualizing data and modeling using statistical as well as ANN-based models. Automated feature engineering (ability to predict which of the input variables have a high degree of correlation to output automatically) capabilities are also critical as they reduce the need for manual intervention from expensive and specialist data science resources. ML models are trained and tested offline using batch data. However, once the F1 scores (measure that balances between precision and recall) and accuracy reach acceptable levels, ML models in production can generate insights, advice, and automatic actions customer by customer in real time while the bank is engaged with the customer. Optimizing metrics such as F1 and accuracy is to help minimize business costs and impact (e.g. avoid classifying a customer likely to churn as someone loyal). Other factors that are critical in ML adoption are the ability to reduce over fitting of input data and the ability to explain predictions. Based on outlier patterns and errors in insights, offers, and advice generated, the models can be retrained manually. Several of the fintech vendors provide such capabilities today. In future, unsupervised learning could produce "self-learning ML models". Benefits of ML led digital insights Looking ahead Banks have earned valuable customer trust as safe keepers of money and reliable fulfillers of financial transactions, but they have yet to push their trust bar higher. The majority are still fixated on customer churn and mass acquisition campaigns. It is time they redirect their energies and budgets towards engaging, personalized, contextual, and proactive insights and advice powered by AI and ML technologies. As they scale the pyramid of trust, they will automatically experience a marked surge in prospects wanting to sign up!

References [1]IDC forecast – Worldwide spending on Cognitive and Artificial Intelligence systems https://bit.ly/2N7w4Pf [2]Raising the CX bar – How to Close the Trust Gap in Retail Banking, Celent, Dec 2018 https://bit.ly/2V1VBOK [3]Meet NOMI https://bit.ly/2B6zGew 4CommBank using data to drive "Next Best Conversation" strategy https://bit.ly/2XVcUm0

Collaborate 4.0: Optimizing the consumer value chain

----- Arcticle source ----- https://www.wipro.com/consulting/collaborate-4-optimizing-the-consumer-value-chain/ ----- About the Authors Contact Wipro Please fill the required details to access the content Collaborate 4.0: Optimizing the consumer value chain The rapid transformation of the retail and consumer goods (CG) industries over the last five years will accelerate over the next decade, hastened by the twin forces of evolving consumer needs and constant digital disruption. These trends are creating an imperative for businesses to understand their customers so they can create personalized experiences and drive positive brand sentiment. The automated supply chain, marked by the collaboration between all its members, will have a key role to play in meeting this imperative. We refer to the practice of connecting all the partners in the supply chain through technology to optimize business outcomes as Collaborate 4.0. This point of view analyzes the latest consumer trends and preferences, and outlines the opportunities to optimize the supply chain in order to serve the modern shopper. Keeping up with next-gen consumers Millennials and Gen-Z, two generations born after 1997, are shaping the next-generation shopping trends. They want personalized experiences that are quick, easy, and fun, and prefer digital wallets and Near Field Communication (NFC) payments over credit card payments (Figure 1). These two groups differ in preferences: millennials are more price sensitive and value-driven, while Gen Z is more focused on a brand's social responsibility, and less tolerant of connectivity issues and inferior service. The retailers of the future will need to satisfy their demands by deploying more conversational chat-bots and Augmented Reality-Virtual Reality (AR/ VR) for personalized experiences. They will have to support digital wallets, and adopt other technologies that enhance the customer experience.1 Figure 1: What consumers want Current digitization efforts are not enough Retail and CG companies are scrambling to win the wallet share of millennials in ecommerce, but neither have strong ROIs to show for it. In the absence of meaningful loyalty programs, CG companies are falling short in reaching their customers. While some brick-and-mortar retailers have found success with white- and private-label brands, others are haunted by the perpetual bankruptcies, and store closings that plague the industry. Leading brands are shutting down stores by the hundreds and laying off employees by the thousands. Given this uncertainty, retailers and CG

businesses need to act quickly and step up their digital transformation or risk being swallowed by digital-native companies with an appetite for ambitious growth and ever-expanding areas of competition.2 The retail and CG of the future To know what it takes to give consumers what they want, let's consider a royal case study (Figure 2): Within 24 hours of Meghan Markle showing up at Queen Elizabeth's annual Christmas lunch in a self-portrait dress, the dress sold out.[3] Social media allowed consumers to identify an influential celebrity and what she was wearing, driving demand to spike beyond the retailers' ability to respond. This is a classic retail and CG Collaboration 4.0 use case, as a smart retailer using the latest machine learning technology could have spotted an opportunity and sent demand signals to the manufacturer who would have immediately shipped the dresses to the retailer. If the demand is overwhelming, the dress-maker can prioritize completing the 3D-printing, then manufacture the dress at a nearby facility. The customer who visits the retailer showroom sends demand signals for her desired customizations – a typical consumer insight which is critical in converting a consumer into a shopper. The manufacturer follows the same 3D-printing process and manufactures the dresses quickly, shipping them the same day to the retailer. This "Mock Up to Mall in a Month" is a win-win-situation for the retailer, CG manufacturer, and the customer. Figure 2: A case study on collaboration between CG companies and retailers[3] Collaborate digitally! While the norm today is for CG companies and retailers to operate independently rather than collectively in their best interest, Collaboration 4.0 is nonetheless catching on. Indeed, managers are seeing the benefits of data sharing, with a single version of the truth across the consumer value chain that paves the way for operational, tactical, and strategic collaboration between all partners in the ecosystem. If retail and CG businesses collaborate throughout the supply chain, they stand to realize their shared goals: higher sales, cost savings, optimized processes and systems, and happy customers (Figure 3). Figure 3: Digital collaboration platform The elements of a Collaboration 4.0 platform include: Strategic collaboration: Partners co-innovate in product development, leverage joint strategic volume and market planning, and participate in joint supply chain improvement activities. They also swap customer insights including shopping behavior. Tactical planning: Partners share planning, scenarios, and forecast information, along with a collaborative sales and operations planning process, deploying capable-to-promise checks across the entire value chain. Operational execution: Partners share inventory location, tracking, and automated replenishment, powered by seamlessly optimized joint logistics. Supply chain in the era of disruptive technology New technologies have begun to disrupt the supply chain, offering a plethora of opportunities across the retail and CG value chain to both, enhancing the consumer experience and improving collaboration between supply chain partners. Figure 4 shows the latest technology trends at each stage of the supply chain. Figure 4: Enhancing the retail – CG value chain Figure 5: Collaborate 4.0 As Millennials and Gen-Z have set the bar high for customer experiences, it is imperative that businesses learn to collaborate with every member of their value chain (Figure 5) to meet the evolving needs of their customers while gaining actionable insights into their desires. In order to succeed, retail and CG businesses will need to develop a collaborative supply chain that integrates data from customer-facing systems, such as point-of-sale systems and

websites, and manufacturing, delivery, procurement, and supplier systems, to effectively deliver a tailored and differentiated experience to the next generation of consumers.

References 1. https://www.spscommerce.com/blog/how-can-retailers-and-supply-chains-serve-the-millennial-shopper/ 2. https://www.youtube.com/watch?v=PirfuKDdR9c 3. https://www.today.com/style/meghan-markle-s-self-portrait-dress-sold-out-1-day-t120411

Johnathan Thomas Manager, Strategy and Transformation Consulting Practice, Wipro Limited With about 10 years of experience in the retail and consumer goods vertical, Johnathan specializes in business operations and change management. He holds an MBA from Northwestern University's Kellogg School of Management and is a graduate of Wipro's Global 100 Leadership Development Program. Swetha Panyam Senior Consultant, Strategy and Transformation Consulting Practice, Wipro Limited Swetha has more than 10 years of experience in supply chain consulting, working with retail and consumer goods businesses throughout Asia Pacific & Australia, North America & Europe. A business consultant with Wipro Technologies for the past ten years, Swetha focuses on supply chain analytics, including demand planning and forecasting, and order to cash processes. She holds an MBA from Great Lakes Institute of Management and AACSB Accredited MBA from Illinois Institute of Technology, Chicago. Get in touch: global.consulting@wipro.com

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Accelerating business value realization

using the Agile approach: Part 1

----- Arcticle source ----- https://www.wipro.com/consulting/mergers-and-acquisitions-accelerating-business-value-realization-using-an-agile-approach-part-1/ ----- About the Author Contact Wipro Please fill the required details to access the content Accelerating business value realization using the Agile approach: Part 1 This article is the first in a two-part series,"Mergers & Acquisitions: Accelerating business value realization using the Agile approach," in which we outline the challenges inherent to acquisitions, and present the solutions offered by the Agile approach. Businesses have long recognized the acquisition of a company as a means to drive growth and gain a competitive advantage. Yet, acquisitions entail serious risks that companies must manage through negotiations, legal transfer, and post-acquisition integration. An acquisition can lead to myriad problems – a flawed valuation of the assets of the target business, cultural issues created by integrating diverse workforces, conflicting operating models and policies, challenges posed by a workforce spread over disparate time zones, legal and regulatory hurdles, represent only a few. Even if a business successfully navigates these risks, either the target business or acquiring company might still lose value before the acquisition is complete, if the integration process drags on too long or no clear agreement is reached regarding the best

operating model for the business in the future. The mergers and acquisition (M&A) team within the acquiring business typically holds the unenviable job of mitigating all these risks while meeting the sky-high expectations of the acquiring company board and stakeholders. This paper looks at ways to reduce integration risks through a pragmatic approach to planning the integration phase, accelerating the delivery of business value to the board and stakeholders, and minimizing the activities required to deliver an integrated business as a process outcome. The key challenges of integration Given the integration challenges, acquisition failure rates could be as high as 70 to 90 percent, although there is no clear standard for determining failure. Since most acquisitions are considered complete from a legal standpoint once offers have been made and accepted. For this paper we will define a failed acquisition as one that did not deliver the level of returns anticipated by the buyer. While most companies assume a failed acquisition is the result of insufficient due diligence, the root cause of failures typically lies in how they approached the acquisition. Since a company's acquisition plans are known only to top managers, due diligence is frequently left to senior stakeholders, who may not understand how their own business operates at the level of detail that enables optimal decision making. Meanwhile, these managers have to balance their acquisition responsibilities with their day-to-day duties, so due diligence may not get its fair share of time and effort. As a result, the focus tends to be on regulatory considerations, and the target's valuation and financial performance by using Excel templates, to understand all the dynamics of a business. This approach overlooks integration, operating models, business value protection and the details of pre-acquisition planning. Consequently, it can take an inordinately long time to conclude due diligence and be ready to make a recommendation to the board for even the smallest of business targets. Due diligence from a new perspective We recommend a few changes to this approach. First, to tackle the problem of too much information, create a due diligence plan designed with the post-acquisition integration in mind. For example, if the plan is for the acquired company to continue to operate at arm's length, with only financial reporting integration required initially, then it isn't necessary to consider dynamics such as the impact on bill of materials (BOM) systems, logistics, website, email, or HR policies as part of the initial integration activities. With an eye on the end state, due diligence can focus on areas that will be impacted, such as charts of accounts integration and reporting processes. Partner to succeed Our second recommendation for improving the due diligence process is to take on a partner. Most companies, without an in-house M&A team, may need to seek the expertise of external parties for specific integration or divestment programs. Even where an in-house team is available, supplementing the team with independent third parties offers a number of tangible benefits. Often, the diligence focuses on the target company's people, processes, products, financial performance and overall value to the acquiring company. There is an unspoken assumption in most cases that the acquiring company has superior processes, tools, systems, and structures. Thus, the question becomes about how best to integrate the target company into the acquirer's way of working, rather than whether there are areas of the acquired company's business that are superior and should be retained. Considering that the acquiring company may have initiated the acquisition in order to gain new capabilities, it's essential to be critical of the acquiring company to

ensure the best parts of each business are retained. Partners can bring their independent experience of acquisitions together with run books, planning tools, and a knowledge base acquired through multiple programs. They should also be able to challenge the buying organization on its approach, suggest viable alternatives to in-house views, and act as a sounding board for the leadership team to assess the risks of the proposed acquisition. Be more agile Here's the typical acquisition approach: a business conducts due diligence, decides to purchase the target company, plans the acquisition, determines the final integration plan, and finally enters the execution phase. A few legal processes run in parallel with these activities, but the process is serial. This makes for a long-winded process that consumes considerable resources and takes a big bite out of the acquisition price. It also does not scale well, as each phase becomes more complex and onerous as the target business increases in size. Applying the Agile approach can significantly accelerate the entire process. Though it was originally applied to software development, the Agile methodology has now proven applicable in many areas. An Agile program breaks up work into manageable chunks, known as sprints with each sprint comprising a complete "mini-project" that delivers a designed outcome. Between sprints, an Agile team undertakes a quick exercise to assess whether the target end state is still relevant and achievable. Then it makes small adjustments to the target objectives to address challenges encountered in the completed sprint and ensures the team remains on track. By constantly monitoring the progress of a sprint, a team can make micro-adjustments to the overall plan without major impact on the timelines or costs. Embedding both business and technical resources within the same Agile sprint team, or"cell", and empowering this team to drive solutions and make decisions, considerably shortens the timeline between idea and delivery. This dual-function approach also ensures close, consistent alignment between business and technology, ensuring that technical solutions are more likely to support business needs with fewer compromises, in terms of functionality or business process support. Multiple Agile cells can operate simultaneously, each working on different areas of the business. However, a central design authority should coordinate change and solution architecture to avoid incompatible decisions or solutions. Another reason for applying the Agile approach to acquisitions is to accelerate some of the activities that are typically undertaken in later phases. Tackling activities earlier allows teams to plan ahead better and minimize focus on non-essential activities. Consider the following diagram, which lists some of the activities performed in each phase of an acquisition program: Figure 1: Typical activities performed in each phase of an acquisition program Carl Booth Consulting Partner, Strategy &Transformation Consulting Consulting Practice, Wipro Limited Carl Booth leads key client initiatives in business transformation, target operating models, mergers and acquisitions, program management, and enterprise architecture across multiple verticals. He has advised senior executives of leading companies how to improve business performance through transformation and business restructuring and has led a number of strategic mergers and acquisitions initiatives. Get in touch: global.consulting@wipro.com =====================

Accelerating business value realization

using the Agile approach: Part 2

Accelerating business value realization using the Agile approach: Part 2 This article is the second in a two-part series, 'Mergers and Acquisitions: Accelerating business value realization using the Agile approach', in which we outline the challenges inherent to acquisitions and present the solutions offered by the Agile approach. To see part one of this series, please click here. In the first article in this series, we looked at the challenges of the acquisition process and discussed how keeping an eye on the end state, partnering with a third party, and taking the Agile approach can improve outcomes and allow companies to realize benefits faster. In this article, we will present specific recommendations for implementing the Agile approach. Level-set with the board At the start of the acquisition journey, consider setting the acquiring board down in a room to discuss key aspects of the acquisition. You may be surprised by the level of disagreement on the rationale or value of the proposed acquisition between members of the leadership team, and if they can't come to an agreement, then success is going to be difficult to achieve. The structure of such a meeting will vary depending on the target, the current business environment, and other factors, but it should aim to assess the level of agreement and find a way to bridge significant gaps. Evaluate the consensus in the room on these four questions: Figure 1: Typical activities performed in each phase of an acquisition program Using the third question to determine how the business will operate can help set business priorities, for either the long or short term. For example, if you acquire a business unit rather than an entire business, you will need to operate on Day 1 at arm's length, as you will not be able to integrate immediately. The selling company will normally operate the systems and processes of the divested entity under a transition services agreement (TSA), though the plan may vary depending on the willingness of all parties. Once you establish your Day 1 operating model, as well as the operating intent for the acquisition post-TSA, you can focus your due diligence and Day 1 planning activities on the most impacted areas. By setting lesser considerations to the side, you can streamline the program and ensure the presence of sufficient resources with skills in the focus areas. Identifying priorities The intent of this exercise is to identify a prioritized list of business areas that will be integrated in order to derive maximum value for the acquiring business. If, for example, the business has identified merging the raw material procurement processes as significantly valuable due to the contracts held by either or both businesses, then procurement could well be a candidate for early integration. In this case, your focus would be on the following activities: Figure 2: Focused Target

Operating Model (TOM) Impact Analysis Figure 3: Business decisions drive TOM planning Finally, while you are being more agile, don't discount opportunities to improve productivity by simplifying processes, removing handoffs, rationalizing applications, and implementing cloud computing and robotic automation. While doing anything over and above the work required to exit a TSA agreement can increase risks to exit, and therefore potentially add cost, companies rarely revisit acquisition opportunities once the merger has been completed. Conclusions The delivery of a successful post-acquisition integration is never going to be without its challenges, and the options highlighted in this paper won't eliminate all of the risks. However, the Agile approach to all key phases in an acquisition will mitigate risks to a more acceptable level and allow an acquiring business to realize the value of its purchase much faster than traditional approaches allow. Businesses often lose time and money focusing team efforts on attributes of an acquisition that are not immediately relevant and miss potential opportunities to speed up the process or innovate around the end vision. Using the Agile approach and partnering with an experienced integration team that can recognize the value in both businesses can have a huge positive impact on the success of your acquisition. Carl Booth Consulting Partner, Strategy & Transformation Consulting Consulting Practice, Wipro Limited Carl Booth leads key client initiatives in business transformation, target operating models, mergers and acquisitions, program management, and enterprise architecture across multiple verticals. He has advised senior executives of leading companies to improve business performance through transformation and business restructuring and has led a number of strategic mergers-and-acquisitions initiatives. Get in touch: global.consulting@wipro.com

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Manufacturing Processes Standardization:

Digitizing Batch Records

and Device History Records

----- Arcticle source ----- https://www.wipro.com/consulting/manufacturing-processes-standardization/ ----- About the Authors Contact Wipro Please fill the required details to access the content Manufacturing Processes Standardization April | 2020 A consolidated strategy is required to improve manufacturing process efficiency by harmonizing processes for electronic batch records (EBR) and electronic device history records (eDHR) for pharmaceutical and medical devices plants. This can help improve real-time visibility, data integrity and enhance data quality besides ensuring compliance and traceability. This article provides an overview on a case study for electronic batch records and electronic device history records process harmonization strategy. The life sciences and medical devices industries are currently facing many challenges in a competitive global

market. To maintain market position and meet customer demands, the organizations are under pressure to introduce new products early to the market with optimized costs. There is another challenge to conform to evolving local and global regulatory guidelines for ensuring manufacturing quality and minimizing product recall, which can be achieved by keeping track of batch records (BR) and device history records (DHR). Regulatory agencies emphasize keeping track of production details for each product manufactured by organizations, which is a cumbersome process, as management of BR and DHR is largely paper based, people dependent process in many organizations. The manual processes take a lot of time and efforts and are often error prone, impacting overall costs and operations. Incorrect entries, unclear documents, rounding and calculation errors can significantly affect approval processes. Industry is exploring an efficient process to generate electronic, digitized batch record and device history records. Business Needs Data level Improving manufacturing processes by replacing paper based mechanism with electronic data capture is utmost important. Typical outcome at data level is: Plant level Due to the unique nature of production processes across various manufacturing plants, data capture processes and compliance needs are inherently complex. Examples of these complexities include: Need of the Hour– Best Practices EBR/eDHR implementation for batch records and device history records automation has become paramount and this can serve as a springboard for connecting the stakeholders for governance, data capture, and quality as well as providing a platform for manufacturing process improvement. It is recommended that process mapping should be performed to identify and eliminate waste before the EBR implementation. Industries are adopting some of the best practices to move towards digitization and automation of EBR and eDHR, which are discussed below. Elements of Electronic Batch Records Key enablers of EBR/eDHR for each benefit area and specific examples of improvements that will be realized when manufacturing execution and data capture moves from manual/paper based to automated/electronic are depicted in figure 1. Figure 1: Elements of Electronic Batch Records The technology layer in the figure 1 provides general descriptions of the types of applications cutting across multiple benefits "pillars" to enable EBR creation. These descriptions are generic as there could be multiple technical pathways to achieve the endpoint. For instance, the requirements for a digitization solution can be met by applications with custom PI sheets in SAP or electronic work instructions and data capture. Key Business Benefits Manufacturing process harmonization and digitization benefits business with: Digitization of EBR and eDHR coupled with manufacturing process standardization can help improve compliance, data quality and data integrity, and enhance operational excellence and global collaboration. Dr.Sarika Vanarse Managing Consultant – Life Sciences & Medical Devices, Wipro Ltd. Dr. Sarika is a Consulting leader with Wipro's Health Consulting Life Sciences and Medical Devices practice focusing on driving business and technology transformation programs across value chain. Dr. Sarika Vanarse can be reached at sarika.vanarse@wipro.com   Dr. Rao Teki Global Head - R&D Innovation and Transformation, Wipro Ltd. Dr. Rao is a Consulting Partner and Global Head - R&D Innovation and Transformation focusing on driving innovation and transformation of R&D business. Dr. Rao Teki can be reached at rao.teki@wipro.com   ======================

Managing COVID-19 Disruption with Cloud

Managing COVID-19 Disruption with Cloud July | 2020 Challenges in a post COVID-19 world The global COVID-19 pandemic has become one of the biggest calamities in recent times. The pandemic has prompted almost every country in the world to go into damage control mode to protect their citizens. The experience as customers, employees, citizens, and humans has changed forever, and our attitudes and behaviors are changing as a result. In addition, IT workforces globally have switched to work from home. In this crisis, cloud companies suddenly are the backbone of a global virtual learning and collaboration experiment. While the Internet backbone has long been a lifeline and reached over half the world's population in 2019, without scalable cloud services, the current disaster would be unimaginably worse. Fortunately, cloud companies are weathering the pandemic stress test caused by the sudden spike in workloads and waves of new, inexperienced users. The magnitude of demand surge has led cloud providers to prioritize COVID-19-related workloads and place tighter caps on its free cloud service offerings for new users. For the cloud, COVID-19 is just a busy day at the virtual office. In fact, cloud companies' confidence in their ability to scale even further to support many more users forced to work and learn from home is so great, that some are offering free collaboration and conferencing services for those impacted by COVID-19, including some promising free services for the remainder of 2020. In this crisis, secure cloud architectures are essential for not only large enterprises and governments, but for all small, medium, Private government and institutional bodies. Protecting against malware and viruses of the computer variety may not appear to be as deadly as COVID-19, but cyberattacks on WHO's COVID-19 efforts (fortunately of limited impact, so far) among others could have devastating consequences. The security & elasticity offered by Cloud is unmatched. Cloud not only helps enterprises to scale up their workloads but also offers them high availability to ensure continuity of operations even during these testing times. The collaboration and video-conferencing platform offered have been used extensively by educational institutions, governments and corporates as a means of regular communication during these tough times. Cloud is the only enabler for enterprise IT operations during these unprecedented times. This paper discusses various challenges that enterprises are faced with due to the spread of COVID-19 and how cloud is acting as an enabler for enterprise IT operations. Enterprise Risks Worldwide from COVID-19 The effects of the pandemic – as the World Health Organization declared officially on March 11 — are predictable. The impact on our organizations, customers, vendors, and communities is tangible. Even so, there is a natural tendency for panic to arise. The Coronavirus is exactly the type of fast-emerging risk with uncertain consequences that can be ignored until it's too

late for traditional escalation procedures to be effective. When initial reports of a lockdown started to come in from China, most organizations in the West had weeks to act on this information but "Gartner research shows that an agile response occurred far more often when clear processes already existed." chose to wait and see. Gartner research shows that an agile response occurred far more often when clear processes already existed to report & escalate absences or issues due to infectious diseases. In other words, a proactive ERM team had already set the threshold for escalation quite low to account for potentially extensive consequences of the risk if no action occurred. Organizations are trying their level best to keep employees productive and taking proactive steps to prepare themselves, if this unforeseen situation continues for a bit longer. Enterprise Business Risks currently faced by organizations and leading to disruptions in the normal day-to-day operations are as follows: Risk 1: Disruption Due to Social Distancing and Lockdowns Social distancing is a term applied to certain actions suggested by public health officials to stop or slow down the spread of COVID-19. Social distancing also disallows the aggregation of more than 5-10 people at a single location. To curtail the spread of the pandemic, governments around the world have provided guidelines to people to adhere to social distancing. Most business events and travel have been cancelled during this peak period. Governments of all major economies are under lockdown to contain the impact of the pandemic. As the economy slows down, some industries are more impacted than others. It's just a few players in the online learning and entertainment space that are doing well, with most people locked up at home. Risk 2: Plummeting Employee Productivity The pandemic has affected all business sectors directly or indirectly. It is estimated that around 40%-60% organizational staff during the Lockdown period will be unable to work properly due to non-accessibility of their working premises Also, at most IT companies, more than 90% of the employees have been enabled to work from home. This has affected the overall margins of major IT companies. All manufacturing, travel, aviation & hospitality services are experiencing a complete halt of operations and suffering huge losses because of the same. Risk 3: Stressed Supply Chains The global economy is still highly integrated and most countries and companies rely on vendors for their business. From pharmaceutical raw materials to electronics and other consumer products, there will likely be purchasing delays. Transport sector has been impacted due to sealed borders. Companies are not able to get their raw materials lifted from the ports due to shortage of transportation and lockdown for nonessential materials. Heavy equipment and manufacturing supply chains have come to a standstill due to lockdowns in various regions of the world including movement of goods. Stressed supply chains have also led to a decrease in consumption of oil and this has led to decreasing demand of crude oil in the global market. The Global oil prices fell to 0.1 $ per barrel on April 20 due to non-demand of petroleum products as all major nations were under lockdown. The world witnessed disruptions across all major supply chains halting the movement of goods. Risk 4: Recession, Unemployment and Investment Pullback The economic engine of growth is driven by continuous investment as well as consumption. Experts are uncertain whether a COVID-19 vaccine will be available before the first quarter of 2021. Investments have been negatively impacted by uncertainty and corporations have started to prepare for strategies to mitigate the impact of the situation

on revenues and will likely cut back growth investments. This will likely contribute to a rapid rise in unemployment, as fewer investments will result in job losses. There may be significant layoffs at existing businesses in the "second wave" of COVID-19 that may surge again in the third quarter. Majority of corporates are taking decisions to do away with salary hikes for this year. Some companies in the consulting business have even declared pay-cuts during this period. During the period of March, unemployment numbers in the US stood at a whopping 22 million. "Per a survey conducted by CMIE, India's unemployment percentage rose to 23.4% in the week that ended on April, 5th 2020" Risk 5: Economic Instability and Civil Unrest Economists suggest that the world economy may contract for the first time since the 1970s. As the coronavirus spreads around the world, stock markets have experienced their worst crash since 1987. Many countries with large economies, such as Italy and Spain, have enacted quarantine policies. This has led to the disruption of business activities in many economic sectors. Except pharma and consumer goods companies, all other industries' operations have come to halt. Civil unrest has been reported in the US and across other parts of the country due to enforcement of lockdown in all major economies. Cloud as an Enabler for Managing Enterprises in the COVID-19 Realm The effort to maintain operations during the COVID-19 pandemic puts cloud computing at center stage for many organizations. COVID-19 has forced millions of people to work remotely. It is hard to imagine a world without cloud technology. At no other point in time has there been such a need for the instant availability of IT resources, enabled by the cloud, than during this coronavirus pandemic. The cloud continues to transform connectivity between people and businesses on a global scale. Today, organizations that do not embrace cloud technology adoption have put themselves at a significant disadvantage in terms of profitability, speed, and agility. Their ability to recover from unforeseen disasters is affected and they cannot react anywhere near as quickly to events within the market as competitors. Some of the key areas where cloud will prove to be a differentiator in the future are highlighted below: This can severely hamper business success and lead to the situation of being phased out of the market within a matter of years.   Key enablers that cloud offers Enterprises during COVID-19 Conclusion Every industry has already taken a financial hit as a result of the COVID-19 pandemic. Now is the time for enterprise software providers to go the extra mile for their customers across all industries and help them recover and grow again. Empowering customers in their time of need by freely providing remote collaboration tools, secure endpoint solutions, cloud-based storage, and CRM systems, is an investment in the community that every software company needs to make. Cloud has been one of the enablers for enterprise during these testing times. From collaboration, virtual meetings, video conferencing, unlimited expandable storage, anywhere access, elasticity and expandability to secure architecture, cloud has been pivotal for a majority of enterprises by helping them stay resilient during these tough times. Many organizations that were apprehensive about moving to cloud now consider this a preferred option. References Amit Raj Singh Head – Cloud Business, India, Wipro Limited Amit Raj is the Head of Cloud business for Wipro, India. He has around 16 years of experience around Practice, Presales & Sales for Cloud & Infrastructure Services. Amit possesses a strong understanding of IT Security, Infrastructure Services & Managed Services business. Amit Raj

Singh can be reached at amit.singh4@wipro.com   Dr. Gurbinder Randhawa Consulting Partner – India, GCG, Wipro Limited Gurbinder Randhawa is a Consulting Partner in the Consulting Business for Wipro, India. Gurbinder has over 18 years of Consulting and Management experience across Public and Enterprise verticals. Her areas of specialization include Cloud Consulting, Program Management, ERP Consulting, Cost Optimization, Thought leadership, Solution Theme Building, Practice, and Business Development, and Revenue Generation. She has written POVs on various topics covering Artificial Intelligence, Fraud Detection in GST, Trillion Dollar Economy, and Digital Economy. Gurbinder can be reached at gurbinder.randhawa@wipro.com   Nikhil Goel Consulting Partner – India, Consulting Business, Wipro Limited Nikhil Goel is a Consulting Partner Digital in the Global Consulting Business for Wipro. He has over 22 years of Consulting and Advisory experience across Public and Private Businesses. His areas of specialization include Digital Strategy, AI Strategy & Consulting, as well as Thought leadership, with an objective to transform business outcomes. He has authored several white papers and points of view on various topics covering Artificial Intelligence in effective Customer Personalization, Risk, Banking, Digital Supply Chain, and Warehouse Automation. Nikhil can be reached at nikhil.goel3@wipro.com ======================

Application Modernization using Cloud Native Approach

----- Arcticle source ----- https://www.wipro.com/consulting/application-modernization-using-cloud-native-approach/ ----- About the Author(s) About the Co-Author(s) Contact Wipro Please fill the required details to access the content Application Modernization using Cloud Native Approach A Point of View July | 2020 Executive Summary Agility, cost optimization, and faster time to market are the key objectives for a majority of organizations while moving to the Cloud. Most of them choose the easiest 'Lift and Shift' model to migrate their workloads on to cloud. Eventually, they have begun to realize that cloud has much more to offer than the normal infrastructure-as-a-service option, and they can create more value and innovation by adopting cloud-native strategies and architectures. Simply continuing on the old-world applications and architectures would not only prevent the ability to innovate, optimize and be agile but also impact their core objectives of moving to cloud. Cloud native is the future of application development, with massive potential for business impact—the ability to move an idea into production quickly and efficiently Companies should adopt a new, "cloud-native" mindset—reorganizing people, processes and workflows, and creating applications with the cloud specifically in mind. This calls for adopting an application development strategy that fits well with the overall cloud strategy and utilizes cloud-native architecture. Currently, business pressures demand faster time to market and app modernization. Modernization approaches include refactoring into cloud-native microservices and re-platforming traditional apps on container platforms. Cloud Modernization strategies offer full flexibility to migrate to cloud

during the app modernization process without any challenges. With a cloud-native microservices approach, clients can capitalize on the scalability and flexibility inherent to cloud. Modernizing applications using cloud-native tools enables applications to run concurrently and seamlessly. Barriers that prohibit productivity and integration are removed to create new user experiences. Containerization of existing applications, adoption of microservices, and server-less architecture are few examples of cloud-native architectures, addressing the requirements of quick scaling up and down, thereby optimizing the compute and cost. Business environments these days demand shorter development cycles followed by faster integrations and deployments. This calls for integration of development and deployment cycles. By using DevOps tools, integration of the entire development to deployment cycle can be done, thereby cutting down the entire cycle time from days to hours. Benefits of App Modernization Accelerate digital transformation: Application modernization is driven by the need to transform business to build new capabilities and deliver them quickly. Adopting DevOps and Cloud-native tools accelerates the overall time from development to deployment, reducing it from Days to hours, thereby helping businesses transform faster. Change the developer experience: Quickly create and deliver new applications and services through adoption of a cloud-native architecture and containerization. Developers can deploy multiple changes within hours without worrying about the integration and deployment part. Accelerate delivery: Adopt DevOps best practices to drive a culture of automation and transformation, can cut down time to market from Weeks to hours. Quick code changes can be deployed on to Production without much delay and human intervention. Deploy enterprise applications on hybrid cloud platforms: It helps to improve efficiency by automating operations in hybrid multi-cloud environments. This leads to "Build Once and Deploy on Any Cloud". Reduces Integration and Build Time: DevOps principles facilitate multiple code streams and their integration into one. Entire integration cycle can be integrated without worrying about the changes in the current environment since the last deployment. Strategies for transforming the existing Applications Containerize the monolith. Reduce costs and simplify operations by moving applications to a cloud runtime. Majority of code can be reutilized while containerizing the same. Expose on-premise assets with APIs. APIs enable legacy assets that are difficult to move to the cloud, thereby enabling a seamless connect between applications. Refactor into macroservices. Break down monoliths into smaller deployable components which can independently exist, thereby enabling faster changes within individual components without the need to manage the whole code and deploying the whole code at one go. It also helps in the addition of new services without impacting existing services. Strangle the monolith. Incrementally phase out the monolith, which cannot be converted to microservices. Challenges while adopting Cloud-Native Development Managing the business case Making the business case for cloud-native requires thinking beyond just cost and operational efficiency to areas such as improved speed and business agility, a better customer experience, and a reduction of technical risk. Managing complexity New complexities in platforms, operating models, and security also need to be managed. Multiple platforms need to be operated as companies wind down the old and spin up the new Platforms. Managing change Finally, organization, people, and culture change needs to be effectively managed.

Roles and responsibilities are likely to change, as will skills definitions. Principles and attributes of Cloud-Native Applications Whether creating a new cloud-native application or modernizing an existing one, developers should consistently follow the below set of principles. 1. Follow the Microservices architectural approach. Break applications down to microservices, which allows the incremental, automated, and continuous improvement of an application without causing downtime. 2. Rely on containers for maximum flexibility and scalability. Containers package software with all its code and dependencies in one place, allowing the software to run anywhere. This allows maximum flexibility and portability in a hybrid multi-cloud environment. Containers also allow fast scaling up or down with Kubernetes container software as defined by the user. 3. Adopt agile methods. Agile methods speed up the creation and improvement process. Developers can quickly iterate updates based on user feedback, allowing the working application version to match as closely as possible to user expectations. IDC found that, by 2021, 80 percent of application development will take place on cloud platforms using microservices and cloud functions Some Key attributes of well-written Applications Adopting Cloud-Native Meeting the challenges of cloud-native development and making a strategic move will often necessitate changes to processes, operations, people, and culture. Cloud-native is not just substituting one technology for another, nor is it just a different programming model. Companies should be prepared for more widespread change. The skill requirements expectation gap is likely to increase dramatically. In fact, by 2020, it is estimated that more than a third of the desired skillsets of most jobs will comprise skills not yet considered crucial today. Containers are technologies that allow packaging and isolation of applications with their entire runtime environment—all of the files necessary to run. This makes it easy to move the contained application between environments (dev, test, production, etc.) while retaining full functionality. Containers are also an important part of IT security. By building security into the container pipeline and defending infrastructure, one can make sure containers are reliable, scalable, and trusted. Containers help reduce conflicts between development and operations teams by separating areas of responsibility. Developers can focus on their apps and operations can focus on the infrastructure. Container technologies—including CRI-O, Kubernetes, and Docker—help teams simplify, speed up, and orchestrate application development and deployment. Already, 40 percent of employers report talent shortages and with significant upshifts Actual development or programming should be driven by business events/requirements and serve business needs. These can include competitive or marketplace events; new products and services; innovation; and end-user/client/customer interactions Architecture can be divided into four separate layers: application software development, service scaling, application network, and container orchestration platform. Having the architectural tenets or paradigms in place is critical to true cloud-native computing. Key Elements of App Modernization In today's technology era, cloud is the execution platform; to the left are DevOps processes, which are driven by agile development—all of which are a result of today's microservices architectures, which are driven and invoked by business events. IDC research has found that 100 percent of businesses with "optimized" cloud adoption (Organization-wide cloud strategies and policies) have adopted microservices compared to just 18 percent of those with an

"ad hoc" approach-just lines of business or other groups experimenting with the cloud.   Element 1 – Microservices Architecture By structuring applications as a collection of loosely coupled services, microservices strengthen continuous delivery and deployment. In addition to improving modularity and making applications easier to develop and test, microservices enable different development teams to create, deploy, and scale their services independently. Organizations can break down their monolithic applications into discrete components, each of which can then be developed, scaled, and maintained independently. Element 2 – Serverless Architecture Serverless is a cost-effective method of enabling microservices. It is a way to deploy applications while leaving all infrastructure details to the cloud provider. These event-driven, function-centric systems are increasingly becoming an essential capability for digital ecosystems. Serverless architectures enable developers to focus solely on revenue-generating functions, not wasting time on non-value-added issues. According to IDC survey data, organizations use DevOps to manage, on average, 25 percent of their application portfolio today, and expect that percentage to rise to nearly 33 percent in five years. Strong adoption of DevOps suggests that the development methodologies are already in place to support the adoption of cloud-native development practices and the development of cloud-native applications. Element 3 - Agile Development Agile is all about coping with and driving change-making development processes fast and easy. By splitting the development process into time windows and providing a continuous Feedback loop, Agile enables rapid, more effective development and the creation of super-nimble organizations that can innovate quickly. Consider an example from the U.S. Air Force. Although the organization has a huge technology budget, 70 percent of it was previously going toward just maintaining existing infrastructure. Only 30 percent was going toward research and development, and new software. By implementing Agile practices and developing apps to run on multiple clouds, the Air Force now finds that 70 percent of its budget is going toward R&D & 30 percent toward maintaining existing infrastructure. Element 4 - DevOps DevOps focuses on speed & how quickly a program can get from the design stage into production. It's largely about automation—i.e. eliminating the need for human involvement in the production process. By equipping developers and infrastructure experts with the same tools to track and control changes in both code and infrastructure— treating it all as software assets—DevOps lets you create a production environment within days or hours, rather than in the weeks or months previously required. Some of the DevOps tools include: Element 5 – Cloud Cloud is an extremely flexible delivery platform. It can support many different architectural & deployment styles, from big, monolithic systems, to large, virtual-machine deployments, to nimble clusters of containers, to large farms of serverless functions. Cloud is flexible enough to carry most of the IT architectures from the last 20 years. Again, however, to get the maximum business benefits & value from the cloud, one should understand that the platform itself is only one part of the overall cloud-native picture. Wipro's Capability in Cloud-Native tools for App Modernization Wipro's RAPID Ops (Release Application Platform for Industrialized DevOps) offering enables enterprises to achieve a connected DevOps tool chain for end-to-end application release thereby enabling reliable releases and faster time to market. The offering provides comprehensive capabilities across application release management, release

automation, and continuous deployment in collaboration with our partners and leveraging best-of-breed technologies across each layer of the tool chain. References   Madhusudan Kulkarni General Manager and Head of Digital and Consulting Business for India Wipro Limited Madhusudan (Madhu) is the Head of Digital and Consulting Business for Wipro in India. He has around 20 years of global experience with strong expertise around P&L Management, Idea Incubation through to Revenue Realization, Service Value Creation, Business Strategy, Product Management, Sales and Marketing. He has written POVs on various topics covering Digital Economy, Artificial Intelligence, and Financial Management Systems. Madhusudan can be reached at madhusudan.kulkarni2@wipro.com Dr. Gurbinder Randhawa Consulting Partner – India, GCG, Wipro Limited Gurbinder Randhawa is a Consulting Partner in the Consulting Business for Wipro, India. Gurbinder has over 18 years of Consulting and Management experience across Public and Enterprise verticals. Her areas of specialization include Cloud Consulting, Program Management, ERP Consulting, Cost Optimization, Thought leadership, Solution Theme Building, Practice and Business Development, and Revenue Generation. She has written POVs on various topics covering Artificial Intelligence, Fraud Detection in GST, Trillion Dollar Economy, and Digital Economy. Gurbinder can be reached at gurbinder.randhawa@wipro.com   Nikhil Goel Consulting Partner – India, Consulting Business, Wipro Limited Nikhil Goel is a Consulting Partner Digital in the Global Consulting Business for Wipro. He has over 22 years of Consulting and Advisory experience across Public and Private Businesses. His areas of specialization include Digital Strategy, AI Strategy & Consulting, as well as Thought leadership, with an objective to transform business outcomes. He has authored several white papers and points of view on various topics covering Artificial Intelligence in effective Customer Personalization, Risk, Banking, Digital Supply Chain, and Warehouse Automation. Nikhil can be reached at nikhil.goel3@wipro.com   A Paper by Consulting Research Centre (CRC) =====================

White paper on Integrated Supply Chain Management - A Strategic Perspective

----- Arcticle source ----- https://www.wipro.com/consulting/white-paper-on-integrated-supply-chain-management-a-strategic-perspective/ ----- About the Author (s) Contact Wipro Please fill the required details to access the content White paper on Integrated Supply Chain Management A Strategic Perspective July | 2020 Executive Summary SCM market is poised for a double-digit growth for the next 6 to 8 years and Wipro has to capture this momentum to increase its share. With a combination of tech platforms, new age solutions, automation and consumer insights driven approach, this space will go through a rapid transformation. In the current international business environment, heightened customer expectations impact every part of the supply chain. At the same time, next-generation delivery and logistics management solutions are making global supply chains smarter, faster, more

customer centric, and sustainable. Supply chain integration is an increasing focus for large companies. Wipro has good capabilities across domains and practices but is currently adopting a fragmented, reactive approach in tapping opportunities in this space. There is a need to create an integrated SCM framework, deep diving into scope and breadth and building offerings catering to the holistic SCM landscape. This strategic view would require integration within Wipro to build and seamlessly reuse IPs, assets, platforms, use cases, solutions and competencies across verticals and Geos. This paper provides a comprehensive view on the SCM market, Wipro's capabilities and a strategic perspective towards Integrated Supply Chain Management. Integrated Supply Chain Management – At a Glance Integrated supply chain management refers to an enterprise resource planning approach to supply chain management. A business facilitates relationships with all of its suppliers and manages all distribution and logistics activities through a centralized system rather than having multiple systems within the organization. Levels of Supply Chain Management Strategic - deals with future planning than in looking at market evaluation, capacity issues, new products, and technology changes. This is accomplished at the executive management level. Tactical - involves a shorter planning cycle. It is more concerned demand planning, inventory planning, and supply planning. This is determined at a less senior level than Strategic SCM. Operational - deals with current planning activities measured in at most weeks. It includes demand fulfillment, scheduling, production, transport, and monitoring. Benefits of Supply Chain Integration Better understanding of customers and better ability to serve them, reduced wasted material & time and redundancy in supplier function, More Cost effective & efficient with increased ROI and profit margins, keep up with demand and be more flexible to changing markets, Less risk and enhanced competitiveness. Get early warnings for problems anywhere in supply chain due to information sharing, better opportunity for investment when operating with collective power SCM Integration – Horizontal and Vertical SCM as integration strategies aimed at coordinating functions across suppliers, manufacturers, distributors and retailers to ensure that products and services are produced and distributed at the right volume, location and time with the aim of reducing operational costs, maximizing profits and ensuring satisfaction across the supply chain. There are two types of SCM strategies: a)Downstream/Forward Integration - A merger situation where the company acquires control over its distributors. b)Upstream/Backward Integration - A merger situation when the company acquires control over its supplier.   Supply Chain Management – Best Practices Key Supply Chain Best Practices Some examples of Supply Chain Best Practices are: Use of business intelligence and predictive insights driven partly by machine learning. Seamless integration of Supply Chain has enabled it to capture data on a real-time basis & simultaneously analyze data points and trends. Scope and Breadth of Supply Chain Management Supply Chain Management (SCM) Landscape Control Tower Control tower provides holistic management of supply chains. This includes management of revenue forecast, sales and operations, consumer demand & order, manufacturing, transport and logistics, warehouse, worldwide material sourcing and positioning. On the other hand, control tower also takes care of the collaborative response mechanism, cognitive computing engine and 360 degree visibility to the holistic supply chain operations. Control tower helps

in self correcting, predictive and prescriptive decision support, early management of alerts and exception management, collaborative information sharing and end-to-end visibility. Various logistic processes play an important part in the overall supply chain management using control tower. All the logistic processes – inbound, outbound, intra-logistics, line feeding, logistic routing and warehouse management are covered using control tower management. Key Challenges and Disruptions in Supply Chain Key Disruptions and challenges posed by the current market trends are Globalization (Managing Complexity), Planning is Data driven (business need to invest in analytics tools), Ecosystem limitations (Geographical Barriers), Building Transparency (Unified Single Source of Truth), Innovation (Shorter Product Lifecycles) and Everything as a Service(Switch from a Capex to Opex Model) Supply Chain Technology Trends Maturity of SCM Segments – An Analysis The above table shows the maturity of various SCM segments. The components in BLUE are highly mature and YELLOW are nascent as per the competitive market of service offerings and customer case studies from large number of service providers. Integrated SCM Offerings – Theme Layer References Nikhil Goel Consulting Partner – India, Consulting Business, Wipro Limited Nikhil Goel is a Consulting Partner Digital in the Global Consulting Business for Wipro. He has over 22 years of Consulting and Advisory experience across Public and Private Businesses. His areas of specialization include Digital Strategy, AI Strategy & Consulting, as well as Thought leadership, with an objective to transform business outcomes. He has authored several white papers and points of view on various topics covering Artificial Intelligence in effective Customer Personalization, Risk, Banking, Digital Supply Chain, and Warehouse Automation. Nikhil can be reached at nikhil.goel3@wipro.com   Dr. Gurbinder Randhawa Consulting Partner – India, GCG, Wipro Limited Gurbinder Randhawa is a Consulting Partner in the Consulting Business for Wipro, India. Gurbinder has over 18 years of Consulting and Management experience across Public and Enterprise verticals. Her areas of specialization include Cloud Consulting, Program Management, ERP Consulting, Cost Optimization, Thought leadership, Solution Theme Building, Practice, Business Development, and Revenue Generation. She has written POVs on various topics covering Artificial Intelligence, Fraud Detection in GST, Trillion Dollar Economy, and Digital Economy. Gurbinder can be reached at gurbinder.randhawa@wipro.com
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Air Travel Post COVID-19

----- Arcticle source ----- https://www.wipro.com/consulting/air-travel-post-covid-19/ ----- About the Author (s) Contact Wipro Please fill the required details to access the content Air Travel Post COVID-19 Aviation Moving Toward Singularity September | 2020 The COVID-19 crisis is disrupting the aviation industry in a big way, leading to a significant decline in passenger numbers and a shift in passengers' perception about air travel safety. How we help allay these fears and address the evolved needs of passengers post-pandemic will define the new normal for the aviation business. Emerging technologies will power business transformation with new operation

processes and new service practices at the airport to drive self-sustainable digital transaction that will provide greater autonomy to the users, the delivery staff at the airport, and the ensuing partner ecosystem. Airline passenger experience post COVID-19 Let me take you on a journey with Rita, whose work requires her to travel extensively. Today is her first post-pandemic flight. This time, at the airport, Rita's anxiety and stress levels are peaking, but to her surprise, airport infrastructure and ambiance look different. There are wider physical spaces, multiple fever scanners, on-screen and audible alerts to identify individuals in a large crowd situation, aiding rapid detection and maintaining pedestrian flow. Airport staff is stationed at designated locations, safely behind transparent counter shields, and dispensers for PPE safety kits, sanitizers, and antimicrobial packaging are placed at multiple locations within easy reach of the passengers. The airport floor is covered with self- cleaning carpet and all information, schedules etc., are displayed on huge digital screens. Rita is delighted to find that these digital screens can be mimicked on her personal device through a simple QR scan. An additional access to her wallet on the phone to link the boarding pass eliminates the need to touch any commonly used screen, which could be a breeding ground of contamination. These screens are designed to make use of her phone's real estate and does not require her to download the airport mobile app, though there is a link to do that if she wishes to. Once inside the airport, Rita avails the newly installed self-service bag drop counter and makes her way through the non-intrusive and frictionless airport security process supported by camera vision-enabled body scanner. Using the new interactive indoor navigation map, Rita moves to the retail area and is relieved to note that passengers are evenly spread out maintaining the norms of social distancing, guided by floor markings. The airport staff is seen keeping an eye on passengers through camera vision technology to mark and identify those not wearing masks and/ or not following social distancing norms. Rita finds that the mobile app driven by the conversational AI bot Ansh, can efficiently guide her to offers, notifications, information, availability of sanitized seating places, retail, F&B and other amenities around her. Using the GPS coordinates, she also gets an option to view the sanitization reports of the seating and other common facilities like the washroom, prayer room, and water dispenser in her vicinity besides having extensive videos about the new safety measures, practices, emergency and exit plans at the airport. As Rita is settling down with a steaming mug of coffee, she notices that Ansh has quietly offered her a plethora of engagement channels, from music and video streaming apps, to e-library filled with e-papers, e-books, magazines, audio books, documentaries, and exclusive online games. She is amazed to see that the engagement channels are premium and she is not required to pay for the content while she is at the airport. Rita gets notified on her mobile app about boarding in 'just-in-time' method, which is calculated exclusively based on her distance (enabled by GPS location) from the boarding gate, resulting in free flowing, and social distance maintaining queue for safe, secure and easy boarding. Rita is delighted with her experience at the airport - the uncrowded, clean and sanitized areas, and the attention to detail displayed by the airport comforts her as a passenger and enhances her experience with multiple thoughtful gestures embedded as functionalities. Reimagining aviation in the new normal Travel will prevail over post-pandemic stress, making it incumbent on the aviation industry to

bring about the changes that create safer infrastructure and practices that take care of the safety and wellbeing of passengers, airport staff, and partner ecosystem. Along with safety, airports also have to look at building a collaborative and efficient operating environment, which will not just facilitate recovery from this crisis but also shape the new normal. Evolved workforce management practices should be deployed to enforce a culture of safety in the very fabric of travel service industry. Organizations will have to encourage employees to rigorously practice and transparently report the hygiene and sanitization processes. Technology will help airports establish best practices. Human-centric design thinking that draws insights from cognitive, social psychology, neuroscience and behavioral economics should be applied to build airport's digital applications. These design principles will enable frictionless digital experience for passengers and build positive perception among users along with discouraging stigmas and misinformation. While airports are now focusing on redesigning the passenger journey touchpoints to build contactless solutions and ensure safety of passengers and employees in compliance with government guidelines; they also need to think beyond, and in collaboration with airlines and other ecosystem partners at the airport, build a digital ecosystem that enhances the complete passenger experience. Over the past few months, Wipro has worked with Airports and Technology partners to facilitate seamless, touchless journeys for passengers. We have enabled integrated and collaborative management systems powered by digital. These digital airport solutions aim to build a connected ecosystem for end-to-end airport systems management from IT and OT systems integration to flight and airside digital operations management. Our customers - three large global airports - have been ranked as best airports in ASQ rating for 2018, 19. Contact us to know how we can help you adapt to the new normal of air travel and achieve high passenger satisfaction. Shubhi Jaiswal Business consultant with Wipro's Global Consulting Group for the Airport Industry. She has over six years of experience working across Retail, BFSI, Manufacturing, and Airport Industries in Technology, Business Transformations, Innovations, and Operations. Shubhi can be reached at shubhi.jaiswal1@wipro.com   Wipro Ltd. and Aviation Industry Wipro Limited, a leading global information technology, consulting and business process services company, has a dedicated airports business division to address the challenges faced by the industry. We build industry reference solutions using a combination of digital airport vision, smart airport model, and solutions/accelerators for improved efficiencies that drive velocity, flexibility and cost benefits for our customers. We deliver end-to-end services for global airports across geographies.
===================== ----- Arcticle source ----- https://www.wipro.com/consulting/resetting-the-future-of-work-agenda-disruption-and-renewal-in-a-post-covid-world/ ----- Contact Wipro Please fill the required details to access the content Resetting the Future of Work Agenda: Disruption and Renewal in a Post-COVID World December | 2020 The future of work has been predominantly linked to advancements in technology, workplace design, and business transformations. The conversations around the workforce, its principles, and governance have undergone a drastic shift during the COVID-19 crisis. This change has presented employers with a rare opportunity to reset traditional models. Chief people officers and other human resources and business leaders have the responsibility to build on

what they learned from the crisis response and reset their agenda for the future of work. Access the report Resetting the Future of Work Agenda: Disruption and Renewal in a Post-COVID World to know Wipro's key insights and lessons from the COVID-19 crisis response. The report, developed by the World Economic Forum, brings together perspectives of over 60 Chief Human Resources Officers from leading global employers, including Wipro, on how organizations are preparing for the post-pandemic 'new' future of work. ======================

How User Persona-Based Services Can Transform Your Organization

----- Arcticle source ----- https://www.wipro.com/consulting/how-user-persona-based-services-can-transform-your-organization/ ----- About the author(s) Contact Wipro Please fill the required details to access the content How User Persona-Based Services Can Transform Your Organization December | 2020 What is digital transformation? Is it an injection of technology to simplify and automate day-to-day activities? Or is it leveraging advanced technologies such as augmented reality and artificial intelligence to derive insights? We see that it is all of these and more. Digital transformation, for us, is about enabling transformation across People, Process, Data, and Technology to deliver a greater experience to end users and drive desired business outcomes. Figure 1 shows the 4 pillars of digital transformation and the technology involved in building these. Figure 1: The 4 pillars of digital transformation   How can we engage the 4 pillars to simplify the life of end users and provide them an ideal experience driven by insights? Persona-based Services is the solution. What is persona-based service and why do you need it? Persona-based service provides hyper-personalized services to end users. This is essential as the end users today expect a seamless and personalized experience with minimal manual interventions. They want customized solutions to meet their specific requirements. Hyper-personalization creates highly contextual communication relevant to the user leveraging behavioral and real-time data. Personalization of services improves engagement levels and productivity. An increase in overall satisfaction promotes loyalty and retention. It also allows organizations to gain more data about their employees to tailor their experiences proactively, rather than reactively. Figure 2 shows the relevance and impact of persona-based service management in an organization. Figure 2: The relevance of persona-based service   With COVID-19, the uncertainty and disruption in the day-to-day workspace and well-being of employees has exponentially increased. While the focus is currently on reviving operations, we believe the time is right to orient and map unavoidable upgrades with the employees at the center. What are the personas in a manufacturing organization? The personas are built on various parameters, ranging from the roles they perform to their interactions with the client and the support they need from other teams, including IT. As an example, here are some of the personas we have created for a manufacturing organization: CIO – This persona provides thought leadership to the manufacturing organization and leads the digital transformation for IT. Connected Field Engineer – A critical

persona who acts as the face of the organization for its various clients. They should ideally receive priority support as any delay caused in their services impacts client experience. Connected Corporate User – These personas are part of the corporate roles such as Finance, Marketing, and HR and generally expect a seamless, omni-channel and self-service enabled experience. Connected Plant Engineer – They are the critical personas who support the day-to-day manufacturing activities in the plant and ensure that plants function with minimal unplanned downtime. Interns – These work in a range of roles and act as evangelizers of the organization. They have high expectations and expect a hyper-personalized, digital experience. Figure 3 depicts illustrative personas in a manufacturing organization. Figure 3: Personas in a manufacturing plant   How does persona-based service help end users? Persona development allows services to be mapped to the various personas. This enables organizations to hyper-personalize various services and improve end-user experience. Figure 4 shows how services are categorized and aligned to personas for personalizing IT end user support. The services range from hardware and software distribution to Tech Bar and vending machine support. Even hardware types such as a standard laptop to rugged devices and iPads are assigned to each persona, allowing faster onboarding and increased productivity. Figure 4: Mapping services to personas   How to create persona-based services? Building persona-based services is a 5-step process that ranges from 8 to 12 weeks for a mid-sized organization. Figure 5 demonstrates the process to create an effective persona-based end user support services in an organization. Figure 5: The 5-step approach to persona-based services   The impact of persona-based IT Support Let us take the example of Clayton, who works as a Plant Engineer at Track-Type Tractor Assembly in Charlestown, Boston. He is responsible for ensuring that various plant equipment runs seamlessly, with minimal downtime. A day in Clayton's work life Persona-based service interventions Increase in CSAT Clayton leveraged an iPad from Digital Locker, enabling collaboration and image capture. This resulted in faster resolution of the issue and reduced equipment downtime. All this was done with no intervention from any other team, again optimizing the actual time spend on resolution. If you're interested in learning more about Persona-based Services and how you can leverage the same to transform your employee experience, contact us today to begin. We can perform a Design Thinking workshop to develop a roadmap for your organization. Namit Bhargava GM & Head of Digital Sales, Digital Transformation, Wipro Namit brings innovative strategic perspective on Digital Transformation and Industry X.O themes for superior customer experience. He is a thought leader for CXO conversations, including digital strategy, transformation, new business models, and innovation. Connect with Namit at https://www.linkedin.com/in/nbhargava/ Savish Sadanandan Senior Consultant, Manufacturing Digital Practice, Wipro Savish focuses on bringing digital solutions across the Manufacturing value chain. He likes to analyze and understand the client's pain points to identify linchpins which can drive digital transformation. Connect with Savish at https://in.linkedin.com/in/savishsadanandan Sweta Nair Consultant, Manufacturing Digital Practice, Wipro Sweta is passionate about delivering best-fit solutions to clients with focus on powering digital transformation and customer experience. She helps clients equip themselves with the right technology solutions to drive business outcomes and be

future-ready. Connect with Sweta at https://in.linkedin.com/in/sweta-nair
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How to Build a Digital Initiative Transformation Office?

----- Arcticle source ----- https://www.wipro.com/consulting/how-to-build-a-digital-initiative-transformation-office/ ----- About the author(s) Contact Wipro Please fill the required details to access the content How to Build a Digital Initiative Transformation Office? Program and Portfolio Management Post COVID-19 February | 2021 Have you recently wondered if your program and portfolio management (PPM) capability has kept up with the ever accelerating pace of digital change during the pandemic? If yes, you are thinking right. As other digital practices mature, it is now the time to kick-start a PPM upgrade that scales along with your upcoming initiatives and gives you a head start out of the COVID-19 crisis.   COVID-19 accelerates existing program and portfolio management trends The ongoing Coronavirus pandemic is a pressure cooker for business and IT capabilities alike. While organizations with a low digitization maturity risk falling behind the curve even faster, competitors will excel and come out of the crisis stronger than ever. Increased pressure on an organization as a whole and PPM comes via the following trends: 1.   Agile methodology: Companies have invested in upskilling their teams in agile methodologies and started to adopt frameworks like SAFe1 or LeSS2. The future will therefore see fewer traditional v-model based programs and projects. 2.   Remote collaboration: Offices and delivery centers are closed, forcing colleagues to work from home. With COVID-19, agile teams must therefore be well equipped to deliver initiatives remotely across the globe in a seamless way3. 3.   IT metrics: The approach to measure the success of IT initiatives is shifting away from traditional cost-center driven metrics such as on-time and on-budget delivery towards more evolved means such as release frequency, risk mitigation and time-to-market. 4.   Product centricity: Internally, many organizations are moving away from a project-oriented delivery model towards a more product (or service) centric organization. New roles such as the product owner are emerging and other roles like the traditional project manager are becoming less prominent. 5.   Technology shift: The technology landscape is changing rapidly, especially trends around cloud computing4 have significantly impacted not only how infrastructure and software is delivered and hosted but also how IT organizations are structured. 6.   Customer first: Besides agile, related methodologies such as design thinking6 are shaping how products and services are delivered in the future and therefore, have a major impact on PPM capabilities. 7.   As-a-service models: On one hand, many organizations discover as-a-service as an additional lucrative source of income for their own business models. On the other hand, they intensively leverage the whole bandwidth between infrastructure and software as-a-service offerings to increase scalability, flexibility and drive down costs. While the traditional role of program management will eventually disappear, there is a great opportunity for the PPM capability to reposition itself as a key enabler and driver for digital

change in a post COVID-19 world. This is what can be referred to as a Digital Initiative Transformation Office. Why act now? During COVID-19, every organization realized that being digital is paramount for survival and therefore, many new digitization initiatives have been started. Organizations are now building the foundation for future growth. Operating in this new-normal world with a "survive - grow - transform" mindset requires a stable foundation for planning and execution that can scale quickly and reliably. Scaling only works though with the right people, processes, methods, metrics and tools in place. This is where the implementation of a Digital Initiative Transformation Office (DITO) becomes relevant. Form a mission statement To provide guidance on setting up a DITO, it is important to understand the overarching objectives and mission statement of this entity. Typical objectives are: Those objectives need to be tailored for each organization. Based on the identified objectives, a mission statement for a DITO could be the following: Mission statement: The Digital Initiative Transformation Office is the central umbrella view across all digital initiatives from ideation to go-live and operations. It will a) provide transparency on how well we perform towards achieving our business objectives and b) accelerate and mature our digital delivery capabilities by c) foster a strong alignment between business and IT. It will do so by providing the right mix of people, processes, metrics, methodologies and tools. Introducing the Digital Initiative Transformation Office The DITO is an integral part of the end-to-end digital decision-making cycle. Only then can it provide the needed holistic support throughout the digital investment lifecycle. It enforces a structured approach that all stakeholders can adhere to. The key capabilities of a DITO are depicted in Figure 1. Figure 1: Key capabilities of Digital Initiative Transformation Office The supported digital investment lifecycle typically consists of the following six phases. Those phases might vary for each organization and the model should be adjusted accordingly. 1.   Shape business strategy: Reinvent or update the business model and challenge every aspect of an organization. Design how an organization will interact with customers and its ecosystem and how that affects processes and structures. 2.   Evaluate digital maturity: Conduct an honest assessment of an organization's digital capabilities in comparison to competitors. 3.   Identify digital opportunities: Identify, which ideas have the highest potential and how does that stack up to an organization's capability. Define how success will be measured and who will be accountable. 4.   Define digital transformation roadmap: Define the right mix of initiatives and resources that best align to the identified business ideas. Take into consideration the current organization's capabilities and architecture. 5.   Implement digital initiatives: Execute the implementation of agreed initiatives. Setup the right governance and delivery methodologies. Move quick and maintain the needed agility to react to an ever-changing environment. 6.   Harness digital capabilities: Rollout products and services to end users as quickly as possible. Get feedback early and adapt accordingly. Conduct an outcome-based assessment of what your organization is delivering to customers. PLAN capabilities Figure 2 shows the five core planning capabilities where the DITO can position itself to support the wider organization. Figure 2: Core planning capabilities DITO supports A big paradigm shift impacts most organizations during their digital transformation: the need to break open existing silos and move towards a more product / service centric organization. Therefore, all

planning related capabilities must be adjusted. Agile cross-functional teams can be formed and eventually the definition and approval of demand is conducted within the different products. The product is where IT and business colleagues work close together and where an impulse for future growth is sparked. This itself has an impact on how IT budget is allocated. Rigid IT budgets no longer suffice. Instead, organizations are moving towards flexible budget guardrails to give teams the needed level of agility. Decision making metrics must be rethought and engrained in the demand- and portfolio management processes. In a digital world, it is even more important to find the right mix between traditional business and investments made for rapidly growing or emerging business. As technology is a significant enabler for innovation and therefore business growth, mechanism must be put in place that ensure that enough time is allocated for technical innovation and experiments. To avoid waste, it must be incentivized to share insights on new technology across teams and products. To not lose sight of the big picture, activities across products and services must be streamlined based on a clearly defined set of rules that a) have the built-in flexibility to react to change and b) provide the long-term guidance needed in larger organizations. EXECUTE capabilities Once an initiative goes into execution mode, the set of capabilities given in Figure 3 play a crucial role. Figure 3: Core execute capabilities DITO supports From a delivery viewpoint, having the right processes and tools for scaling in place is paramount for a successful IT organization. An organization must balance the need to move quickly with the best fit-for-purpose technology while at the same time not piling up additional technical depth across the organization. Especially larger, established organizations rely on existing programs and applications that are best delivered via a traditional v-model approach. At the same time, agile teams have become the norm. Hybrid approaches must be designed that allow agile teams to release features in short time intervals while still adhering to an organization's quality gates and release windows. Change never comes easy: every organization needs to adapt to the new ways of working. True digital leaders understand the networks within an organization and can bridge the gap across formerly divided silos. They understand that innovation happens at the intersection of different disciplines and they can apply systems thinking. The organization should always work towards the global optimum instead of looking for the local optimum. The performance management process and associated metrics must be rethought so that the envisioned way of working is incentivized. In case an organization wants to become more agile and flexible, KPIs must be reworked and the right tooling needs to be in place to measure them. How can you start? Take a minimum viable product approach! Any of the five DITO building blocks (people, processes, tools, metrics and methodologies) can be taken as an on-ramp scenario. As a rule of thumb, pick one or multiple building blocks and implement them across one (at most two) capabilities as a starting point. This results in a maximum of ten initiatives that will be targeted in parallel (See Figure 4). The less items you focus on for your MVP, the more likely you are to set yourself up for success. Figure 4: Creating on-ramp scenarios Here are four potential on-ramp scenarios that have proven successful: Scenario 1: An integrated tool suite for target landscape design and delivery management Tooling is a great starting point to drive behavioral change within an organization. With this scenario, it is important to pick tools that already come with preferred-practice processes,

data model, reports and workflows. It is important to choose a trusted implementation partner to avoid upfront design decisions that will hinder wider adoption when ready for scaling. Figure 5: Tools for target landscape design and delivery management Delivery management and target landscape design are two capabilities that are well suited due to the high tool maturity and relative ease of tool setup. Those type of tools also have an immediate impact and can be deployed quickly for agile teams doing product development or cloud transformation initiatives. Scenario 2: Introduce a common agile methodology for delivery management Typically, an organization has already deployed a variety of agile teams without ever developing a clear vision on how their work can scale and blend in with the rest of the organization. This is where agile frameworks such as SAFe come in. The DITO can become the leading unit to streamline agile initiatives and, together with the agile teams, define the ways-of-working that should be adopted by all agile teams. It is advisable to listen to the lessons that successful teams have learned previously. Figure 6: Agile methodology for delivery management The added value that the DITO can bring on top of the mentioned frameworks is the fact that hardly any organization will make a 180-degree turnaround to fully adopt one of the frameworks. Instead, different components of the framework(s) must be leveraged in perspective. Scenario 3: Move towards product-centricity True agile organizations must move towards a more customer-focused setup and form cross-functional teams. One solution is to reorganize around products and services and set up the respective agile teams. Figure 7: Product-centric approach The DITO can become the entity to give the right impulses and provide guidance on this endeavor. Scenario 4: Agile demand and portfolio capability If portfolio visibility is your biggest pain point, then try to go with scenario 4. You will leverage the DITO to establish common processes and metrics for demand requestors and portfolio managers that combines v-model and agile initiatives. Figure 8: Agile demand and portfolio capability It is advisable to target a certain project or product and use it as a prototype to establish new ways of working, tooling, etc. Once operational, this model can be scaled and rolled out across the wider organization. 3600 digital transformation management This article has introduced the concept of a Digital Initiative Transformation Office. The DITO forms a central umbrella view to manage the diverse set of digital initiatives in your organization. The DITO is a combination of people, processes, metrics, methodologies and tools (building blocks). The on-ramp scenarios can be used to discuss potential starting points in your organization. References Nils Ackermann Managing Consultant, Wipro Digital CIO Advisory Nils has more than 15 years of experience in delivering the whole bandwidth from smaller strategic IT assessments up to multi-year systems integration initiatives. He has implemented agile and v-model aligned IT Governance processes and tools across a wide variety of global organizations. Nils is based out of Frankfurt, Germany. If you want to find out more on how to set up a Digital Initiative Transformation Office, reach out to Nils at nils.ackermann@wipro.com
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How a Change Management Office Can Solve the CIO's ROI Problems

How a Change Management Office Can Solve the CIO's ROI Problems March | 2021 CIOs are increasingly questioned about the ROI from technology investments, but shortcomings don't always lie with the technology itself. Management research studies indicate that 60-70% of technology programs fail or do not meet the intended objectives due to poor people adoption and organizational issues. Many companies undertaking large-scale programs are beginning to factor change management into the process, but some still do not. They should. Change management is critical to the success of any transformation project. Today, many transformations intended to meet the challenges of digital disruption are of a varied nature, scope, and scale. When starting a new project, the lack of synergy and coordination within the organization leads to inconsistent messaging, lack of best practices, and incompatible tools and processes. There are also challenges about how to manage the people side of disruption to derive business value. A change management office (CMO) is uniquely positioned to address these issues while managing change across the organization. The issues preventing most projects from success can be summarized into three themes: These challenges can each be overcome with a CMO managing the change. Without one, enterprises risk slower adoption and potentially greater expense. Consider the following examples: Key change management challenges for CIOs Today, CIOs are finding it increasingly difficult to prove positive impact across the organization. The value created by IT is not properly recognized. Most of the organization views IT more as an operational department rather than a strategic enabler. Among the many variables contributing to this view, absence or poor change management in IT projects is a key factor. The primary change management challenges faced by CIOs of large organizations include: Due to the complexities inherent in global organizations, many are now seriously exploring the idea of having a centralized change management office to build enterprise-wide change capability. The idea of a change management office has been there for some time, but few organizations embraced the concept. Most studies show that organizations that do not adopt CMOs have largely remained dysfunctional and project management continues to operate in silos. The Change Management Office (CMO) is an entity within the organization which takes care of all the organizational change management requirements. It is a department or group formed by a team of specialized individuals mandated to bring uniformity, common language, and framework to change management efforts. CMOs support integrated change management effort bringing synergy and consistency to any project by designing common tools and templates to use across the organization and serve as a center of excellence. The key advantages of having an integrated change management office can be summarized as: The CMO can help build

change maturity in the organization. It operates similar to a project management office (PMO), and includes a centralized pool of dedicated change consultants. The CMO provides a focal point for governing, structuring and implementing change initiatives. It legitimizes change activities and ensures a consistent approach to the "people side of change", which is where many projects fail. It addresses communications, training, and effective management of change across a portfolio of change programs. A structured approach is followed, increasing the likelihood of a successful implementation and adoption of new or existing programs in any organization. Industry and research insights on the CMO Change management research conducted by many organizations like Prosci shows that a change management office is increasingly being used to develop enterprise change management capabilities, build agility, and increase change readiness. In 2017, 40% of the participating organizations reported to have a CMO, or a "functional group" dedicated to change activities. Larger organizations were more likely to have a CMO, especially in retail, banking, government, finance as well as oil and gas. A CMO should not be confused with an office supporting one change activity; the CMO should be used in all projects that result in change. In Prosci's 2017 study participants identified the establishment of a CMOs as the number two trend expected in the discipline of change management in the coming years. How to build a Change Management Office This approach provides a roadmap to effectively create and transition to the new model of managing change, built on previous experiences and globally accepted practices The CMO is designed to manage multiple programs within multiple portfolios, eliminating duplicative work, creating a better user experience, and consistently managing change. CMO establishes a centralized hub for all organization change management activity across all projects. The CMO function will align itself in the current structure to drive consistency. Whether the change management office is an independent department within the organization, is part of human resources, or within IT, depends on the unique working style of each organization. But wherever the CMO sits, an operating model of managed change will benefit any organization. Based on our collective experience over a range of geographies, cultures, and industries, we can categorize the journey to build a CMO across four levels Operating Model of a CM The CMO may operate in multiple models depending upon the organization, its geographical spread, culture, needs, scale, change maturity, and agility. The following hub and spoke example model demonstrates how each project, based on size and complexity, may be delivered via different hub teams. This model gives the flexibility and scale to meet the unique needs of any organization. It can operate in a centralized, decentralized and hybrid structures, whether the change function reside in the organization generally, the IT, or HR department. Wipro's change management as a service solution proposition For organizations to achieve successful adoption of new process and technology adoption across the enterprise, we look to standardize the way change is executed. Through our change management as a service model, we help enterprises implement change plans with a flexible resourcing model and provide innovative tools, templates, and best practices to expand industry wide accepted models. For a repeatable process, we engage the business to drive change within their organization, and build capabilities to sustain enterprise wide change. Mohammad Tanweerul Hoda Consultant, Wipro

Digital Consulting Tanweer is part of Wipro's Talent & Change practice in the Middle East and has over 12 years of experience. Recently, he has been working with organizations on managing organizational changes due to shifts in strategy, new technology implementations, managed services transition, IT BAU Demand Management and change advisory. Before switching to consulting he spent his years as part of Corporate HR team for a global telecom OEM in various HR functions bringing a holistic, harmonized, and viable approach to consulting engagements. He can be reached at mohammad.hoda@wipro.com =====================

How Healthcare Companies Can Get their Data Monetization Strategy Right

----- Arcticle source ----- https://www.wipro.com/consulting/how-healthcare-companies-can-get-their-data-monetization-strategy-right/ ----- Contact Wipro Please fill the required details to access the content How Healthcare Companies Can Get their Data Monetization Strategy Right April | 2021 As per a BCG report "while many companies have high data ambitions, few achieve those ambitions. In 2019, only about 10% of companies reported that they had met the data targets set in 2016. Moreover, most were far from achieving their 2021 ambitions set in 2018." [1] Many companies have been unsuccessful in identifying the right data strategy that can give them sustained competitive advantage. Lack of data maturity has been a reason for this failure. To achieve their data ambitions, organizations need to focus on the impact areas based on available data and applied algorithms. Companies like John Deere, Kroger have identified their most valuable set of data using technologies such as IoT, analytics sensors etc. They have successfully used their data sets to understand their customers, and sell insights to their suppliers and third parties to create additional sources of revenue. In this article we will explore data monetizing models, pricing strategies, and how advanced analytics platforms help in generating insights which can help the businesses get their data monetization strategy right. Data collection strategies Companies can use various strategies to collect or acquire data. This can include both, organic and inorganic methods. Collecting data from customers. Using this strategy, a company can understand their customers, take decisions related to marketing, store locations, and create hyper personalized solutions. Flatiron has developed its own oncology based EMR platform by collecting data of 2 million patient records as of 2018. Lifesciences organizations use these datasets for various use cases in areas such as R&D, and clinical trials. [2] Partnering or purchasing data. John Deere in partnership with Cornell University has created a data platform (Ag-Analytics, data platform that syncs with John Deere's operations center to access and analyze farm data) which has become a source of revenue and has created significant value for their farmer ecosystem. Using this platform John Deere performs analytics of the data and farmers use these tools for estimation, forecasting, risk management of crop maintenance, and soil health.[3] Acquire a company.

Companies that are not able to process the data or not able to get the data required from any partnerships, could go for acquiring a company. Kroger has acquired a data analytics firm 84.51, which helps its biggest suppliers to understand the behavior of customers (60 million households) that shop at Kroger. This helps the supplier design better solutions and services.[4] Building an ecosystem. A company that possesses a significant amount of proprietary data and can buy or partner for additional data may be able to orchestrate an ecosystem that other companies participate in. Goldman Sachs in 2012 acquired a credit-reporting firm TransUnion and converted it into a data mining giant in just 3 years. TransUnion now has a large base of data sets, it continuously analyses those data and sells it to insurers and lenders.[5] For these strategies to create full impact, companies need to build a data-first culture. This can be done by investing in skills specific to using analytical insights. They should also run change management programs to create new mindsets and ways of working, and break silos by making cross-functional teams to share data, and create new roles and governance process. [6] Data monetization operating models The two main roadmaps for data strategy and monetization are internal and external. The first one focuses on leveraging company's data to improve its operations, productivity, quality of its products and services, and marketing campaigns. The second focuses on increasing the number of revenue streams - sell data as a service, sell data platforms, and create personalized products for its customers and partners. Analytics Platform as a Service. Companies use proprietary and sophisticated algorithms to generate highly personalized insights and data. Real-time insights are provided through a platform that is cloud based or self-service. Data analytics platform Predix owned by GE provides services to customers that helps increase the efficiency of its equipment. It also provides Energy Management Systems to its commercial and industrial customers. [7] Insights as a Service. Companies combine internal and external data sources, apply advanced analytics methodologies to provide insights to their customers. AkzoNobel provides an analytics based iOS app to its ship operators that provides performance prediction, financial predictions, and cost-benefit analysis thus enabling them to make informed decisions. They also provide a decision support model to its ship operators enabling energy cost savings. [8] Data as a Service. This is one of the simplest models where data is aggregated, anonymized and sold to partners and customers. Kroger helps consumer packaged goods companies in understand evolving habits and trends of shoppers by selling shopping data generated from their loyalty and reward cards. [7] Improving Outcomes and Productivity. Companies use Big Data solutions, which help them analyze their costs, selling price, and marketing campaigns, thus improving their savings, profitability, services etc. A battery manufacturing company used data from inventory and datasets of order backlog to optimize raw materials costs, maximize selling price and increase margins. [9] Hurdles in the data monetization journey Considering the sensitivity of data, any data monetization strategy must adhere to regulations like GDPR, HIPPA, and data protection acts of respective countries. [10] Consent Management. Getting the consent of consumers to use their data is the biggest challenge for companies. Companies have access to loads of valuable consumer data such as transactions, financials, and biometrics. Companies need to find a way to incentivize consumers for access to their data and make sure to handle it securely. [11] Data Governance. Companies should efficiently

onboard diverse set of data, ensure right quality of data in the system, have the right security in place and should be able to trace insights to the data source. [11] Data Security. The most critical part is the safeguarding of consumer data. Companies should build capability in role-based masking, anonymization, encryption of data, and network safety to make sure data, be it personal or enterprise, is safe. [11] Pricing strategies for data monetization Building a successful pricing strategy is one of the vital aspects for a data provider to have a successful data monetization strategy. The two primary strategies of pricing data products are: Cost-Based Pricing & Value Based Pricing[12] In cost-based pricing, the price is determined by adding a markup to the unit cost. Vendors need to determine the variable and fixed components that will be needed to build, maintain, and deliver the product. In value-based pricing, the value that customers derive from the product determines the cost of the product. This is not an easy task and requires many considerations and assessments. The pricing techniques that can be used are given in Table 1. Table 1: Pricing techniques for data monetization Winning with a solution built on data pipeline and AI-driven decision engine An advanced data analytics platform can provide a framework that allows Data Scientists to leverage data to create value-added insights. Companies can use this kind of platform to unlock value from data across the value chain and this can become an integral part of their data monetization strategy. It should have features like deep learning platforms, pre-built data science applications, high processing event processing platforms.[11]. See Figure 2 and 3. Figure 1 - Data Discovery Platform – Building analytics apps Potential data monetization market segments for health sector companies Research Organizations. There has been a huge growth in the volume of data and real-world evidence. Harnessing this will provide a great opportunity to reimagine and develop new approaches to clinical development, speed innovation and improve clinical outcomes. Leveraging a robust big data analytics platform will enable companies to take advantage of data. Using advanced analytics methods such as machine learning and predictive modelling, data scientists of IQVIA are able to provide insights and predict challenges before they occur.13] Innovators. Data sets in pharmaceutical innovators pose a challenge for analytics programs due to their complexity, density and diversity. To overcome this challenge, innovators can use robust data analytics platforms, for instance, through strategic partnerships that will enable them to improve efficiency, and clinical outcomes. Roche acquired Flatiron, an oncology based data platform that captures data from hospitals, health centers and generate insights from it. This will enable Roche to leverage data to boost its capability in R&D, and drug development. [14] Providers. As the trend of patient-centric approaches for healthcare keeps increasing, the providers need to align accordingly. With increasing complexity in surgeries like robotics, providers will need to have a robust data analytics platform to cater to image data, patient data etc. Advanced analytics models need to be deployed to have better accuracy and efficiency in surgical performances. With the help of advanced analytics using business intelligence platform, Western Maryland Health System was able to reduce the cost by 78%. They were able to generate valuable insights from their patient data, which resulted in cost savings of $112,000 over 6 months. [15] Payers. With the industry moving from volume-based care to value-based care, payers are faced with challenges to shift their business models. Payers

will need data analytics tools to overcome the challenges and enable better revenue recognition, new payment models, better options to patients, and fraud detection. Oscar Health is using data to help its customers increase their awareness about care they are receiving. They are able to help the patients with better choices of doctors using better pruning mechanism. [16] Digital Health Startups. Digital health startups are increasingly using data to devise their product offering. They are well positioned to cater to the ever-changing consumer behaviors due to their agility and smaller size. With the help of data, they can provide more predictive healthcare offerings, detect disease outbreaks, and personalize offerings. A digital health startup Medopad has developed an app that collects data from wearables, mobile devices, and medical bodies and analyzes those data to prohibit chronic disease. [17] Internal beneficiaries Companies can benefit in various functions internally in terms of cost savings, improving efficiency, and optimizing operations. Sales & Marketing. Sales & Marketing divisions can use analytics platforms to focus on reducing infrastructure costs, and maximizing sales outcomes. Enterprises can look at adopting cloud based Big Data platforms to accommodate their customers and vendor base. A global pharmaceutical and medical device major was able to achieve a savings of $1.5 mn from campaigns by using high performance Big Data platform. [18] Supply Chain & Operations. The need to manage product, customer and vendor, clinical and research data is extremely critical to the pharmaceutical industry. Companies can look at building a data management platform that can transform their sourcing and procurement function. A global pharma major was able to reduce cost by 25% in operations through master data management lifecycle solutions. [19] Workplace Management. Data analytics can offer many gains in the area of workforce management like using data analytics to determine the payroll of employees based on KPIs and workload management. A leading US retailer was able to increase customer satisfaction and $100 Mn in savings with the help of predictive analytics used for store labor optimization. [20] Reshaping healthcare with data monetization As the volume and complexity of data keeps increasing, there will be ample opportunities for companies to monetize their data. Companies in the health domain can leverage their data to gain advantage by improving the efficiency of their own business unit and/or by selling services using the data. To overcome the complexity and regulatory challenges of data monetization, companies will need to have robust data analytics and AI capabilities, which will enable them to tackle high volume of data and empower them to generate real-time insights for their ecosystem of partners and customers. Want to know how Wipro's Data Discovery Platform can help make your data monetization journey successful? Schedule a discussion with our experts. References
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Organization Change Management: A Key Ingredient For Successful SAP-ERP Implementations

----- Arcticle source ----- https://www.wipro.com/consulting/organization-change-management-a-key-ingredient-for-successful-sap-erp-implementations/ ----- About the Author Contact Wipro Please fill the required details to access the content Organization Change Management: A Key Ingredient For Successful SAP-ERP Implementations May | 2021 Implementing or upgrading an SAP-ERP can provide an advanced, flexible IT landscape that helps organizations adapt quickly to dynamic market requirements and to improve efficiency, digitalization, and cost optimization in the long run. But SAP implementations are rarely just technical implementations. They can fail when companies neglect the need for organization change and the transformation journey. Many enterprises underestimate the effort required to change their internal behaviors and ways of working. For example, a leading multinational conglomerate implemented an order management system as part of its SAP package, which cost around $120 million. The system was supposed to save the company more $10 million per year, but it had quite the opposite effect. The organization's sales representatives struggled to adapt to the new system. Getting early buy-in from the end users and providing adequate training was overlooked. Another construction materials company implemented an SAP system and estimated it would generate $12 million to $14 million in net sales after it went live. In fact, the company's profit dropped by 45%. The major reason for this failure was not the new process or system but the lack of user adoption. In fact, when organizations and their people are not prepared for the transformation, implementation can take more time and more money. The key to a successful SAP implementation is a comprehensive Organizational Change Management (OCM) strategy. To achieve actual business benefits and increase user adoption, people need to engage continuously, sharing their concerns and feedback through a constructive change management roadmap. Software Advice, a Gartner company, has identified the key reasons for SAP or any ERP implementation failure as shown in the graph below. Half the respondents cited poor change management as the primary reason for SAP transformation failure. Fig: Why ERP implementation fails? Organizational Challenges in SAP Implementations The business impacts of an SAP implementation demonstrate the importance of change management: These challenges can be illustrated through real life cases. Case 1: SAP Concur Implementation A major oil and gas company wanted to leverage their expense management process and systems by implementing SAP Concur and integrating it with their core SAP system. Users are dispersed across 10 different countries. This new SAP implementation resulted in a new way of submitting the expenses. User adoption was not to the expected level and, as a result,

business benefits were not achieved. The company did not have the proper channels to handle the people side of change. and facing difficulties in spreading awareness and conducting training as their people across locations and time-zones. Employees were not using the system effectively. Change management was not initiated until late in the project life cycle when change resistance and misinformation were on the rise. After handling the people side of change through a change consultant, the client was able to achieve the desired end-user adoption levels across locations and the number of helpdesk tickets related to expense was significantly reduced. Case 2: Vendor Invoice Management The client implemented the SAP invoice management workflow to automate the end-to-end invoice process. The scope covered internal and external stakeholders and business processes, and the new SAP system implementation introduced a new way of submitting, processing, and approving invoices. However, end-users were not properly or adequately trained, and post-implementation adoption levels were low: less than 10% of the invoices were being processed using the new system. The organization resisted embracing the transformation because the client did not have a proper change management strategy and approach to onboarding internal and external stakeholders. The actual business benefits of the system were not achieved, and leadership considered canceling the project. However, they decided to introduce a strong change management team to help bring the project back on track. Stakeholders were onboarded and engaged effectively. Vendors started using the new system to submit their invoices, and internal users started using the new system to process the submitted invoices. Adoption was measured as part of the change strategy and communicated to leadership periodically. Now, the project is running successfully, with more than 90% of invoices processed using the new SAP solution. Risk of Focusing More on Technology Traditionally, executives have placed more importance on the technical aspects of implementations including functionality, reliability, timeline, and budget. In-house and external IT teams have often concentrated more on system engineering aspects than adoption and change management. Nonetheless, project overruns and failures still happen – primarily when SAP projects are managed from the technical perspective and neglect the people side. Wipro's view is that change management should be an integral part of SAP implementation from the beginning. This involves deploying a dedicated change manager or change management team with the necessary skills to handle the people side of the change effectively. Characteristics of Change Don't think about "users" – think about the people who are using the system. People have emotional reactions to change. Change management will educate leadership and end-users and make them aware of the changes that are coming their way. The key focus should be on these elements: Change management for SAP implementation follows a structured methodology that should be adopted to encourage the organization to understand and accept the changes. An organization can only get the full value and potential from a new SAP implementation after all the people who use the system have accepted the changes. Key Change Levers to Drive Any SAP Implementation Project Effectively driving change management will lead to achieving effective system adoption. Listed below are change levers used in the invoice management problem mentioned above, but which are valuable for any SAP implementation project. 1. Create a Business Case A business case will provide the end-to-end information about the change, particularly

in terms of why the change is triggered and what benefit or value is expected from it. Example: On the invoice management project, a detailed case study was prepared regarding the change. Initially, the vendor would submit invoices manually into a submission box. The expectation is to onboard all vendors and make this new solution the single window for all invoice submission. This will provide better cash flow and hence, strengthen the relationship between vendor and client. This was measured frequently against the expected results covered in the business case. 2.   Leadership Alignment Leaders across all levels must have absolute clarity on the purpose of the change and be aligned strategically. Leaders must have clarity on: Example: The executive team should have a regular update on statistics such as number of invoices submitted, processed, and paid (among others). Also, monthly reviews should be conducted to keep them engaged. 3.   Stakeholder Management Stakeholders are dynamic, and it's important to form and maintain constructive relationships with different stakeholders. People who were once supporters of the project may have learned something that causes resistance now. By spending time with stakeholders on regular basis, a change manager can monitor and maintain good relationships. Stakeholder management drives change management. Example: The invoice management project impacts both internal and external stakeholders. A stakeholder analysis provides different categories of audiences across the organization and leads to understanding of their perceptions of the project. Then, change strategies were devised to manage external stakeholders and internal stakeholders efficiently. Focused vendor sessions, and internal stakeholder sessions are conducted to listen and address their concerns and feedback. 4.   Change Impact Assessment (CIA) CIA is a detailed analysis comparing the current state to the future state and understanding the impact of the implementation on process, people and the organization. CIA helps drive the change from the organizational level to the individual level. CIA will act as the input for building communications and training strategies. It also covers a detailed analysis of job or role mapping. Example: A detailed analysis of existing and new invoice management processes against each stakeholder segment was completed to figure out the most efficient communication and training strategy. People react to communication differently and a customized change strategy is needed based on the user group. 5.   Change Agent Network Effective and excellent change management delivery requires establishing a change agent network across the organization. A group of people was selected from various department to be influencers and drive change within their user communities. They are the focal points and the carrier of the change program. Example: An influencer for every department was appointed across organization. These focal points act as change agents. Constant engagement with change agents helps take the change to the grassroots level across departments. Communications and training were executed well with the help of the change agents. 6.   Business Readiness and Adoption How prepared are users to accept changes? Before the system goes live, the enterprise should evaluate business and transformation readiness, in order to understand the level at which users are ready to accept change. After going live, the same process can be repeated to understand the adoption level of the new SAP system. 7.   Communication Communication – the right message, to the right audience, using the right communication channels, at the right time – is one of the key levers of the

change program. A good frequency of communications will keep the audience engaged. Example: With input from the impact assessment, a detailed communication strategy plan was made and very well executed. The key benefits of the new invoice management solution were communicated periodically to different stakeholder groups through all possible and available communication channels across the organization. 8.	Training Another key lever of the change program is to educate stakeholder groups about the new process, their roles, responsibilities, and the system. Understanding training needs and training the users on relevant modules, using an effective training strategy, enhances the user's readiness to adopt the changes. Example: The Concur case adopted a "train the trainers" approach. A group of internal users was educated to conduct further training and reach out to audiences across different countries. In the invoice management project, the training strategy was based on input from the impact assessment and executed at department level to reach the audience effectively. 9.	Change Reinforcement Once the change is implemented, an organization tends to move on to the next change program. However, it may not sustain the change in long term. People can turn back to their original level of comfort. That's why reinforcement is required to sustain change. For example, a celebration event or a reward and recognition program directly linked with the change can help to sustain momentum. Example: To reinforce the change in the invoice management project, a new email and helpdesk channel to address the stakeholder's concerns was provided after system go-live. "On the job" training was provided to the stakeholders required to adapt to the new solution. Detailed statistics were prepared on people struggling with the new solution, and they were supported through targeted communication and training sessions. Vendor meetings and stakeholder engagement sessions were been arranged to embrace the change. Feedback was collected and success stories were shared with audience to create positivity. Overall progress and success of the project was communicated in every stakeholder meeting to reinforce the change. Technology & People For enterprises adopting an SAP system, the focus should be two-fold: on the system-related changes on SAP but also on people side. This will increase user acceptance and adoption and leads to the desired results. Change management consulting can be the key to improving success. Organizations can also set up a change management office to increase the effectiveness of change programs if the SAP implementation is running as a different project. It is better to have a common pool of change professionals to run the programs with uniformity, common language, and framework to change management across organizations. Wipro's change management capabilities and its global pool of consultants can help technical implementation teams achieve high a degree of client satisfaction, run projects on time, and with the desired adoption outcomes. Pradeep Kumar R Senior Consultant, Digital Consulting Currently based out of India, Pradeep specializes in driving large-scale Organizational Change Management (OCM). He is an engineering and MBA graduate having total experience of nearly a decade, the majority of which has been devoted to OCM. Pradeep has also worked on technology, digital transformation, ERP implementation, and mergers and acquisitions projects.
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Next-Gen ITSM Blueprint for Digital Enterprise

Next-Gen ITSM Blueprint for Digital Enterprise June | 2021 Introduction In today's world, virtually every sector and every enterprise function has been disrupted by digital transformation – including information technology (IT), the nervous system of any business. Facilitating digital transformation is central to the IT function; IT, after all, facilitates the adoption of technologies and solutions that make digital work. But how enterprises manage the "business of IT" also needs radical transformation to thrive in the digital era. In order to provide quality services and meet enterprise expectations, many IT processes and operating models require transformation, including IT Service Management (ITSM). Stability and resilience have always been key elements of ITSM success, but today, agility and experience are becoming de facto standards. Stakeholder expectations are shifting from "first-level resolution" to "first-class experience." With these rapid changes, CXOs are finding it difficult to align their ITSM models with new organizational strategies. Taking the existing challenges to a next level... Traditional ITSM best practices and frameworks have served companies well, but now, users demand faster services and better experiences. Meeting these expectations with a traditional ITSM model can't be done. Most existing ITSM efforts still operate with legacy processes and siloed functions and are output-focused. Many organizations also face significant issues such as IT landscape complexity, reactive processes, inadequate process definitions, and the lack of integrated platforms. And there is less focus on ITSM-related organizational change management. The time is ripe for a digital approach to ITSM. Organizations should design a well-thought-out ITSM blueprint that will complement their digital strategy and provide a great service experience. Wipro understands these new realities for ITSM. With Wipro's Next-Gen ITSM Blueprint, enterprises can transform an existing, traditional ITSM model so it aligns well with their organizational digital strategies. Wipro's Next-Gen ITSM Blueprint makes existing ITSM models simpler and more user experience-centric. It enables digital transformation. The Next-Gen ITSM solution is a holistic approach to help organizations become more digital-savvy by addressing a whole spectrum of current industry trends, including customer experience. Built on current industry best practices, Wipro's Next-Gen ITSM Blueprint can accomodate leading-edge processes and technology solutions. Introducing Wipro's Next-Gen ITSM Blueprint Solution Figure 2: Key tenets of Next-Gen ITSM blueprint solution Transformation Programs Where Next-Gen ITSM Model is a Key Differentiator Several enterprises have used Wipro's Next-Gen ITSM Blueprint framework with great results. It provides the power and agility to handle a variety of business needs and situations, but it is particularly valuable in these initiatives: The Core of Wipro's Next-Gen ITSM Framework Figure 3: Core principles behind the solution framework Wipro's Next-Gen

ITSM Blueprint is based on these core principles: Value Drivers, which refer to the core outcomes for a specific enterprise and sector. Provisioning Levers represent the a set of levers that Wipro will apply to achieve the Value Drivers. Enabling Platforms represent Wipro's underlying technology and platform solutions make it all possible. For example, for a telecommunications company seeking to provide exceptional customer service, one of the value drivers might be user experience management. Achieving this could require a provisioning lever such as an "experience excellence office" – a unique charter to ensure a unified experice across personas, locations, and channels. The relevant enabling platforms could be Bot Govern, Bot Factory, HOLMESTM intelligent routing, Remidiation Engines. The combination of all these key components would help the company realize the desired outcome. Embarking on this challenge would require blueprint contextualized to the telecome company so that the provisioning levers and underlying enabling platform work cohesively. Wipro's Next-Gen ITSM framework has been designed to achieve the outcomes as described below. Figure 4: Next-Gen ITSM Blueprinting Framework Contextualized Service Design Contextualized service sesign focuses on defining business-centric IT services and documenting them in a service catalog. Services will be different for different businesses and sectors; for example, service definitions for retail and finance will be very different. A more contextualized business and IT service definition should represent the real-world IT and business organizations. User Experience Management Because user experience is at the center of digital transformation, the Wipro blueprint explicitly focuses on user-centric, persona-based processes created with design thinking methods. The Wipro solution helps manage all forms of user experience – for customers, of course, but also for employees. Service Ecosystem Integration The Wipro blueprint focuses on integration of the whole service ecosystem so that suppliers, processes, solutions, modern technologies, and platforms work together seamlessly. Empowering end-to-end IT supply chain integration requires data-driven integration of services and business process improvements. Smart Governance Smart governance provides a real-time view of service performance through a single pane of glass across the service landscape in the form of a service dashboard. Wipro's service dashboard solution is based on a unique concept known as delivery-led value which foicuses on outcomes more than output. This type of governance enables efficiency by using digital technologies that span strategic and operational layers. Next-Gen Operating Model With advanced tools and technology platforms disrupting ITSM, the traditional operating model won't work. The new operating model must align with modern digital ways of working including the enterprise's AMSC (analytics, mobile, social, cloud) strategy. The Next-Gen operating model supports service management, business, and IT in a holistic way to aid in making critical decisions and improving ROI. Wipro helps clients deliver on the potential of these value levers through its extensive experience of well-established technology and platform solutions. Ease of Implementation Delivers Maximum Gain Wipro has specifically designed a transformation methodology to design and implement its Next-Gen ITSM Blueprint solution. This transformation methodology is complemented with a rich set of accelerators, from tool kits to reusable assets, along with enabling platform solutions and products. These capabilities accelerate the client's transformation journey while

delivering tangible benefits and outcomes. Key Benefits of Wipro's Next-Gen ITSM Blueprint   Subhasish Das Principal Consultant, CIS Consulting Subhasish is part of the Applied Service Management Consulting Practice (ASIC) within CIS Consulting at Wipro. He has more than 15 years of consulting experience, which spans across ITSM transformation, operating model design, platform implementation, service and integration management (SIAM), and automation. Subhasish has worked with prestigious clients across industries and helped in their transformation journey. He is currently leading the Next-Gen ITSM product charter within ASIC. =======================

Reimagine Business with an "Art of the Possible" Roadmap

----- Arcticle source ----- https://www.wipro.com/consulting/reimagine-business-with-an-art-of-the-possible-roadmap/ ----- About the Author (s) Contact Wipro Please fill the required details to access the content Reimagine Business with an "Art of the Possible" Roadmap June | 2021 In the current climate, enterprises must move fast to stay ahead of the competition and to ensure survival in the face of quickly evolving industry boundaries and business models. More and more enterprises are looking at digitalization to help them thrive and compete. However, rushing headlong into digitalization can lead to trouble. Organizations can get bewildered by a kind of technology euphoria that leads to too-frequent strategy reviews, budget erosion, and, sometimes, very little headway on their transformation journey. True transformation requires a thoughtful, strategic approach. It requires deep understanding of how users really interact with an enterprise's systems, products, and services. It requires new platforms to ensure round-the-clock availability on all relevant channels. And it requires an infusion of artificial intelligence to generate new insights and to deliver experiences that are contextually aware, personalized, and differentiating. The best way to enable digital transformation is by thoughtful strategic planning. Wipro formulated an approach called an "art of the possible roadmap." The roadmap identifies areas where digital technologies can be leveraged in innovative ways to build user-friendly and contextually aware products and services. To help enterprises create such a roadmap, Wipro developed a five-step approach (see Figure 1) designed to help enterprises reimagine their business processes with intelligent capabilities to realize strategic goals. Figure 1: Constructing the Roadmap: A Five-step Plan Step 1: Identify Relevant Value Streams Many enterprises start digitalization at a granular level, like for a particular business unit or function or sub-business unit, but these rarely deliver the outsized benefits that companies are looking for – they're just too siloed and narrow. Instead, start by analyzing the "value stream," the path that extends from initial engagement with a customer or prospect all the way through to delivering a product or service as well as after-sales support and whatever tasks are required to build the ongoing relationship. Typically, an enterprise will have many value streams. Some example value streams might be "order to cash," "prospect to customer," or "source to pay." The fact that there are many value streams

means the enterprise will have to make choices about which value streams to start with on their implementation journey. Organizations have limited capacity to absorb too many changes in people, process, and technology that require multiple changes in their culture and behaviour. Value streams should be evaluated and selected based on business value, readiness for process digitization and technology maturity parameters outlined in Figure 2.   Figure 2: Factors for determining Value Streams for Digitalization 2. Evaluate "Intelligence" in Value Streams Once the value streams have been identified, each individual value stream needs to be broken down into value stages and assessed with respect to its potential for leveraging automation and intelligence, along two dimensions: a. Intelligent Interactions: What is the potential to reimagine the way users in the value steams interact with more intelligent (i.e., AI-powered systems) considering the context of the moment of interaction? Each use case within a value stage can be assessed using multiple paradigms: empathy, speech, language, touch interactions, gesture interactions, and immersive experiences. b. Intelligent Processes: This dimension drives the potential to reimagine how processes can become more dynamic and adaptive using cognitive/intelligent capabilities. Each value stage can be assessed using several possible paradigms: Here is an real-world example of applying intelligence to value streams: Amazon has achieved impressive results from its 2016 acquisition of Kiva, a robotics company that automates picking and packing in Amazon warehouses. Using manual workers, Amazon's "click to ship" cycle time ranged from 60 to 75 minutes; Kiva's technology reduced this to 15 minutes. 3. Reimagine Value Streams Business problems are complex – often too complex to solve by merely identifying digital opportunities and applying digital technologies. Enterprises should take an outside-in, customer-centric approach to reimagining intelligent value streams with design thinking workshops and crowdsourcing. For example, consider holding innovation workshops with all business stakeholders participating and present the latest digital technologies, potential capabilities identified in Step 2, and use cases across industries. These workshops also provide a forum for business stakeholders to really think about the status quo. This approach will help identify the initiatives/use cases that need modification in order to redefine employee, customer, or partner experiences and how processes will be executed in the new world of automation/intelligence. Figure 3 shows the "Source to Pay" value stream broken down in value stages. Each value stage has been reimagined along two dimensions of interactions and processes to come up with ideas and initiatives for interjecting intelligence. Figure 3: Art of the Possible – Initiatives for "Source to Pay" Value Stream Initiatives identified through the reimagining process will often need to be supported by foundational technological capabilities or platforms. Platforms play a crucial role in bringing together common computing infrastructure, cognitive capabilities, event-driven services, and contextual capabilities. Ultimately, platforms influence strategy, partnerships, and business needs and have a huge impact on the business outcomes of digitalization. One of the key forces behind the success of tech companies such as Amazon, Google, Facebook, and Alibaba are the intelligent platforms they have built for their innovative products and services. 4. Define the Art of the Possible roadmap The first three steps – identifying value streams, assessing them for the potential to become intelligent, and reimagining in light of digital technologies – will generate a set of initiatives to enhance experiences,

embrace intelligent automation, and build platforms to support scaling. Now, analyze that set of initiatives using a portfolio-based approach, looking at use cases over a one- to three-year horizon and based on the organization's strategic directions, market conditions, risk, and reward. In the near term, the enterprise should focus on use cases where there are proven technology solutions today – but should also identify use cases where a technology is emerging but not yet proven at scale. Over the medium to longer term, consider selecting unproven use cases to collaborate with third parties to innovate for first-mover advantage in the market. Many of these initiatives require challenging the status quo, taking risks, breaking rules, and challenging existing policy and governance models. It may be related to modifying an existing governance model, organization structure, change management, etc. These supporting initiatives should be included as part of the overall plan. The plan requires buy-in from the executive suite to generate momentum within the organization, hence these initiatives should be co-led by both business and technical leaders. 5. Realize business benefits iteratively This art of the possible roadmap should be implemented in the form of virtuous cycle – design, try, learn, and redesign – using a design thinking, DevOps, and agile approach to manage risk and derive the benefits quickly. Embracing agile concepts like "fail fast," "minimum viable product (MVP)," "user feedback," and "time boxing" will help ensure the roadmap takes the enterprise on a meaningful, valuable transformation journey. While the benefits of the art of the possible roadmap are immense, they can be difficult to measure. How, for example, can a company measure competitive advantage, or how well they are embracing digital adoption? Organizations should develop a model that clearly defines and articulates all the required areas, and a reasonable way to measure them. It is also important to establish a feedback mechanism to facilitate continuous monitoring of outcomes once the model is adopted. Such a monitoring mechanism will translate the practices to tangible outcomes throughout the timespan of the project. The Roadmap is Just the Beginning The reason enterprises develop strategies is to generate real results. The art of the possible roadmap is a powerful approach to developing digital strategies and the journey to digital transformation – but the real challenge comes when enterprises begin to implement their roadmaps. Even when compelling commercial use cases have been identified and created, regulatory and social barriers can raise the cost and slow the rate of adoption. Moreover, it is critical that roadmaps and initiatives have very strong support from executive leadership – essentially everyone in the C-suite and the board of directors as well. Intelligent capabilities are important not only to stay competitive, but also to survive amidst the changing industry boundaries and business models. Wipro's "Art of the Possible" framework evaluates the intelligence that can be embedded in processes by infusing cognitive capabilities. This is supplemented by our expertise in the emerging technologies that identify future technology scenarios that can be leveraged to further transform business capabilities. Rajnish Kasat Practice Partner, CIO Strategy and Advisory Services Rajnish has over 24 years of experience in building and managing global teams to deliver digital consulting engagements and architecture services across industries. He routinely advises boards of directors, CXOs, and executive management on various aspects of IT and digital. Karthik Reddy Nareddy Lead Enterprise Architect, CIO Strategy and Advisory Services Karthik has 13 years of experience in

advising clients on IT strategy, digital enterprise architecture, and cloud strategy. He has a blend of experience in strategizing and also, driving IT transformation implementation to ensure business-IT alignment.
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Beyond the Financials: How Organisational Change Management is Critical to M&A Success

----- Arcticle source ----- https://www.wipro.com/consulting/beyond-the-financials-how-organisational-change-management-is-critical-to-m-and-a-success/ ----- About the Author (s) Contact Wipro Please fill the required details to access the content Beyond the Financials : How Organisational Change Management is Critical to M&A Success July | 2021 "People are our most important asset." It's the kind of verbiage that appears on mission statements and value propositions in corporations and institutions around the world. And here's why: because it's true. Because people deliver products, services, and experiences. People turn strategy into results. And when people work in a culture that empowers and inspires them, they do great things. For many executives, mergers and acquisitions are driven by the numbers, the cold, hard realities of revenues, profits, and balance sheets. But the best and most successful M&A deals are driven by something else: an appreciation of the importance of people and an awareness of the immense uncertainty people experience in the midst of a merger or acquisition. As a technology leader, Wipro works with many companies to ensure a smooth melding of IT and business process landscapes through our post-merger integration practice. But Wipro has also built a team focused on talent and change management because of this reality: The typical cause of failure for an acquisition is neglecting people and culture. We help companies ensure that human resources remain at the forefront of M&A activities in recognition of the importance of people in successful deals. A recent experience for Wipro's Talent and Change Management team illustrates the point. In late 2020, the German company METRO AG wanted to strengthen its focus on its core wholesale business and decided to spin-out two subsidiaries focused on digital and IT, METRO-NOM GMBH in Germany and METRO Systems SRL in Romania. In a deal valued at about $700 million, Wipro acquired the subsidiaries and transitioned more than 1,000 employees to Wipro. Of course, the deal made financial sense to both parties, METRO and Wipro. But it would only be successful if Wipro was able to successfully manage the employee transition from METRO and integration into Wipro. And at the height of the global COVID-19 pandemic, this was even more crucial than ever. It's a credit to METRO this was an important consideration in their decision. Both companies shared a vision of what a transition should do: By their very nature, acquisitions create huge uncertainty, fear, and anxiety about the future and risk loss of talent, resistance to change, and damaged morale.

Wipro's challenge was to manage and mitigate people issues with the same focus and discipline as functions like Legal, IT, and Finance. Align, Engage, Enable The Talent and Change team at Wipro know how to approach and manage these kinds of large-scale enterprise organisational change challenges, by focusing on three big themes: Here's how this worked out with METRO AG. It was critical that pre-Day 1 and post-merger integration activities would be supported with robust change management interventions. Wipro's organisational change management team is human centred in its approach, so the project team could focus on the acquisition's design and development. Wipro's involvement started several months before the acquisition "went live." The designed approach was aligned with key business change objectives: rapid adoption and ensuring the transitioning employees would be emotionally committed to the strategy behind the change. This was achieved by developing a strong leadership structure, consisting of transitioned leaders as well as those already within Wipro. We also made open and honest communications a primary concern, aligning priorities, and promoting teamwork. This ensured the acquired businesses functioned as smoothly as possible, minimizing disruption and accelerating time-to-results. To mitigate any human capital risks, Wipro's Talent & Change team conducted business readiness and change impact assessments both before the acquisition closed and during integration. These assessments served as the framework for the ultimate change strategy. The team also worked with the leadership of the three entities to ensure the acquisition's strong value was clearly and repeatedly communicated to employees. Specific interventions were employed to increase cultural alignment and build connections between Wipro, METRO-NOM, and METRO Systems employees, such as virtual coffee get-togethers and expert talks. Employees from both parties were able to share their individual transition experiences and share knowledge of best practices. Townhalls, monthly newsletters and a dedicated Q&A microsite provided an ongoing drumbeat of communication activities to deliver timely, relevant and consistent information. In addition, a network of 'Change Influencers' further supported these change activities. Led by employees of METRO-NOM and METRO Systems, and assisted by Wipro, this network acted as ambassadors, bridges, and translators to help the transition and integration proceed smoothly. Regular measurement for meaningful insights to drive execution excellence and transformational success provided direction to help ensure these interventions drove the successful adoption of the change, for both sides of the acquisition. Paving the Way to Future Success Successful post-merger integration is the key to generating sustainable added value for companies. Every merger is unique and requires a customized solution. Effectively managing the people issues that resulted from this M&A integration took discipline and focus to ensure change would be lasting. Improving engagement, measured through employee engagement software, as well people working together as one company with a common vision and shared goals were key indicators of success. The OCM team provided a valuable perspective on the people-related risks which may otherwise be overlooked. It was important to partner OCM with the acquisition team early in the due diligence process, whilst also forming a blended change team. This helped identify and mitigate cultural as well as structural, talent, and financial risks that could have arisen in the transaction. Importantly, the team were able to ensure that the transitioning employees could

successfully navigate the new terrain and were supported in their continued cultural immersion. By focusing on organizational change management before, during, and after the deal, Wipro ensured that human capital is now a key focus area moving forward. Wipro will look to provide the acquired employees with new opportunities to advance their careers, access innovation, work with leading digital technologies, and adopt new ways of working that enable agility, speed and scale in engineering. In M&A situations, planning for the human consequences of change and disruption can make a tremendous difference at both the enterprise and individual employee levels. But experience and expertise in organizational change management can add value during any kind of restructuring or strategic shift because people really are "the most important asset." Click here to learn more about Wipro's organisational change management expertise and our Talent & Change team or email David Lyons on david.lyons@wipro.com. Thomas Howell Senior Consultant - Talent & Change Team at Wipro. Tom has 6+ years Change Management experience, delivering complex multi-stream, multi-capability end-to-end change consulting and advisory engagements. David Lyons Partner - Talent & Change Team at Wipro David has 20+ years Change Management, Organisation Design and HR Advisory experience, leading multiple end-to-end consulting engagements for many household brands. =====================

Moving ERPs to the Cloud: The Importance of Program Management

----- Arcticle source ----- https://www.wipro.com/consulting/moving-erps-to-the-cloud-the-importance-of-program-management/ ----- About the Author (s) Contact Wipro Please fill the required details to access the content Moving ERPs to the Cloud: The Importance of Program Management August | 2021 According to Gartner, worldwide public cloud service revenue will reach $364 billion by 2022, which represents a compound annual growth rate of 12.6% since 2018. And the reason is simple: More and more enterprises are embarking on their digitalisation journey and migrating their infrastructure and applications into the cloud. In fact, cloud adoption has become the default choice for many CIOs planning strategic digital transformation. But for enterprise resource planning (ERP) systems, which have been vital for all kinds of businesses for decades, cloud adoption has been much slower. For some companies, ERP systems are so important that they are reluctant to tinker with them; for others, the attitude is along the lines of "if it's not broke, don't fix it." In many cases, however, ERP systems and their underlying infrastructure have decayed into the legacy systems. And ERP systems are costly in terms on-premise hosting and application maintenance. Cloud can help, and ERP systems are finally starting to embrace cloud computing. In fact, Gartner predicts that business intelligence, supply chain management, project and portfolio management and ERP will see the fastest growth in end-user spending on SaaS applications over the next few years, reaching $143 billion by next year.

Traditional, on-premise ERPs offered CIOs the freedom to adapt these powerful solutions to suit their enterprise's needs, offering differentiation and competitive advantage. But insight from Gartner – its Pace-layered Application Strategy – highlights the fact that there is no real advantage in heavily customizing systems of records used primarily for operational efficiencies (a layer within which almost all ERPs fail). Some enterprises may require a unique, differentiated approach for their systems of engagement or systems of innovation. One consequence of this idea is that adopting standard processes for systems of records, hosted by a SaaS ERP provider, can ensure world-class processes that are tested and proven and can be used in many industries. Small- and medium-sized companies are already moving to a SaaS ERP, but even large multinational enterprises are finding it safe to adopt SaaS ERPs for their systems of records. CIOs are increasingly keen to move ERP systems to the cloud – not just their custom-built, on-premise cloud-based ERPs but also SaaS-based ERPs. They want to take advantage of the many benefits of cloud computing: lower total cost of ownership, much greater scalability, reduced risk of deployment, access to innovation (via continual upgrades), and enabling accessibility to critical enterprise applications for global users. The CIO dilemma: From strategy to implementation This trend begs the question: What's the best approach to successfully putting ERP systems on the cloud? Wipro believes that modern program transformation practices can help organisations improve efficiency and ensure success in their SaaS-based ERP implementations. The right program management approach helps ensure effective alignment, integration, and control. It requires strategies for prioritising and sequencing a series of multiple projects, managing their interdependencies, implementation methodologies, benefits, stakeholder management, establishing and implementing governance, and orchestrating organizational change management. In fact, the decision about how to proceed with a SaaS implementation may be as important as the decision to proceed. SaaS-based ERP transformations do entail risks, at the implementation phase or in the long run, that may negatively impact the initial business case. A truly informed decision will reflect many factors and challenges: Methodologies: Waterfall, Agile Fusion, and "WAgile" Traditionally, ERP applications have been implemented using the highly structured waterfall approach: requirements, design, coding, and testing. Gartner's Pace-layered Application Strategy suggests that this highly structured implementation method is ideal for implementing systems of records. Take conventional ERP implementations as an example of the waterfall approach. Typically, this involves these steps: Each of these steps is discrete and distinct; each is completed before moving onto the next. But waterfall is not an ideal methodology. For example, a waterfall approach can make it very challenging to visualize the application from the requirements documentation, one of the most difficult parts of software development. This can lead to dissatisfaction with the delivered product. Also, the waterfall approach is not change-friendly. Changes are often difficult and costly to implement. And, finally, waterfall approach is not fast, which means it could take months or even years before the customer sees the final product and starts to see results. However, the rise of SaaS ERP providers has tilted the balance more towards the agile development process, an iterative, team-based approach that emphasizes rapid delivery of complete functional components. Tasks and schedules are broken into sprints or iterations.

Completed work can be reviewed and evaluated by the project team and customer through daily builds and end-of-sprint demos. These benefits are why agile is so popular, but it's not a silver bullet that can address every implementation challenge: On the plus side, agile shortens the delivery time and makes it easy to gather feedback in the early stages to better suit customer requirements. Agile is good, but many development and implementation projects today use the WAgile – the phrase combines "waterfall" with "agile" – approach that dismantles the siloed approach. In WAgile, planning, design, and requirements definition are done using the waterfall methodology, but development and modular tests are conducted in in short sprints using the agile (scrum) methodology. Some other key points about WAgile: The WAgile implementation model for SaaS ERP applications uses the minimum viable product (MVP) approach, which starts with the premise that end-users have a minimum fundamental need and the application chosen for implementation satisfies that need. The project team then delivers a MVP – essentially a subset of the desired end-goal application (in this case, a SaaS ERP system) – with enough features for a reasonable sampling of users to try out and provide feedback for further development, fine tuning, or for the phased rollout. MVPs are valuable in that they help developers avoid lengthy and potentially unnecessary work. Instead, they iterate on working versions, responding to feedback and challenging and validating assumptions about meeting the application requirements. This approach helps avoid application configuration that customers do not want or seek, avoiding unnecessary costs and delays. A MVP also becomes a quick win in and of itself because it helps the business become familiar with the application. Essentially, a MVP entails independent development of some modules or components while the planning phase is still underway along with some activities – such as setting up the cloud infrastructure or planning for data migration – are being tackled as separate workstreams. The diagram below illustrates a WAgile process flow for end-to-end delivery. o During daily scrums, the team shares what has been done, discusses what is to be done, and raises flags on potential blockers. o At the end of the first sprint, the team conducts a sprint review during which the first iteration — a fully functional iteration — is presented. o Then, testing and feedback of the first iteration by stakeholders is begun and gaps on initial assumptions are identified. Under the WAgile methodology, the MVP approach is split first into small modules, which are then broken down into components, features, or user stories that can be delivered incrementally. Ultimately, the components will cover the entire business need and, eventually, the broader rollout. Adopting a hybrid model like WAgile, which combines the best aspects of both waterfall and agile, can be a win-win for business units and the implementation program team. Implications for Organisation Change Management Organisation change management (OCM) is an essential component of large IT ERP transformations, and covers a wide set of activities: new organisation design, roles and responsibilities; skill sets required for the new technology; understanding change impacts on processes, users, and roles; designing and delivering training programs; and communications management. A conventional waterfall project will experience intense support demands at the beginning of the program, tapering off during code development and configuration, followed by a spurt in support requirements during user acceptance testing and training. In a WAgile scenario, OCM tends to move

towards more of an agile approach. OCM will be required throughout the project lifecycle, from the introduction of the MVP all the way to the realisation of full business objectives. OCM demands will vary from project to project based on the volume of business change and the organisation's maturity to accept and adopt change. Conclusion As ERPs continue to move from on-premise configurations to SaaS cloud-based solutions, implementation delivery methodologies will also evolve in order to achieve the desired timeline and business benefits associated with a cloud strategy. The WAgile approach combines the best of both agile and waterfall methodologies, and it can be easily adjusted to the size and complexities of each SaaS ERP implementation and the inherent business transformation. Shripad Ghanekar Sr. Partner, leading Program Transformation Practice within CIO Advisory Consulting. Shripad has over 25 years of progressive experience in multiple roles and has successfully executed some large Programs Wipro has delivered globally. Spanning across multiple industry sectors these programs include ERP transformations of strategic importance as well as Merger, Acquisition and Divestiture scenarios. Jesus Oregui Partner at the Program Transformation Practice within Wipro's CIO Advisory Consulting. Jesus has over 20 years experience across industries, Jesus has helped organisations to implement their ERP based driven transformation programmes as part of their digital and cloud migration journeys. With strong roots in manufacturing and engineering, Jesus has actively led the development of the digital agenda in the supply chain while leading global project delivery teams for implementing latest SaaS ERP solutions. Vijay Venkat Partner in Program Transformation Practice within WIPRO's CIO advisory Consulting He has 25plus years of experience. Vijay Venkat has successfully delivered many largescale ERP transformation & Consulting projects in Retail, Energy (Oil & Gas), manufacturing and Utility Sectors. Have extensive experience in managing Enterprise Architecture solutions around PaaS, IaaS, SaaS, TaaS and Hybrid solutions. With a strong domain knowledge in Supply Chain, has extensively worked on New Dimension products of SAP like S/4, BW4HANA, SAC, Ariba, Concur, GRC, IBP and also other technologies like Hyperion, MES, Workday, FIS-QUANTUM in various project implementation methodologies like Waterfall, Agile and also the proposed WAgile methodology.
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Change Networks:

A Key to Success in Enterprise Transformation

Whether it's a new application or an enterprise-level digital transformation, progress cannot happen until people embrace and adopt the change. One of

the best approaches to helping people embrace the new is through change agents and change agent networks. Change agents are sometimes called "change influencers," "change champions," or even "ambassadors" of change – but the nomenclature is less important than their common characteristics. They are eager to lead the way forward. They volunteer themselves to be at the forefront of transformation. They want to help their co-workers understand what is actually going on and embrace the "new ways of working." They are the people within the enterprise who help make change happen, sometimes without a formal role, and they play an outsized role in successful enterprise transformation. In a report on "The people power of transformations" from McKinsey in 2017, the authors wrote: Change agents...appear to have a notable impact on success. Less than half of respondents say their organizations select these employees, who dedicate a significant part of their time to work as facilitators or agents of the transformation. But those who do report overall success more often than other respondents—and are twice as likely to report success at transforming their organizational cultures. Why are change agents so important? For a simple, almost obvious reason: Because employees are more willing to accept change when they: The most effective to ensure that these things happen is by identifying change agents and building change agent networks. In Wipro's work with change management, change agents are an essential component of ensuring change happens and change endures. The Power of Change Agents Enterprises that are serious about evolution and improvement either are considering transformational journeys or have already launched one or more of them. They consider the financial and technological implications as a matter of course, but they should also consider this reality: people should be at the heart of the transformation journey. Change agents can play an enormous role in helping the broad employee population accept change and, most important, ensuring that change becomes embedded in the company culture. Change agent is not an official job title (though perhaps it should be in today's dynamic enterprise). But what makes a good one? According to the book "The Change Leader's Roadmap: How to Navigate Your Organization's Transformation" (Linda Ackerman Anderson & Dean Anderson, Pfeifer, 2010), good change agents share several characteristics: First and most important, they are very open to change; they are not rigid in their thinking or approach to work. Second, they appreciate the differences between current ways of working and how things might be in the future, and they are excited by the possibilities and opportunities that something new offers. Third, they are effective in both communicating and listening, able to empathize with their colleagues as well as take direction from above within the organization. Change agents also have a growth mentality. Their positivity and willingness to embrace new ideas is great for them, personally, but those traits are also great for the dynamic enterprise. Their enthusiastic belief in the purpose and benefits of change can help lead other, perhaps more hesitant, colleagues to embrace transformational initiatives. One change agent is good, but a network of them spanning the enterprise is phenomenal – if (and it's a big if) that network is empowered to drive and deliver change at the local level. Often, the best change agents don't need a formal mandate to work their magic, but change networks only work if they have the approval and the tools to actively effect change through educating, coaching, and supporting their colleagues in new ways of working. That's why change agent networks

should work closely with project and program teams; that enables change agents to become early adopters of new ideas. Change agents serve as ambassadors and translators – the bridge between the inner circle of a project and the rest of the organization. They deliver information (what, why, and how), and they are the conduit for feedback from the rest of the organization. By doing so, they promote understanding and commitment to the change. Effective Change Agent Networks The effectiveness of a change agent network is driven by two ideas. First, the change agents must have a real understanding of the business area that is changing or transforming in terms of process, systems, or stakeholder perspectives. They must believe that the change is beneficial. This gives change agents the ability to make the case for change with conviction. Second, the rest of the organization should respect the network and have confidence and trust that the change agents are genuine. Change agents should have a kind of charisma and be seen as leaders by their peers – so choose them wisely. The ideal change agent network is composed of people who have a high level of understanding of the business and change and have positions of authority (formal or informal) within the enterprise. What Change Agent Networks Do Enterprises undergoing change can put change agents and change agent networks to work in multiple ways: Communication: Change agent networks help clarify and deliver messages around new initiatives to the people they influence. They can ensure communication is clear, concise and uses the right language to be easily understood by the intended audience. They typically understand the best channel, the best format, and the best opportunity to communicate. And they can collect feedback regarding how people feel about changes. Creating change plans: The "one size fits all" approach generally does not work for organisational change management. Most enterprises create a framework that can be applied across a multitude of different scenarios, but for meaningful change to take place, a change plan needs to be adapted to address the intricacies and nuances of affected teams. Change agent networks are in a prime position to support the development of change plans for their areas, especially for organizations lucky enough to have employees who understand the change management and business transformation. Stakeholder engagement: Change agents understand the rationale for change but also can empathise with the reasons for resistance to change – which helps address resistance. They can help change management teams build a targeted, persona-led approach to engage appropriately with different stakeholders and build commitment. Because change agents tend to be in the trenches of the business, they can help ensure people are receiving the change message from a source they respect and a source who understands their situation and concerns. Change impact assessment: Changes involves risks; change management seeks to mitigate risks, and that's where the change impact assessment (CIA) – an articulation of the magnitude and complexity of required changes – becomes so valuable. The change agent network can provide valuable, "real world" insights into potential organisational impacts of new initiatives. The CIA is essential for effectively planning and managing change. Business readiness assessment: A key element of any change management effort is to know when to put the key in the ignition and go. A business readiness assessment helps determine the willingness and ability of the people within the organisation to adapt to change. The change agent network can help by encouraging participation in things like surveys and focus groups, which can

create picture of how ready the business is to change. By engaging with affected groups, the enterprise gets a better understanding of root causes that can ultimately mean the difference between success and failure. Next Steps Organisations should approach the social architecture of change by ensuring that affected users and employees (and, through them, customers) are engaged from the outset of a project and are actively involved throughout the journey. They should strive to embed "change thinking" in everything they do, from design to build to deliver, to ensure that the initiative delivers the maximum business benefits. Wipro recognises that change agents are amplifiers of change, a bridge between the programme team and employees. At Wipro, building and managing change agent networks has played a significant role in designing and implementing substantial change management initiatives. We know first-hand how to help our clients build and scale a network of change agents so that we can improve awareness at the grassroots level, reduce resistance to the change, support leadership engagement, and provide a two-way communication mechanism. =====================

The cloud immigrant and native divide - The grass is greener on the digital side

----- Arcticle source ----- https://www.wipro.com/consulting/the-cloud-immigrant-and-native-divide-the-grass-is-greener-on-the-digital-side/ ----- About the Author Contact Wipro Please fill the required details to access the content The cloud immigrant and native divide – The grass is greener on the digital side The cloud world is changing fast, and everyone wants to be on board. There are two distinct groups of cloud adopters - cloud immigrants who, for long, have been running IT in the traditional form, using on-premise data centers, and trying to match steps with the needs of the business. And the cloud-natives, who are born in the cloud. They execute at the speed of thought, know what the cloud can bring to the table and how it can respond, scale, and deliver. While the adaptation curve is almost non-existent for cloud-natives, traditional cloud immigrants traverse a long and winding path, one that influences how they view the value and its associated dependencies for transformation. What does cloud-native mean? "Cloud-native technologies empower organizations to build and run scalable applications in modern, dynamic environments such as public, private, and hybrid clouds. Containers, service meshes, microservices, immutable infrastructure, and declarative APIs exemplify this approach." The Cloud Native Computing Foundation1. The cloud immigrants are aware and open to the power of the cloud; however, they bring their baggage of constraints. Every brownfield migration needs to take care of multiple factors, build an app on the cloud, manage a double cost of running on-premises simultaneously to ensure business continuity. Add to it the reality of never being able to exit the cloud completely – with data that must remain on-premise, custom legacy workloads, and other regulation demands - the immigrants may not warm up to the cloud the way the natives would. What

do the cloud-natives see in the cloud? And why is the view counter-intuitive? Cloud-native organizations look at the cloud and its benefits and caveats a little differently. Sometimes, not having a previous experience can be a good thing. The natives have a fresh perspective – they do not have an on-premises set-up, have not managed leases in a colocation facility, or had staff to maintain cooling, power, networking. What they see is the infinite scale and power of the cloud. They look at the ease of deployment and scale of microservices on containers, quick detection and response to Distributed Denial of Service (DDoS) attacks, cheaper storage on demand. They look at creating immutable, swift, consistent, error-free infrastructure and maintaining business continuity. The list goes on. A new frame of reference brings to the fore many value drivers not limited to cost and helps create business differentiation. One can distill the ways of working of a purely cloud-native organization into a mindset, which is a great starting point for the immigrant type of organizations.The Cultural Shift Towards A Cloud-Native Mindset (forbes.com)2 Once the mindset finds favor with the leadership – both business and tech – it can then be shaped into a strategy, an actual path that the organization can follow. A tailored cloud-native strategy delivers many benefits. The recent Wipro survey of 1300 global executives (Making Business Thrive: A Cloud Leader Roadmap for Achieving 10x) is a case in point. It illustrates how organizations that embrace more of the cloud-modernization of its core, adoption of cloud-native applications, and related tech- show a significant increase in their bottom-line. However, it is essential to note that the challenges immigrants face are real – and in a VUCA world (Volatile, Uncertain, Complex, and Ambiguous), the challenge is at multiple levels. However, while these can be daunting, new problems need new thinking, not old. "The greatest danger in times of turbulence is not turbulence itself, but to act with yesterday's logic" - Peter Drucker. Cloud-native helps move the industries forward Cloud-native thinking is helping multiple industries get a better grip of the transformation and have an action plan that can yield quick and meaningful results. A healthcare company uses the power of big data and AI-based platform on the cloud to help doctors personalize each patient's radiation treatment.Innovation in health and life sciences with Microsoft for Startups - Microsoft Industry Blogs3. Investment platform businesses scale up during market hours and scale down seamlessly when the markets close for the day – controlling costs and optimizing capacity. Telcos are integrating 5G and Edge using the cloud for differentiation. Connected cars provide a step-up in the mobility space with sensors, data exchanges, and cloud connectivity for safe and innovative driving. EdTech is serving worldwide insights on demand through cloud content delivery networks - the power of an integrated business and tech-led cloud-native mindset and strategy is limitless. Learnings from Cloud-native There are many areas for businesses to learn from and close the cloud-native gap. The road ahead There is a need to embrace the thinking that cloud-native brings forth. While the objective of the transformation remains the same, the new rules need to be understood. As a car is not a faster cycle and is much more, one has to look at cloud-native needs with different optics to solve things in previously unthought-of ways. With more innovation on the cloud-native front, there would be more adoption, leading to technology democratization, reducing entry barriers to modernization. It is time to shed inhibitions and leave the baggage behind! References Nikhil Warrier Nikhil Warrier is a Cloud Consulting Partner with Wipro's iCORE Consulting group

and advises customers on cloud strategy, governance, and operating model transformation journeys. He strives to continually create value across the business and technology continuum by converging business strategy with technology enablers. =====================

Building a Future-Ready Workforce

----- Arcticle source ----- https://www.wipro.com/consulting/building-a-future-ready-workforce/ ----- About The Author Contact Wipro Please fill the required details to access the content Building a Future-Ready Workforce March | 2022 Ten years ago organizations relied on centralized change centers of excellence, deploying standardized change methodologies in a traditional mechanistic approach. Typically, these frameworks were waterfall in nature, running in parallel with the overall program and designed to smooth the integration of program outcomes into business as usual. This approach was relatively stable and predictable, but often took too long to drive adoption and realize organizational benefits. Today the differences are significant: While this evolution from traditional and mechanistic change to organic and digital is highly beneficial, it leaves one question unanswered. As organizations struggle to keep up with the pace of technology advances and market drivers, how much change can be accommodated before breaking the business? For an organization to benefit from continuous digital change, it must recognize that a future-ready workforce is vital to the success of any digital transformation program. Companies must add workforce readiness to project roadmaps and implement continuous workforce recalibration programs to ensure that everyone is fully prepared for the changes of tomorrow. Continual Calibration as a Transformation Enabler The core question of all workforce calibration is this: Is the current workforce the one needed three years ago, or what will be needed three years from now? As the workforce risk associated with each transformation is understood, the need to progressively cultivate the workforce of the future becomes increasingly urgent. This continual recalibration of workforce capability ahead of coming changes is critical to achieve a sustainable return on investment in each transformation program. Program-based change adoption is now well accepted as essential in integrating program outcomes into business as usual. However, can the people comprising that 'business as usual' keep pace not only with the volume of transformation programs in any large organization, but also be work-ready for external changes impacting their company? Technological advances and market forces will impact every organization, whether they are sought out or not. Change is coming, and for organizations to win in this environment a perpetually future-ready workforce is essential. This requires an underlying and continual layer of workforce calibration to shape the right questions, then build the right answers. If coming automation necessitates the reduction of 100 employees in a specific area, where will these people go? The tribal knowledge held by these people are organizational assets worth retaining, so leading organizations are increasingly seeking to re-skill and redeploy these people

in other areas of the business. Calibrating the existing workforce often delivers a faster and better outcome than continuous cycles of redundancies and hiring. Integrating program outcomes into the business will always be required, though in many companies this remains a piecemeal and reactive approach to workforce management. In contrast, a genuinely holistic and strategic approach to enterprise change management should address the heart of the organization itself, ensuring that the business keeps pace with the new normal of continual change. Building a Future-Ready Workforce There are three fundamental components in building a future-ready workforce. Identify the technological drivers that are most impactful for the organization's industry in the coming three to five years. Automation, IoT, 5G and others still in the research and development stages are all analyzed to generate high quality and highly relevant data on upcoming changes to the organization's workforce needs. Predict the adoption rate of these technologies in each geography through web scraping and neuro-linguistic programming analysis of job advertisements. Alliances with leading industry research and technology providers can also be leveraged to identify local insights. Identify the impact of current external forces (such as the ongoing COVID pandemic) and predict the impact of market forces (such as changes to government regulations). Depending upon the insights derived from the data analyzed, the workforce calibration roadmap may include: The Future is Now Organizational change management has evolved significantly over the last 10-15 years from a centralized and traditional approach to frequently delivering change in highly agile programs. While this comes with its benefits, it also requires a workforce that is nimble, adaptable and forward-focused. This means knowing upcoming technological and market drivers and adapting ahead of the curve to minimize business disruption. This underpinning layer of perpetual workforce calibration ensures the organization is ready, willing and able to embed transformational outcomes into the business. Wipro's Workforce Transformation services enable our clients to cultivate a future-ready workforce. Companies can leverage our ecosystem of AI-enabled technology and labor market data analysis to continually recalibrate their enterprise workforce. This ensures that organizations remain perpetually equipped for rapid changes to the new ways of working. The workforce of the future will not suddenly appear in the future – they are already here, and they need to be prepared. Jim Hughes Consulting Partner, Wipro Ltd. Jim has over 25 years of experience in workforce transformation, change and program management, and is passionate about leveraging AI to uplift business results. Jim leads the Wipro Workforce Transformation consulting service in the Asia Pacific region and manages complex global programs involving enterprise workforce calibration. =====================

Improve Cloud Adoption Success by Focusing on People

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Adoption Success by Focusing on People May | 2022 Cloud adoption in the telecommunications industry has accelerated due to the growing need for business agility, cost reduction and the opportunity to reposition for new services and markets. But many organizations in other industries that adopted the cloud failed to achieve desired benefits mainly due to the people and organization-related challenges. A successful cloud implementation requires more than just technology; it requires the adoption of new ways of working, adding different capabilities and cultural shifts. Communication Service Providers (CSPs) are large organizations with entrenched culture, structures and long-standing skills. Such environments can prohibit achieving agile operations and ultimately a successful cloud adoption. How can CSPs address these issues to become a cloud-ready organization? The answer lies in understanding and proactively managing people, processes and cultural requirements. CSPs beginning a cloud adoption should start the process by addressing these blockers up front. Start with Questions to Evaluate Cloud Adoption Readiness Cloud migration programs can be overwhelming for the technology and project teams to manage. A program can include one or more significant technological changes for the organization such as different ways to harness data, infrastructure services, on-demand software applications, machine learning and smart development. From a people and process perspective, these changes are complex, impacting people across the organization in different ways. There may be role changes, requirements for new skills and compliance and security policy changes that could impact the entire organization. To manage all this change successfully, it is essential to shift the employee mindset and organizational culture toward agile principles. This is the most challenging aspect of the technology transformation. From the outset, CSPs should ensure proper alignment with the program objectives. The questions below can help assess cloud adoption maturity from a people perspective and identify what to add or amend as needed for success: A Shared Vision at the Core A critical aspect of the people-focused strategy for transformation success is to share and constantly communicate the change vision. To drive changes across the organization, program objectives must be understood. This is an important enabler for business transformation and individuals' growth and development. Employees should see that any new skills required will enable them to thrive in a global environment that demands greater agility, speed and improved customer orientation. By focusing on people, and organizational readiness and capabilities to operate effectively in a cloud-enabled environment, CSPs can monitor the changes required to develop and implement tailored strategies and adjust accordingly. Wipro helps clients succeed with business and cloud transformation journeys by applying Organizational Change Management (OCM) principles and best practices to guide leaders and teams. These principles build the commitment, engagement and capabilities that are necessary to become a cloud-ready organization. Putting the shared vision at the center of the cloud transformation program unites technology, process, business and people perspectives. CSPs can refer to the guiding principles to drive the required changes successfully, as depicted below: Figure: Guiding Principles for a Successful People-Focus Transformation Identifying Organization-Specific Changes CSPs have different maturity levels and capabilities. While there are some common characteristics of cloud-ready organizations, the change focus areas and plans will be unique to each organization. The sponsors and

leaders of the cloud transformation can start by assessing the cloud strategy and organizational components together with the desired outcomes to identify where there are opportunities for change and better alignment. CSPs should focus on leadership, people, culture and structural aspects of organizations to assess the current state and identify the steps and gaps to build change plans for organizational and people development. Cloud Adoption is an Opportunity for CSPs to Revitalize Business Models The cloud is the foundation for business transformation. CSPs can reposition themselves with new products and services that significantly improve the lives of their customers – both businesses and individuals, at work and home. These new offerings can provide better personalization, enriched interactions and connected living solutions. All of this is possible, supported by a cloud-enabled digital foundation, new ways of working and emerging technologies like open architecture, scalability, artificial intelligence (AI), data analytics and 5G. While Cloud adoption enables unprecedented opportunities, many such initiatives fail to achieve their promises mainly due to overlooking the impact on people, culture and process-related changes required throughout the organization. Using the guiding principles outlined above and building a core team with representatives from the different functions, CSPs can start to shift their journey to a people perspective. This is critical to successful cloud adoption and business transformation. Ozlem Peevey Managing Consultant, Talent & Change, Asia Pacific Region, Wipro Limited Ozlem is focused on managing the people-side of digital transformations and developing and leading the delivery of end-to-end organizational change programs for improved business performance. She combines expertise in technology, business and people domains with over 20 years of experience working for leading technology companies in global and Asian operations. Collaborating with the digital teams and client change leaders, Ozlem helps drive tailored, value-driven solutions for successful change. =====================

Change Management: The Retail CIO's Ally

----- Arcticle source ----- https://www.wipro.com/consulting/change-management-the-retail-cios-ally/ ----- Reference About The Author Contact Wipro Please fill the required details to access the content Change Management: The Retail CIO's Ally August | 2022 Digital transformation is seldom about technology alone. People have to get their heads around it; behaviours have to change. For that to happen in the retail industry, businesses need a CIO with a strong vision. And retail CIOs are often hired exactly for that transformation vision. They are brought in at crucial times in the history of organisations when major changes in operating models, ways of working and culture are required to make sure the business survives and is competitive into the future. In the past two years, few industries have gone through as much change as retail. Post-pandemic, this sector is still battling with staff shortages, rising inflation, supply-chain disruptions caused by the current geopolitical situation and consumers continuing to relocate from city centres to less urban areas. In addition, long periods

spent in lockdown have forced people to alter their shopping habits with online purchases and delivery services becoming much more prevalent. All this volatility and ambiguity are placing unprecedented pressure on retail CIOs. New CIOs only have a short window of opportunity to prove their transformation is going to succeed. Armed with the experience of other projects they have led in the past, CIOs set out to design a path forward for companies they are just getting to know. Inevitably, transformation anxiety is one of the first challenges they encounter. Some board members might not appreciate the necessity of a major IT investment at a time when the company is struggling but still showing positive results. They might also worry about their teams and the extra burden the program means for them, particularly given the tight recruitment market. Employees might also be concerned about their roles becoming obsolete. Those close to retirement might be reluctant to learn the new skills required. Before CIOs can get down to shaping the system change they want to achieve, they have to battle with a series of people-related challenges, both at the board level and on the ground. That's where involving a change professional from the early days can make a difference. A change manager can act as a trusted advisor and an ally to a CIO, helping him or her tune into the mood of an organisation. There are several scenarios where such an advisor has proven invaluable. We would like to highlight a few. Win the board over The scope and scale of a transformation program can make board members uneasy. They might not understand the benefits of the new technology. They might fear that the anxiety the transformation is causing among their teams could offset, at least in the short term, the advantages the new system is promising to bring to their business. Take, for example, a board member in charge of marketing and communication at a large retailer, and who doesn't want his overall corporate communication strategy linked to the digital transformation. He probably doesn't really believe in the transformation and therefore doesn't want his communications associated with it. This kind of disconnect could prove highly disruptive. The CIO needs to get the board member and marketing team on her side. And she needs ammunition to be able to convince them. A change professional can help by carrying out research among different stakeholder groups, evaluating their propensity to change and assessing the way they would like to learn and consume information about the transformation program. Armed with such knowledge, it will then be possible for the CIO to present the hesitant board member with facts and convince him of the importance of building a common front and joining up their communication efforts. A vision to relate to Analysts agree that CIOs have become as influential as CHROs when it comes to setting the culture of a workplace. And culture has become paramount in retail for attracting and retaining staff. CIOs are also instrumental in creating the identity of a transformation program. Every digital transformation needs a vision. We are talking about unprecedented long-term projects likely to unsettle large groups of employees and encounter their resistance. We need a compelling vision able to inspire minds and mobilise efforts.   And that vision has to be broken up into chunks that people can easily relate to and get excited about. Otherwise, they will feel left behind. As Jonathan Smart describes in Sooner Safer Happier, the bigger the capital 'T' in transformation, the steeper the Kübler-Ross change curve1 an employee has to ride through. One of those chunks could be data. Data and analytics are some of the most inspiring aspects of a transformation. The prospect of being able not only to collect

data, but also to extract unique insight from it is irresistible. Data's potential inspires people. All of a sudden the vision behind a new system becomes tangible, less abstract. Every employee in retail knows the difference that having better consumer analytics could make to his or her job. For store managers, the possibility of getting more data from interactions with consumers and combining it with social media or weather data means they can handle their inventory in a more proactive way, exploiting predictive insight.   Change professionals are used to gauging the appetite of an organisation for the new. They can spot the most compelling arguments behind a transformation, like data, and turn them into a powerful story. They are ideally positioned to help a CIO create an identity for a program and strengthen its vision by making it more relatable and easier to communicate. The workplace path How fast an organisation is able to transform also depends on its openness to cloud technology. CIOs are often confronted with the issue of an organisation not being able to fully grasp the benefits of moving from on-prem to cloud. And retail has often proved a rather traditional sector.   In our work, we have become aware that the path to cloud often goes through workplace modernisation. Office 365 has become for some retail clients an entry point. Once their employees are exposed to the freedom of accessing files anywhere from any device or the experience of collaborating on the same document with unprecedented version control, they can start picturing the difference cloud can make to other processes. CIOs can use the energy around a workplace transformation to get buy-in for their overall vision. Again, a highly tangible digital experience can be utilised to help users visualise changes at a much larger scale. Workplace collaboration tools alleviate the administrative workload of store staff. They free up time staff can spend interacting with consumers at the front of the shop, rather than having to fill out paper-based form after form in the back. Workplace transformation is one of the main areas of expertise of many change professionals. It has an impact on how employees behave, share content and connect. That's why change managers are instrumental in making sure that workplace technology is not merely rolled out, but fully adopted and its new ways of working internalised. Change professionals are ideally positioned to advise retail CIOs on how to turn the success of a workplace modernisation into an engine of further transformation. Our experience tells us that, rather than being an afterthought, change management needs to be positioned as a key supporting element of a transformation roadmap. With a change manager as a trusted advisor, a CIO will be able to build powerful alliances throughout the business and keep an ear on the ground as the transformation program progresses. Summarised, here are some of the primary ways in which a change professional can support a CIO embarking on a transformation for a large retailer: The speed at which the retail sector is changing and embracing digital is only bound to increase in the near future due to an overall rise in inflation and a decline in customers' purchasing power. A growing number of employees will continue to have little time to adjust to new operating models. Strong partnerships with change professionals are what CIOs will continue to need in order to be able to deliver successful transformations.
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Why Do Energy Firms Fail at Digital Transformation?

Why Do Energy Firms Fail at Digital Transformation? October | 2022 The energy industry today is at a crossroads, and depending on one's point of view, one might see either boundless opportunity or tumult and disruption. Decarbonization is accelerating, digitization is reshaping our capacity to track and model the energy ecosystem in real time, and the trend toward devolution will continue to move power generation away from centralized monopoly suppliers. Decarbonization, digitization and devolution have at least one thing in common: In each case, the supporting technologies will require fundamental digital transformations within all major industry players. While new digital workflows and data capabilities may theoretically promise significant return on investment, that ROI will not be realized if the digital transformation is not enthusiastically embraced throughout the organization. Many steering committees and program managers focus on technical progress and assume that exciting new innovations will sell themselves and naturally scale throughout the company. Because of this assumption, they do little to pave the cultural road that will socialize the new ways of working. This "build it and they will come" model is rarely successful. Rather, successful digital transformation in the energy industry requires sustained user engagement that begins early in the planning phase and extends past the go-live moment. In particular, five crucial components of a user engagement strategy can help energy companies find success and avoid failure as they scale digital-first mindsets and workflows throughout their organizations. Stakeholder Mapping With any transformation initiative, levels of enthusiasm will range from "Bring it on!" to "This will never work here." To optimize the messaging and engagement, the program team needs to think of members of the organization as falling into three camps: the supporters, the neutrals (probably the majority) and the naysayers. A stakeholder map should be used to track which key stakeholders fall into each camp (this document should not be widely shared by the change manager, for obvious reasons). The stakeholder map serves as a guide for how and where to deploy specific types of messaging. Tracking the sentiments of every individual employee is certainly excessive; one recent digital transformation project successfully tracked the sentiments of all relevant team leaders, and below that level, developed personas to represent groups of affected users. While the core message should be consistent across the organization, different emphasis may be required depending on how the changes are perceived by various team leaders and user groups – hence the need for an engagement plan. Engagement Plan The engagement plan describes how the key groups of stakeholders will be informed and updated about progress and defines the messaging that the program wants to reinforce. When it comes to particularly critical stakeholders, plan for periodic one-on-one engagements, which ensure consistency of messaging and provide

opportunities to develop rapport with key organizational influencers. For a large global energy company in which the transformation will affect operations in a specific region, this might mean one-on-one conversations with leaders in the field operations and production management teams, as well as stakeholders in central corporate functions, including the communications team. The engagement map should include a mechanism for tracking the status of each engagement, as well as a "heat map" that captures specific areas of concern and triggers urgent messaging activity. Comms Plan Once the key stakeholders have been mapped and incorporated into an engagement plan, the program team should create a separate communications plan to present the digital transformation to the rest of the organization. This plan should capture all organization-wide channels that may be used – Yammer, email, Slack, team briefings, town halls, etc. – along with the key messages that need to be shared with a wide audience. Most importantly, the purpose of each message should be clearly defined. Is it meant to increase awareness, drive anticipation, impart knowledge or reinforce earlier messaging? Impact Assessment A Change Impact Assessment (CIA) is both one of the most important pieces of a digital transformation messaging strategy and, ironically, the one most frequently overlooked. In its simplest form, the CIA visualizes the implication of the resulting changes from an end user lens and determines what needs to happen to socialize and embed the proposed changes. The changes may require new training programs, project management tools and reporting structures. A CIA is best developed in a workshop setting that brings together technical, program and user resources stakeholders after the technical design work is completed. In one recent capital programs management transformation project, the CIA process included representatives from front-end engineering design, engineering management, data standards, contracts and procurement, and operational readiness – all of whom contributed unique perspectives and surfaced concerns that might not otherwise have been addressed. Readiness Assessment A final – and, again, often overlooked – element of a digital transformation program is an assessment of business readiness. Ideally, this should take the form of a series of workshops scheduled about one month prior to go-live. The aim is to measure and track to closure the activities needed to ensure a successful go-live, and is a first step toward permanently embedding the new changes to ways of working. Remaining training needs and the delivery of go-live communication should receive careful attention, as should arrangements for resolution of end user queries and issues at go-live.   As energy sources and distribution ecosystems continue to evolve, the energy companies that seamlessly integrate new data-driven digital solutions will be the ones that seize the present moment and shape the future of energy in the 21st century. Yet even the most advanced digital solutions will make little difference if they are not rapidly and enthusiastically adopted throughout the company. While change management should not be seen as a "silver bullet," focusing on the key elements of change management dramatically increases the probability that a digital transformation initiative will meet or even exceed expectations. Keith Simmonds Managing Consultant, Talent & Change Keith has successfully delivered a number of technology enabled transformation programs, the majority in the energy sector. His experience confirms his belief that addressing the people side of change is critical to achieving a

sustained and cost-effective transformation.
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Team Charters – The Secret Sauce for ERP Transformation Success

As many as 78% of all significant corporate transformations fail.1 Because enterprise resource planning (ERP) transformations require a unique blend of functional and technical diversity, ERP transformation can be particularly challenging for complex global organizations. Often, the core problem turns out to be a lack of intentional and effective organizational change management. Without robust organizational change management and a focused team to drive it, an expensive and strategically critical ERP transformation can be derailed. To ensure a successful ERP transformation, companies must consider team dynamics from the very outset and maintain that focus throughout the project. An emphasis on building trust between the diverse and scattered team members is paramount, and one promising tool to create that foundation is a team charter. Why ERP Teams Fail An ERP team is defined by a blend of functional, technical, change and governance team members. The major stakeholders arrive at the project with different priorities, preferences and approaches. Team members may also be working across different countries and cultures, and the project typically blends employees, external consultants and other types of system integration contractors. Because of these complex team dynamics, misalignments and power struggles can appear immediately. Lack of leadership vision, blurred governance, unanticipated scope changes, resource pressures, unmet deadlines and financial overruns can all contribute to a potentially toxic project and team environment. In one case, we found ourselves working with a change team that was riddled with competing sub-factions. There was no true accountability, and regular arguments focused on who was responsible for delivering key aspects of the program work. The same ingredients that cause challenges, however, can also become the transformation's greatest strength. With a clear team charter supporting proactive change management, the ERP transformation team's rich diversity of viewpoints, even in conflict, can be unified into a high-performing transformation chorus. High-Performing ERP Transformation Teams are Defined by Trust Extensive research on high-performing teams has demonstrated the primacy of building trust. As neuroeconomist Paul J. Zak summarizes, "Employees in high-trust organizations are more productive, have more energy at work, collaborate better with their colleagues, and stay with their employers longer than people working at low-trust companies."2 Trust is the foundation that allows teams to access their full range of strengths and creativity. Trust is generated by building an environment that encourages creative thinking, risk-taking, openness and collaboration. Establishing trust means developing an environment of resilience that learns from mistakes and manages the inevitable setbacks and constant pressures.

It means connecting on a human level, whether virtually or in person, and moving from purely transactional discussions toward understanding and empathy.   Building a trusting environment means creating a space in which people feel confident and safe, and where they are willing to demonstrate honesty and vulnerability to form lasting cohesion. This is particularly true in a new cross-functional team. Seniority and decision-making authority might not yet be completely clear. Some parties may feel that their task is primarily to protect their own department or business unit's agenda, rather than represent the broader goals of the business or the project. Trust is not likely to emerge on its own; it needs the right catalyst, a proactive approach and ongoing focus. Building a Team Charter: How to Set Teams Up for High Performance While an ERP change team has the shared goal of a successful ERP transformation, the team members may not be aligned on things like process, decision-making protocols, responsibilities and collaboration practices. At first, they may not even realize that they are not aligned. A team charter (Figure 1) is designed to align the team around a unified purpose, define the supporting factors that will achieve that purpose, and create mechanisms to continually hold the team accountable not only for what it does, but also how it does it.   The goal of a team charter is to provide clarity on what a high-performing team looks like in context of the organization's ERP transformation mission and vision. A team charter captures the key goals of the project, but then goes further to set behavioral expectations, define roles and responsibilities, and institute ways of working. The team charter might lay out preferred communication methods and even communication styles. It can document best practices for avoiding groupthink and encouraging respectful disagreement and debate. To drive change, colleagues on the change team must be rowing in the same direction, but they should also have recourse to healthy ways of challenging each other and providing constructive criticism. The team charter process will initially require active promotion by one or more senior members of the team. But overall, it should endeavor to be a fully democratic process. Typically, the team charter's ground rules can be developed over the course of two or three facilitated workshops focused on brainstorming and team discussion. The key is to define the principles that will guide the team and build out clear examples of what those practices look like in terms of day-to-day actions and behaviors. Once a team charter has been established, its guidelines need to be periodically revisited. This can be accomplished with periodic meetings focused exclusively on team dynamics. A team charter leader or coach might take full responsibility for team dynamics, or that leadership position might rotate over the course of the transformation project. The team leader(s) should be able to observe behaviours, keep notes on team-related developments, and coach team members toward higher levels of performance with honest and direct feedback. During an ERP transformation, some contributors may be involved only for small portions of the project, rolling in and out over a period of months. Because of the shifting nature of an ERP team, it is often necessary to periodically recalibrate during key inflection points, such as when moving from Design into Build and Testing. It is also important to remember that a team charter is not set in stone. It can and should adapt, if necessary, to reflect a changing context and sustain its value. While a team charter and attention to the evolving nature of relationships, actions and behaviors might seem like a luxury, consider that an average ERP transformation program for a

large company can cost anywhere from $1 million to $10 million.3 Those millions can evaporate quickly unless a high performing change team ensures the transformation program's success by adhering to the governance structures of a clear team charter. With a proactive and sustained approach to change management, even the most massive and complex ERP transformation can defy the daunting statistics about corporate transformation failure. RESOURCES 1. The Secret Behind Successful Corporate Transformations, Harvard Business Review, 2021 2. The Neuroscience of Trust, Harvard Business Review, 2017 3. ERP Software Report, Software Path, 2022 Andrew Shapiro Managing Consultant, Talent & Change, Europe, Wipro Andrew is focused on managing the people-side of digital transformations delivering organizational change and people development programs for improved business performance. He has over 25 years of experience across many leading global businesses. David Lyons Partner, Talent & Change, Europe, Wipro David has 20+ years Change Management, Organisation Design and HR Advisory experience, leading multiple end-to-end consulting engagements for many household brands. =======================

Accelerating AR/aR Adoption in the Energy Industry

----- Arcticle source ----- https://www.wipro.com/consulting/accelerating-arar-adoption-in-the-energy-industry/ ----- About the Authors Contact Wipro Please fill the required details to access the content Accelerating AR/aR Adoption in the Energy Industry February | 2023 The biggest danger, when it comes to introducing a new technology across an organization, is to over-promise and under-deliver. During the early stages of any emerging technology, the use cases will be compelling but limited. To maximize the ROI of emerging technologies, organizations must carefully balance excitement about potential benefits with realism about current capabilities. In the energy industry, augmented reality (AR) and assisted reality (aR) adoption have both accelerated in the past several years, particularly as companies turned to new technology-enabled methods of monitoring and managing assets during the COVID-19 pandemic. Augmented reality (AR) refers to a computer-generated overlay to real-world objects, while assisted reality (aR) delivers digital content in a user's immediate field of vision. Both technologies are about more than just wearable headsets and include the associated software and the user experience provided by the integrated solution. From a user experience perspective, the AR/aR rollout in the energy industry has often been less than ideal. Our first-hand experience across connected worker programs and emerging technology adoption with global energy clients has reflected this challenge. Many recent AR/aR adoption efforts did not reach their full potential. By over-promising and under-delivering, IT and innovation leaders ensured that frontline workers would eventually revert to legacy ways of working. Frontline workers began to suspect that AR/aR were being driven by empty hype. This backsliding on AR/aR is unfortunate, because AR/aR do bring significant benefits when it comes to monitoring and maintaining assets in the field. Among other

benefits, AR/aR deliver: Problems in the Field: The Causes of AR/aR Adoption Challenges In our experience, most problems related to the daily use of AR/aR devices were due to IT or innovation teams not understanding the nuances of assets, sites and frontline teams. Each site and asset presents unique requirements when it comes to AR/aR-enhanced inspections. If not addressed, frontline workers experience those unique requirements as baked-in limitations of AR/aR, particularly if they feel that they have not been consulted as part of the solution rollout.   In one recent client engagement, users reported network connectivity issues when working in onshore assets surrounded by metal buildings. In the context of floating production storage and ship offloading, users regularly reported motion sickness when using AR/aR devices. Workers were also troubled by the absence of "hey, while you're here..." conversations during remote inspections, finding that the narrowly task-oriented nature of a remote inspection via a wearable headset did not tend to provide a broader view of the state of the site/asset. This last roadblock was not due to the inherent limitations of remote inspections, but rather insufficient training on how to fully leverage the new tools.. In all of these examples, the message to the field workers was: The technology team that is pushing this new solution has not bothered to understand the basics of what you do every day.   How to Smooth the AR/aR Transition When launching a new AR/aR solution – and particularly when launching a new solution when a previous AR/aR effort has failed – technology and leadership teams need to think carefully about both their own blind spots and how the new solution might be perceived. In particular, they need to emphasize the value to the end user, tailor solutions to individual sites and involve frontline workers to drive business readiness. 1. Emphasize the value to the end user As IT and innovation teams become enamoured with the potential of new technologies, they can fall into the trap of assuming that new technologies are inherently exciting to everyone. When deploying a new technology and explaining its many features, they often forget that they have a responsibility to articulate the "why" behind the technology. Frontline workers are not immersed in futuristic trend-spotting, and they are not likely to adopt something simply because it is new and innovative. They want to know that it will solve their current challenges better than their legacy solutions. Often, technology teams focus exclusively on the hardware: "We are deploying a wearable Augmented Reality headset that enables hands-free, voice-activated remote assist and work assist functionality." For a frontline worker in a high-stress onshore refinery, this emphasis on learning new hardware will come across as a burden rather than an opportunity. Instead, descriptions and explanations of new AR/aR programs should focus on articulating the value to end users and asset managers. After all, an AR/aR solution is not simply a piece of hardware, but a combination of hardware and software that delivers a value add to the user. Technology teams might emphasize how AR/aR can lower operational costs and necessitate fewer helicopter flights for remote support. They can explain how the solution will deliver faster responses while presenting less risk to frontline workers, and how the solution will accommodate the constraints of offshore assets. 2. Tailor solutions to individual sites Force-fitting an asset simply for the sake of standardisation is a surefire way to undermine new technology adoption. An AR headset that is ideal for a refinery worker, for example, might cause motion sickness for oil rig workers, and such nuances can only be discovered through on-the-ground

testing. Consequently, technology leaders should undertake trials and POCs for different assets and sites to identify context-specific challenges and opportunities before beginning an organization-wide rollout. An agile method of testing, failing fast, and further testing with first-hand users is the best way to ensure that the ideal solution is deployed for each particular asset, whether upstream or downstream, FPSO or fixed platforms or wind farm. Standardisation has benefits at an organisational level and does provide economies of scale, but if doesn't serve the user, standardization is unlikely to yield better ROI than customization. 3. Involve frontline workers early and at every step While thoughtful communication to employees is important (see point 1), deployment is a two-way street, and it is crucial to involve frontline workers in decision-making well before deployment begins. To enlist the help of users in developing the solution, organizations should focus on making them "sponsor users" rather than just users. This active involvement sets a baseline for success and helps identify constraints, and more importantly provides a community of users who will advocate for the solution with their peers. A carefully crafted communication plan can include targeted messages designed to be shared by individual site managers, advertising the context-specific benefits of AR/aR adoption. Pre-deployment messaging can often be effectively shared through posters/ stickers on shared assets such as terminals, desktops and laptops. Trainings on how, for example, to seamlessly adapt to a new headset must include ample opportunities for feedback, to ensure that no potential drawbacks or problems are overlooked. This feedback loop can be extended by ensuring strong channels for resolving technical issues, including clear instructions for who to contact for support to ensure minimum disruption. An often-forgotten part of the adoption curve is ensuring sustained use of the solution. Periodic long-term engagement from the operations team or OLMs (Operations Landscape Managers) to collect data on the quality of new devices and services will feed into continuous improvement. Conclusion: A Bright Future for AR/aR Deployment Energy companies should not assume that recent struggles with AR/aR deployment are the result of inherent limitations in the underlying technology. AR/aR can and will transform asset monitoring and management. So far, many of the challenges have been rooted in poor communication and planning, and a lack of focus on how simple site-specific factors like connectivity and motion might impact the effectiveness of AR/aR solutions. By focusing on the needs of frontline workers and actively adapting AR/aR solutions to individual sites and assets, energy companies can ensure that their next AR/aR implementation program will impress frontline workers, making their day-to-day work more safe, efficient and effective. Sreedhar Menon R Principal Consultant, Organizational and Change Management Sreedhar is a Prosci-certified change and communications practitioner focusing on digital transformation and the future of work. He has experience deploying and increasing adoption of emerging technologies while delivering sustainable growth through a people-centric change approach, supported by a strong background in business intelligence and analytics. Peter Floyd Managing Consultant An upstream oil and gas work transformation consultant considerable field operations and maintenance experience, Peter's work spans numerous geographies and MCP lifecycle phases, including FEED, detailed design, EPC, SU, and operationalisation. His specializations includes asset TAR planning, IM, mobility and field work, ERP, operations

and subsurface. He designs and deploys effective technology solutions that support upstream, new asset, field development, production, operations and maintenance users.   Contributor Luke Sykora Content Writer, iDEAS ======================

Collaborative Working in a Hybrid World: Five Steps for Successful ERP Programme Delivery

----- Arcticle source ----- https://www.wipro.com/consulting/collaborative-working-in-a-hybrid-world-five-steps-for-successful-erp-programme-delivery/ ----- About the Authors Contact Wipro Please fill the required details to access the content Collaborative Working in a Hybrid World: Five Steps for Successful ERP Programme Delivery April | 2023 Proactively strengthen team relationships through both digital and in-person interactions. What is the defining feature of successful ERP implementation programmes?   It is safe to say that programmes rarely fail due to a lack of technical know-how — there is an abundance of technical ability out there. Rather, the difference between success and failure usually comes down to people's ability to work together and integrate into a cohesive team. This differentiator, however, is hard-won. Large ERP programmes typically consist of clients, contractors and third-party vendors with different priorities and perspectives. While collaborative intent often exists, this mix can provide a fertile ground for dysfunctional relationships, siloed working and partisan agendas. Furthermore, we have observed that in the cut and thrust of ERP transformation, people in programme team leadership roles, under pressure to deliver results, tend to default to a more dictatorial leadership style. Conversations with the team are focused on tasks, deadlines and deliverables; information is highly controlled; and the course of action is predetermined. These team dynamics are exacerbated in the hybrid world, as a relative lack of in-person connections makes it difficult to build the strong, trusting bonds required for optimal performance. So how can leaders and teams build and maintain levels of trust that can serve as the foundation for collaborative working and successful programme delivery? And how can they best replicate the benefits of high-performing, face-to-face teams when working in a remote or hybrid environment? We have found that the following strategies will build the sorts of collaborative relationships that help ensure ERP programme success in a hybrid context : 1. Implement active measures to build relationships Relationships don't form by magic. They need to be worked at, particularly when the team is operating remotely or at an early stage of maturity. Relationship-building needs to be planned, supported and considered essential to core programme delivery. Team members need to find occasions to step away from purely transactional task-orientated dialogue and get to know each other.   Hybrid teams, in particular, need to make a concerted effort to plan for in-person time. In-person team-building and social activities should become part of the drumbeat of programme life, built around mobilizations, key milestones and programme successes. Even when working virtually, teams can carve out

time for non-work-related conversations at every opportunity. Meetings can include 'check-in' and 'check-out' periods for looser conversations and rapport-building, rather than jumping right into the working agenda and then ending abruptly. Teams can also organize formal relationship-building time through activities like "coffee roulette," in which meeting participants are randomly paired and then spend 30 minutes getting to know each other better, or simply a quick review of everyone's status on a team "emotional mood wheel." 2. Define norms around trust and fun Culture starts at the top, and leaders set the tone. Leaders need to act and speak in a way that encourages trust and collaboration: setting others up for success, being inclusive, avoiding blame and allowing people to feel supported. At the outset of a programme, the integrated leadership team can set the tone by creating a behavioural charter that transparently lays out acceptable and unacceptable behaviours. This charter should emphasize the importance of trust and specify how desired behaviours will be both demonstrated and reinforced. Displays of vulnerability are more likely to help the rest of the team open up. Leaders can also build trust by recognizing positive behaviour in others; for example, applauding someone's courage for raising a risk early or highlighting a recent collaborative approach that led to innovation. Nor should leaders forget to find opportunities to simply keep things light-hearted. They can schedule a fortnightly team connect and rotate the facilitator to inject some fun and get conversations going. Team members can share a skill, run a short quiz or game like "guess who's fridge it is," or even have a mindfulness session. The exact activity isn't as important as the effort to tap into the team's creativity and get everyone engaged. 3. Be transparent and communicate Without transparency and clear communication, the rumour mill dominates, creating a fertile breeding ground for speculation and mistrust. The entire programme team should have equal access to relevant information about what's happening on the programme. When they understand the big picture, people stop fearing the worst and make well-informed local decisions. Tactics to ensure transparency need not be complex or onerous. They might include a weekly soapbox address by leaders to share programme status and celebrate success, joint townhall events for programme members where suppliers and the client stand shoulder-to-shoulder to reiterate the vision and field Q&A, and open forums for discussions on specific hot topics that require a deeper dive. On the technology side, enterprise apps like Flowdock, Trello and Quip have been designed to optimize innovation, collaboration and sharing. Even encouraging teams to take advantage of the simple social media-style features of more familiar tools like Teams and Webex (e.g. likes, hearts and thumbs-ups) can enhance idea-sharing, engagement, consensus and support. 4. Be empowering, caring, and supporting Leaders rarely invest sufficient energy in influencing team culture, climate and motivation levels. This is short sighted: Engaging the hearts and minds of the team will unleash additional discretionary effort and creativity that would otherwise be lost. To motivate high levels of effort and engagement, leaders need to proactively shape the tone of all their interactions. They have a massive opportunity to bring out the best in those around them – whether employees, clients, vendors or contractors – if they can use their communications skills to actively support and empower their team members. Coaching skills like careful, intentional questioning and listening techniques can unearth individual preferences and traits and access deeper and more meaningful

connections with team members. Building time to connect like this can feel like time away from driving the programme forward. However, leaders need to remember that a supported and empowered team will be more inclined to go above and beyond when faced with unexpected challenges. 5. Monitor relationships and address breaches of trust During an ERP programme implementation, the complex mix of clients, vendors and contractors can quickly devolve into disfunction. To avoid spirals into misalignment and outright conflict, it's critical to monitor the health of team relationships, and particularly the relationships between the client and vendor at the leadership level.   To monitor relationship health, leaders can make relationship health a standing agenda topic at key leadership meetings. They might also institute periodic 'drains-up' with their team, or leverage "temperature surveys" to evaluate the team's satisfaction with programme collaboration. Relationship-related questions can be open-ended: "What's working well, and where can we improve?" But they might also be more probing: "Are you being kept in the loop?" or "Do you feel like you are set up for success?" Answers to these questions are indicators of the current level of trust and the effectiveness of collaboration; they should be used as a springboard for discussions on how to improve. Sadly, relationships do sometimes deteriorate despite even the best efforts. At the outset, the programme should establish clear mechanisms to address such issues quickly when they cannot be resolved between peers. When a resolution cannot be found at the programme team level, there should be a clear escalation route to programme sponsors for appropriate mediation and intervention. Conclusion: Enabling Hybrid Collaboration For large ERP implementation programs, hybrid delivery is becoming the new norm. It is certainly more efficient: Enterprises are able to reduce travel time and costs, while leveraging the talents of a more geographically distributed network of team members. The downside is that teams often fail to build the strong bonds that reduce conflict and spur innovative collaboration. The upsides of hybrid ERP implementation can absolutely outweigh the downsides. The key is to proactively strengthen team relationships through both digital and in-person interactions. When digital tools and careful relationship-management allow diverse teams to work together toward a common aim, the experiences and skills of each team member are amplified, contributing to ERP programme success. Andrew Shapiro Managing Consultant, Talent & Change, Europe Andrew is focused on managing the people-side of digital transformations, delivering organizational change and people development programs for improved business performance. He has more than 25 years of experience across many leading global businesses, including experience with numerous SAP- and Microsoft-enabled ERP programs. David Lyons Partner, Talent & Change, Europe David has more than 20 years of experience in change management, organization design and HR advisory, and has led end-to-end consulting engagements for many household brands, including programs involving Oracle- and SAP-enabled ERP transformations. Contributor Luke Sykora – Content Writer, Wipro Consulting =====================

Agile Change Management in the Energy Sector: A New Approach Requires a New Mindset

Agile Change Management in the Energy Sector: A New Approach Requires a New Mindset May | 2023 As they navigate the shift toward renewable energy sources, leaders of today's energy companies are simultaneously dealing with many other complications: geopolitical tensions, soaring prices, global slowdown anxieties, waves of restructuring, an aging workforce, and an imperative to build new relationships with non-traditional technology service providers and startup acquisitions. They fully expect the margins of the past to disappear and are under pressure to adapt their fundamental operating models. To navigate these momentous shifts, many energy enterprises have embraced agile change management. Agile change management promises to deliver unforeseen innovations and rapid results through iterative "test-and-learn" approaches that enable individuals across the organization to design and drive change. Unfortunately, through our change management work with energy companies around the world and our conversations with industry leaders, we have observed first-hand that agile change management in the energy sector often under-performs. The problem, we have found, is that organizations often approach agile change management as a set of tools with catchy new names: sprints, daily "stand-ups" and the like. What is often forgotten is that the "secret sauce" of agile change management is a much more fundamental mindset shift. Agile approaches work because they actively engage and empower more people throughout the organization to define and drive change incrementally, rather than waiting on a "big bang" solution to arrive from the top. Why Agile Change Management Fails Often, senior leaders — especially those in corporate functions such as finance, human resources, risk management and other siloed departments — have experienced organizational change as a process in which leaders direct others to change. This entrenched culture of command and control impedes the distributed leadership model that is an absolute necessity for genuine business agility. Even good intentions can end up backsliding. When organizations set up agile squads as silos amid traditional cost centres and resourcing plans, for example, the small agile teams are sidelined by the inertia of traditional hierarchies and industrial organizational arrangements. As soon as the familiar rhythms of the planning and budgeting cycles kick in, career managers tend to revert to the behaviours they've always used to win the periodic competition for department budgets. Leaders retreat to closed-door meetings, attempting to solve their own problems rather than leaning on more collaborative agile solutions. Servant Leadership: A Catalyst for Agility Navigating complexity and uncertainty in the energy sector will increasingly require leaders to acknowledge an uncomfortable truth: They don't have all the answers, and

they can't guarantee or fully control linear progress towards strategic outcomes. Rather than revert to traditional top-down structures, leaders in the energy industry can respond in a new way: They can become servant leaders. Servant leaders drive innovation by creating trusting, collaborative communities. They unlock creativity by encouraging employees to speak up even if it means challenging the thinking of company leadership. They motivate colleagues to learn from inevitable mistakes rather than avoid risks due to a fear of failure. Crucially, servant leaders understand that top-down decision-making can have negative consequences as well as positive ones. During one recent client project, we took leaders through a simulation exercise in which they examined several potential outcomes from a key project decision. As they explored how their decisions cascaded in unforeseen ways throughout the project, they grasped in a concrete way how a command and control approach might actually impede change and innovation throughout the organization. Servant Leadership's Role in the Agile Process Servant leadership is the bedrock of truly transformative agile change management. That's because servant leadership is a key enabler of the other strategic tools and elements of agile change management, including: Strong partnerships with change professionals can support CEOs, CIOs, COOs and transformation leaders as they seek to nudge other leaders throughout the organization toward the servant leadership mindsets that enable design thinking, data-driven decision-making and continuous learning. Making the Most of Agile Mindsets Working in a truly agile organization can be a thrilling experience. In an organization defined by agile mindsets, as author and agile consultant Steve Denning eloquently puts it, people are "preoccupied — and sometimes obsessed — with innovating and delivering steadily more customer value, with getting work done in small self-organizing teams, and with collaborating together in an interactive network." To succeed in the 21st century, energy enterprises will need to disrupt their entrenched "business as usual" mindsets. Opportunities to innovate amid complexity will come from people all across the energy sector changing how they work, but change needs to start from the top. To prepare their organizations for momentous change, it's time for senior leaders themselves to undergo momentous change. Silvia Cambie Partner, Talent and Change Silvia has more than 25 years of experience in change management and communication, helping clients increase adoption of workplace tech and other systems. She had advised the C-suite and senior stakeholders in a number of industries, including banking, retail, FMCG, manufacturing and energy. A former business journalist, Silvia applies a people-centric approach to her work that is focused on developing inclusive change narratives with the help of design thinking and agile methodologies. Carlien Coultate Director, Talent and Change Carlien is a versatile change leader with more than 25 years of experience in change, transformation, workplace learning, process improvement and leadership coaching. She has worked across numerous industries — including energy and utilities, finance, telecommunications, life sciences and the public sector — with a focus on design-led change strategies that leverage agile approaches and lean thinking to pave the way for new ways of working. Neil Harrison Managing Consultant, Talent and Change With more than 20 years of experience in business change and transformation leadership and delivery across Europe, the US and Australia, Neil applies expertise in human-centred change management and design thinking to enable clients' strategic

goals. He coaches change leaders to champion and realize people, process and technology-enabled benefits. Contributor Luke Sykora — Content Writer, Wipro Consulting ======================

Design the future: An interview with Karina Vazirova and Katia Lang, co-founders of FemTech Lab

----- Arcticle source ----- https://www.wipro.com/consulting/design-the-future-featuring-femtech-cofounders/ ----- Is your organisation looking for ways to innovate? Let's chat. Contact Wipro Please fill the required details to access the content "Innovation doesn't happen inside a computer screen, it doesn't even happen at the product level. It happens in our minds and in our imagination." Welcome to the second instalment of The Interview by Designit, a new series to bring you perspectives, insights, and advice from business and industry leaders who are designing the future. In this edition, we chat with Karina Vazirova and Katia Lang, co-founders of FemTech Lab. Tell us about your role and remit within your organisation We are the founders of FemTech Lab, a global ecosystem and startup accelerator for cutting edge innovators in women's health. FemTech Lab is a mission-driven venture. Our goal is to improve the lives of 1B women globally by supporting the most forward thinking entrepreneurs in the sector. We believe that the rapid innovation happening in women's health today will shape the future of humanity and society. Tell us how you go about innovating. Is there a process you use? When it comes to innovating, we don't follow rigid rules or frameworks. As entrepreneurs, our process always starts with imagining a vision of the future. That vision is usually a product of discovering a real market need and a passion to actually make the vision a reality. We then figure out creative ways to get there. When you are disrupting existing status quo, you often have to find routes that no one has taken before. It's all about being in tune with the market, having the right creative instincts and knowing when to pivot. You also have to leave room to get lucky, rather than trying to control every outcome. What is one innovation of which you're most proud? We're incredibly proud of FemTech Lab and its rapid achievements. Our vision was to create something unique by harnessing the momentum and passion of the FemTech sector. By breaking away from the traditional accelerator model and embracing the sector's mission-driven nature, we built a global platform for people to come together. In just 2.5 years, we have accelerated 52 innovative companies. Our startups received support from 500+ world-class mentors, investors, and partners. FemTech Lab surpassed being a mere startup accelerator and evolved into a movement. Katia Lang Co-Founder & CMO FemTech Lab Karina Vazirova Co-Founder & CEO FemTech Lab What has surprised you most in your role in delivering innovation? The profound influence of human emotion and connection. In order to create something different or build a business, you have to get other people on board. Innovation doesn't happen inside a computer screen, it doesn't even happen at the product level. It happens in our minds and in our imagination. To get others on board - customers,

employees, partners, supporters - you have to be able to communicate a message that resonates, not just intellectually but also on an emotional level. What do you feel is one of the greatest challenges to innovators in today's climate? It's the best and worst time to innovate. The best because incredible technological advancements, especially in AI, are reshaping our lives, work, and creativity. Social media has revolutionised how brands connect with audiences. Perfect for envisioning new products and services! The worst because rapid change makes it challenging to stay focused on the right things. Many companies pursue innovation (like AI) just to follow trends or out of fear of falling behind. Another challenge is the social media echo-chamber. Every industry faces it: LinkedIn and Twitter feeds flooded with repeated opinions and critiques. The echo-chamber is not productive, yet easy to get stuck in because fundamentally it's easier to throw jabs than to take consistent action towards change. Lastly, the current economic climate pushes larger companies to reconsider resource allocation. Innovation remains vital, but some reduce budgets and opt for external innovation partners for efficiency. What advice would you give to others in similar roles given this challenge? It's more important than ever to build a partner network to share market insights, opportunities, and lessons learned. If you are part of a larger brand - working with entrepreneurs, startup ecosystems and relevant communities can be incredibly insightful in seeing where your sector is heading. These relationships may also lead to productive opportunities in the future. The worst you can do today if you are leading innovation in any business is to stay siloed and receive all your insight from social media. Go out there, meet other innovators and builders, and get inspired! Contact Us =====================

Is There a Future of Work with AI?

----- Arcticle source ----- https://www.wipro.com/consulting/is-there-a-future-of-work-with-ai/ ----- Contact Wipro Please fill the required details to access the content Is There a Future of Work with AI? Is the future of work hybrid, remote, in-person or freelance co-working? Probably all of the above, but AI will fundamentally transform work itself. For the past several years, amid unprecedented rates of hybrid and remote work, the future of work has been a topic of intense conversation among global businesses. Recent advancements in GenAI are taking that conversation to a new extreme. The emerging question: is there a future of work? As machine learning takes over previously human-occupied analytical roles, and as GenAI stakes its claim in content and code creation, there's increasing anxiety about economy-wide job displacement and rigid automation. Some of this anxiety is perhaps well-founded, but the future of work will involve a heavy dose of AI whether we like it or not. It won't be apocalyptic, but there will be change. At its best, the future of work will be about viewing AI as an ally, a hyper-intelligent collaborator that can augment human potential. So, while AI skeptics find it easy to ask, "Is there a future of work?" a better question is "How do I cultivate an AI-ready workforce of the future?" In many cases, AI itself will provide some answers. In the coming years, enterprises will

leverage AI to identify emerging skills gaps, build talent transformation programs on top of AI-powered platforms, and retain top talent by personalizing employee engagement through AI-driven insights. For all of the ink recently spilled about in-person vs. hybrid vs. remote working, there's a deeper reality: Wherever and however employees work during the next several decades, they will need to be prepared to add value amid relentless technological change, particularly in the context of the AI revolution. The companies that win the AI revolution and successfully ride the waves of other emerging technologies will achieve resilience by prioritizing people through an AI lens. In the process, they have an opportunity to not just adapt to changing circumstances, but truly create the future of work. Find the Talent to Power the Future In a rapidly changing job landscape, companies need to emphasize agility in their talent strategies. Every large company in every industry will need a workforce that's fluent in emerging technologies, including but certainly not limited to AI. But it won't be easy. Already, an AI recruiting frenzy is putting pressure on HR teams while creating an escalating war for talent. Pursuing the future of work means, first, activating cutting-edge talent-acquisition programs. AI-driven talent-acquisition strategies are already leveraging predictive insights to refine the talent pipeline. These tools will increasingly allow recruiting organizations to identify potential talent around the globe, predict their cultural fit, and reduce hiring biases. Companies can establish an AI-powered skills lab to further analyze market trends, internal business metrics, and the evolving nature of industries to predict the skills that will be in demand. This requires a diverse set of analytical capabilities, like those available through Wipro Consulting's partner ecosystem, to define the skills needed for future success and more-effectively plan for the skills gap. Meet the Upskilling Imperative The pace of technology evolution is threatening to outstrip our capacity for upskilling. Traditional learning methods are failing, leaving a deep skills chasm. Increasingly, employees will need personalized learning ecosystems powered by AI to bridge the skilling divide and offer bespoke learning journeys that map out gaps and recommend upskilling paths. The cost of retraining existing employees often competes with the cost of hiring new ones, yet investments in continuous-learning platforms more than pay for themselves if used wisely to cultivate capable, experienced leaders. As these new-age training programs are developed, organizations will need to rapidly educate employees on AI. At Wipro, for example, we've launched an ambitious effort to train each of our 260,000 employees on GenAI awareness. Beyond AI, organizations will need frameworks for deciding which new skills need to be socialized across the organization, plus concrete learning and development (L&D) strategies and platforms to rapidly scale learning across the enterprise. Bolster Employee Engagement and Retention A positive and seamless employee experience leads to better retention, higher productivity, and greater levels of engagement. AI can personalize the experience and improve motivation by tailoring solutions to individuals' needs and adapting to their learning styles and pace. Enterprises will increasingly leverage AI to analyze employee engagement metrics in real-time, understand what makes top talent perform, and iterate on their AI-powered personalized retention strategies. Meanwhile, new technology tools will foster work cultures in which collaboration is rewarded and where digital experiences feel as genuine as face-to-face interactions. Embrace AI for the Ethical Future of Work AI is not

eradicating the future of work. AI is the future of work. Its workplace invasion is a double-edged sword: It can dramatically improve efficiencies and augment human intelligence in powerful ways, yet if deployed carelessly, it can deliver biased algorithms, privacy breaches, intellectual property risks, and potential job displacement. To truly make AI an ally in the future of work, enterprises will need to embed strong AI ethics at the heart of their operations, including their HR operations. AI guardrails will need to eliminate bias in skills analysis, predictive forecasting, hiring, talent cultivation and succession planning. And workforce strategies will need to build AI-driven skills development initiatives that can counteract any AI-driven job displacement. To identify, attract, and support a dynamic and committed global team, such AI guardrails will be non-negotiable. Rather than bringing on a dystopia of job displacement and rigid automation, the AI revolution can give birth to nimble companies that are great places to work and build a career. This requires enterprises to leverage data to identify skill gaps and recruit top talent, invest in comprehensive upskilling programs, and use technology to supercharge employee engagement. Technology has always been a tool, not a silver bullet. The real magic of the coming decades will happen when companies merge the strengths of their human workforce with AI to create a potent blend of empathy, creativity, and efficiency – the three keys to thriving in the future of work. About The Author John Arnold Smith Global Head of Talent & Change, Wipro Consulting John is a Senior Partner with Wipro Consulting and Global Head of Wipro's Talent & Change practice. He leads a dynamic team of talent and change management consultants who advise top Fortune 500 companies on strategic solutions to solve their toughest HR, talent, and organizational challenges. In his 30 years of experience in management consulting, organizational design, talent development, and strategy execution, he has led consulting programs across a wide range of industries in Europe, North America, and Asia. To address the complex needs and market demands of the workforce and workplace of the future, he leverages a global perspective on talent strategy that enables diversity and inclusion and develops leaders with the competencies needed to successfully create value in the international marketplace.
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Championing the Chatbot

----- Arcticle source ----- https://www.wipro.com/consulting/championing-the-chatbot/ ----- Contact Wipro Please fill the required details to access the content Championing the Chatbot Chatbots and other virtual assistants will soon be much more ubiquitous across the employee experience. Change management will de-risk their implementation. Soon we will all be collaborating with robo-colleagues. The chatbot market is projected to grow at a CAGR of 22.6% between 2023 and 2032, with much of this growth occurring in the IT service management segment. Virtual assistant solutions will also see heavy adoption in HR, sales and marketing, operations and supply chain, and finance and accounts. GenAI and advancements in natural language processing will improve the accuracy and responsiveness of virtual assistants. But how will employees themselves respond to their virtual colleagues? The success of these human-virtual agent collaborations will be

largely determined by how quickly and enthusiastically people embrace these new ways of working, and how well they sustain newly learned behaviors. So far, enterprises have found actual virtual assistant (VA) implementation to be a challenge, largely because many employees are inherently skeptical of these automated support solutions. Across all industries, leaders know that virtual assistants will advance productivity. As a result, they're not slowing down their digital transformations. To keep pace with the technology, organizations will need to double down on human-centric change management strategies to build a currency of trust and foster positive relationships between human and virtual assistants. Why Employees Resist Virtual Assistants One important reason employees resist virtual assistants is that, in the past, VAs simply weren't very impressive. This leads to some common preconceptions about VAs: that they are not intelligent enough to make strong recommendations, for example, and can't solve complex problems. Employees assume that VAs continue to struggle with complicated or unusual language such as colloquialisms, abbreviations, fragments, and mispronunciations. Lacking a deep understanding of AI, employees may believe that VAs are simply reading from a script. Some even worry that interacting with VAs will contribute to loneliness and erode social skills. Beyond these specific objections to VAs, employees are also experiencing a more generalized "change fatigue." Employees who have experienced frequent and disruptive shifts in enterprise technologies often lose their willingness to cooperate with change. Gartner now cites change fatigue as one of the top emerging concerns for today's HR leaders.   Given all of these challenges, organizations often face an uphill battle as they encourage the adoption of even the most capable VAs. Six Strategies to Pave the Way for VA Adoption IT and change leaders need to reckon with these negative human perceptions of VAs. Ideally, a VA service experience should be perceived as superior to phoning or emailing a live agent/service desk. This will encourage people to enthusiastically embrace virtual agent colleagues and learn to fully leverage their capabilities. Because so many of the issues associated with VAs are human rather than purely technological, a human-centric change management approach is required to build symbiotic relationships between humans and their VA counterparts. Human-centered change management leverages principles from psychology, sociology, and behavioral science to instill the mindsets and behaviors that can deliver digital transformation goals. The following six change management strategies, in particular, can de-risk VA implementation: Virtual Colleagues: A Key to the Future of Work As organizations embrace the future of work through digital transformation, one of the top priorities will be to create a humanized workplace in which smart digital colleagues perform many of the repetitive tasks once performed by humans, improving productivity and enabling the human workforce to focus on projects that benefit from human creativity and critical thinking. In the past, virtual agents have been perceived as a hindrance rather than a digital transformation catalyst. In the future, they will be a positive force, reducing menial and repetitive tasks across all global enterprises and powering a more dynamic employee experience. But success will not be automatic. As technologists build the fluent, reliable virtual assistants of the future, change leaders need to prepare their teams to work seamlessly with those virtual colleagues. An intentional, human-centered change management effort is the best way to create positive experiences with these virtual

colleagues and ensure that they become a respected presence in the future of work. About the Author Promity Chakraborty Senior Consultant- Talent & Change Promity has more than 15 years of diversified experience in consulting, change management, digital transformation, organization design, HR transformation and organizational development, along with post M&A integrations across multiple industries and geographies.
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De-Risking GenAI with Prototypes

----- Arcticle source ----- https://www.wipro.com/consulting/de-risking-genai-with-prototypes/ ----- Contact Wipro Please fill the required details to access the content De-Risking GenAI with Prototypes Rather than figuring out how to deploy GenAI everywhere, enterprises need to first deploy GenAI somewhere. The launch of ChatGPT grabbed the interest of business leaders everywhere, catapulting GenAI from its technology silo into high-level business strategy discussions. Since then, it's become clear that GenAI is here to stay and will add value across all industries. Even so, enterprises may hesitate to move forward with GenAI initiatives because they are unsure which use cases to prioritize, or are worried about the risks around data privacy and algorithmic bias. Enterprises will find it difficult to resolve these questions about use cases and risk in the abstract. GenAI is an extraordinarily iterative technology — more like a musical performance than a machine. Think of the GenAI model as the instrument, the enterprise's data estate as the sheet music, and the enterprise itself as the musician. The outputs of GenAI will be intimately tied to the quality and characteristics of an enterprise's unique data estate. Rather than coming up with some high-level theory of how GenAI will transform their business, enterprises need to start simply practicing with GenAI. Launching early, low-risk GenAI prototypes and proofs-of-concept (POCs) is the fastest way to gain the experience necessary to craft a more high-level GenAI strategy that delivers significant competitive advantages while building robust risk-management frameworks. Starting a GenAI Prototype or POC When it comes to GenAI, the most important thing is to simply get started. To identify appropriate GenAI POCs, enterprises should consider how tactical use cases can enhance their near-term efficiency and operational advantages. They should also consider the ability to scale, prioritizing tactical use cases that seem likely to contribute to key business processes and competitive advantage in the long term, but without letting the perfect be the enemy of the good. The business case for a GenAI POC — and how to measure the impact on that business case — should be clarified as part of the discovery process. Clear definitions of success are crucial, as they will decide which POCs are worth scaling. For organizations facing cost-optimization pressures amid macroeconomic turmoil, GenAI has arrived at the perfect time. Many of the more obvious tactical GenAI use cases — for example, rapid text summarization and automated code generation and testing — are tailor-made for enabling measurable efficiencies and cost-reductions in the prototyping phase. As GenAI foundation models proliferate, enterprises have numerous options for running GenAI prototypes. Even the simplest prototypes will require understanding the general suite of large language

model (LLM) capabilities and finding a reasonable match between the LLM and the use case. Given the costs and skills required to train a foundation model from the ground up, most prototypes will take alternative approaches. These approaches may include working with established players like Google and OpenAI through corporate partnership models, engaging with smaller GenAI startups looking to scale solutions for corporate clients, or standing up a team to deploy open-source models in-house. Managing GenAI Risks A prototype-based GenAI strategy inherently manages one of the core risks of any technology transformation: investing too much, too fast without a clear path to business impact. But other risks (including very real legal and reputational risks) need to be managed as well. Fortunately, especially for early prototypes, organizations can begin with "minimum viable governance" frameworks. These relatively simple checklists allow experimentation with new GenAI tooling. Any enterprise exploring GenAI will already have data controls and risk management frameworks in place; by refining those frameworks to address GenAI-related risks specific to their use cases, enterprises can run sandbox experiments with lower risk using offline models on their existing infrastructure. Of course, governance and risk management frameworks will need to mature as GenAI use cases mature. A prototype setting is a perfect opportunity to develop "responsible AI" checklists that both inform the viability of emerging use cases and identify future needs for risk policies and frameworks. Use cases that involve communicating with customers or employees, for example, will need strong anti-bias guardrails that draw on emerging approaches like constitutional AI. Any GenAI project that intends to publish GenAI-generated material for public consumption will also need automated checks for copyright infringements. Enterprises can socialize frameworks to address these risks in an iterative way, implementing learning and development activities as prototypes become mature use cases that impact multiple team and business units. Constraints are GenAI's friend. But rather than building guardrails for all potential GenAI use cases on day one, enterprises can de-risk their GenAI prototypes by constraining GenAI to very discreet tasks, measuring how well GenAI performs those tasks, and preventing GenAI from doing anything outside of the defined problem space.   An Early Look at GenAI Impacts Globally, McKinsey's recent influential report on the economic potential of GenAI forecasts that GenAI could add between $2.6 trillion and $4.4 trillion in value annually across more than 60 business use cases. A Goldman Sachs analysis, meanwhile, predicts that GenAI will contribute to a 7% global GDP increase over the next 10 years. But even today, early adopters are already experiencing measurable benefits from GenAI, which should give enterprises confidence to ramp up their GenAI experiments. In the consumer industry, generative AI is already helping brands build stronger relationships with customers. We have also observed firsthand how GenAI-led transformations are beginning to deliver concrete value. One media client, for example, used GenAI to automate the generation of contextualized abstracts, resulting in a direct cost savings of 33% in addition to other productivity improvements. It's Time to Practice GenAI outputs will be intimately tied to the quality and characteristics of an enterprise's unique data estate; the results and ROI, therefore, may not be entirely predictable. Some experiments may be barely audible, and others will resonate across the enterprise. While the first GenAI prototype may seem like cautious attempts to tune a new instrument, enterprises will

quicky find themselves with an orchestra. In time, an enterprise should aim to achieve a GenAI flywheel in which time/effort savings from one initiative can fund further GenAI initiatives. Building a GenAI center of excellence, meanwhile, will help both upskill talent and serve as a hub for exploring the art of the possible. Leaders need to imagine how their organization will function when GenAI is available in every business process. But just as no amount of reading sheet music turns a student into a concert violinist, no amount of abstract strategizing will achieve remarkable GenAI outcomes. Delivering outstanding business performance through GenAI starts with practice.   About the Authors Dr. Colin Kelly Managing Consultant, AI Advisory, Digital Consulting An AI transformation expert with an academic background in natural language processing and a passion for deep learning and generative AI, Colin has more than a decade of experience deploying machine learning capabilities into challenging commercial environments. He currently chairs Wipro Consulting's Generative AI Special Interest Group. His experience spans multiple industries, including insurance, telco, defence, government, healthcare, and financial services. He has defined and guided responsible AI initiatives and led applied research teams to deploy cutting-edge AI technology into production systems. Sreejith Kurup Principal Consultant, Wipro Consulting – AI Advisory Sreejith works with organizations across the globe to solve business problems by applying AI and other digital transformation interventions. Contributor Phani Solomou Senior Partner, Wipro Consulting – AI Europe Lead ====================== ----- Arcticle source ----- https://www.wipro.com/consulting/these-five-trends-are-reshaping-the-energy-industry-in-2024/ ----- Contact Wipro Please fill the required details to access the content These Five Trends Are Reshaping the Energy Industry in 2024 These Five Trends Are Reshaping the Energy Industry in 2024 On the heels of COP28 and the pledges made there, the global energy industry must accelerate efforts to bring alternative, low-carbon energy sources to market. To make progress in areas like the energy transition, decarbonization, and scaling/integrating renewables, energy companies will need to focus less on identifying innovations and more on deploying and scaling them. But how? What's the best way to approach these initiatives to ensure returns? Collaboration is vital to the success of these programs. Energy companies must cultivate an ecosystem of technologies and partnerships to maximize business value and impact. The following trends highlight key focus areas for energy companies in 2024 and beyond and show how an integrated approach to digitalization can help companies develop lucrative new business models for sustainable growth. 1. Renewed focus on Industry 4.0 New regulations and market demands are putting significant pressure on oil and gas companies to modernize legacy assets and enhance operations. For example, the growing demand for localized energy sources forces countries to update aging infrastructure and improve cyber-resilience while unifying capabilities that have developed piecemeal over the years. Country-specific standards for industrialization, like those in Germany and India, will help guide digital transformation, leading to more sophisticated digital operations requiring compliance with local laws and frameworks. As governments crack down on the environmental impact of industrial operations, resource efficiency and detailed reporting will become increasingly important, putting additional pressure on suppliers throughout the value chain to invest in Industry 4.0 to increase data capture and

transparency. Further refining digital operations can help companies – both early and late adopters – cut costs and free up more resources to invest in larger, more ambitious projects. 2. Technology collaborations for systemic decarbonization Decarbonizing value chains will require energy businesses to work with various technologies, innovators, and service companies throughout their operations. Collaborations with fuel distributors, battery manufacturers, vehicle manufacturers, and technology service providers are helping to build the infrastructure, platforms, and EV capabilities needed to support the energy transition. Forward-thinking companies combine data analytics, IoT, and responsible GenAI to analyze distribution while developing more energy-efficient supply chains and less carbon-intensive products. Robotics, AI, and machine learning will improve asset operations by automating inspections, enhancing predictive maintenance, and assisting in detecting issues like flares and methane leaks. With improved emissions capture, energy companies are leveraging modeling platforms to explore alternate modes of operations for decarbonization. Global coordination of responsible AI must underpin these efforts. 3. A tech-first transition to new business models Advanced technologies can help companies explore new products and business models, such as converting plants to produce adjacent products that are less carbon-intensive. Data analytics, AI/ML, and digital twins are helping with research and development and testing new models and products. Blockchain technology will play an increasingly important role, supporting the development of distributed energy resources and the traceability of molecules, products, procurement, and credits. Energy-as-a-service offerings will become more popular to drive the adoption of low-carbon energy sources by minimizing upfront capital expenses for customers. This is a significant opportunity for energy providers. To seize it, companies must review their existing technology programs to be sure they have the necessary capabilities to support managed service offerings. Technologies like cloud, 5G, connected edge, and remote sensing will be critical. 4. Continued transitions to data platforms and open standards To scale new business models and improve the performance of existing assets, companies must shift siloed data to platforms that are more accessible and flexible. Cloud platforms and open industry standards will enable new capabilities through data consumption and applications designed to meet specific industry requirements, such as security protocols and reporting standards. Shifting to more accessible data platforms will also help companies address challenges associated with knowledge management and cross-generational training. Increasingly, AI-driven training will synthesize employee experience data points and other information to build programs that create the energy industry workforce of the future. 5. Scaling and integrating renewables Energy businesses are diversifying their portfolios with renewable fuels and renewable power assets, influencing Scope 1, 2, and 3 emissions. As companies overhaul their business models to support ambitious sustainability goals, they must scale and integrate capabilities to launch products like hydrogen, sustainable and renewable fuels, wind, solar, and geothermal assets. This requires encouraging entities throughout the value chain to adopt standard practices, as seen in the shift to sustainable aviation fuel. Companies will need to extend existing digital capabilities to advance the development of renewable energies and the underlying platforms and integrations needed in emerging operational landscapes and business models. Energy companies have a

unique opportunity to redefine the industry by pursuing alternative fuel sources and business models. This is not a small undertaking, and 2024 will be just one year of an extended journey. Strategic implementation and coordination of technologies like AI, industry cloud, 5G, IoT, and data analytics will help accelerate returns on investment and maximize impact at this moment when the industry has reached an inflection point. About the Authors Sidharth Mishra Vice President – Global Practice Head, Domain & Consulting Energy Susie Coppock Senior Partner - Domain & Consulting Energy Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/consulting/these-five-trends-will-reshape-the-retail-industry-in-2024/ ----- Contact Wipro Please fill the required details to access the content These Five Trends Will Reshape the Retail Industry in 2024 These Five Trends Will Reshape the Retail Industry in 2024 Retailers have been gradually settling into the post-pandemic paradigm. The in-store experience remains important, but retailers also know that recent upticks in eCommerce and newer delivery models are largely permanent. That's simultaneously a store operations challenge, a customer experience challenge, and a supply chain challenge that retailers need to solve for. Traditional retailers are focused on building brands that are equally strong in digital and physical formats. In an omnichannel environment, the most successful retailers will leverage technology to strengthen their strategies and efficiently serve customers across all channels. Given these imperatives, the five technology trends below should be top of mind for retail leaders this coming year. 1. Artificial intelligence for everything Artificial intelligence will make a meaningful impact across numerous retail functions, from merchandising to forecasting, marketing, sales engagement, loss prevention, and after-sale support. At the same time, retailers need mechanisms to ensure that AI is used safely and effectively. Some large retailers, for example, have rolled out responsible AI guidelines. As AI experiments proliferate – particularly GenAI experiments designed to automate customer touchpoints in new ways – retailers must ensure some level of centralized governance that can vet and de-risk experimentation while empowering the most impactful prototypes and proofs-of-concept to scale rapidly. 2. Secure and convenient payments Digital retail is growing, and retailers need to guard themselves from fraud. Biometric technology can give retailers another layer of protection against fraud. Retailers will play an active role in building customer trust by more accurately authenticating customers and reducing fraudulent transactions. Biometric data points like fingerprints, retina scans, and facial recognition will further improve the customer experience by enabling capabilities like rapid contactless checkout. As a side benefit, store employees can use this technology to log attendance and hours seamlessly. The most recent data suggest that the biometric POS market will experience a CAGR of 13.9 through 2028. 3. Technology-driven shoppable content Creating a best-in-class digital retail experience is now about much more than searchability, pricing, and payment. Retail brands are competing for mindshare as much as wallet share. To remain competitive, they must embrace technologies that will power the next generation of customer engagement, from OTT integrations to AR visualizations. Retailers must also be prepared to adopt the next generation of emerging platforms quickly. As new platforms become popular venues for user-generated content, brands need to be ready to jump in with a high-quality content strategy. 4. Retail media networks

Omnichannel strategies have allowed retailers to build brands across multiple channels, and they are now growing retail media networks to monetize those channels and broaden their revenue mix. Retailers are creating new brands using their omnichannel platforms and, at the same time, enticing existing brands to utilize their infrastructure (both physical and digital) for marketing products. Advertisers are projected to spend over $55 billion on retail media this year. In the last few years, retailers like Walmart, eBay, and Amazon have proved the importance of retail media networks to boost demand and increase sales. Based on their successes, this year will see an increasing number of large retailers building, refining, and monetizing their media networks.   5. Robotics, computer vision, and automation The combined power of robotics, computer vision, and automation can reshape every aspect of retail. Automated robotic solutions will increasingly facilitate mundane tasks like picking, sorting, and replenishment. Computer vision already enables cutting-edge digital shelf management solutions, and drone-based visual inspections will further accelerate the journey toward picture-perfect shelf sets. Automated solutions will improve efficiency along with KPIs like order fulfilment time. More importantly, they will free retail talent to focus on improving and innovating the core customer experience. Usually, these automation-focused technology solutions are high-cost, higher-reward propositions. The ROI is clear; to pursue these long-term enablers, retailer leaders will need to drive organizational alignment around deploying working capital with an eye on the technology-defined competitive landscape of the future. Retailers find themselves in an exciting but complicated position. On the one hand, the industry has identified numerous innovative ways to leverage emerging technologies for efficiency, resilience, and customer success. On the other hand, only some retailers can afford to invest in everything simultaneously. The most rewarding approaches will be iterative and agile, allowing retailers to stack-rank potential technology transformations and press play on the most strategic business transformation opportunities available. About the Authors Sreekumar Veluthakkal General Manager and Senior Partner, RSAT Consulting Yogesh Pitkar Consulting Partner – Retail & Distribution Vineeth Kadasi Associate Consultant, RSAT(Retail, Services and Transportation) Contact Us ====================== ----- Arcticle source ----- https://www.wipro.com/consulting/these-tech-trends-will-reshape-airports-in-2024/ ----- Contact Wipro Please fill the required details to access the content These Tech Trends Will Reshape Airports in 2024 These Tech Trends Will Reshape Airports in 2024 According to Airports Council International (ACI) World, 2024 will be a milestone for global passenger traffic, with global air travel reaching 9.4 billion passengers. To handle this growing volume of travelers, airports must address the turbulence on the ground by further improving the airport experience. As they seek to enhance the traveler experience in a way that simultaneously drives new revenue, airports across the globe can leverage three technology trends to pave the runway. 1. Digital IDs Become the Norm This may be the year digital identities truly take hold in some regions. We are moving toward a future in which passengers can travel without needing to present physical travel documents or stop to confirm their identity. As of August 2023, Finland is the first country to allow its citizens to re-enter with a digital passport. Other countries like the UK are gradually introducing digital visas. The US is testing digital visas for some K-1 applicants, and India has introduced its

DigiYatra, a contactless digital travel program. As global travel continues to grow, digital passports and travel identities will help streamline the movement of passengers through airports, from check-in to departure to baggage claim. Digital identification works on technologies that many airports already use, like the cloud, biometrics, and private 5G networks, making the adoption easier than other transformations. As these new identity verification methods take hold, airports will have an opportunity to measure their impact on passenger processing and adjust staffing, procedures, and physical infrastructure accordingly. 2. Analytic-Led Traveler Experience Improvements In 2024, airports will leverage traveler data analytics to build better home-to-home journey experiences for every passenger. Soon, airports will send customized dining recommendations to travelers the minute they land, using data to select the options that best match the traveler's digital profile. In addition, airports will begin using innovative engagement strategies like gamification. In-airport scavenger hunts, for example, will entertain travelers, award them discounts at participating vendor locations, and collect data to advance key customer-related KPIs further. As these experiences enhance the airport journey for guests, they will drive sales for airport vendors and ultimately increase non-aero airport revenue. 3. New technology-led sustainability initiatives IoT-enabled solutions will increasingly help airports achieve sustainability goals by managing energy sources and consumption while improving terminal operations. Sensors can monitor facility systems like HVAC, conveyor belts, and water systems and enable predictive maintenance, automated control, and ongoing inspections with connected cameras. In addition, IoT can be configured to monitor escalators, restrooms, and waiting rooms to optimize cleaning and maintenance schedules for energy management, waste management, water management, air quality monitoring, and more. With 5G connectivity accelerating and IoT devices growing cheaper by the day, 2024 will present opportunities to implement new technology-driven sustainability improvement activities cost-effectively. Digitalization and automation technologies are becoming the core value drivers for the airport industry. As airports focus on using technology to improve the passenger experience and overall efficiency further, they will inevitably need to address retooling and retrain their workforce to work differently. The airports that navigate these new routes effectively will be well-positioned to boost both aeronautical and non-aeronautical revenue for years to come. About the Authors Manish Kumar General Manager – Domain & Consulting Head of EC&O and Airports Industry Practice Tushar Batra Global Practice Lead & Industry Partner - Engineering, Construction & Operations and Airports Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/consulting/these-tech-trends-will-reshape-ec-and-o-in-2024/ ----- Contact Wipro Please fill the required details to access the content These Tech Trends Will Reshape EC&O in 2024 These Tech Trends Will Reshape EC&O in 2024 The engineering, construction, and operations (EC&O) industry is poised to undergo significant changes in 2024. Technology advancements are maturing, and there are numerous opportunities for these new technologies to improve visibility, accuracy, and efficiency in the design, construction, and maintenance of complicated physical infrastructure. According to the Associated General Contractors of America, surveyed members reported that 72% of projects do not finish on time. The widespread prevalence of project delays and rework continues to

be costly, impacting the profitability of construction firms and the feasibility of projects. New technologies are poised to alleviate this longstanding industry challenge – and many others.

1. A new horizon of data-driven precision

Precision and accuracy are required to ensure safety and avoid costly rework. This year, emerging technology tools will continue to usher in an era of data-driven precision. GenAI-assisted design will analyze large sets of design requirements to provide options and recommendations. This technology will streamline many planning, permitting, and design tasks in the building construction lifecycle, optimizing both processes and outcomes while enabling collaboration between stakeholders across the value chain. In addition, the autonomous site theme will continue to scale, bringing advanced AR/MR hardware, robotics, and AI/analytics to more jobsites and improving inspection accuracy during multiple construction phases. The same connectivity advances that enable these solutions will also spur the adoption of new IoT devices that can help construction managers track building supplies for just-in-time provisioning. On-site wearables will further improve worker safety, and enhanced sensors will monitor and predict needed maintenance for expensive equipment assets.

2. Construction sustainability

Emerging government policies are bringing in new construction sustainability standards. At the same time, owners, operators, and occupiers are seeking more sustainable living and working environments. Advancements in sustainable building materials, supply chains, and technologies could make 2024 the year that sustainability becomes the standard in the construction industry. Modular and prefabricated construction are already generating renewed enthusiasm. Preconstruction drives efficiency and cost-effectiveness, and prefab materials are more sustainable than traditional building supplies. Components built off-site and assembled on-site reduce construction time and labor requirements. Adding automation and analytics to the design and planning stage can identify excess waste upfront to help firms further reduce inefficiencies.

3. Renovating real estate and facilities management

This year, property management will be re-engineered to incorporate smart technologies like artificial intelligence and automation. IoT and advanced analytics can monitor systems (HVAC, electrical, and plumbing systems), automate smart operations and predictive maintenance, manage and shift energy sources, and use cameras for continuous inspections. Facilities management will gradually shift to occupier-centric operations to deliver safer, cleaner, more sustainable, and more productive workspaces. IoT, AI, and data analytics will become integral to optimizing facility operations and enhancing occupant experiences and workforce safety. Engineering and construction is a capital-intensive business. As such, enterprises in the sector usually take a wait-and-see stance rather than aggressively adopting the latest technology trends. But digital technologies that simultaneously improve precision, drive efficiency, and save money have been around long enough to prove their worth. This year, technologies like AR/MR, automation, AI, advanced analytics, digital twins, and even GenAI will gradually make their way into construction firms that have been resistant to change. The risk of being left behind in an increasingly tech-driven industry is no longer worth taking.

About the Authors Manish Kumar General Manager – Domain & Consulting Head of EC&O and Airports Industry Practice Tushar Batra Global Practice Lead & Industry Partner - Engineering, Construction & Operations and Airports Contact Us

These Tech Trends Will Reshape Healthcare in 2024 These Tech Trends Will Reshape Healthcare in 2024 In the last few years, emerging technologies have positively impacted the health and well-being of people around the globe. Connected devices and other new data sources are increasing, as is our ability to synthesize data using AI. Across the healthcare landscape, data collection and advanced analytics will improve everything from back-office efficiency to patient experiences and concrete patient health outcomes. The following three technology trends will define the industry's trajectory in the coming year. 1. The continuing adoption of connected care enablers Studies have shown that patient outcomes are better and less costly when care is given at home rather than in a hospital. The COVID pandemic spurred a telemedicine wave, allowing care protocols to catch up with the data. But there is still much work to be done when moving more care out of a hospital setting. The home care of the future will be deeply connected care, and this ecosystem is now being improved and extended with wearable devices and new digital tools. Connected digital tools play a significant role in connected care by assisting patients and providers in streamlining the care continuum. Digital therapeutics, disease screening, patient education/training, and care navigation can be improved using digital tools. Wearable devices can now monitor a patient's vitals (blood pressure, A1C, etc.) in real-time and send readings to a patient's provider. Beyond opportunities to track and monitor a patient's condition, new approaches to patient-facing applications will allow patients to have more frequent virtual check-ins with their providers. Virtual healthcare assistants, meanwhile, will guide patients to the information they need and make recommendations. Digital therapeutics will also powerfully impact mental health and behavioral health determinants. These connected care/home care advancements will reduce hospital strain and improve patient outcomes. As the ecosystem of connected care tools evolves, organizations must focus on adjusting their delivery models to accommodate more data, changing reimbursement requirements, and measuring connected care's clinical and financial ROI. 2. Operationalizing GenAI (and teams to support it) GenAI's ability to process massive volumes of data makes it a valuable tool for healthcare. While there are many regulatory concerns about how GenAI will interact with patient data, the technology can still move the needle in assisting clinical diagnoses and advancing genomic sequencing for disease detection. On the administrative side of healthcare, it promises dramatic workflow benefits. GenAI can provide efficiency benefits for insurers in billing management and operations, and GenAI chatbots can produce human-like interactions for patients in healthcare customer service tasks. Physician practices can utilize GenAI for care personalization and optimization, billing management, payer automation, and provider task automation – all potential areas of disruption. A critical first step is building teams equipped to develop GenAI use cases and deploy GenAI tools. AI tools and models need to be taught and constantly tested, which helps ensure that the outcomes are trustworthy. Creating centers of excellence (COEs) for GenAI will allow healthcare organizations to align the resources and technical talent to drive GenAI's success. 3. Building an interoperable data foundation Connected devices and healthcare systems are making data more

available, and AI/ML has made data analytics more efficient. However, those technologies can be hamstrung by suboptimal data practices. The industry continues to need help with data interoperability. All stakeholders need to store and share electronic health data in a way that is intelligible across healthcare systems and settings. Fully integrated and interoperable health data will allow healthcare providers (and public/NGO entities) to leverage advanced analytics more fully and identify trends and patterns that will impact medical care and population-level health outcomes. To leverage health data for good, the healthcare industry must abide by robust data governance to protect patient privacy. Data architecture requirements have become more complex with multiple streams of data inputs. Many health organizations have immature data processes and technology, such as segmented datasets. Others do not own their data or do not provide practical self-service data tools to their employees. Healthcare businesses must overcome these challenges to remain competitive, drive growth, and convince patients and regulators that their data practices are secure and highly impactful. In healthcare, technology developments have the potential to improve patient outcomes, reduce costs for everyone, and open patient access to better care. Data is the crux of all these trends. The growing digital tool market will enrich patient data and present healthcare companies with a more accessible data landscape. Ultimately, these advancements drive a whole patient data approach that improves care for all. Given the current stress on the US and global healthcare systems, these technology-enabled efficiencies and advancements will be a welcome development. About the Authors James Collier Senior Partner, Global Head of Healthcare Consulting Philip Handal Senior Partner, Payor Consulting Leader Stephen Favaloro Partner, Provider Consulting Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/consulting/these-tech-trends-will-reshape-the-utilities-industry-in-2024/ ----- Contact Wipro Please fill the required details to access the content These Tech Trends Will Reshape the Utilities Industry in 2024 These Tech Trends Will Reshape the Utilities Industry in 2024 The utilities industry is experiencing a fundamental shift driven by aging infrastructure, significant technology advancements, and growing demand for alternative energy sources. The recent geopolitical instability in Europe and the subsequent energy crisis have emphasized the critical importance of both energy sovereignty and a stable supply. In 2024, the convergence of these forces and events will continue to create challenges and new opportunities for utilities companies. The following technology trends can help enterprises address the challenges and seize the possibilities, and should be critical considerations in strategic agendas in 2024 and beyond. 1. Preparing for the energy transition with AI The utilities industry is becoming increasingly data-driven. Some utilities already use AI/ML to enhance predictive asset maintenance, supply and demand forecasting, and automated data collection/summarization. GenAI advancements will enhance those capabilities further. It's no secret that the coming energy transition will require modernizing legacy infrastructure and enabling intelligent grids, peer-to-peer energy exchanges, and microgrids. AI will play a role in each of those imperatives. AI will also help companies optimize energy transfers and asset management while minimizing loss and other inefficiencies, contributing to sustainability gains. In the near term, utilities should focus on building the AI-driven data processing capabilities necessary to manage a

transformed grid and leverage the scalable cloud capabilities to build a solid and sustainable foundation for future digital programs. 2. Enabling new operating models with smart meters, grids, and connected assets Smart meters, agile grids, and connected assets will be critical to the energy transition and will play a significant role in the integration of alternative energy sources. Localized energy generation and peer-to-peer marketplaces will continue to need the support of reliable, centralized energy sources, and utilities companies will need to update their systems to account for more flexibility in supply and demand. Smart meters, smart grids, and connected assets will work together to provide real-time insights on usage and allow companies to optimize distribution (less waste, more reliability through enhanced forecasting) and integrate distributed energy resources more effectively. With smart grid and smart metering deployment accelerating in many geographies (particularly in Europe), utilities have an opportunity to update their operating models to fully leverage the capabilities of these agile new technologies to advance both affordability and sustainability. Meanwhile, connected generation and T&D assets will continue to help utilities enhance grid visibility, improve reliability, economize maintenance, and enable prosumers (energy producers and consumers) to better participate in flexibility and demand-response programs. 3. Building customer experiences and business models amid decentralization As utilities pave the way for the energy transition, they face numerous questions about future customer experiences and business models. The emerging Utilities 3.0 era will displace traditional business models in the utilities industry, particularly in deregulated markets. Energy suppliers must diversify by providing energy services such as aggregation, energy advice, and energy infrastructure services rather than just selling energy as a commodity. Centralized electricity generators may need to equip themselves with new technologies that enable them to sell on decentralized energy marketplaces and rapidly identify and leverage new trading platforms as they emerge. Web3 technologies like blockchain-based smart contracts will help utilities serve customers and preserve their market position in a more decentralized energy marketplace. In 2024, as the world emerges from the energy crisis and turns its focus squarely on sustainability and the energy transition, utilities will have numerous opportunities to gain a deeper understanding of consumer needs and preferences and focus on providing a digitalized and connected experience aligned with consumer personas, analytics-based insights, and end-to-end digitalized interactions across energy and energy services. Utilities will advance energy management and smart home solutions, further define their role in the EV charging ecosystem, enable consumers to better manage their usage and participate in demand-response programs, and provide new clean and sustainable energy options. As consumers begin to play a greater role in energy generation and distribution, connected assets will likely become a new revenue stream for utilities providers. Companies should already be considering business models that involve selling equipment and support services to prosumers to help prosumers establish, manage, and monetize their own energy systems. 4. Refining cloud capabilities with industry clouds Industry clouds are verticalized offerings tailored to the specific needs of an industry, coupled with the advantages of cloud computing. The approach offers pre-built applications, templates, data models, and processes based on critical industry considerations such as regulatory requirements and

complex infrastructure management procedures. Utilities industry clouds allow companies to deploy new solutions and services quickly, respond to industry changes and market conditions, and adapt to customer needs. Many utilities are already utilizing industry clouds as they seek to accelerate digital transformation. As they standardize functionalities and data, utilities can pave the way for an ecosystem of cloud services that will advance new, more distributed operating models. However, to derive the maximum benefits from these industry clouds, utilities need to continue reimagining and streamlining their legacy business processes to make them more customer-centric, automated, and agile. As they review their legacy application landscape, utilities will need to identify and retain the system capabilities that provide differentiation (customer engagement, products, pricing, etc.) while utilizing the capabilities of industry clouds to optimize standardized capabilities such as billing, metering, and market data exchange.   The energy transition is accelerating, but it will be several decades before the utilities industry approaches anything close to a steady-state business model and operational landscape. Not all current business models are guaranteed to survive, but industry leaders can view that reality as an exciting opportunity to invest in the data and technology tools that will reveal new horizons of innovation and efficiency. The utilities that are equally data-driven and inventive will be the winners in an increasingly decentralized future. About the Authors Shirish Patil Head of Consulting – Utilities, ECO, and GIS   Diptarka Sensarma Enterprise Transformational Leader – ENU Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/consulting/these-technology-trends-will-reshape-the-communications-industry-in-2024/ ----- Contact Wipro Please fill the required details to access the content These Technology Trends Will Reshape the Communications Industry in 2024 These Technology Trends Will Reshape the Communications Industry in 2024 As the AI wave converges with 5G, the power of cloud computing is steering the communications industry in exciting new directions. At the same time, cost takeout remains a core priority for the telecom sector, with key themes around consolidation, productivity prioritization, and automation. This year will present communication service providers (CSPs) with numerous opportunities to enhance customer experiences, improve network reliability, and deliver innovative connectivity solutions. Three technology trends will define what's next in the communications space. 1. A GenAI revolution Generative AI will drive a seismic shift in the telecom transformation agenda. Efficiency, cost-effectiveness, data-driven intelligence, improved IT services, and network connectivity will form the backbone of the GenAI-propelled customer experience. As enterprises in all industries finalize responsible AI governance models and zero in on scalable GenAI use cases, telcos will be challenged to go far beyond the GenAI "hype factor" and deploy real-world GenAI applications and experiences to ride the next wave of services. This year, telecoms can push the boundaries of customer service by using GenAI to turn reactive call centers into proactive customer experience powerhouses. GenAI will also help build customer and network digital twins to optimize network performance. Cost optimization strategies built on responsible GenAI frameworks will supercharge service providers' ability to provide a broader range of telco services that drive topline and bottom-line growth. 2. Telecom cloud with strategic partnerships and robust security Telecom companies are increasingly turning to the cloud in the race

to stay ahead. Prominent cloud hyperscalers are accelerating this next phase of growth by bringing telco industry cloud offerings to market, thus challenging existing NEPs. Having seen this hyper-growth in the cloud, ecosystem partners are keen to drive the next wave and orchestrate network space in a more scalable, integrated, and collaborative way that caters to the enterprise market segment with diverse products and business models. This development will be a core area for telco cloud investment for the upcoming year. Cybersecurity is always paramount, and building cloud-native services that are as secure as they are seamless will also be a top priority for telco investments this year. Today, data is currency, and cybersecurity protects the industry's most valuable assets, including networks, data, and customer privacy. The future of cloud in telecom rests on ensuring communication networks' robust integrity and trustworthiness. 3. 5G: paving the way for innovation 5G means much more than faster connectivity and lower latency. 5G is a catalyst for transformative communications technologies. As data processing speeds accelerate, 5G will advance capabilities like augmented reality and IoT-based edge computing. As 5G-enabled network slicing continues to gain momentum, telecom companies will bring increasingly sophisticated network performance optimizations to clients with increased reliability. This year, telecoms will need to leverage the speed and flexibility of 5G to lay a diverse groundwork for transformative technologies like autonomous driving and IoT. Open RAN and "future of work" propositions will also continue gaining momentum. Open RAN — using open standards-based connectivity of radio network components to seamlessly integrate NFV and Edge Cloud architecture — will be a key component of use cases like "smart cities" build-ups. When it comes to the future of work, 5G will integrate with emerging applications in areas such as healthcare (remote patient monitoring, robotic surgery), manufacturing (field devices/field force management and AR/VR connectivity for troubleshooting), and enterprise sustainability (healthy connected workforce and efficient warehouse management). Beyond these particular 5G use cases, it's time for telecom enterprises to focus on monetizing the new-age services required to build tomorrow's capable and integrated enterprises. The fusion of AI, 5G, and cloud computing with ironclad cybersecurity is not just a technological evolution; it's a strategic imperative. The industry's commitment to these imperatives, as demonstrated by the groundswell of new collaborations and investments, will lead to unprecedented innovation in the telecom industry. Across all these developments, telecom operators focus on balancing cost optimization while holding a durable operational advantage. The most successful innovators will spend big this year to infuse AI and GenAI across their businesses and chase the best value-generating use cases for their companies. As this new frontier continues to evolve, this will be a critical year for communications service providers. Success will lie in integrating these new technologies into new and existing offerings to create a seamless, highly productive telecom of the future. About the Authors Padman Kumar General Manager and Global Practice Leader, Communications and Media, Wipro Consulting Subratha Pathak Partner and Europe Leader, Communications and Media, Wipro Consulting Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/consulting/these-tech-trends-will-reshape-the-global-banking-industry-in-2024/ ----- Contact Wipro Please fill the required details

to access the content These Tech Trends Will Reshape the Global Banking Industry in 2024 These Tech Trends Will Reshape the Global Banking Industry in 2024 Digital transformation and the acceleration of artificial intelligence continue to disrupt all industries, and these forces have heavily impacted the banking sector in recent years. These trends have buoyed fintechs but present a complex puzzle for traditional banks. The fintech ecosystem provides transformational new partnerships and presents stark new competitive dynamics. At the same time, banks are tasked with constantly evolving their cybersecurity posture and responding to new regulations, including regulations around sustainable finance. Somehow – amid all of these technology and market shifts – banks also need to maintain a laser focus on their end customers. The banks strategically leveraging the following technology trends will be best prepared to strengthen their resilience, emphasize agility, and win market share in 2024. 1. A turning point for AI The global market for artificial intelligence services in BFSI stood at $22.5 billion in 2022. It is projected to reach $368.6 billion by 2032. AI-powered tools like chatbots have already been driving contact center transformation; the emerging capabilities of GenAI will supercharge that effort this coming year by reducing customer support costs and simultaneously improving customer engagements in ways that banks never thought possible. More broadly, various forms of AI will transform how banks think about data. This is a year for banking leaders – even those who have previously prioritized human decision-making over tech-first solutions – to think deeply about how AI will inevitably change how banks forecast market trends, improve their lending and investment decisions, and interpret valuable customer data to deliver personalized services. The AI paradigm shift can boost bank revenue and lower costs through automation and process efficiency. Many traditional banks must continue evolving clear AI strategies to overcome challenges like weak core technology and suboptimal data ecosystems. And they will need to be vigilant about AI accountability frameworks and regulations. 2. From demographic to psychographic hyper-personalization Growing digitization and the emergence of fintechs and challenger banks have significantly enhanced customer expectations. Customers are no longer satisfied with offerings targeted at broad demographic categories. They now expect a bank to have a nuanced understanding of their unique needs, preferences, and behaviors. Banks need to respond, but they need to respond efficiently. Recent developments in AI and ML will help banks simultaneously automate and hyper-personalize their messaging, offerings, and services to enhance brand equity and differentiate themselves in the market. Currently, only a limited number of banks can offer meaningful, personalized advice and recommendations due to various challenges (lack of efficient enterprise data management, for example, and an inherent lack of AI/ML expertise). Because banking personalization can drive revenue while reducing customer acquisition costs and marketing spending, a wider range of banks should consider significant investments in technology-driven hyper-personalization in 2024. 3. A neo-banking acceleration Neo-banking is transforming the financial industry, offering customers convenient, cost-effective, and innovative banking solutions. As they expand their services and geographic reach, neo-banks are positioned to be critical players in shaping the future of financial services, enhancing accessibility and personalization for individuals and businesses. In 2024, we can expect the emergence of more

digital-only banks focused on providing seamless digital experiences to customers across onboarding and lending. Amid the emergence of neo-banks, traditional banks can retain market share by leaning on their legacy of trust and offering competitive, digital-only services. To compete with neo-banks, traditional banks should accelerate their digital transformation, consider moving to coreless banking, and provide innovative products and services by partnering with niche fintechs. 4. A banner year for open banking The industry has been discussing open banking for years, but this broad and deep transformation continues to evolve. Already, the conversation has moved from the more straightforward concept of open banking to the more complicated models of ecosystem banking and open finance. This coming year will be an inflection point as open banking matures across geographies and customer segments. Regulatory changes will drive some of this. The JROC continues to refine the next phase of British open banking, while the EU's Financial Data Access Regulation (FiDA) is maturing the open banking ecosystem on the continent. The market-led open finance transformation in the US will swerve dramatically toward competition if the proposed Personal Financial Data Rights rule comes into effect. Meanwhile, fast-paced adoption will continue in the APAC region (Singapore, Australia, Hong Kong, China, India, etc.). Regardless of the exact regulatory environment, API performance continues to improve, and new approaches to digital identity continue to gain traction. Meanwhile, the fusion of AI and open finance will open up new use cases, such as hyper-personalization, where AI algorithms can analyze account transactions to issue personalized offers based on customer spending patterns. This data-rich landscape will also better serve consumers with poor or no credit history, who often get rejected by banks' traditional underwriting models. In such instances, AI models could analyze open banking transactions to assess a consumer's creditworthiness. 5. Security everywhere (especially in real-time payments) According to an AAG report, cybercrime costs the global economy around $7 trillion in 2022, which is expected to rise to $10.5 trillion by 2025. Given the speed and frequency of digital transactions, security is a perennial top priority for banks. Payments, in particular, are accelerating. In the US, the highly anticipated FedNow real-time payments rail launched last year, and real-time payments continue to gain traction worldwide. Fortunately, AI can play a role in smoothing over the transition to real-time payments, particularly by automating and accelerating fraud prevention efforts. Advanced authentication methods like biometrics (face recognition, fingerprint scanning, behavioral analytics), anti-hacking software, and other new fraud detection mechanisms will increase customer trust and bank credibility. Customers will increasingly pay close attention to their bank's security posture, and advanced security features will become monetizable differentiators. Cybersecurity is indeed an enabler for banking businesses, with implications that will increasingly extend far beyond simple compliance. Banks must recognize and adapt to the latest technological advancements as they seek to attract and retain customers in a fast-changing market. Identifying novel emerging technologies that integrate with a larger business strategy is pivotal in gaining a competitive advantage. The strongest banks will build experiences that are highly automated and data-driven yet feel deeply personalized, leveraging a broad partner network defined by unshakeable security and trust. About the Authors James Curzon Global Head of BFSI Consulting - Banking Thomas Brady Domain &

These Tech Trends Will Reshape the US Banking Industry in 2024 These Tech Trends Will Reshape the US Banking Industry in 2024 American banks are heading into 2024 with guarded optimism. If inflation continues to moderate and employment remains stable, the economy may avoid the recessionary impacts and credit market disruptions that the industry anticipated last year. Rather than managing severe macroeconomic headwinds, banks should be able to invest in the technology innovations that will drive sustainable growth through the rest of the decade. The trends below will define the direction of this year's banking technology spending. 1. A continued focus on cost and efficiency Banks have responded to the current economic environment by re-organizing/ restructuring, cutting budgets for technology and consulting, scaling back on new investments, reducing workforces, pausing hiring, and eliminating high-cost centers such as in-house operations or custom technology with inflexible fixed costs. This year, banks will explore various frontiers for cost reductions that reimagine operational expenses while creating open, agile, and flexible systems consistent with sustainable technology expenses. 2. AI goes mainstream This year, AI (particularly GenAI) will go mainstream. During the past year, banks have been focused on building their GenAI strategies, refining GenAI governance and guardrails, and validating the likely ROI of their generative AI investments. This year, banks will move beyond GenAI prototypes, first scaling internal GenAI use cases (like banker/ agent knowledge base and assistant tools) before turning to customer-facing use cases such as full-scale contact center and customer assistance transformation. (Banks should also double down on AI compliance to ensure they abide by all regulations.) Banks can reduce employee workloads, automate customer interactions, and improve customer experience through these use cases. 3. Faster, more data-rich payments From the outside, payments seem simple. Banks need to ensure that consumer and corporate customers continue to experience simplicity even as payments accelerate and the backends become more complex from a data perspective. Banks have already come a long way in terms of payment automation. The next phase of payment maturity will require reworking the front/middle/back-office approvals and reporting to accommodate ISO 20022's more structured data standards, leveraging AI to support real-time payments, and helping an expanding set of enterprise clients build out embedded banking. This next phase of payments transformation will benefit from advanced payments data lakes and analytics, microservices-based architectures, and blockchain (particularly blockchain for cross-border payments). 4. Evolving approaches to fraud identification Fraud identification is a perennial priority for banks, but the stakes are rising again, mainly because of the potential for GenAI-powered bad actors. In this context, behavioral biometrics and device intelligence will be more critical than ever, as will fraud analytics and AI. As GenAI-infused fraud comes onto the scene, AI will also be the best defense. 5. Compliance challenges on multiple fronts US banks will need to engage in multiple compliance efforts this year. CFPB's emerging Personal Financial Data Rights rule aims to set the parameters for open banking in the US. It

will require banks to reexamine their practices around customer data collection and data use. At the same time, banks will be accommodating to new reporting requirements related to the Community Reinvestment Act and must implement the final rule changes by January 2026. DFA 1071, meanwhile, means that banks will be challenged to ensure that recent consumer fairness-in-lending practices are extended to SMBs, which will require core platform updates, banker training, and expanded datasets (which must be captured, managed, and reported to regulators). As AI (including GenAI) scales, banks must ensure that governance practices promote adherence to statutes like the Equal Credit Opportunity Act, which holds AI outcomes to the same standards as human decision-making. 6. A consumer lending transformation imperative Most consumer lending technology supporting originations, servicing, collections, and loss mitigation is now ten or even 20 years old. This is true across numerous products: auto, cards, personal loans, and mortgages. Last year, we saw unprecedented inquiries and initiatives in this otherwise dormant space. Interest rates have peaked, and lenders should prepare to take advantage of this space as the lending market bounces back. With some challenger banks making great strides in streamlining lending journeys, banks need to prioritize rethinking onboarding, origination, servicing, and collections. The most successful banks will pair contemporary SaaS-based platforms with custom intelligence and UI/UX to orchestrate an enlightened customer experience. 7. A year for treasury transformations Banks have a massive opportunity to help commercial clients integrate from accounts payable through accounts receivable and interpret the data to offer better products and services. This includes KYC/AML checks, API-driven customer experience integrations, and intuitive omni-channel platforms. As commercial customers demand solutions to enhance their corporate treasury activities, banks are increasingly partnering with fintechs and software players to provide quality treasury management offerings. The advent of API-enabled solutions and fit-for-purpose fintech capabilities will likely alter the composition of treasury management products and services revenue pools. Historically, bank-provided treasury platforms have focused on core transaction execution central to their corporate relationships. However, the advent of software-as-a-service and API connectivity has made robust, multifunctional workstations far more feasible; in response, software firms and other third-party providers have grasped this opportunity to create solutions that are gaining ground with corporate clients of all sizes across various sectors. 8. Data transformation Most banks have already started their data transformation journeys, but they still need to be completed. While the initial focus was on data infrastructure modernization and the move to the cloud, data transformation will continue to expand into data consumption rationalization, bringing real-time drill-down analytics, enhanced data quality, better data definition, and due diligence. Banks now have an opportunity to harmonize this internal and external data in a unified fashion via a centralized data lake to support previously unimaginable analytics, AI, and GenAI use cases. 9. Cloud migration and transformation Most banks operate in a hybrid cloud environment, blending on-premises solutions with services from cloud hyperscalers. Cloud economics has recently emerged as a theme enabling banks to get the highest performance out of their cloud spending. The next stage in cloud maturity will lean heavily on industry clouds to build new capabilities in core banking, lending,

and decision management. 10. A turning point for small and medium business (SMB) digitalization The SMB segment brings unique challenges due to the disparate nature of the customer base, divergent product use, and small ticket sizes. Even so, in an increasingly competitive market, it's a sector that few banks can afford to overlook. This year, banks will undertake efforts to drive better SMB customer experience, improve product penetration, reduce back office and banker workload, and offer innovative products and services to SMB customers. At the same time, SMB digitalization efforts will more closely mirror recent consumer banking transformation, bringing seamless digital-first customer and product onboarding and improved loan origination. But SMBs need more than just loans: They need full partners to help them better understand their data ecosystems and make decisions to enhance their business outcomes. Banks have numerous opportunities to spin up insights-based cross-sells that improve revenue for themselves and their SMB customers. 11. Data-focused sustainability initiatives Total AUM in the ESG investing sector continues to grow, as does the focus on ESG lending and ESG-backed securities. At the same time, asset values and return models must adjust to accommodate new climate and environmental business risks. Regulatory changes will continue to pick up speed, and ESG will ascend the board-level agenda. More than anything, this means additional diligence, and diligence is all about data. Banks will need automation-heavy data strategies to ensure that they can marshal credible sustainability datapoints in real-time. While the macroeconomic environment remains uncertain, the technology imperative for banks has become quite clear: They need to invest in data, cloud, and AI because data is now the currency of the realm. The sector's emergent complexity – a dizzying ecosystem of APIs, cloud hyperscalers, fintech partners, challenger banks, service providers, and niche startups – is also where the opportunity lies. As the backend of the banking ecosystem becomes more complex, the winners will be the ones that harmonize these many partnerships into customer-facing offerings that feel clear, simple, and compelling. About the Author Ashish Shreni Practice Head, Banking Consulting Contact Us =====================

The Change Hub:

----- Arcticle source ----- https://www.wipro.com/consulting/the-change-hub-revolutionizing-change-management-for-organizational-success/ ----- Contact Wipro Please fill the required details to access the content The Change Hub: Revolutionizing Change Management for Organizational Success Revolutionizing Change Management for Organizational Success Imagine that you are leading a change workstream at a large bank. The weekly program board meeting will likely include 5-10 other workstream leads representing various aspects of the program, from technology to process to change management itself. The team is likely to include multiple separate contractors and consulting firms in addition to representatives from the actual client. That's challenging enough. But at the same time, everyone at the table knows that this program is only one of a dozen huge transformation program being delivered simultaneously. Everyone is silently asking themselves the same question: Given all the changes happening

throughout the company, is anything we do even going to land on the radar of the employees we're trying to reach? Most large enterprises are now running multiple change programs in parallel, creating confusion as employees receive numerous and often contradictory communications about these programs. The result feels like an orchestra without a conductor; multiple programs play their tunes simultaneously, drowning each other out in the process. To manage these organizational changes, some organizations have created central change management functions, but these small and under-resourced teams are often not equipped to service the sheer volume of change and end up being overwhelmed. As a result, they resort to contractors and consultants to manage each individual change effort. That may help on the bandwidth front, but mass confusion and mixed messages are virtually guaranteed. What is a Change Hub? A Change Hub sits at the heart of multiple transformation programs, in the same way that a global PMO does. A Change Hub revolutionizes the way enterprises manage change by tapping into external expertise and resources expressly designed to lead multiple, complex change efforts. Imagine having a dedicated support system that ensures smooth and transparent change management, reducing the risks associated with delivery. A Change Hub staffed with external experts can be brought in wherever and whenever business demand for change management is greatest, ensuring a flexible, consistent approach across all change programs. The effectiveness of a Change Hub is rooted in four critical dimensions: With these four elements in place, large organizations will find that complexity and frustration begin to be replaced by clarity and purpose. Addressing the Challenges of Change No change effort, however well-managed, is free of challenges. To improve the effectiveness of multiple, simultaneous change programs, a Change Hub confronts the following challenges: Why Enterprises Need Change Hubs As new technologies like GenAI disrupt all industries, the pace and ferocity of change is bound to increase. In times of radical change, chaos is possible but by no means inevitable. Uncoordinated change activities tend to set enterprises up for failure. A Change Hub, on the other hand, reduces delivery program risk — and at a lower cost than traditional change management methods. As an external resource, a Change Hub is also remarkably responsive. It delivers value from day one, and becomes a flexible, affordable, and effective solution over the long term. With a Change Hub, internal and external change leaders no longer worry that their efforts are being undermined by competing change efforts. Instead, every change program gets its moment in the sun, and each begins to move the enterprise forward.   About Authors Mike Essex Senior Partner Mike is the European Leader of the Talent & Change practice and has 25 years' experience of leading global, complex transformation programmes for clients across multiple sectors. Nadia Arouri Senior Manager Nadia has co-founded 2 NGO's and beings 18+ years experience in advising and transforming organisations. She holds a doctorate in organisation development and brings a strong track record of architecting, leading and managing successful large business transformation programmes including change management, communication strategies, workforce transformation, culture transformation, as well as Inclusion, Equity and Diversity transformations. Carmen Jones Principal Consultant Carmen has 9 years of experience in change management, workforce transformation and end user adoption and has led end-to-end consulting engagements for numerous enterprise clients

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How GenAI Is Helping to Bridge the Skills Gap

----- Arcticle source ----- https://www.wipro.com/consulting/how-gen-ai-is-helping-to-bridge-the-skills-gap/ ----- Contact Wipro Please fill the required details to access the content How GenAI Is Helping to Bridge the Skills Gap New GenAI-led strategies are impacting learning and development initiatives across numerous industries. In a 2023 World Economic Forum report, surveyed companies predicted that 44% of workers' skills would be disrupted in the following years. Demand for new skills is growing, accelerated by technology advancements, industry changes, and macroeconomic forces. Technology-related skills gaps, meanwhile, harm innovation and competitiveness. Companies may decelerate a new AI or cybersecurity program simply because their people need to gain the skills to run the program. Learning and development (L&D) teams have been experimenting with addressing these skills gaps, but traditional approaches must catch up to the growing demand. A survey from Manpower shows that 57% of employees are pursuing training outside of work because they believe "company training programs don't teach them relevant skills, don't advance their career development, or simply don't help them stay competitive in the marketplace." Embracing Generative AI can help L&D teams bridge these skills gaps more effectively and keep pace with changes across all industries. GenAI capabilities are growing day by day and are well positioned to play a significant role in developing L&D programs that are more efficient, effective, and engaging. Opportunities for GenAI in Learning and Development Opportunities to infuse GenAI into L&D programs will continue to grow. Right now, the following three use cases will be

particularly advantageous: 1. Outcome-Based Needs Analysis Training needs analysis is an essential yet time-consuming part of any learning and development program. Teams need to identify the skills gaps, build the training necessary to develop those skills and find a way to measure the success of this training. GenAI can fast-track these tasks by automating KPI analysis and market research. L&D teams can upload relevant documents — everything from standard operating procedures to company policies, design documents, guidelines, protocols, and notes from interviews and discovery sessions — and GenAI can scan these documents and generate insights based on specific queries from the team. In this way, GenAI can reduce the time required to conduct a baseline training that drastically needs analysis, which the teams can validate and enhance as required. Beyond just a faster turnaround, GenAI promises more in-depth analysis by allowing teams to spend less time gathering information and more time analyzing it. 2. Content Development Developing content is another time-intensive task. The average L&D content development cycle requires a coordinated effort from visual and instructional designers, programmers, content developers, and team leads. Each of these teams needs input to guide their content development, time to work on the project, review it, incorporate feedback, and review again. All this adds up. As organizations seek to create more personalized content, teams may need help keeping up with requests. GenAI can help with nearly all aspects of content generation, including scripts, audio, video, and assessment questions. Teams can use this GenAI-created content as starting points for their projects, refining as necessary. They can also use GenAI to translate content into other formats to accommodate the varying learning needs of different individuals — translating text to image, for example, or using more user-friendly language to describe highly technical concepts. Human involvement is still significant to ensure content is relevant, accurate, and aligned with company standards. Even if teams only use GenAI to brainstorm concepts, that support can help teams provide more varied, personalized learning materials faster. Platforms like Canva, Powtoon, and Adobe Firefly already use GenAI capabilities to generate content based on prompts. L&D teams can get more from these tools by using them to develop bite-sized content that is easy to engage with, evaluate, and adapt as needed. Other platforms like Smart Sparrow combine this rapid iteration capability with machine learning or data analytics capabilities to help teams deliver content tailored to the unique needs of teams or individual users. 3. Program Roll-Out There are two primary approaches to rolling out learning and development programs: a push approach, which is common to most traditional learning management systems (LMSs), and a pull approach, which is characteristic to learning experience platforms (LXPs) like Fuse, Edcast, and Degreed — all of which are using GenAI to enhance functionalities. The push approach "pushes" learning courses on individuals based on needs defined by the business or by another team acting on the business's behalf. Think of a company-wide training for cybersecurity best practices or workplace conduct. These programs tend to be very generalized. They may deal with a specific topic (cybersecurity or proper behavior in the workplace) but they are designed to work for many individuals across a large group. Unfortunately, this can lead to material that is less effective for many individuals than tailored content. (Think back to that earlier statistic: 57% of employees don't believe company training programs will provide them the skills they need). A pull

approach, on the other hand, analyzes an employee's daily activities and creates learning content based on those activities. What platforms is the employee using? What systems? Where is this employee succeeding and where are they struggling? Employees can then engage with the most helpful recommended content at their own pace (i.e., "pull" it toward themselves, rather than have it "pushed" on them). GenAI can support the pull approach by making it easy for L&D teams to analyze a learner's past performance along with preferences and career objectives to create customized learning paths. This is typically a time-consuming manual process done by the Learning Lead. By incorporating GenAI into that process, Learning Leads may be able to draw deeper insights faster and run different scenarios to offer more personalized content suggestions. Teams can use GenAI to administer exams and check responses, track learning progress, and suggest related content based on performance. GenAI-based LXPs can also automate various administrative and onboarding tasks for new hires, such as learning program enrolment, training/exam scheduling, and reminder prompts. About the Author Abhishek Nag Senior Manager, Global Talent and Development Abhishek is a Learning and Development Practice Leader and brings a wealth of experience in designing and implementing learning strategies that drive organizational growth and individual skill development. =====================

The Human Role in the AI-Defined Supply Chain of the Future

----- Arcticle source ----- https://www.wipro.com/consulting/the-human-role-in-the-ai-defined-supply-chain-of-the-future/ ----- Contact Wipro Please fill the required details to access the content The Human Role in the AI-Defined Supply Chain of the Future For supply chain organizations, the rules of the road are changing. A surge of data and digitization is transforming supply chain management. At the same time, new expectations for sustainability and social responsibility are soaring among consumers and business leaders alike. Supply chain stakeholders must increasingly account for these emerging value systems and associated metrics. AI will play a significant role in harmonizing data and providing strategic insights. However, AI will only partially automate supply chains, and supply chain leaders will increasingly be challenged to define their teams' roles in working with AI to make complex decisions and trade-offs. This AI revolution must be collaborative. AI's capabilities may seem boundless, but AI models and tools also require intelligent, strategy-minded human operators to observe their outputs and define the direction of travel. Functions like AI governance and decision engineering will emerge as critical operational roles in the supply chain organizations of the future. The question isn't just "How will AI capabilities transform supply chain management?" but also "What roles will humans play in AI-defined supply chains?" How Will Humans Work with AI? Beyond the current buzz around Generative AI's image and text generation capabilities, there's a paradigm shift in information management behind the scenes. While AI relies on computing, in many ways, it's a radical departure from traditional computing. When modern robots, for instance, rely on AI

models, they don't balance themselves using pre-programmed motion capabilities. Instead, a learning algorithm processes sensory inputs and iteratively improves. These new robots, much like humans, learn to climb stairs after several attempts and then retain this knowledge – a testament to the power of experiential learning. Similarly, the large language models (LLMs) that underly GenAI don't operate on set rules or instructions. Instead, they leverage vast training data to learn and apply semantic logic probabilities. With AI, we are witnessing a shift from human-made static rules (and the associated mathematics of rigid systems) to observation-based learned behaviors. The implications for human-AI collaboration are two-fold: These dynamics will impact all industries and functional roles, but they have unique implications for supply chain operations. The Future Supply Chain: AI Meets Human Intelligence Today's supply chain operations often rely on management science dating back over a hundred years. Frederick Winslow Taylor's "scientific management" was picked up by Henry Ford's assembly line revolution, and many of these founding principles are still used today to calculate inventory levels, transportation lead times, and manufacturing throughput. The focus has always been on finding the best way to approximate real-world events and building models compatible with the most advanced computing methods. These static supply chain models were highly explainable and contributed significantly to industrial efficiency throughout the 20th century. However, these static mathematical rules fail to accurately capture and manage the complexities of today's market dynamics and related supply chain behaviors. Tomorrow's supply chains will need AI because only AI can operate in this dynamic complexity and learn from large swathes of information to drive reliability and predictive and proscriptive insights in near real-time. The latest strides in visualization and virtualization are opening up new possibilities, allowing us to create digital models of real-world entities such as products, transportation vessels, entire factories, and even complex systems like social and demographic entities. Intuitive, observation-based optimization and virtualization are ushering in a new era of "augmented humans" – individuals who can instantly connect to virtual worlds, explore them through simulations and scenarios, and manipulate and optimize real-world events at a scale and impact never seen before. To illustrate some of the potential impact of these capabilities: In the agile, responsive, dynamic, data-rich, AI-driven supply chain of the future, the role of human operators is bound to change. Time-consuming and inefficient information management and consensus-building will be replaced by a new role, "boundary condition management," which is not dissimilar to driving an autonomous vehicle. Humans will guide the process towards the destination rather than actively driving and making every micro-decision. The transition from a traditional execution focus to a world where advanced technologies can learn and outperform almost any human is significant. Increasingly, thoughtful responses to the AI revolution are focusing on how AI provides an opportunity to recognize capabilities that are truly unique to humans. One of those fundamental human traits is our ability to question assumptions deeply. This suggests that, in an AI-defined supply chain, humans will always need to ask and refine the assumptions underlying AI models, continuously ensuring that enterprises are deploying this powerful tool responsibly. New Responsibilities: Striving for Value, not just Speed and Revenue Speed and cost efficiency will always be fundamental supply chain objectives. The

synthesis of deep supply chain insights, virtualization simulation, and AI-driven optimization will certainly advance those objectives. But increasingly, other supply chain imperatives will also be in the mix. Supply chain organizations' values and strategic goals will need to be realigned to meet the evolving expectations of customers, investors, and regulators regarding sustainability and responsible use of energy resources. AI may become particularly advantageous for managing this multivariable supply chain in the future. On-time delivery might be necessary, but what if it comes at a cost to other customers or the environment? What kind of arbitration or governance would we need to create to manage these situations? Supply chain organizations and regulators must also explore thorny issues around AI-driven competitive dynamics. Suppose numerous AI-driven supply chains compete for the same resources, markets, and customers. How do we ensure that AI-driven decision-making makes the right tradeoffs rather than devolving into a potentially "ruthless" optimization engine? Defining new value concepts and operating boundaries for these advanced capabilities is a task uniquely suited to humans, and it will be a regular strategic focus in the future. Navigating a Radical New Supply Chain Landscape Humans have always been explorers, and AI is simply a radically new landscape. Attempting to put AI back into the genie bottle would be futile. Recognizing this, Wipro has created a novel and innovative capability — Intelligent Supply Chain — that enables transformation pathways toward the AI-driven, human-centric supply chains of the future. Rather than scaling AI in ways that emphasize unfettered automation, we are seeking to balance AI's astounding supply chain capabilities with a vision for how human problem-solving and creativity will continue to add value in the context of supply chains. The future supply chains should be efficient and economically viable while also aligning with core principles of human-centricity, resilience, and sustainability. To get there, we will need AI's efficiency and data processing capabilities, but we also need human guides who can direct AI toward the right objectives. What training, systems, and roles best combine AI tools and human supply chain talent? Supply chain leaders should ask that question as they envision future supply chain operations. About the Author Sebastian Ennulat Senior Partner & European Head of Wipro Supply Chain Consulting Sebastian joined Wipro in 2010 and has over 25 years of experience leading digital supply chain transformations across manufacturing, hi-tech, CPG, retail, and utilities. He brings value to clients by leveraging data-driven innovations and generating rapid ROI. ======================

Leveraging AI and Digitalization for Renewable Energy Refinancing

----- Arcticle source ----- https://www.wipro.com/consulting/leveraging-ai-and-digitalization-for-renewable-energy-refinancing/ ----- Contact Wipro Please fill the required details to access the content Leveraging AI and Digitalization for Renewable Energy Refinancing The rapid growth of renewable energy projects worldwide has created a pressing need for effective refinancing strategies. Renewable energy finance supports the development, deployment, and operation of clean energy sources such as

solar, wind, hydro, and biomass. Refinancing these projects – restructuring or replacing existing debt or equity to improve the financial terms – is a complex process that involves a network of stakeholders, risks, and opportunities. Key factors that make renewable energy refinancing unique include: As the industry continues to evolve, artificial intelligence (AI) integration and digitalization present a significant opportunity to enhance the efficiency and effectiveness of renewable energy refinancing. Addressing data reliability issues, reducing costs, and improving decision-making are among the benefits AI and digitalization bring to renewable energy lenders and developers alike, enabling adaptation to market challenges and further unlocking capital to deploy toward new opportunities. Technology-Driven Renewable Energy Refinancing The need for renewable energy project refinancing arises from existing expensive short-term debt, fluctuating interest rates, expansion efforts, and sometimes even impactful regulatory changes. Current refinancing methods involve extensive manual processes that are time-consuming, error-prone, and costly. Leveraging AI technologies, such as machine learning and predictive analytics, can significantly improve the efficiency and profitability of renewable energy refinancing. AI will contribute to: For lenders, it's worth noting that AI use cases in corporate refinancing will be quite different from AI use cases in areas like consumer lending. In consumer lending and small business financing, the sheer volume of loans and the simplicity of relevant datapoints will increasingly enable AI-powered auto-decisioning. Corporate refinancing decisions present unique challenges due to the complexity of financial data, bespoke deal structures, the involvement of numerous financial experts, the need for in-depth risk assessment, and a complex regulatory environment. For corporate financing in general and renewable energy financing in particular, AI will not enable auto-decisioning for the entire project, but rather will provide clear directional guidance related to discrete aspects of the proposed refinancing effort. The Transformative Opportunity with AI The integration of artificial intelligence and digitalization presents a transformative opportunity for renewable energy refinancing. However, three critical challenges must be addressed to fully harness this potential. First, robust data privacy measures are essential to safeguard sensitive project information from unauthorized access or breaches. Ensuring data security is paramount to maintaining stakeholder trust and protecting valuable data assets. Additionally, AI and digitalization should seamlessly align with relevant regulatory frameworks governing renewable energy refinancing. Compliance with legal requirements not only mitigates potential risks but also ensures ethical practices throughout the process. Finally, while AI enhances decision-making processes, human expertise remains indispensable. Stakeholders must strike a delicate balance, leveraging AI capabilities while relying on human judgment to make informed refinancing decisions. As the renewable energy industry continues to evolve, embracing AI and digitalization will be essential in unlocking the full potential of renewable energy refinancing. The energy transition will be an extremely capital-intensive effort. AI is well poised to give renewable energy developers, asset owners, and lenders the insights required to effectively unleash capital at scale and drive sustainable growth. About the Authors Phani Solomou Senior Partner Phani is Wipro's AI Consulting leader for Europe. She has over 25 years of advisory experience on business transformation working with clients across sectors. She is a

member of Wipro's Responsible AI Taskforce. In addition to collaborating with clients, Phani is driving a number of internal initiatives to reimagine consulting for Wipro, upskilling 8,000 colleagues to deliver value for themselves and clients. Sundar Thyagarajan Principal Consultant Sundar is a seasoned consulting professional, with over 15 years of experience in digital consulting, business transformation, AI. He has led multiple large accounts across the UK and Australia, driving business transformation, process re-engineering, and value creation through AI.

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Revitalizing Change Communication with GenAI

----- Arcticle source ----- https://www.wipro.com/consulting/revitalizing-change-communication-with-genai/ ----- Contact Wipro Please fill the required details to access the content Revitalizing Change Communication with GenAI GenAI is enhancing the role of communication leads in transformation programs. When intelligently integrated into change efforts, GenAI is not an intrusion but a catalyst that can supercharge the change process. Imagine a world where AI-powered tools automate routine change communication tasks and strategic ones, providing valuable insights from vast amounts of data. Envision change communication minus the process rigidity: A truly agile change experience that feels personalized to each employee. This is not a utopian dream; thanks to recent GenAI innovations, it is a reality within reach. The question now is: Are enterprises ready to embrace this evolutionary shift? Why Change Communicators Struggle All communication professionals today (including those devoted to change communication) are searching for new productivity enhancements amid time-intensive manual content creation, editing, and target audience segmentation. These tasks consume significant time and energy, leaving communications leads with little bandwidth for strategic thinking. This hinders their ability to creatively and effectively manage change. Even when the content is flawless, the overall change process can hamper its effectiveness. The traditional approach to change management involves one-way communications, where information is disseminated to employees without actively driving engagement. Without proper engagement, employees may resist the changes being implemented, ultimately hindering the success of the initiatives. By automating specific processes and providing valuable insights, GenAI can augment the role of change communication professionals and elevate their impact within organizations. In particular, GenAI can already play a significant role in accelerating communications development, fostering inclusivity and accessibility, and ensuring consistency in messaging and design. A recent study conducted at Wipro revealed that change practitioners spend 31% of their time on communication development. This persistent manual workload underscores the potential impact that emerging GenAI technologies can have on the efficiency and effectiveness of change practitioners, freeing up valuable time for more high-value activities including advisory. Communications Development With GenAI's automation and assistance,

developing communication materials can be significantly expedited. Tasks such as content creation, editing, and target audience segmentation can be streamlined. This allows communication professionals to save time and focus on more strategic activities, such as exploring user personas, meeting individually with key stakeholders, and evangelizing the change across company forums. Wipro's AscendAI framework recently demonstrated GenAI's power to accelerate communications for a prominent FTS 250 company in the UK. Working with the client, the Wipro Talent & Change team delivered a "case for change". Traditionally, a seasoned consultant invests 25 hours in this endeavour. Enter AI: a digital alchemist that condenses the same process into a mere 2 hours. This 92% time savings for a single change communications task underscores the potential for human expertise to harmonize with AI's computational capabilities.   However, it is worth noting that not all GenAI foundation models perform equally well in communications development. In comparing GenAI models across numerous attributes (understanding of prompts, rationale clarity, word count compliance, response structure, tone suitability, scenario interpretation, etc.), Wipro's Talent & Change team has encountered numerous differences across models. In our experience, some models overemphasized the shortcomings of current practices, while others delivered overly long responses or lacked coherence. This emphasizes the need for human oversight even if the model provides a strong starting point. Careful testing, or collaboration with change partners experienced with GenAI, can enable organizations to identify the optimal model for their use cases, and outcomes can be further enhanced through prompt engineering. Clear and specific prompts will guide GenAI models toward generating accurate, engaging, and persuasive content. Inclusivity and Accessibility In addition to simply developing content, GenAI-powered tools can help ensure communication materials are accessible to a broader audience. By incorporating features like language translation, voice assistants, and text-to-speech capabilities, communication professionals can effectively reach diverse audiences with change-related messages and promote inclusivity. Fostering inclusivity and accessibility is a strategic imperative. AI-powered language translation tools, for example, can dissolve the linguistic barriers that all global enterprises face, enabling instantaneous, democratized change communication. In conjunction with GenAI, natural language processing (NLP) algorithms can also scrutinize written communication for bias, advocating for language that embraces everyone and avoiding language that might strike the wrong note with particular communities. Capabilities like GenAI-enabled captioning, for example, will improve the speed and accuracy of captioning even in highly technical contexts, allowing employees with hearing differences to be more fully included in the conversation. By integrating these AI-infused inclusive technologies, businesses are opening the doors to diversity. Consistency in Messaging and Design With the assistance of GenAI, communication professionals can ensure that their messages are aligned and visually appealing across different platforms. GenAI-powered tools can provide templates, style guides, and real-time feedback to help maintain a cohesive brand image for the change effort. Maintaining consistent tone, voice, and messaging across marketing efforts reinforces brand identity and facilitates customer connection and recall. As these GenAI sentinels advance, they will become indispensable in safeguarding the integrity and continuity of change

communications. The GenAI Future of Change Communications GenAI's impact will go far beyond content development and execution (see figure below). It will also play a role in areas like stakeholder analysis, persona mapping, and measuring effectiveness. GenAI will handle routine tasks such as scheduling, content creation, and data analysis as a powerful digital assistant for change communicators. It will illuminate audience inclinations, empowering data-centric strategy formulation and personalized messaging at an unprecedented scale. Even so, human judgment and authenticity will remain irreplaceable, and experienced change communicators must continue to ensure that all messages retain a human touch. In this dance of human and machine, change communicators will be empowered to tell stories that foster transformational change. About the Author Phani Solomou Senior Partner Phani is Wipro's AI Consulting leader for Europe. She has over 25 years of advisory experience on business transformation working with clients across sectors. She is a member of Wipro's Responsible AI Taskforce. In addition to collaborating with clients, Phani is driving a number of internal initiatives to reimagine consulting for Wipro, upskilling 8,000 colleagues to deliver value for themselves and clients. Carmen Jones Principal Consultant – Talent & Change Carmen, an AI and Transformation professional, brings 9 years of experience in change management and end-user adoption. She has successfully led end-to-end consulting engagements for numerous enterprise clients across Energy, Defense, and Retail. Sreedhar Menon Principal Consultant – Talent & Change Sreedhar is an experienced professional who brings expertise in digital change enablement, process design, strategic communications, user adoption, and culture change within a digital transformation program. His hands-on, in-depth knowledge extends to business intelligence, analytics, and data visualization. ======================

Infrastructure Services

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stop-shop for all cloud and IT infrastructure needs. Wipro's solutions and services combine deep industry insights, leading technologies and best-in-class execution. Our focus on driving transformation and efficiency through innovation using standardization and automation has helped gain market recognition from analyst with regards to our offerings and value proposition. We drive efficiency in IT Infrastructure and with deep understanding of our client's business and verticalized offerings help our customers succeed. With over 900 clients, more than 40,000 infrastructure professionals, and 30+ operation delivery centers, we are uniquely positioned to help our clients accelerate their digital journey. Helping our customers gain agility transform networks towards a digital future. A comprehensive engineering solution for IoT adoption to transform businesses. Bringing a consultative approach to enterprise service management. A Quarterly Survey Series by Wipro FullStride Cloud An IDC white paper sponsored by Wipro on the long-term value of a platform-based OT solution. With AI, organizations are unlocking the full potential of their hybrid and multicloud investments, achieving cost efficiency and operational excellence. A Wipro and Intel perspective Role of TETRA in the World of 5G Mobile Networks A holistic approach to reliability should incorporate reliability principles in the DevOps pipeline to form 'DevRelOps' The paradigm shift in the IT Network infrastructure Moving from reactive to proactive Edge computing enables businesses to reimagine experiences for people, purpose, and profitability, at speed and scale. Wipro is positioned as a Leader in the 2024 Gartner® Magic Quadrant™ for Managed Network Services (MNS) Contact Us
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Business Service Management

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LiVE Workspace™

Our Expertise Analyst speak What we Think What We Think Solutions What We Do Contact Wipro Please fill the required details to access the content LiVE Workspace™ Enabling Digital Workplace Transformation A seamlessly integrated solution with pre-defined tools, technologies, processes, and self-service options that works anywhere and on any device. The Metaverse has taken the world by storm. But what exactly is the Metaverse, and how will its adoption change the world of work? The opinions on what the Metaverse is vary, mainly because the idea is still evolving. However, the time is right to explore how this technological revolution will reshape the way we work. Painless application distribution across devices Modernize Your Workspace to Embrace the Future of Hybrid Work A service experience to surpass all Drive a Digital-First Strategy to Enhance Productivity Work goes well with Apple Today, people have much higher digital dexterity than ever before. Enable digital dexterity with increased "remoteability" by adopting a synergistic combination Active directory for pros: Keep it lean and simple

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SDx (Software Defined Everything)

Our Expertise What we Think Form Title Form Title What We Think Solutions Our Solutions Contact Wipro Please fill the required details to access the content SDx Reimagining the core Very recently, JBS USA Holdings Inc., the world's largest meat supplier had to shut down its systems to slow down an online attack. The company paid $11 million to a criminal ransomware gang to regain control of its systems. This is just one instance of a business, among thousands, that has been at the mercy of cybercriminals. Regardless of how big or powerful an organization is, today's sophisticated cybercriminals can bring it down. Digital transformation and end user experience drive businesses to innovate with new applications and enhance core applications flexibility. As companies embark on their digital transformation journey... Digitalization and Cloudification are vital to business success and not an option any more. The Telco industry is one of the first to adopt newer technologies. Derive value from technology investments Managed service to automate the container based IT Lifecycle Realize the full potential of your SAP investment Last line of data protection against destructive cyber attacks Wipro's Digital Database Platform Services 2.0 (DDPS) is a fully managed Database-as-a-Service (FMDBaaS) offering that hosts traditional and next-generation databases on a unified platform in a hybrid-cloud environment. Platform to embrace digitalization

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Wipro Smart i-Connect™

Our Expertise Key attributes Benefits delivered Solutions Our Solutions What We Think Form Title Form Title What We Think Contact Wipro Please fill the required details to access the content Wipro Smart i-Connect™ | An Enterprise IoT Platform An Enterprise IoT Platform Wipro Smart i-Connect™ (WSiC) is an enterprise IoT platform that enables solutions for six critical objectives of IoT applications: Data acquisition, storage, processing, advanced analytics, visualization, and enterprise application integration. The disruptive and differentiated benefits created by WSiC transform businesses across various industries like transportation, retail, manufacturing, agriculture, healthcare, oil & gas, logistics & fleets management, mining, smart cities etc. giving them a market edge. The low-code, ready-to-deploy WSiC platform speeds up digital transformation through faster customization and go-to-market of cloud, on-premises, hybrid and edge use cases. It is an open, modular, scalable, and distributed architecture and provides a rich set of features like Vendor agnostic nature, visualization of operations, enhanced security, business impact analytics and live online reporting, which helps to integrate, configure, monitor and control various devices and software's. WSiC is a remedy for the complicated issues like connecting, provisioning, monitoring, managing, configuring, controlling, maintaining, upgrading, and evolving a fleet that has millions of widely different devices operated by a huge enterprise. It also provides facility to users to run the application on edge devices such as industrial PCs, PLCs, single-board computers, and specialized IoT gateways to make local monitoring, control and decision making, as well as data buffering for higher-tier server connections. Key Differentiator 1. Deployment Flexibility – On Premises, On Cloud, Hybrid and Edge 2. 100+ Communication protocols and pre-built device drivers, growing continuously 3. Integration with External Eco-Systems through any supported protocol, open-source Java/.NET/C++ APIs, as well as web services 4. Widespread Database support such as Oracle, MySQL, Microsoft SQL Server, PostgreSQL, No SQL, Cassandra, Hadoop etc. Enhance passenger's airport experience, achieve operational excellence, sustainability and contribute to non-aero revenue Rig management, along with security and HSE compliance, to create a safe operational environment Transform citizen experience by building digital and sustainable cities leveraging IoT, 5G and AI Cut energy consumption of IT equipment by one third Improve campus performance and strengthen user experience with persona- focus digital transformation Cut energy consumption of IT equipment by one third Boost customer experience and employee productivity while improving store profitability Leverage digital twin, data and analytics, to make building management and sustainability simple and effective Improve telecom site availability, utilization and optimization using AI based monitoring and management Enhance employee and visitor experience along with operational excellence and optimization. Wipro Smart i-Connect™ is a multi-domain IoT solution which is ready to deploy solution that allows clients to rapidly create new revenue streams and right shift end-customer experience while reducing cost of operations. The disruptive and differentiated benefits it creates for clients transforms their businesses and gives them the much

needed market edge to be the leaders IoT is transforming the healthcare industry by redefining the space of devices and people interaction in delivering healthcare solutions. The use of building automation is not a new phenomenon. In fact, with the rapid advancement in technology and the development of IoT making connected devices a reality, the concept of building management has undergone a paradigm shift. The use of building automation is not a new phenomenon. In fact, with the rapid advancement in technology and the development of IoT making connected devices a reality, the concept of building management has undergone a paradigm shift. Enable smarter, faster and more efficient claims processing Medical device companies weave new business models to provide value-added services This paper charts out the service opportunities enabled by industrial internet and a framework which can help manufacturers prioritize their aftermarket strategy. Digitization of processes and data across the value chain along with the emergence of Internet of Things (IoT) has transformed the Pharma industry. Although IoT is still in its nascent stages of adoption in the Life Sciences industry, the use of smart devices and machine-to-machine (M2M) communication leveraging SMAC technologies comes at a time when the industry is grappling with patent cliffs and declining R&D productivity This paper explores some of the benefi tsspecially to retailers and focuses on a pragmatic, cost-conscious approach to get retailers started on their IoT journey. ======================

Business Continuity Solution on Cloud with Wipro's VirtuaDesk™

----- Arcticle source ----- https://www.wipro.com/infrastructure/business-continuity-solution-on-cloud-with-wipros-virtuadesk/ ----- What We Think Form Title Contact Wipro Please fill the required details to access the content Business continuity solution with Wipro's Virtuadesk™ Be prepared to lead your business through unanticipated crises For any business, minimizing business disruption and ensuring employee safety are the top priorities during unpredictable incidents. In such circumstances, having a solution focused on business continuity and remote work is crucial. Wipro's VirtuaDeskTM Business Continuity Solution is designed to introduce desktop and application virtualization to the workplace in a quick and cost-effective manner. The solution leverages Cloud architecture principles, next-generation hardware components, and hyperscale Cloud ecosystem to create a high-performance way of delivering virtual workplace. The solution offers the assurance that your employees can access work anywhere, anytime, from any device for the safety of your employees and undisrupted operations during emergencies or unplanned events. Wipro's VirtuaDeskTM is a Desktop as a Service solution that is based on the best-of-breed components fit for business continuity requirements. Wipro also extends a 'Cloud Ecosystem' that can offer additional desktops (500 – 100,000) to scale quickly to minimize business disruption through our Business Continuity-Virtual Desktop Infrastructure solution. For any demo/POC kindly reach out to marketing.cis@wipro.com Covid-19 pandemic is impacting

people and enterprises globally. The top priority for enterprises is to keep employees, =====================

Wipro's #WANFreedom SDWAN powered by Aruba EdgeConnect

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Wipro AWS AI/ML Lab

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Offerings According to Gartner, artificial intelligence and machine learning (AI/ML) interventions are going to play a big role in an organization's success, and AI/ML will remain one of the top drivers of infrastructure decisions through 2023. Companies are interested in capabilities such as Cloud migration, MLOPs, SageMaker Feature Store, and Conversational AI. However, many organizations that start with AI pilots struggle to scale and operationalize those initiatives. The Wipro AWS AI Solution team helps customers across industries overcome these challenges and take advantage of AWS SageMaker by providing skilled AWS ML-certified professionals, AI/ML accelerators, a dedicated AWS AI/ML CoE Lab, MLOPs framework, and more. Key solution areas Customer Experience Cloud/Platform Migration Demand Forecasting Industrial AI AWS AI/ML Lab Services Prototypes – Quick use-case build and demonstration that showcases general capabilities to solve a given problem (1-2 weeks) POCs – focused, contextual development to demonstrate solution, using customer data, in Wipro AI Lab environments (4-6 weeks) Pilots – focused, contextual development to demonstrate solution, using customer data, in customer environment (6-8 weeks) Principles Wipro AI/ML accelerators using AWS capabilities InspectAI – Wipro's InspectAI transforms Asset Maintenance tasks with its image-gathering capabilities and predictive algorithms. Using this AWS Cloud solution, enterprises can maximize asset integrity and strengthen resiliency while ensuring worker safety. Cloud Migration Knowledge Assist – AI powered natural language-based conversational knowledge search engine. Anomaly Detection – Big Data-driven platform that can ingest transactional data and derive patterns out of it using ML models. Any outlier/anomaly can be highlighted. Reusable Templates / artifacts – Reusable AWS CFTs for automating ML model lifecycle (event-based model retraining, batch scoring, real-time end-point deployment, model versioning, API gateway deployment, etc. Wipro AWS AI/ML GTM Themes Demand Forecasting – For the retail industry and other customers looking for a forecasting solution, specifically customers on SAS forecasting products looking for migration to AWS Cloud product Cloud Migration Knowledge Assist – AI-based cognitive knowledge assist solution that helps customers migrating to AWS cloud by providing quick access to knowledge artifacts with conversational AI (bot) Conversational AI – AI contact center intelligence theme focused on enabling AI-based agent assist for contact center modernization customer journey Model Migration – For customers planning to set up data science lab on Amazon Cloud after or during their migration journey Asset integrity management is a key activity for energy companies. It ensures safe operations, avoids unplanned downtime, and prevents incidents... VW Credit, Inc. (VCI), a financial services arm of Volkswagen Group of America, provides competitive financial services to its dealers and 1.2 million customers. The credit arm wanted to provide more timely and customized products to its customer base. Mitie, a UK-headquartered facilities management (FM) and professional services leader employing almost 50,000 people with revenues of £2.2 billion in FY20, wanted to drive significant efficiency improvements and cost savings. In the midst of a multiyear transformation program that started before the COVID-19 pandemic, Mitie teamed with Wipro to manage their SAP cloud ERP migration to Microsoft Azure. =====================

Reinventing retail for the modern age with Wipro <u>RE.TALE</u>

----- Arcticle source ----- https://www.wipro.com/infrastructure/reinventing-retail-for-the-modern-age-with-wipro-retale/ ----- Contact Wipro Please fill the required details to access the content Reinventing retail for the modern age with Wipro RE.TALE Digital transformation has become paramount for every industry and the retail industry is no different. However, with the rise in the adoption of new-age technologies and increasing connectivity, many retailers face several challenges with respect to building better omnichannel experience, tighter supply chains and driving data insights. To accelerate in a digital-first economy, retailers need to design a unified commerce strategy to streamline every process, drive data insights, modernize the supply chain, and elevate customer experiences. Transforming the retail landscape with RE.TALE With a legacy of strong consulting services, engineering and infrastructure background, Wipro equips retailers with strategic solutions that span across store modernization, supply chain, customer/employee experience, and hybrid cloud solutions to drive optimum ROI. Wipro's RE.TALE proposition enables retail organizations to modernize their technology landscape for the digital-driven age. Leveraging RE.TALE, retailers can embrace a unified retail commerce approach. Making retail more intelligent At Wipro, our aim is to help retailers understand customer behaviour while helping customers with a more enhanced experience. With RE.TALE, we are enabling retail organizations to move beyond technology siloes by leveraging best-of-the-breed solutions and our 25+ years of experience working with Retailers across the globe.
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Digital Network Services

----- Arcticle source ----- https://www.wipro.com/infrastructure/digital-network-services/ ----- Our Offerings The Buzz Around SASE. Is It Worth All the Hype? Contact Wipro Managed Network Services SD-WAN/WAN Freedom Software-Defined Multicloud Networking Insightix Network UCaaS Multi-Domain Orchestrator Network as a Service CCaaS Hooking up a Leading Telco with IoT and 5G Building a Future-Ready, Software-Defined Data Center Reducing WAN Operations Costs by Over 30% SD-WAN: The next wave in WAN refresh Reimagine Your Networks with Flexible Cisco Plus Offerings Delivered at Scale by Wipro The Business Case for SD-WAN Get More from Your Public Cloud Investments with SD-WAN Network on Autopilot Mode Software-Defined Networking: Connecting hybrid clouds seamlessly Leader in 2024 Gartner® Magic Quadrant™ for Managed Network Services Leader in 2023 Gartner® Magic Quadrant™ for Managed Network Services, Worldwide Leader in Everest Group Network Transformation and Managed Services PEAK Matrix® Assessment- System Integrators 2023 Leader in Everest Group's Network Transformation and Managed Services PEAK Matrix® Assessment 2021 Please fill the required

details to access the content Digital Network Services Offerings Success Stories Insights Recognitions Growing demand for hybrid operations such as multicloud, IoT and hyperconvergence is putting new pressure on businesses and their networks. Enterprises need reliable, flexible networking services that can maintain performance and security while keeping pace with traffic and new connections. Wipro FullStride Digital Network Services are designed to modernize and optimize network infrastructure in the digital era. Leveraging a strong partner ecosystem of leading technology OEMs, ISPs and cloud service providers, along with Wipro's own IP, platforms and frameworks, these services provide end-to-end network lifecycle services, including: This comprehensive offering makes it easy for businesses to access the advanced networking capabilities they need to enhance connectivity, security, and performance in the cloud era. Using Wipro's 3C approach (Cost, Capacity, Continuity), Wipro FullStride Digital Network Services offer a comprehensive set of services in different models, including as a service. Clients can choose the engagement models that best suit their business objectives and ambitions. Wipro is recognized as a leader by leading analysts and well appreciated by advisors and clients for its capabilities and innovations in the enterprise networking domain. Leverage an AI-driven managed network service for greater control and efficiency. Take control of WAN investments and drive performance across cloud. Ensure successful cloud transformation with a secure, simplified, scalable network. Easily assess network architectures and operations while aligning with future bunisess objectives. Enhance business communication and collaboration with Unified Communications as a Service. Leverage Wipro's multi-domain orchestrator for global network management. Unlock sustainable business growth with a future-ready framework. Deliver exceptional support and customer experiences. Discover how Wipro enabled secure network access control (NAC) to enforce access privileges and reduce network security risks. Wipro helped the telecom company reduce network complexity, cut costs and become future-ready. The state-of-the-art data center provides seamless network failover, enhancing scalability, and resiliency. Learn how a top electronics manufacturing company took control of its complex legacy network. Is SASE really the future? Find out what our experts have to say. News, Awards & Recognitions Contact Us =====================

IOT and EDGE

----- Arcticle source ----- https://www.wipro.com/infrastructure/iot-and-edge/ ----- Our Offerings Transforming Operational Technology Using Platform Services News, Awards & Recognitions Contact Wipro Smart Warehouse Drives Visibility for US Energy Company How a Semiconductor Manufacturer Built a Smart Warehouse How 5G Networks Will Accelerate the Journey from Smart Cities to Cognitive Cities Internet of Vehicles (IoV): Revolutionizing Transportation of Tomorrow Riding on 5G and Edge AI Adopting IoT Technologies to Rejuvenate Dairy Farming Sustainability: A Race to Achieve Net Zero with IoT-Led Digital Solutions Improving Sustainability and Reducing OPEX Cost in the Oil and Gas Industry Transform Buildings into Smart Buildings with IoT Wipro Named a Leader in

Everest Group's Digital Twin Services PEAK Matrix® Assessment 2023 Wipro Named a Top Engineering Services Provider by Everest Group, 2023 Wipro Named a Major Contender and Star Performer in Everest Group's 5G Engineering Service Matrix, 2023 Please fill the required details to access the content IOT and Edge Offerings Success Stories Insights Recognition The difference between real time and near-real time is a lifetime. Don't miss a beat. Harness the full potential of data-driven operations with advanced IoT and edge computing powered by 5G and the cloud. The Wipro FullStride Cloud IoT framework makes it easy for organizations to build and deploy IoT solutions at scale. This comprehensive platform provides a range of capabilities including device management, data ingestion, analytics and visualization to boost performance and maximize impact. The Wipro Edge Solution Services Suite powered by 5G is a set of services that complement the Wipro FullStride Cloud IoT framework by providing edge computing capabilities. This suite includes edge device management, analytics, and security services, allowing organizations to process and analyze data closer to the source, reducing latency and improving overall system performance. Together, the Wipro FullStride Cloud IoT framework and Edge Solution Services Suite provide a complete end-to-end solution for organizations looking to implement IoT and edge computing technologies in their operations. Accelerate digital transformation with a low-code, ready-to-deploy platform. Leverage data analytics to enhance service life cycle management for IoT and OT. Harness the combined power of 5G and edge to reshape the digital landscape. An industrial township authority chooses Wipro as a strategic IT partner to realize its vision of a well-integrated smart city. Wipro helped a Fortune 500 organization realize its ambitions for a smart warehouse. A top American manufacturer of semiconductor products reimagined its warehouse management with Wipro's IoT solution. An IDC white paper, sponsored by Wipro, on the long-term value of a platform-based OT solution. Contact Us =====================

How an Energy giant 'virtually' transformed its workplace

----- Arcticle source ----- https://www.wipro.com/infrastructure/how-an-energy-giant-virtually-transformedits-workplace/ ----- Contact Wipro Please fill the required details to access the content How an Energy giant virtually transformed its workplace A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops Client background Client: A UK-based energy company Industry: Energy Area of operation: UK Services: Supplies electricity and gas Number of employees: Over 10,000 Challenge The energy company had a legacy environment based on Windows XP virtual desktop solution. This led to stability, performance and scalability issues with less adoption of desktop and application virtualization. The incumbent virtual desktop solution was only for 3,000 users and operations were complicated with over 75 different desktop images. The solution was going out of support from Microsoft and was being decommissioned and migrated to Windows 7. The client wanted

to implement a new Virtual Desktop Infrastructure (VDI) within a time period of 3 months and also migrate additional 1000 users (a total of 4000 users) in three months and scale up to 7,000 users in a year's time Solution Wipro implemented Wipro virtuadesk™, a complete desktop virtualization solution built on Cisco UCS servers to deliver Windows 7 and Windows 10 virtual desktops. Business impact Implementation of Wipro's desktop virtualization solution, which is designed for rapid deployment and risk management, eliminated the architecture and design phase, and minimized risk. Deployment and provisioning automation enabled the hyper-converged appliance to be factory-assembled, shipped to the datacentre and implemented within three months. The solution ensured business agility and helped create a digital workforce by securing, provisioning, and sharing applications and data. The VDI solution has an upgrade roadmap to avoid the risk of end-of-life and out-of-support infrastructure. This will help reduce the complexities involved in compatibility testing of various platforms and applications during PC refreshes in the future. "The client was facing several issues due to their legacy infrastructure and our solution helped address all these challenges. Through Wipro virtuadesk™ workplace transformation solution, we were able to enhance the stability and performance of desktops, resulting in better productivity and efficiency. We got proactive support from our partners like Cisco to deliver the solution on time and meet all customer requirements." - Seshu Kumar G.V. General Manager, Global Infrastructure Services, Wipro
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Media group gets future-ready with Wipro virtuadesk™

----- Arcticle source ----- https://www.wipro.com/infrastructure/media-group-gets-future-ready-with-wipro-virtuadesk/ ----- Contact Wipro Please fill the required details to access the content Media group gets future ready with wipro virtuadesk™ A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Client background Client: A leading media group Industry: Media Area of operation: Europe Services: Publishing, distribution Number of employees: Over 15,000 Challenge The media group had multiple datacentres spread across Europe managed by Citrix farms of multiple versions. This led to poor IT management and lack of a centralized view. A complex legacy environment based on Windows 2003 server, which was being decommissioned and going out of support from Microsoft, led to stability, performance, agility and scalability issues. The client wanted to migrate multiple Citrix farms to a central location in a period of 3 months. Solution Wipro implemented Wipro virtuadesk™, a complete desktop virtualization solution built on Cisco UCS servers, software defined storage based on Datacore and virtualization platform based on Citrix.   Business impact Wipro virtuadesk™ enabled the media group to build a collaborative and mobile workforce by securing, provisioning, and sharing applications and data. Wipro's pre-architected solution, designed for fast and secure

implementation, eliminated architecture and design phase, and minimized risk. The hyper-converged appliance was factory assembled and shipped to the datacentre. Deployment and provisioning automation built by Wipro helped implement the solution within 3 months. "Through our proactive approach, we managed to deliver the new platform to the client ahead of schedule. The success of our solution was due to close collaboration with partners like Cisco and Microsoft. Our workplace transformation solution, built on Cisco's industry leading UCS servers, helped deliver high performance VDI to business users with up to 25% cost savings." - Seshu Kumar G. V. General Manager, Global Infrastructure Services, Wipro
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Wipro takes key applications and data center on hyper automation drive

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-takes-key-applications-data-center-on-hyper-automation-drive/ ----- Related Articles Contact Wipro Please fill the required details to access the content Wipro takes key applications, data center on hyper automation drive Client background Client: Wipro Services: Global information technology and consulting company that harnesses the power of cognitive computing, hyper-automation, robotics, Cloud, analytics and emerging technologies. Geographies: The US, Canada, Latin America, Continental Europe, India and Middle East, and Asia Pacific. Challenges Wipro, which serves clients across six continents, had a complex IT landscape to manage. At any given time, there were more than 200 enterprise applications running on 4,500-plus servers. These were hosted on two public clouds and on-premise data centers globally. The underlying infrastructure supported an employee base of over 160,000 and all critical applications, such as Helpline, the system used by employees to log tickets powered by Wipro HOLMES, and myWipro, the digital platform for self-service that gives employees a seamless experience across various processes and workflows. Complexity and efficiency issues aside, security and compliance were also a key concern. There were multiple monitoring alert consoles for different applications and infrastructure silos that required multiple monitoring teams, leading to delays in identifying root causes of failures. Monitoring was also being done on a piecemeal manner, not covering all servers and devices. Ability to track and roll-back configuration changes was cumbersome and there was limited track of historical changes. Thus, there was a need for real-time monitoring, incident and change management, automation and self-healing for a seamless user experience. Solution The team at Wipro embarked on a hyperautomation drive to address the infrastructure, critical application and data center monitoring and management issues. This was our 4-step approach: Business impact We've gained true understanding of end-user experience in every application interaction and now have the ability to

rapidly resolve issues in real time, to ensure our employees have quick access to the services they need. - Raja Ukil, CIO & Senior Vice President, Wipro Limited A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Wipro implements centralized management using Cisco IWAN solution and APIC-EM - a network automation tool =====================

A leading Indian conglomerate deploys scalable network infrastructure to optimize operations and enhance agility

----- Arcticle source ----- https://www.wipro.com/infrastructure/a-leading-indian-conglomerate-deploys-scalable-network-infrastructure-to-optimize-operations-and-enhance-agility/ ----- Contact Wipro Please fill the required details to access the content A leading Indian conglomerate deploys scalable network infrastructure to optimize operations and enhance agility Wipro implements centralized management using Cisco IWAN solution and APIC-EM - a network automation tool Client background Challenge The client's business was hampered by aging network infrastructure that led to frequent service degradation. As a rapidly growing company, the client wanted to refresh its aging network hardware, upgrade its sub-optimal operations, and reduce the operational effort in managing its entire network infrastructure. It was looking to replace its core switches and routers that were approaching the end of their service life, and ensure mission-critical application based usage of WAN links. Additionally, the client expected Zero Touch Deployment across LAN and WAN. Solution The client chose to partner with Wipro to address the challenges based on its robust global infrastructure and SDX capabilities, and proprietary transformation framework. Wipro implemented the Cisco IWAN solution as well as NMS-Cisco Prime to centralize management of the network, while APIC-EM i.e. the network automation tool (configured on top of Cisco Prime) helped automate processes. Additionally, Wipro enabled zero touch deployment across LAN and WAN and PnP and created path visualization and architecture design. Business Impact Deploying centralized network management along with the network automation tool helped the client realize the following benefits: "Deep study of customer business objective and network challenges helped us position the best solution set. Our experience and capacities helped us not only transform customer network to meet their current business but also future growth."
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How a top women's university upgraded campus security

How a top women's university upgraded campus security Client background Client: A large women's university Industry: Education Employees: Over 5000 Challenge As a women-only university, the client wanted to secure its premises for its female students by digitizing people and asset tracking and monitoring across its premises. The client also wanted to control the movement of male personnel within the restricted zones, while also check the entry of public into any unauthorized area. Solution Wipro assumed end-to-end ownership of IT and non-IT systems to deploy a customized security application for the client. Key highlights of the solution: Business Impact Wipro's end-to-end asset tracking and monitoring solution enabled the client to track the IT/non-IT assets in the campus and make the university campus more secure for students. Security and safety benefits included: "With the implementation of the end-to-end asset and personnel tracking/monitoring system, the client significantly improved premise safety and security, and also improved asset life by providing IT/non-IT asset lifecycle management." Ashish Khare, General Manager, IoT - Cloud & Infrastructure Services, Wipro A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to

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Township realizes smart city vision.

Here's how.

Township realizes smart city vision. Here's how. Client background Client: An Industrial Township Authority Industry: Township development Area of operation: Spanning 903 acres and 158 companies Challenges With the goal of providing improved city services and higher quality of life, the client was looking to

integrate different subsystems such as street light management, water metering, environmental monitoring, waste management, incident management and fleet management. This was critical to enable effective asset control and monitoring in near real time. In addition, the client also wanted a more connected infrastructure for CCTV surveillance, smart parking and e-toilets for enhanced user experience. Solution The client chose Wipro as their strategic IT partner to prepare solution blueprint for smart city design and architecture. Wipro leveraged its system integration expertise to help the client: Business impact Wipro adopted a phase-wise integration of various stacks, helping the client build a robust infrastructure in compliance with standards, draw insights in near real time for enhanced decision making, and drive superior user experience for township constituents. The entire smart system made control and monitoring more effective and efficient and also brought in transparency and accountability of operations. A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to =======================

US food manufacturing company makes

OS upgrades risk-free, fast, and efficient

----- Arcticle source ----- https://www.wipro.com/infrastructure/us-food-manufacturing-company-makes-os-upgradesrisk-free-fast-and-efficient/ ----- Related Articles Contact Wipro Please fill the required details to access the content US food manufacturing company makes OS upgradesrisk-free, fast, and efficient September | 2019 Client Background Challenges The client has a large infrastructure landscape that constitutes multiple operating systems (OS). The devices in the landscape were periodically upgraded to the latest OS version. These regular updates were causing security risks during transition and were also leading to considerable performance degradation issues. Patch and image testing was done manually, which was inefficient and time-consuming. Applications that were hosted needed to be tested for its correctness based on upgrades. There were multiple combinations of upgrade paths to be followed based on OEM supported architectures. Solution Wipro helped the client automate the process of testing to reduce the time spent in manually testing all the OS upgrade activities. Wipro deployed a seed team to stabilize and reduce the risk of transition. Solution Highlights Business Impact Automation of testing, the time-consuming

manual process, helped the client accelerate the efficiency of the overall process. "The client was facing the challenge of business downtime. With improved predictability post upgrade, we were able to reduce business downtime by 10% by reducing OS related tickets/cases."- Harish Krishnan, General Manager, Cloud and infrastructure services, Infrastructure Quality Assurance, Wipro A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to =======================

A leading LPG supplier takes control of its assets

with IoT. Here's how.

----- Arcticle source ----- https://www.wipro.com/infrastructure/a-leading-lpg-supplier-takes-control-of-its-assets-with-iot-heres-how/ ----- Related Articles Contact Wipro Please fill the required details to access the content A leading LPG supplier takes control of its assets with IoT. Here's how. October | 2019 Client background Client: A large supplier of liquefied petroleum gas (LPG) to homes and businesses Industry: Gas Area of operation: Global Products: LPG, LNG, Bio LPG Challenges The client was experiencing a rapid growth trajectory. This led to significant challenges in efficiently managing its gas distribution operations. The inability to track the pallets and cylinders in circulation resulted in high OpEx due to constant refurbishment of lost assets. Also, siloed operations led to lack of relevant data and insights, undermining effective decision making. The client was looking for remote identification, detection, and recording of the location of pallets to enable real time inventory and tracking of pallet entry/exit from individual locations. It also wanted the ability to integrate the type and quantity of gas bottles into each pallet and log pallet damage in real time to ensure compliance. Additional needs included increasing safety through accountability and enabling a maintenance record of all pallets. Solution Wipro collaborated with the client to design a pallet digitalization initiative. Wipro assessed the digital supply chain use cases and identified pallet tracking as the key to address immediate challenges affecting revenues. The team employed a two-pronged approach: Highlights of the automated pallet detection solution: Business impact The client saw huge improvements in operations visibility, safety, cost savings and brand reputation as a direct outcome of the pallet digitalization initiative Cost Savings Better Visibility Safe Operations Increased Security Operational efficiency   Real-time visibility and tracking of pallets provided boost to the pallet digitization program. Not only did the initiative bring in anticipated operational benefits,

but also fueled the production, resulting in increased revenues.-Ashish Khare General Manager, IoT - Cloud & Infrastructure Services, Wipro Limited. A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to

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Fortune 500 insurance company improves application uptime by 99%

----- Arcticle source ----- https://www.wipro.com/infrastructure/fortune-500-insurance-company-improves-application-uptime-by-99/ ----- Related Articles Contact Wipro Please fill the required details to access the content Fortune 500 insurance company improves application uptime by 99% March | 2021 Client background Client: A Fortune 500 financial services organization based in the US Industry: Insurance and financial services Products/ Services: Insurance and investment advisory services, insurance products Number of employees: Over 7000 Area of operations: Global Challenge With over 300 field offices spread across the world and multiple internet links, the client faced challenges in their network infrastructure. The legacy infrastructure ran a number of key applications - including internet-based telephony and collaboration apps - both in-house and partner applications - and was unable to sustain and enhance the end-customer experience. The client was looking for an experienced partner who could transform their legacy WAN and help them upgrade their end-user experience with internet bandwidth. Solution The client conducted a thorough evaluation of the available SD-WAN products. After extensive market research, the client selected Wipro as their vendor of choice to address their requirements. Wipro's proven track record in SD-WAN implementation and dedicated SD-WAN CoE that houses multiple OEM products to collaborate with the client to resolve existing challenges Business Impact With Wipro bringing in decades of knowledge and experience of WAN management, and Palo Alto Networks revolutionary Prisma SD-WAN, the client could now improve customer experience. The Wipro team transformed the network with SD-WAN, delivering application-aware network, faster visual troubleshooting and application-based link quality and auto load balance. SPOG and API integration enabled network and security policies in a single console with auto ticketing options. Some of the key benefits of the SD-WAN implementation were: A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro

virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to ======================

Wipro empowers its mobile workforce with a smart network

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-empowers-its-mobile-workforce-with-a-smart-network/ ----- Contact Wipro Please fill the required details to access the content Wipro empowers its mobile workforce with a smart network February | 2020 Client background Challenge Wipro wanted to leverage digital technologies such as cloud and analytics to meet its operational priorities that included: Solution Wipro leveraged four key solutions from Cisco to build an intelligent networking platform that was easy to configure and completely secure in order to deliver a unified experience to its mobile employee base: Business Impact The highly advanced solution enabled secure and seamless user experience to Wipro's 170,000 employees while providing important insights into user behavior as well as analytics on malware and threats. Some key benefits included: "With Cisco DNA™, we have moved to a true intent based network which is secure, and enables user mobility without losing the access with much simplified operations." Rohit Adlakha, Senior Vice President and Chief Information Officer, Wipro Limited. ======================

Minerals company designs a State-of-the-art data center

----- Arcticle source ----- https://www.wipro.com/infrastructure/minerals-company-designs-a-state-of-the-art-data-center/ ----- Contact Wipro Please fill the required details to access the content Minerals company designs a State-of-the-art data center February | 2020 Client background Client: A global material solutions company Industry: Materials Area of operations: APAC, Europe, Middle East, Africa and America Products: An extensive portfolio of specialty industrial minerals Number of employees: Over 10,000 Challenges The client had a disparate setup, which included multiple technologies, processes and vendors across geographies. The resultant challenges included lack of comprehensive security solution, heterogeneous LAN switching environment and decentralized vendor management, which led to operational issues. The network architecture was prone to production outage due to lack of redundancy in LAN design in critical remote sites. The client was experiencing performance issues in accessing public clouds (Azure and SAP). In addition, end of support devices for network in remote sites needed proper inventory, manufacturer support services and a common monitoring and management platform. Solution Wipro built a state-of-the-art data center leveraging Cisco Nexus 9000 switches with spine and leaf

architecture. Wipro's team of experts extended the network to Azure and SAP Cloud by leveraging express route to access resources in the cloud. Business impact The new architecture helped the client achieve complete LAN resiliency and aggregation links, and enabled multi-tenancy capability. It helped protect the client from external threats as it could easily integrate with multiple security solutions. The architecture design helped the client achieve better application performance and network reliability. Highlights: The client was running a disparate setup with multiple technologies, multiple processes and a multi-vendor set up across geos. Through Wipro's solution, the client now has a seamless single operating model across 34 countries, a modern datacenter that is hybrid cloud-ready and remote sites that are standardized on the Wipro-Cisco Office-in-a-Box solution. Anand Jayaraman, General Manager, Continental Europe, Wipro

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Europe's leading Electric Utility makes the Lean IT journey

----- Arcticle source ----- https://www.wipro.com/infrastructure/europes-leading-electric-utility-makes-the-lean-it-journey/ ----- Related Articles Contact Wipro Please fill the required details to access the content Europe's leading Electric Utility makes the Lean IT journey April | 2020 Client background Client: A leading electric utility company based in Europe Industry: Electric Utility Area of operations: Europe Products: Electricity, renewable energy, natural gas Number of employees: Over 15,000 Challenge The client had a disparate estate of over 3,000 servers, 5.5 million batch job instances, and more than 230 critical applications in a diverse landscape containing a mix of applications hosted on premise and public cloud. Transforming the legacy data center to private cloud with consistent improvement and automation initiatives was a challenge, as there was limited transparency on operational performance parameters. The client wanted to build a lean IT organization by simplifying all IT services and offerings. This required changing the overall mindset as well as skill set from "make IT" to "manage IT" and choosing to "make" only if it added measurable additional value. The overall aim was to derive maximum value from IT offerings, and enable cost transparency and long-term customer satisfaction. Solution Wipro stepped in as the client's preferred partner to revamp IT infrastructure services and optimize operations. Wipro provided the client services like DC Hosting, Compute Services (Wintel, VMware, Unix), Database (Oracle, SQL, Middleware, Mongo DB), Storage and Backup, Network (DC LAN), Output Management Systems, Job Supervision, SAP (SAP Basis and Solutions), Managed File Service, Monitoring / Automation, and Cloud Services. Wipro leveraged its knowledge and solutions such as Virtual desktop infrastructure, Knowledge Management, Reporting, Automation, and Cloud Portal to build a lean IT organization for the client. The highlights of the solution included: Business Impact Leveraging Wipro's expertise in data center hosting and hybrid cloud services, the client was able to: "Wipro's expertise in data center services

and best-of-breed solutions ensured the client maximum worth from its existing IT investments and helped establish a lean IT organization." - Ralf Georg Mueller, Account Delivery Head, ENU-Utilities, Wipro A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to

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How a Semiconductor Manufacturer

Built a Smart Warehouse

----- Arcticle source ----- https://www.wipro.com/infrastructure/how-a-semiconductor-manufacturer-built-a-smart-warehouse/ ----- Contact Wipro Please fill the required details to access the content How a Semiconductor Manufacturer Built a Smart Warehouse May | 2020 The company reimagined warehouse management with IoT-powered man, machine and material tracking, enabling 20% increase in operational efficiency Client background Client: A top American manufacturer of semiconductor products Industry: Manufacturing Area of operations: Worldwide Products: Semiconductor and infrastructure software products Employees: Over 11,000 Challenge The manufacturer's productivity was challenged due to warehousing inefficiencies. Lack of visibility into inventory, asset and manpower as well as inefficient warehouse processes like picking and put-away were resulting in lesser throughput, thus impacting their overall operational efficiency. The client identified key areas where they wanted to make changes to transform their warehouse operations. Solution The manufacturer needed a partner with the expertise to manage end-to-end transformation of their warehouse. Wipro's knowledge of the client's business and decades of experience meeting similar needs of clients enabled a quick and seamless transformation. The Wipro team came up with an Integrated Smart Warehouse solution using IoT technology for Man, Machine and Materials tracking. Standard Operating Procedures were defined to reduce event/issue times. Some of the key features of the solution were: Business Impact The new warehousing solution secured many firsts for the client. With ready information at their fingertips, the client had real-time access to inventory, asset, and manpower, and could easily measure the efficiency and productivity of resources engaged in picking, packing and shipping processes. The integration with the existing systems ensured that there were no sudden changes. Some of the key benefits realized were: "Our team took complete responsibility of the client's warehouse operations, integrating old with the new. And while we helped them re-imagine their

warehouse processes, our client was able to focus on their end customer experiences driving customer successes and living up to their name in innovation, collaboration and engineering excellence." Ashish Khare, General Manager, Cloud Infrastructure Services - IoT, Wipro
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Leading mining company in Asia optimizes transport operations with IoT-enabled automation

----- Arcticle source ----- https://www.wipro.com/infrastructure/leading-mining-company-in-asia-optimizes-transport-operations-with-iot-enabled-automation/ ----- Related Articles Contact Wipro Please fill the required details to access the content Leading mining company in Asia optimizes transport operations with IoT-enabled automation May | 2020 Client background Challenge The client was facing challenges in adopting and implementing new-age technology for better tracking, monitoring and management of coal from mine-head to port / rail-head. The key issues were: Solution The client collaborated with Wipro and introduced solutions to enhance end-to-end transport operations - from the entry at the check post to delivery at the unloading points. Leveraging IoT and analytics technologies and experience in the Mining industry, Wipro worked closely with the client for this transformation project and helped optimize client's transport operations. Business Impact The client experienced significant improvements in transparency, and security, savings of over 15% as a direct outcome of the optimization, and theft avoidance and operational improvement due to the technology upgrade. "Wipro provided mining logistics operation automation solution built on Wipro Smart i-Connect platform covering automated tracking, vehicle utilization optimization, theft avoidance, cost savings and operational improvement using IoT and analytics." Ashish Khare, General Manager and Practice Head IoT- Cloud & Infrastructure Services, Wipro A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to
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A Leading Airport Enhanced Customer

Experience by 45%. Here's How.

Related Articles Contact Wipro Please fill the required details to access the content A Leading Airport Enhanced Customer Experience by 45%. Here's How. May | 2020 Client Background Client: A leading airport Industry: Air transport Area of operations: North America Customers: Connects over 50 million passengers Challenge The client was struggling to enhance passenger experience at the boarding and transit gates. Lack of real time visibility into shuttle movement impacted the airport's ability to optimize ground operations, resulting in longer wait times at the gates. It was a challenge to keep terminal facilities clean given the irregular maintenance schedule and lack of real time view of facilities. At the same time, operational maintenance of equipment was not easy as terminal assets were not traceable. This resulted in excess equipment leases and purchases, putting equipment at risk of loss, theft or non-utilization. In addition, manual loading of bags on conveyor belts delayed the un-loading process, increasing passenger wait time. Solution Wipro implemented an Automated Vehicle Identification and Tracking solution on the Wipro Smart i-Connect™ platform for the airport. This enabled real time location tracking of vehicles with geo mapping, geo fencing, route optimization, and integration with other airport applications – Airport/Airline Customer Relationship Management systems, Google Maps, etc. Wipro Smart i-Connect™ is a ready-to-deploy Internet-of-Things (IoT) based enterprise use case solution with open standard architecture which supports multiple protocols and helps realize advanced analytics. Solution highlights: Business Impact Wipro Smart i-Connect™ platform allowed the airport to enhance customer experience while reducing cost of operations. Impact highlights: "Passenger experience is integral to the success of an airport besides other operational parameters. Our solution helped in boosting passenger experience significantly. Wipro Smart i-Connect™ provides the opportunity to scale IoT requirements of an airport on the same platform." Ashish Khare, General Manager & Global Practice Head – Smart i-connect™, Cloud and Infrastructure Services, Wipro Limited. A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation Single-pane of glass for incident management improves incident response and enhances end-user satisfaction. This case study summarizes toolsets and processes adopted to =====================

App Modernization

Our Offerings Market Leader in the HFS Horizons: Generative Enterprise Services, 2023 Report Contact Wipro The AI Paradigm: A Special Report From Consumer to Value Creator, Unlocking the Power of Generative AI Generative AI on the Cusp of Disruption Redefining Application Modernization Wipro recognized as a Leader in the IDC MarketScape: Worldwide Artificial Intelligence Services 2023 Vendor Assessment report Wipro recognized as a Leader in Avasant's Applied AI Services 2022-2023 RadarView Expanding Google Cloud Partnership to Advance Adoption of Generative AI Please fill the required details to access the content App Modernization Offerings Insights Recognitions Updating legacy systems to meet today's tech standards presents significant hurdles, including cloud migration, cloud-native adoption, and comprehensive application overhauls. Wipro's app modernization services directly address these challenges, leveraging Generative AI (GenAI) to streamline and expedite the modernization efforts. Wipro leverages an intelligent, non-rule-based system that quickly understands and migrates complex legacy applications. Users can customize migration paths, ensuring efficient and precise transitions. Intermediate checkpoints provide accuracy checks and alignment with client objectives. The process is further enhanced by easy testing and quick iterations, raising the migration quality. These capabilities ensure a smooth shift to modern, adaptable, and robust technology infrastructures, boosting operational efficiency and customer satisfaction for our clients. Paving the way for innovation and maximum business value with GenAI. An AI-powered platform enhancing app development and cloud enablement with Azure integration. Quality engineering and testing offers practical applications to expand existing AI capabilities. Wipro's Lab45 explores the impact of artificial intelligence (AI) on business and society. Generative AI promises to be a transformative force. The most valuable applications require creativity from the business. This report provides an overview of Generative AI, the market for it and the reasons for the hype. An iterative approach leveraging Strangler Pattern on AWS Cloud. This recognition highlights Wipro's groundbreaking AI-first approach, reshaping the concept of work and fostering intelligent enterprises in the digital era. Contact Us =====================

Wipro Industry Solutions on AWS

AWS Introduction Wipro Industry Solutions on AWS Introduction Functionality Community Security Innovation Wipro Industry Solutions on AWS Wipro Healthcare & Life Sciences on AWS Why AWS? Incorporate new technology to improve care delivery and product development Manage your data more effectively Reduce risks and support regulatory compliance Wipro Solutions for Healthcare on AWS Wipro Manufacturing Services on AWS Why AWS? Improve product and production process design Get smart with your data Enhance security and streamline

operations Wipro Solutions for Manufacturing on AWS Wipro Financial Services on AWS Why AWS? Versatile tools and easy integration Delivering more value to your customers Build with confidence on the most secure, compliant, and resilient cloud Wipro Solutions for Financial Services on AWS Wipro Industry Solutions on AWS eBooks Why AWS Wipro Solutions for Healthcare & Life Sciences on AWS Smartance Collaborative Care Platform Why AWS Wipro Solutions for Manufacturing on AWS Condition-Based Monitoring Smart Track and Trace Production Monitoring and Process Automation Why AWS Wipro Solutions for Financial Services on AWS Lab Bank on AWS Cloud Banking Services on Cloud ML for Accounts Payable Auditor HOLMES E-KYC Functionality Community Security Innovation Wipro Solutions for Healthcare and Life Sciences on AWS 1. Smartance 2. Collaborative Care Platform Wipro Solutions for Manufacturing on AWS 1. Condition-Based Monitoring 2. Smart Track and Trace 3. Production Monitoring and Process Automation Wipro Solutions for Financial Services on AWS 1. Lab Bank on AWS Cloud 2. Banking Services on Cloud 3. ML for Accounts Payable Auditor 4. HOLMES E-KYC Lower costs, become more agile, and innovate faster. Amazon Web Services (AWS), the world's most comprehensive and broadly adopted cloud platform, is the cloud technology leader by both revenue and market share. AWS cloud services leverage decades of Amazon retail experience, innovations, and technology to help industries operate more efficiently and deliver better customer experiences at lower cost. AWS provides the secure, resilient cloud infrastructure and services you need to differentiate yourself today and adapt to the needs of tomorrow. We offer more than 175 fully featured services, delivered from data centers around the globe. Millions of customers use our reliable, scalable, and cost-effective cloud computing services to lower costs, become more agile, and innovate faster. Our flexible financial model makes it free to join AWS and pay only for what you use. Building on AWS can empower your organization to modernize infrastructure, meet rapidly changing customer behaviors and expectations, and drive business growth. AWS has more services, and more features within those services, than any other cloud provider. This includes infrastructure technologies such as compute, storage, and databases, as well as emerging technologies such as machine learning and artificial intelligence, data lakes and analytics, and Internet of Things (IoT). Our wide range of services and features make it faster, easier, and more cost-effective to move your existing applications and data to the cloud – where you can build nearly anything you can imagine. We also have the deepest functionality within those services. With the widest variety of databases purpose-built for different application types, for example, you can choose the right tool for the job with the best combination of cost and performance. Infrastructure technologies Compute Storage Databases Emerging technologies Machine learning and artificial intelligence Data lakes and analytics Internet of Things (IoT) AWS has a dynamic community that includes millions of customers globally and tens of thousands of partners of every size and across virtually every industry. The AWS Partner Network (APN) includes thousands of systems integrators that specialize in AWS services, and tens of thousands of independent software vendors (ISVs) that adapt their technology to work with AWS. AWS adds value to customers with cross-industry capabilities such as app modernization and migration to the cloud. From startups to enterprises, to public sector organizations, every imaginable use case is running on AWS. AWS is architected to be the world's

most flexible and secure cloud computing environment. AWS supports 90 security standards and compliance certifications. And our robust cloud security tools with comprehensive security, compliance, and governance features satisfy requirements for militaries, global banks, and other high-sensitivity organizations. All 117 AWS services that store customer data offer the ability to encrypt that data. Use the latest technology to experiment and innovate quickly, taking advantage of highly scalable, elastic cloud services. At AWS, we continually accelerate our pace of innovation so that you have new technologies for transforming your business. Whether your sector is public, retail, healthcare, or something else, we have you covered with the most extensive global cloud infrastructure available, including more than 75 Availability Zones within 24 geographic regions. AWS has the operational experience, at greater scale, of any cloud provider. Functionality Community Security Innovation Incorporate new technology to improve care delivery and product development Manage your data more effectively Reduce risks and support regulatory compliance 1. Smartance 2. Collaborative Care Platform Serving over 200 customers across more than 50 countries. Cloud-based technology is becoming the new normal in healthcare and life sciences –and with good reason. Two-thirds of the average healthcare IT budget is currently dedicated just to keeping the lights on. That amount of spending should reap bigger rewards, and cloud technology offers just that. Healthcare and life sciences companies around the world are using Amazon Web Services (AWS) to create better experiences and outcomes for patients. Using AWS saves money with affordable archiving, saves physical space with backup servers in the cloud, and offers new ways to manage patient information. AWS cloud computing also provides access to powerful new analytics capabilities and machine learning, all while meeting the most stringent security and privacy requirements. It's time to rethink IT in healthcare and life sciences – and reduce complexity, inefficiency, and costs by optimizing your investment in data management. Here are three specific ways AWS can help. AWS is collaborating with healthcare providers, public health organizations, government agencies, and life science businesses around the globe to support their efforts to cope with the effects of COVID-19. Our AWS Healthcare & Life Sciences COVID-19 Resources page provides up-to-date information and resources for COVID-19 researchers and diagnostics developers. You're in the health and wellness business, so it's important to allow your organization to focus more on delivering optimal patient experiences and outcomes, and less on building and maintaining your data infrastructure. The managed features of AWS provide new ways for life sciences and healthcare customers to connect with patients, providers, suppliers, and distributors. Capabilities such as code-triggered functionality enable customizable reports and personalized notifications, transforming the value chain to help more patients get better, faster. Data analytics empowers researchers, clinicians, and operations and manufacturing teams to make better-informed decisions. Machine learning can support clinical forecasting, personalized engagement, and advanced clinical and product research. Customizable reports and personalized notifications Make better-informed decisions Clinical forecasting, personalized engagement, and advanced research. Propeller Health has developed a digital health platform that improves outcomes for people with chronic respiratory disease. The company applies machine learning with solutions such as Amazon

SageMaker and Amazon Redshift, along with its infrastructure built on AWS, to give patients a forecast of their health based on local weather conditions, recent medication use, and other factors. It's not about the data you have; it's what you do with it. AWS offers myriad ways to gain insights from the data you gather and store. That starts with the ability to get data into the cloud quickly and seamlessly. AWS offers hybrid and customized configurations, so your data-management system does exactly what you need it to. That means easy and secure access for users, with safeguards that ensure secure data and user identities. You can search metadata easily, using tools such as predictive and prescriptive analytics to identify trends and develop new insights. You can also segment your data, creating separate storage for active, infrequently accessed, and archived data. AWS supports HIPAA, HITRUST, FedRAMP, and other compliance requirements, with services designed to conform to global industry standards. A major cancer research center uses Amazon Comprehend Medical to identify patients for clinical trials who may benefit from specific cancer therapies, reducing the time to process millions of document from hours to seconds. AWS delivers an environment built for the world's most secure organizations. Our infrastructure meets stringent security standards for banking and the military, with a robust set of tools for networking, encryption, identity management, and regulatory compliance. Insufficient data security, compliance and availability can open the door to sophisticated, hard-to-identify attacks. To stay in front of the latest threats, we continually refine our security measures based on our customers' experiences. And the AWS security team is always available to help. The healthcare industry is rapidly moving to the cloud, and AWS gives you the best resources to accelerate your journey. In addition to direct support, our AWS Partner Network (APN) connects you with technology and consulting partners who are experts in a wide range of applications. And the AWS Marketplace offers industry-specific software you can deploy with one click. Wipro's fast-growing health industry vertical serves over 200 customers across more than 50 countries. Wipro on AWS helps health providers coordinate care teams, increase patient engagement, and improve internal processes, and also offers extensive experience providing solutions for critical functions along the pharmacy value chain – from research and development to manufacturing, distribution, and sales. AWS service integration assists Wipro in building products that deliver unprecedented efficiency, cost savings, and customer satisfaction. Wipro Smartance is an end-to-end platform that automates pharmacovigilance (PV) processes by harnessing the power of AWS native artificial intelligence (AI) capabilities. Smartance collects and analyzes adverse event and complaint data from intake channels to reduce processing time and improve consistency and accuracy. Learn more Pharmacovigilance: Smarter approach to drug safety Wipro Smartance: Bringing a revolution in patient safety with Artificial Intelligence How Pharma is Adapting to Digital Interventions and Driving Healthcare Integrating patient care among providers improves patient outcomes while conserving resources. Wipro's Collaborative Care Platform is built on AWS native architecture. It integrates care teams and leverages AI and IoT tools to provide superior patient experiences and deepen engagement across the health care spectrum, from preventative to acute care. Customer references A leading pharmaceutical company used Collaborative Care Platform to bring together patients, physicians, and sponsors. Wipro helped a top healthcare system

streamline breast screening and blood donation processes. Learn more Collaborative Care Platform: Enabling a superior patient experience Wipro Digital Experience Platform: Collaborative Care Platform Patient Centricity Connect with Wipro To get started transforming your business, innovating faster, and growing ahead of the curve. Improve product and production process design Get smart with your data Enhance security and streamline operations 1. Condition-Based Monitoring 2. Smart Track and Trace 3. Production Monitoring and Process Automation Helping manufacturers achieve digital transformation quickly and seamlessly. Manufacturers are embracing digital technologies to transform and are looking to leverage data to make data-driven decisions, further automate processes, and leverage innovations like machine learning, computer vision, and robotics. Manufacturers are challenged to squeeze out additional productivity, maximize their asset availability, and improve quality all while lowering costs. They are also looking to move away from manual inputs into their production processes with digitally executed manufacturing for production and quality optimization, and flexible product changeovers. Additionally, they are looking to reduce consumption of water, compressed air, gas, electricity and steam to lighten their energy footprint to meet corporate sustainability objectives. The cloud plays a key role in all these optimization trends. For more than 20 years, Amazon has been designing and manufacturing smart products. We also distribute billions of products through our globally connected distribution network using cutting-edge automation, machine learning services, and robotics, with Amazon Web Services, AWS at the core. AWS was literally born from our industrial operations at Amazon, and we understand the needs of factory operations. AWS helps you transform manufacturing operations with the most comprehensive and advanced set of cloud solutions available today. Instead of focusing on building and maintaining your data center infrastructure, concentrate your resources on creating innovative new products, improving operational efficiencies across the value chain, and optimizing production. AWS delivers virtually unlimited compute and storage capacity, along with one of the most comprehensive set of edge-to-cloud solutions available today. Reduce time to results and time to market by running more parallel tasks than most on-premises environments would allow. Innovate faster without the worry about scaling your data center infrastructure. When they run HPC workloads in the cloud, designers, scientists, and engineers can use model-based design and large-scale parallel simulations to quickly solve complex computing challenges and collaborate more effectively with secure file sharing, and access to AWS resources worldwide. Unlimited compute and storage capacity Edge-to-cloud solutions Reduce time to results and market Innovate faster Leading Semiconductor companies today use AWS to take advantage of a more rapid, flexible deployment of CAE and EDA infrastructure, from the complete IC design workflow, to register-transfer-level (RTL) design, to the delivery of GDSII files to a foundry for chip fabrication. AWS compute, storage, and higher-level services are available on a dynamic, as-needed basis without the significant upfront capital expenditure that is typically required for performance-critical electronic design automation (EDA) workloads. Amazon Web Services (AWS) offers a secure, agile, and scalable platform with a comprehensive set of services and solutions for high performance design, verification, and smart manufacturing, supporting EDA and rapid semiconductor innovation in the

cloud. Semiconductor design simulation, verification, lithography, metrology, yield analysis, and many other workloads benefit from the scalability and performance of the AWS Cloud. For example, compute performance for these applications is enhanced by latest generation EC2 instance types, including the z1d. Run more jobs per core with z1d, the fastest single thread performance of any cloud instance, delivering 4GHz sustained CPU, 16 GiB RAM per core, and local NVMe storage. Manufacturing is dependent on data – not just gathering it, but using it effectively. Data from design teams, the factory floor, and finished product behavior in the field can help optimize operations, improve the quality and usability of products sent to customer, and provide feedback to design and engineering teams to create better products. To get more out of valuable data in your factory it needs to be extracted from disparate sources and production systems, structured for context and stored, and then analyzed to optimize production, machine availability, and quality. AWS Cloud services address these use cases by helping manufacturers extract, structure and store data from a variety of current and legacy equipment into a data lake for a combined, single source of truth. A data lake is a centralized repository that allows you to store all your structured and unstructured data at any scale. An Aberdeen survey saw organizations who implemented a data lake outperforming similar companies by 9% in organic revenue growth.1 This data allows for detailed analysis and consumption to digitally transform to improve business operations. Data extraction and structuring tools, edge computing, storage, and machine learning services are making smart factories even smarter to optimize Overall Equipment Effectiveness, or OEE. 1 Aberdeen Research: Angling for Insight in Today's Data Lake (pdf) Data gathered from disparate sources, even from different systems, can benefit from advanced data analytics. For example, using machine learning services like Amazon SageMaker which is a fully managed service that gives your teams the ability to build, train, and deploy machine learning (ML) models quickly. SageMaker removes the heavy lifting from each step of the machine learning process to make it easier to develop high quality models. This allows analysis and comparison of a huge number of production variables to glean insights into your process to optimize overall equipment effectiveness. Protecting your intellectual property and the integrity of your production processes is vital in today's business environment, where operational technology (OT) infrastructure cyberattacks are on the rise. At AWS, cloud security is our highest priority. When you work with us, you'll benefit from a data center and network architecture that's built to meet the requirements of the most security-sensitive industries and organizations. As a manufacturer, you want to focus on innovation and improving business operations, not on technology infrastructure. AWS, together with our GSI partners can help start your cloud journey today to optimize your business operations. Innovate faster, maximize your factory OEE, and lower costs with the help of AWS and our vast partner network. Wipro offers its own specialized platforms, along with AWS tools and partner solutions, to help manufacturers achieve digital transformation quickly and seamlessly. Wipro's products on AWS provide smart monitoring technologies, data collection and analysis, product development, supply chain modernization, and maintenance recommendations that revolutionize manufacturing efforts. These offerings take factories from reactive to proactive while unifying infrastructure, saving money, increasing productivity and efficiency, and

keeping workers and equipment safe. No factory is quite like yours, which is why Wipro created its Condition Based Monitoring solution to be highly scalable and customizable. AWS Internet of Things (IoT) sensors and analytics apps give factories total and continuous visibility into asset performance to optimize equipment usage and increase factory efficiency. As today's industrial environments and supply chains increase in size and complexity, manufacturers can leverage intelligent technologies to gain visibility into their operations. Wipro's Smart Track and Trace solution uses AWS AI/ML, analytics, and blockchain to monitor asset locations, track time-series data, and perform real-time analysis. Wipro's Production Monitoring and Process Automation offering provides installed base management and real-time production monitoring for discrete manufacturing companies. This solution combines Wipro's Looking Glass Industrial Internet Platform and a multi-protocol gateway software stack (MPIOTG), along with AWS IoT services. Customer references Precision Group enhances operational efficiency on factory A construction equipment OEM decreases cost of service operations Learn more IoT solutions: Stitch the complete IoT Looking Glass: Industrial Internet Platform Wipro Looking Glass - A hierarchical asset management platform Connect with Wipro To get started transforming your business, innovating faster, and growing ahead of the curve. Versatile tools and easy integration Delivering more value to your customers Build with confidence on the most secure, compliant, and resilient cloud 1. Lab Bank on AWS Cloud 2. Banking Services on Cloud 3. ML for Accounts Payable Auditor 4. HOLMES E-KYC Building products that transform processes for businesses and consumers. Financial services institutions across banking, payments, capital markets, and insurance rely on AWS for the secure, resilient, global cloud infrastructure and services they need to differentiate themselves today and adapt to the needs of tomorrow. As a result of today's challenging business environment, these institutions are redefining their business models to modernize disparate legacy systems for improved agility and scale, meet rapidly changing consumer behaviors and expectations, drive business growth by harnessing data and innovation, and build with confidence on the most secure and resilient cloud. AWS meets the most stringent security requirements while delivering the greatest breadth and depth of services, deepest industry expertise, and most expansive partner network. Building on AWS empowers organizations to modernize their infrastructure, meet rapidly changing consumer behaviors and expectations, and drive business growth. Running old financial systems consumes valuable resources you could be using for innovation. With the broadest set of migration services and tools, AWS lets you modernize legacy accounting and storage systems for improved agility and scale. Integrating AWS software into your existing financial systems is easy and enables you to maintain your business workflows with minimal technical issues. And you can add custom software modifications designed for the financial industry. Analyzing data is crucial to the industry's business growth and innovation. AWS facilitates effective use of data, so you can explore new ideas within a secure data lake, build quickly using a microservices-based platform, and engage partners for new products and capabilities. With AWS cloud-based technologies you get easy, real-time access to your data across multiple geographic regions and markets. Modernize legacy accounting and storage systems Maintain your business workflows Add custom software for the financial industry Today's financial-

sector customers want instant access to information – from any device, at any location, at any time. Using AWS lets you meet those rapidly advancing expectations. You can offer customers easy-to-use services to track transactions and accounts and help them analyze investment data to uncover what's important. AWS offers the largest global footprint in the market, with dozens of Availability Zones (AZs) across more than 20 AWS Regions, so your customer services can truly be global – with more and better data for an enhanced customer experience. You can offer customers a variety of local or global payment methods, in multiple currencies and languages, plus rapid dispute resolution for failed payments. Backed by more than 20 years of Amazon's investment in artificial intelligence (AI), AWS offers the broadest and deepest set of machine learning (ML) and AI services for all skill levels. Your developers can create rich, personalized experiences that meet customer expectations without needing ML experience or the assistance of data scientists. A leading financial institution was the first U.S. bank to move its core banking systems to AWS – beating larger banks and fintech startups. Its retail line of business runs core banking systems for ten million customer accounts on AWS. Along with moving traditional workloads, the bank was able to retire its on-premises call center by moving to Amazon Connect. The financial industry is one of the most strictly regulated sectors, with strict rules concerning data privacy and reporting. With AWS, you're able to connect directly to financial services experts who will help you ensure data integrity with the most secure infrastructure – which includes the elements you need to protect cardholder data, maintain a vulnerability management program, implement strong access-control measures, regularly monitor and test networks, and maintain an information security policy. AWS supports 93 security standards and compliance certifications, more than any other cloud provider, and is actively acquiring more to help customers stay current (for example, PCI-DSS, SEC Rule 17a-4, Regulation SCI, EU Data Protection Directive, and FISMA). Our cloud data services safeguard the integrity of your IT infrastructure, for both customer protection and regulatory compliance. Having physical separation of data eliminates the vulnerability of a single point of attack, and our compliance security extends globally. Wipro has strong financial industry expertise, plus experience building products that transform processes for businesses and consumers. With more than 55 Centers of Excellence for emerging technologies, Wipro is an innovation-led cloud partner on AWS. AWS provides the extensive and flexible cloud and AI/ML capabilities that Wipro employs in its end-to-end solutions. Wipro solutions on AWS transform businesses and produce improvements in efficiency, worker effort, and cost savings for banks, insurers, and other financial professionals. Wipro's industry-specific innovation labs support companies as they digitize their services and organizational structures. For the financial services industry, Wipro created miliu, a futuristic-concept lab bank powered by advanced technologies, extensible architecture, and innovative engineered solutions from Wipro and its partners. Customer references Share money with family and friends on social media Enjoy frictionless registration with blockchain-based digital identity Purchase a car using virtual reality Learn more miliu: Banking contextual to life The journey toward open banking: What banks need to do Digital identity ecosystem: The opportunity for banks to be identity brokers in the open banking era Digital channels for banking are evolving lightning fast.

Reaching customers via remote, secured multichannel avenues creates unprecedented differentiation for today's banks. Wipro has architected a seamless bouquet of channels to give customers personalized access to innovative banking services, enhancing the banking experience without compromising security. Customer references Share money with family and friends on social media Enjoy frictionless registration with blockchain-based digital identity Purchase a car using virtual reality Learn more miliu: Banking contextual to life Is your bank ready to team up with chatbots? The journey toward open banking: What banks need to do Wipro's HOLMES™ Machine Learning for Accounts Payable Auditor solution uses the Wipro HOLMES AI and automation platform to deliver machine learning capabilities for finance departments. The solution uses AI to perform proactive monitoring of accounts payable and helps to identify recurring leakages, compliance violations, and fraud – in near real time. Learn more Machine Learning for Accounts Payable Auditor Procure to Pay anomaly protection: Detect frauds, plug fund leakage Procure to Pay anomaly protection: Need for a pre-emptive, big data system Wipro's enterprise know-your-customer solution, HOLMES™ E-KYC, automates customer onboarding by performing necessary due diligence for selected vendors. It aggregates information and vets vendors for financial stability, supply capabilities, compliance standards, and market reputation, plus produces reports required for anti-money laundering (AML) requirements. Customer references A large universal bank reduces KYC lifecycle by up to 50% A global investment bank saves effort and data costs with E-KYC Learn more Enterprise Know Your Customer Wipro HOLMES E-KYC Unlocking automation opportunities for superior due diligence in KYC operations Connect with Wipro To get started transforming your business, innovating faster, and growing ahead of the curve. ======================

Infrastructure-as-a-Service

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Platform-as-a-Service

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enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. Smart and delightful connected products Enabling seamless hybrid Cloud integration
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Software-as-a-Service

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Business-Process-as-a-Service

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Cloud Integration

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Cloud Operate

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content Cloud Operate A Resilient Cloud Strategy IT may be the front door, but how do you roll out the welcome mat when unifying technology? Learn how to become a trusted advisor to the business and ensure ROI. Wipro FullStride Cloud Services' Enterprise Digital Operations Center (EDOC) empowers organizations to harness the maximum potential of cloud by managing the hybrid cloud services to deliver efficiency, mitigate risks and ensure maximum availability, in a cost-efficient manner.

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Cloud Engineering

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Enterprise Digital Operations Center (EDOC)

----- Arcticle source ----- https://www.wipro.com/cloud/enterprise-digital-operations-center/ ----- ENTERPRISE DIGITAL OPERATIONS CENTER (EDOC) SERVICES/CAPABILITIES Contact Wipro Please fill the required details to access the content Enterprise Digital Operations Center (EDOC) Wipro FullStride Cloud Services' Enterprise Digital Operations Center (EDOC) empowers organizations to harness the maximum potential of cloud by managing the hybrid cloud services to deliver efficiency, mitigate risks and ensure maximum availability, in a cost-efficient manner. EDOC services span across hybrid multi-clouds (public and private) involving IaaS and PaaS along with cloud native services, DevOps, micro-services, containers, IoT and enabled with data analytics based on artificial intelligence (AI), machine learning. It provides customers with the ability to manage multi cloud environments with a 360-degree view of service availability, service efficiency, resiliency and acts as a trusted advisor to expand their cloud portfolio. Wipro FullStride Cloud Services long-standing partnership with

leading cloud service providers, helping clients leverage next-gen technologies to drive competitive advantage. Some significant differentiators that we uniquely provide are: An integrated digital platform enabling multiple Cloud offerings for anytime, anywhere digital insights Wipro's Enterprise Digital Operations Center (EDOC) is built as a platform that provides hybrid cloud managed services for multiple customers in a shared plug and play model. In addition, EDOC's automation and orchestration capabilities help choose the Cloud model for the right workload, helping to achieve elasticity, enhanced agility and security, reduced operating costs, better uptime and augmented customer experience.   =====================

Wipro's BoundaryLess Enterprise (BLE)

----- Arcticle source ----- https://www.wipro.com/cloud/wipros-boundaryless-enterprise/ ----- Our Expertise What We Think Form Title Contact Wipro Please fill the required details to access the content Wipro's BoundaryLess Enterprise (BLE) Re-imagining your business transformation journey As enterprises today are looking for alternatives to extract greater business value from their cloud investments while addressing organizational challenges, Wipro has unveiled BoundaryLess Enterprise (BLE). ====================== ----- Arcticle source ----- https://www.wipro.com/cloud/boundaryless-enterprise/ ----- BoundaryLess Enterprise BoundaryLess Enterprise What We Do Our Success Stories News, Awards & Recognition News, Awards & Recognition What We Think Form Title Contact Wipro BoundaryLess Container platform (BLCP) Please fill the required details to access the content BoundaryLess Enterprise Transforming Your Business for the Future. Global business leaders demand to stay ahead of the competition and build the agility to quickly maximize new opportunities. Those leaders consistently trust Wipro to provide the strategic insights and most innovative technology platforms to ensure their businesses are prepared for the future. Like Wipro FullStride Cloud Services' BoundaryLess Enterprise (BLE), a cloud lifecycle enablement platform created around a hybrid-cloud approach with the world's most dependable hyperscalers and technology partners. Our focus is on outcomes that keep your business ready to step firmly into the future. Wipro FullStride Cloud Services' investments in people, processes, technology, partnerships and green-technology expertise are the reason the world's most-demanding industry leaders depend on our cloud capabilities. We solve the most difficult problems using Topcoder, our crowdsourcing platform with access to world-class talent. To ensure our customers' journey to cloud is fast, secure and seamless, we leverage our automated and industrialized solutions, cloud studios, accelerators, plug-and-play integration platforms and digital operations center for multi-cloud environments. From modernizing dynamic workloads and creating delightful user experiences to delivering bulletproof resilience, BLE is the go-to solution. The Wipro BoundaryLess Enterprise is built to deliver the next-generation intelligent enterprise. One that drives business outcomes at scale while continually positioning businesses to be

ready for whatever tomorrow brings while providing greater speed, efficiency and agility. Explore how this multinational company transformed their business. See how Wipro created resilience and elasticity for this industry leader. Moving critical business applications to Oracle Cloud Infrastructure leveraging Wipro-as-a-Service model brought in cost, performance, scalability, availability, security, and agility advantages To thrive, retailers need to remain agile and transformed retail operations to meet these changing demands by focusing on a multi-cloud infrastructure and approach to create new business value .
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Cloud Studio

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-studio/ ----- Wipro and Google Cloud Partner to Expand Generative AI   Contact Wipro How AWS Cloud Migration Benefitted a Leading Technology Company Insight-Driven Microsoft Azure Cloud Advantages I Azure Cloud Service Cloud Based Automation for a Leading Investment Bank Wipro Positioned as a Leader in Everest Group Mainframe Service PEAK Matrix® Assessment 2024 Wipro Named a Leader in Everest Group's Cloud Services in Insurance PEAK Matrix® Assessment 2023 Wipro and Google Cloud Accelerate Cloud Migration Wipro Recognized in System Integrator Capabilities Wipro Tops in System Integrator Capabilities Wipro Leads in Cloud Native Application Development Service Providers Wipro Positioned as A leader in IDC MarketScape Worldwide Wipro Identified as a Leader in System Integrator Capabilities Please fill the required details to access the content Cloud Studio Accelerate Business Transformation in the Cloud and Beyond Wipro FullStride Cloud Studio is an innovation lab, idea incubator, creative workshop, and client engagement hub, designed to accelerate business transformation to the cloud and beyond. Cloud Studio plays the role of a strategic ecosystem integrator, leveraging Wipro's platforms, IP and talent, along with tools developed by hyperscalers and partners, to offer a one-stop marketplace for cloud optimization. Our multifunctional teams of cloud specialists — spanning strategy, infrastructure and applications — collaborate with an ecosystem of cloud leaders to develop the strategies and tools you need to make the most of your cloud investments. Our automated, industrialized approach, shaped by our experience working with business leaders across every major sector, combines industry-leading tools, accelerators and blueprints to simplify the design, deployment, and management of cloud projects. We incorporate cloud economics and FinOps strategies throughout the process to help clients go beyond cost savings to maximize the business value of their cloud programs. With a full suite of advanced cloud solutions, a robust partner ecosystem and a proactive customer-centric approach, Wipro FullStride Cloud Studio makes it easier for enterprises to harness the full potential of the cloud. Our Offerings Our Success Stories Wipro enabled 35% reduction in IT spend and 25% reduction in cost of reporting licenses. Wipro Data Discovery Platform on Azure Cloud enabled business process transformation and data monetization. Wipro helped enhance business agility and lowered the environment provisioning lead time from 21 days to 3 hours. Wipro and

Google Cloud Partner to Expand Generative AI   Contact Us ======================== ----- Arcticle source ----- https://www.wipro.com/cloud/mediakit/ ----- Accolades Wipro FullStride Videos Partner Logo Contact Wipro Please fill the required details to access the content Comprehensive capabilities and hyperscaler ecosystem to simplify and accelerate business transformation. Ignite your cloud transformation with Wipro FullStride Cloud Services. Wipro is a leading partner for cloud transformation ====================== ----- Arcticle source ----- https://www.wipro.com/cloud/devsecops/ -----   DevSecOps   DevSecOps Our Services Partners News, Awards & Recognition Contact Wipro DevSecOps Transformation Digital Rig DevSecOps Managed Services Enterprise Application Release Orchestration (ARO) Wipro RapidOps Cloud Conversations Please fill the required details to access the content DevSecOps DevSecOps   DevSecOps   DevSecOps enables leaders to unlock new business value and growth in the cloud with a transformative approach to culture, automation, and platform design that integrates security to achieve high levels of automation & scalability promised by cloud native technologies. DevSecOps practices, empower organizations to deploy and scale applications faster. Cloud-based DevSecOps increases the availability of applications in addition to eliminating downtime, which leads to improved business reliability and higher customer satisfaction. By prioritizing the importance of DevSecOps in the cloud, organizations can derive a huge number of potential benefits including enhanced agility due to faster development cycles, reduced operational costs due to tools rationalization, higher application quality with lesser defects and improved time to market.   Join other business leaders who have made DevSecOps embedded in their approach. Creating agile business processes and automation to accelerate the delivery process to meet the dynamically changing needs of customers in today's digital world. ======================

Transform your Data Center to achieve agility, security, scalability and sustainability with cloud

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criticality of a seamless and secure transition, particularly with mission-critical legacy applications housed within data centers. Leveraging our extensive cloud portfolio, partner network, and innovative FullStride Cloud Studio, Wipro provides a comprehensive data center exit strategy. This encompasses meticulous design, efficient migration, and effective ongoing operations. Our approach goes beyond technical expertise, as we tailor innovative strategies to meet your specific objectives, scalability requirements, timelines, sustainability standards, incumbent contract exit obligations, regulatory constraints, and more. With Wipro FullStride Cloud, you can confidently embark on your data center transformation journey, unlocking the full potential of agility, efficiency, and sustainability for your organization. From data centre to cloud How to Migrate Data Center Infrastructure to an XaaS Model Wipro FullStride Cloud partners with the world's leading cosmetics brand Wipro and Evanta CIO Community Discuss Cloud Strategies Wipro and Microsoft to accelerate EON's digital transformation Monetizing Your Data Center Exit Strategy Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/migrate-your-data-center/ ----- Contact Wipro Please fill the required details to access the content How to Migrate Data Center Infrastructure to an XaaS Model Many businesses haven't fully migrated their operations to the cloud, resulting in hybrid environments that are complex, rife with technical debt, and prevent the enterprise from realizing the anticipated flexibility and agility gains. Embracing an everything-as-a-service (XaaS) model solves these challenges by shifting the responsibility of asset ownership and maintenance from businesses to service providers, increasing the business' control over its applications. Gartner® report: "How Do I Plan for Migrating My Data Center Infrastructure into an XaaS Model?" highlights the benefits of XaaS for data center exits and provides key considerations to help businesses make the shift. "Many organizations do not have the internal skill sets to effectively manage a cloud migration or complete hardware refresh," the report states. "Relying on service providers is a way to partially mitigate the problem of skills gaps. Service vendors retain personnel with the expertise to help design and deploy a solution that meets business needs without requiring the client to upskill, reskill or hire." Download the full report to learn how to leverage XaaS for your data center exit. Disclaimer: 1. Gartner, How Do I Plan for Migrating My Data Center Infrastructure Into an XaaS Model?, 23 November 2022, Jason Donham, Philip Dawson 2. Gartner is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved. Download report =====================

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Cloud Native

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for Next-Gen Private/Hybrid Cloud – Data Center Solutions & Services 2022, U.S. Please fill the required details to access the content Cloud Native As more enterprises expand their businesses in and through the cloud, the leaders are looking for the next great instrument to unlock new growth and innovation. Increasingly, this means adopting a cloud-native mindset that reimagines people, processes and workflows with greater emphasis on the cloud.   Cloud-native practices align development with cloud principles for seamless scalability, cost efficiency, rapid time to market, resource optimization and high reliability. This new mindset is hyper-focused on navigating the newest digital landscape challenges such as agility, security, and vendor independence. Wipro FullStride Cloud offers a portfolio of industry-leading cloud strategies, tools and platforms designed to empower clients across all cloud infrastructures (public, private, multi and hybrid) and delivery platforms (IaaS, PaaS and SaaS). Our in-depth knowledge of the various industry and regulatory requirements helps clients at every stage of their cloud journey achieve greater business value, faster. As a key ecosystem partner to the world's leading cloud, technology and data companies, Wipro connects clients with the most advanced cloud services available, helping accelerate innovation and power business transformation. Our Offerings Loosely coupled, fine-grained services, communicating through lightweight protocols make it easier to develop and deploy applications independently of one another. Accelerate application development to be more rapidly deployed, patched, or scaled. This cloud computing execution model to software design allows organizations to build and run services without having to manage the underlying infrastructure. This progressive management methodology uses an iterative, flexible approach for greater collaboration, innovation, and speed. Observe and manage dynamic configurations across cloud infrastructures and providers to improve productivity. Automate applications, workloads, supporting resources, and infrastructure across multiple cloud platforms. A Quarterly Survey Series by Wipro FullStride Cloud Wipro FullStride Cloud Reshapes a Leading Energy Industry Leader's Business Wipro FullStride Cloud Boosts Innovation for a Financial Services Leader Wipro FullStride Cloud Increases Productivity for a Leading Wireless Network Operator Wipro is positioned as a Leader in the 2024 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services which evaluates service providers on their Ability to Execute and Completeness of Vision. Contact Us
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Digital Transformation Services

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Wipro FullStride Cloud+Cloud Leaders Please fill the required details to access the content Digital Transformation Services Our Digital Transformation Service practice drives digital transformation initiatives for clients by solving the current challenges and anticipating future trends. We work with our clients as partners to create a vision that empowers the business to grow rapidly and operate with agility. As a strategic partner, we're devoted to fostering innovation, agility, and enduring success in a constantly evolving, software-driven world. We align clients' software engineering, business agility, and architecture goals with their digital aspirations, allowing us to drive rapid, high-impact value. We realize digital transformation through our expertise in Enterprise Architecture, Agile, DevSecOps, Full Stack Engineering, Artificial Intelligence and Cloud Consulting. Our experience operating in various sectors combined with our digital transformation expertise provides a unique edge to help our clients succeed on their digital transformation journeys.   Together with our partner eco-system, Wipro offers accelerated paths to digital transformation success. Get a better understanding of how organizations capture business value from their cloud investments. Multinational investment bank improves processes and sees cost savings by improving data integrity and removing siloed data. Wipro is positioned as a Leader in the 2024 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services which evaluates service providers on their Ability to Execute and Completeness of Vision. Contact Us =====================

Advisory & Consulting

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technical debt and accelerate innovation with end-to-end modernization solutions. Drive growth, innovation and business value with advanced software engineering and cloud-native solutions. A Quarterly Survey Series by Wipro FullStride Cloud Empowering business at the intersection of strategy, design and technology, we are committed to creating vibrant and relevant brand experiences on every level. NetOxygen LOS is an award-winning enterprise loan origination solution, driving profitability and customer-centric lending anytime, anywhere. Wipro is positioned as a Leader in the 2024 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services which evaluates service providers on their Ability to Execute and Completeness of Vision. Contact Us
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Modern IT Strategy and Operations

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IT Modernization Consulting

Our Offerings OUR INSIGHTS:The Secret to Cloud Success: A CXO's Guide to Business-Driven Cloud Strategies Wipro is Named a Leader in 2023 Gartner Magic Quadrant for Public Cloud IT Transformation Services Contact Wipro IT Modernization SLICE Network Assessment IoT & Edge Discovery Virtualdesk Consulting Services 4 Ways To Maximize Cloud Investments While Keeping Innovation in Mind Cloud Conversations Wipro Recognized as a Leader in ISG Provider Lens for Mainframe Services Wipro FullStride Cloud + Cloud Leaders Please fill the required details to access the content IT Modernization Consulting Wipro IT Modernization Consulting provides expert advice and services for clients looking to elevate their IT infrastructure, systems and processes. These services are vital for organizations needing to upgrade their technology landscape to support current and future business needs and to ensure the IT infrastructure is scalable, secure and aligned with the strategic business goals. Defines the future state required to meet business objectives, solutions to bridge gaps, and an implementation roadmap. Drive innovation, enhance operational efficiency and achieve growth in distributed hybrid cloud environments. Comprehensive evaluation of network strengths, weaknesses, and vulnerabilities to improve performance and security. Co-creating clients' visions for IoT and Edge with a clear roadmap for implementation. Services to design, evaluate or implement virtual desktop solutions to enhance remote work capabilities and streamline management. Many cloud transformations fail to deliver the intended results on the first attempts due to a lack of alignment between business strategy and cloud strategy. The mantras for enterprises to maximize their cloud investments to foster continual innovation and pave the way for greater business value. Engage with our cloud experts as they share insights on new technologies, innovation and game changing solutions that are driving the more intelligent, hyperconnected cloud. Our tailored approach to delivering custom cloud transformations that meets businesses where they are is why we are recognized as a Leader. Contact Us
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Cloud Consulting

Our Offerings OUR INSIGHTS:The Secret to Cloud Success: A CXO's Guide to Business-Driven Cloud Strategies Wipro is Named a Leader in 2023 Gartner Magic Quadrant for Public Cloud IT Transformation Services Contact Wipro Cloud Strategy & Assessment Cloud Application Assessment Cloud COE Cloud Migration Strategy Cloud Site Reliability Engineering (SRE) Cloud Exit Strategy Cloud Resilience 4 Ways To Maximize Cloud Investments While Keeping Innovation in Mind Cloud Conversations Wipro Recognized as a Leader in ISG Provider Lens for Mainframe Services Wipro FullStride Cloud + Cloud Leaders Please fill the required details to access the content Cloud Consulting Moving to a cloud-

centric environment is critical — not only for IT to meet the needs of the business but for business to meet the needs of its customers. Wipro's cloud consulting services are designed to help businesses understand, adopt and maximize the benefits of cloud technologies. Wipro advisory & consulting teams collaborate with clients to navigate the complexities of cloud computing, from initial planning and migration to ongoing optimization. Combining in-depth industry knowledge with technical expertise, they help enterprises harness the full benefits of the cloud, such as scalability, flexibility and cost-efficiency, while addressing challenges related to security, compliance and performance. Designed to help customers make informed decisions, reduce risks, and maximize the benefits of cloud adoption while aligning with business goals. Provides businesses a clear roadmap for migrating or developing applications in the cloud, optimizing their performance, minimizing risks and ensuring cost-effectiveness. Brings business and IT together to lead adoption and roll out cloud computing practices and technologies. Outlines how to best move on-prem or co-located workloads and data to the cloud. Consulting services designed to reduce downtime, enhance customer experience, and align operations with best-in-class practices. A plan to ensure a smooth, cost-effective switch from one cloud provider to another. Services that help mitigate risks, minimize downtime, and ensure that cloud-based systems remain available and dependable despite the challenge. Many cloud transformations fail to deliver the intended results on the first attempts due to a lack of alignment between business strategy and cloud strategy. The mantras for enterprises to maximize their cloud investments to foster continual innovation and pave the way for greater business value. Engage with our cloud experts as they share insights on new technologies, innovation and game changing solutions that are driving the more intelligent, hyperconnected cloud. Our tailored approach to delivering custom cloud transformations that meets businesses where they are is why we are recognized as a Leader. Contact Us ======================

Cloud Economics

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technology, finance, and business together to drive financial accountability and accelerate business value realization from the cloud. Evaluate and streamline the application portfolio to align with strategic goals and improve operational efficiency. Enables clients to deploy an insight driven continuous improvement approach to adopt & mature agile ways of working. An Insights Report by Wipro FullStride Cloud and Forbes An Analyst Brief Sponsored by Wipro To ensure AI investments deliver maximum value, cloud economics is a strategy that can manage cost, optimize value and allow organizations to be at the front of cutting-edge technology. Cloud investments continue to make up a bulk of technology budgets. Leaders need to be sure they're making the most of those investments. An estimated one third of cloud spending goes to waste, with 13% of projects, on average, going over budget. Wipro is positioned as a Leader in the 2024 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services which evaluates service providers on their Ability to Execute and Completeness of Vision. Contact Us =====================

Migration & Modernization

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economics and FinOps to align with business goals and generate greater returns on cloud investments. Wipro's full suite of application modernization services, combined with the capabilities of a vast partner network, help clients erase technical debt by modernizing and remediating to the cloud. Through rehosting, re-platforming, refactoring, and rearchitecting applications, enterprises adopt a nimble, intelligent approach that allows them to solve business challenges and develop a stronger cloud program going forward. Our Offerings An integrated cutting-edge platform that accelerates the transformation journey from legacy applications to cloud based applications with minimized risks. Ensure a seamless, secure data center transition to accelerate your journey to the cloud. Build stronger, more efficient workplaces with cloud-based applications and employee services. Keep pace with innovation and competition by optimizing your cloud infrastructure. Get the best out of systems data through data and DB modernization themes like, data virtualization and offload, legacy to modern datastore. Increase agility by updating infrastructures and employing a tailored hybrid cloud approach. Exit from your existing state to a target state through rewriting, re engineering, transcoding, re hosting, replacing, and retiring with Wipro and its partners who specialize in Legacy Modernization tools and solutions. Empower organizations to reimagine and rearchitect their business and unlock the full potential of cloud. Modernization solution owners only think about application code, databases, and data, but they don't plan for the entire platform ecosystem. Modernizing legacy applications building a roadmap for success. Engage with our cloud experts as they share insights on new technologies, innovation and game changing solutions that are driving the more intelligent, hyperconnected cloud By modernizing cloud infrastructures, energy enterprises can reimagine their service delivery and business models through a series of cloud-based advantages. Master the art of cloud strategy in 2023. Learn from a life insurance companys journey, avoiding pitfalls. Elevate business with a proactive, business-driven approach. Wipro FullStride Cloud Helps a Food and Beverage Leader Improve Customer Experiences Wipro Fullstride Cloud Empowers a Leading Healthcare Provider to Improve Lives with Hybrid Cloud Wipro FullStride Cloud Enables Seamless Digital Customer Experience for a Retail and Commercial Banking Leader The transition to a cloud-first environment will deliver improved sustainability benefits Wipro aimed to improve customer service and reduce loan delinquencies. Wipro transformed their global business by moving from data centre to cloud. Transform Customer Communications to the Cloud. Wipro is positioned as a Leader in the 2024 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services which evaluates service providers on their Ability to Execute and Completeness of Vision. Contact Us
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ModerniZ

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MODERNIZATION JOURNEY Contact Wipro Wipro Positioned as a Leader in Everest Group Mainframe Service PEAK Matrix® Assessment 2024 Please fill the required details to access the content ModerniZ is a cutting-edge integrated end-to-end platform designed to streamline the migration process in a comprehensive, automated, and modular manner. With a robust combination of in-house tools and our global partner ecosystem, ModerniZ transforms your legacy applications into cloud-native or cloud-ready applications, ensuring your business stays at the forefront of innovation. ModerniZ caters to a wide range of business use cases, helps accelerate your transformation journey, minimizes risks and maximizes efficiency, with productivity gains as high as 40-50%. Revolutionize your legacy application modernization by going FullStride in the Cloud with ModerniZ today and propel your business towards greater success. KEY BENEFITS Modular and scalable as per business needs End-to-end solution with both in-house and partner tools Hybrid automation enabling flexibility for using right tools Cost effective and quick modernization cycle Plug and play feature allows easy on-boarding of new tools Allows customers to choose best of breed tools based on requirement News, Awards & Recognitions Contact Us =====================

Application Engineering and Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/migration-and-modernization/application-engineering-and-cloud/ ----- Contact Wipro Application Modernization Cloud Native Engineering Digital Lending GenAI Adoption Services Mainframe Simplification Next Gen Application Services Modernize Enterprise Integration Platform Navigating the cloud-native maze The Secret to Cloud Success: A CXO's Guide to Business-Driven Cloud Strategies Redefining Application Modernization: An iterative approach leveraging Strangler Pattern on AWS Cloud Wipro is Named a Leader in 2023 Gartner Magic Quadrant for Public Cloud IT Transformation Services Expanding Google Cloud Partnership to Advance Adoption of Generative AI Wipro Named a Leader by Everest Group Network Transformation and Managed Services PEAK Matrix® Assessment - System Integrators 2023 Please fill the required details to access the content Application Engineering and Cloud Application modernization is a key driver in helping organizations to transform their legacy systems into cloud-based solutions. The growth of hybrid work environments along with the rapid adoption of generative AI is creating an environment where application engineering is highly sought after. Whether it entails cloud-native development, strategic migration initiatives, or the implementation of robust evaluation practices to optimize tools, processes, platforms, and applications, leading enterprises are recognizing that the business value of the cloud is not solely derived from migration. True cloud value materializes through effective modernization and the transformative evolution of applications, providing organizations with the efficiency, security, and agility they are seeking.   To modernize capabilities and drive innovative business value, or to revitalize existing applications, enterprises must align their investments with overarching

business objectives, ensuring a focused and purposeful approach to the evolving cloud landscape. Our Offerings The modernization journey is focused on identifying business and technical value and reducing costs. Build modern and resilient application to keep pace with business priorities and governance. Wipro's NetOxygen offers the right compliance tools and automation to grow loan origination while managing regulations. Helping customers build a Center of Excellence to build the right LLM framework. Migrate and modernize your mainframe applications with a de-risked approach. Harnesses the adoption of cloud to drive efficiency and reduce costs. Consultative approach evaluates and identifies the right transformation path for your organization. An HFS report in partnership with Wipro FullStride Cloud Our tailored approach to delivering custom cloud transformations that meets businesses where they are is why we are recognized as a Leader. Contact Us =====================

GenAI: Powering Mainframe Modernization

----- Arcticle source ----- https://www.wipro.com/cloud/migration-and-modernization/genai-powering-mainframe-modernization/ ----- Contact Wipro Please fill the required details to access the content GenAI Powering Mainframe Modernization The Importance of Mainframes In an era where mainframes continue to be the backbone of global enterprises, the challenges of maintaining, optimizing, and modernizing outdated legacy systems have become paramount. These systems, often burdened with technical debt and fragile from years of quick fixes, are not only costly to maintain but also hinder business agility. The scenario is further complicated by the impending retirement of a significant portion of the skilled workforce that has the knowledge to maintain these systems, as well as the often-inadequate technical documentation that makes knowledge transfer, mostly through person-to-person, expensive and inefficient. At the same time, demand for mainframe modernization is growing, driven by the need for streamlined applications that enhance agility and mitigate continuity risks. However, these projects are notoriously complex, with a 74% failure rate among organizations attempting them1. Recent advances in technology, partnerships with Cloud Service Providers, usage of hybrid cloud environments, as well as incremental modernization strategies, offer more viable and less risky pathways to modernization. Despite this, COBOL modernization continues to pose significant challenges. Decades of business logic encoded in COBOL make it difficult to extract, document, and translate to modern languages. Automated code conversion often yields Java that is correct but hard to maintain and extend, failing to utilize modern programming practices. Moreover, traditional one-size-fits-all tools don't fully address the nuances of different legacy systems, necessitating extensive manual effort in debugging, testing, and refactoring. There's a growing recognition of AI's potential to address these challenges, offering promising solutions for automated code conversion, retro-documentation, and testing processes in mainframe modernization. Can Artificial Intelligence and Generative AI address the challenges? Generative AI

(GenAI) represents a leap beyond traditional mainframe technology and AI applications. It's not just transforming business and societal problem-solving with new, human-like content; it also has tremendous potential for accelerating mainframe modernization. GenAI's deep understanding of legacy code semantics as well as heuristic interpretation of enterprise engineering standards allow for more effective capture of business logic and intent, enabling precise code transformation and knowledge encapsulation. Several consulting firms, IT services, and Cloud Service Providers are exploring AI applications for code refactoring, generating visuals to demystify complex systems, and improving data migration. These innovations aim to bridge legacy systems with modern technologies, though many are still under development. How are Wipro FullStride Cloud and Capco leveraging GenAI capabilities to accelerate mainframe maintenance and modernization? Wipro FullStride Cloud and Capco has adopted a ground-breaking approach to tackle our customers' most pressing challenges with innovation and pragmatism. This approach has been developed through Capco's extensive management consulting and industry experience together with Wipro FullStride Cloud's industry leading cloud and infrastructure expertise. At the heart of our vision is the synergy of knowledge management (one of the most important business critical and continuation risks for our clients in all industry domains), existing COBOL code optimization, and the transformation of legacy COBOL applications to sustainable, modern systems. Note that we are not advocating mainframe exit using GenAI: Rather, by harnessing GenAI for a more systematic and controlled modernization process, we simplify legacy applications and prepare them for a future where flexibility, performance, and maintainability are paramount. Wipro FullStride Cloud and Capco's proprietary set of accelerators creates virtual replicas of legacy applications by analysing millions of lines of legacy code. Feeding GenAI extracts of these virtual replicas allows it to accelerate modernization outcomes across knowledge management & code optimization, application modernization & testing, and application maintenance & support. Note that we do not promote one LLM (Large Language Model) over another. Generative AI models are becoming more sophisticated at an unprecedented pace, and many of the proprietary as well as open-source models perform exceptionally well for our stated purposes. 1. Knowledge Management and Code Optimization 2. Application Modernization & Testing 3. Application Maintenance & Support At a broader level, Wipro FullStride Cloud and Capco implement GenAI to manage complex dependencies in legacy systems, ensuring that updates or migrations do not break functionality and reducing integration issues in the process. Finally, it's important to acknowledge that integrating our tool into your DevOps pipeline allows for dynamic updates of knowledge, ensuring that system documentation remains current with the production code. As we embrace a new era of mainframe optimization and modernization enhanced by GenAI, it's time to move beyond outdated modes of working to thriving in the modern digital landscape. Leverage Wipro FullStride Cloud and Capco's proprietary accelerators to transform your legacy systems and propel your business to the forefront of agility and innovation. With our GenAI-assisted knowledge management, code maintenance, optimization, and modernization, as well as testing solutions, we are confident your systems are not only robust and maintainable but also cost-effective and fully compliant with your enterprise standards. References 74% Of Organizations

Fail to Complete Legacy System Modernization Projects, New Report From Advanced Reveals | Business Wire About the Authors Anil Kumar Mallanna Managing Partner, Legacy Application Modernization and Platform Services (LAMPS) Wipro FullStride Cloud Services Anil brings in 25+ years of IT experience with extensive business knowledge of enterprise-wide applications and experience in designing & implementing mission critical applications. He is responsible for Wipro's Americas Legacy Modernization charter and has led successful Sales, Presales, Consulting and IT Delivery organizations serving global leaders in large Financial Services Industries. Sanjay Rao Director Legacy Application Modernization and Platform Services (LAMPS) Wipro FullStride Cloud Services Sanjay is a legacy modernization consultant and cloud architect with 25 years of experience in simplification, augmentation, migration and modernization of mainframe applications. He leads presales, consulting and delivery for Wipro's Americas 1 which includes healthcare, life sciences, communication, retail and Brazil sectors. Gerhardt Scriven Executive Director, CAPCO Gerhardt Scriven has over 20 years of experience in IT, focusing on de-risking and solving complex problems in the delivery of mission-critical projects, particularly through early risk discovery and mitigation. He specializes in Legacy Application Optimization and Modernization.
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Digital Workplace

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America Wipro Named a Leader in Everest Group's Digital Workplace Services PEAK Matrix® Assessment 2023 – Europe Wipro has been ranked as a Leader in Everest Group Workplace Communication and Collaboration Services PEAK Matrix® Assessment 2022 Please fill the required details to access the content Digital Workplace Wipro Live WorkspaceTM solutions for enhancing employee experience Success Stories In today's digital-first landscape and growing hybrid work environment, businesses need to adapt and be prepared to evolve to meet the organization and employee needs. Wipro Digital Workplace services empower organizations to redefine their work environments by constructing an inclusive, immersive future of work for every employee. Our digital workplace transformation capabilities enable employees to be productive, resilient and healthy no matter where they work. Our digital workplace solutions are designed to cater to diverse organizational needs, offering cutting-edge tools and strategies that align with modern work trends. Combining cognitive intelligence, zero-touch automation and a comprehensive data fabric, Wipro Live Workspace™ helps maximize productivity, by delivering exceptional employee experience that fosters collaboration. Whether you're looking to enhance remote work capabilities, streamline operations, or improve workforce engagement, our digital workplace solutions provide our clients with the desired digital workplace transformation across the physical, human and digital that builds a culture of empowered employees ready to innovate and drive sustainable business value. Create a modern work experience powered by intelligent workplace transformation capabilities with Wipro Digital Workplace services. Our Offerings Use generative AI to amplify IT support and workplace connectivity. Elevate productivity with a persona-based service desk powered by automation, AI/ML and cognitive support for self-service capabilities. Maximize cost-efficiency and productivity in field service operations with remote troubleshooting and self-service enablers. Maintain an evergreen IT infrastructure with an analytics-driven orchestration solution that offers unified endpoint management, application modernization and enhanced security. Strengthen security and privacy postures with a zero-trust approach and comprehensive cloud-based security suite. Offer simplified, secure collaboration and communication services for greater employee engagement and inclusivity. Generate a multi-dimensional view of employee experiences with an advanced analytics platform. Delivering resilient enterprise hybrid workplace services through Wipro Virtuadesk™ Our Partners Why Mac is the growing device of choice for employees. To see a list of our industry leading partners visit our Partner Ecosystem. By prioritizing the human touch in AI adoption, businesses can harness the power of technology to enhance, rather than replace, the workforce, creating a more dynamic, innovative, efficient and competitive future. The future of workspace Unleashing the Generative Future of Work Shifting focus from the office to the employees allows businesses to offer more advanced capabilities to support remote work. Unlocking employee experience success through applications management. Discover the three important benefits of starting with personas when building a hybrid workplace strategy. In reimagining the future workplace, businesses must prepare for what lies ahead by harnessing the power of Metaverse technologies. Most organizations are working towards digital transformations where adaptations to changes in lightning speed is the call of the hour. Organizations are looking for effective ways to enhance field

services. One such way is the shift left approach using augmented reality (AR A look at how Wipro Live Workspace™ Secure360, powered by Intel solutions, is combining AI and zero trust models to deliver superior endpoint security. A five-step approach to seamless work experience. Wipro is among the only two vendors to be recognized with a Customers' choice distinction in the Gartner® Peer Insights™ Voice of the Customer for Outsourced Digital Workplace Service. Contact Us =====================

Wipro AI Live Workspace™

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Banking 4.0

----- Arcticle source ----- https://www.wipro.com/cloud/digital-workplace/banking-4-unleashing-the-generative-future-of-work/ ----- Contact Wipro Please fill the required details to access the content Banking 4.0: Unleashing the Generative Future of Work Unleashing the Generative Future of Work Wipro and Intel recently hosted a Future of Work innovation summit in association with ET CIO. The event brought together dignitaries and industry experts to discuss the impact of Generative AI (GenAI) on the BFSI

sector and its workforce. The summit included a panel discussion on the theme "Banking 4.0: Unleashing the Generative Future of Work." The panelists discussed the evolution of the future of work in the banking sector, outlined the key tenets of Banking 4.0, and shared an enterprise's guide to embracing the generative future of work for BFSI organizations. Siddharth Mukherjee, Global Practice Head of Wipro's Digital Workplace Services, and Mrinal Rai, AD and Principal Analyst – Future of Work, ISG, discuss three macro trends for the future of work that are likely to create a differential advantage for large banking enterprises. Siddharth Mukherjee, Global Practice Head of Wipro's Digital Workplace Services, and Susheel Shanbhag, SVP of Automation, HDFC Bank, outlined the business challenges in the journey of digital transformation with AI. Key takeaways from the discussion: =====================

Quality Engineering and Testing Services for Cloud Solutions

----- Arcticle source ----- https://www.wipro.com/cloud/quality-engineering-and-testing/ ----- Wipro and Zurich: Quality Engineering in Cloud Transformation Contact Wipro Managed Testing Services Powered by AI & GenAI A Logistics Firm Improves IT Reliability with Full-Stack Observability From Quality Assurance to Quality Engineering Accelerating Business Assurance: Strategies for SAP S/4HANA Transformation How Observability Improves Customer Engagement The True Value of GenAI for Quality Engineering How Software-Defined Testing Environments are Revolutionizing Testing Adopting the Hybrid Habit for Agile Quality Assurance Bots Offer 'Self-Healing' Touch to Correct Quality Errors Digitized Platform for One View of Quality Cut the Clutter, Join the Big Data Wellness Club Assuring Quality for Internet of Things Wipro Named a Horizon 3 Market Leader in HFS Horizons: Assuring the Generative Enterprise™, 2024 Wipro wins 4 awards at the European Software Testing Awards (TESTA) 2023 Wipro wins 2 awards at The North American Software Testing Awards (NASTA) 2023 Wipro Named a Leader in Everest Group's Next-generation Quality Engineering (QE) Services PEAK Matrix® Assessment 2023 Wipro wins Tricentis's UK Partner of the Year award 2023 Please fill the required details to access the content Quality Engineering and Testing Offerings Partners Success Stories What We Think Recognitions Wipro FullStride Cloud Services' Quality Engineering and Testing services ensure high performance and security in a cloud-centric world. The practice covers the end-to-end (E2E) testing lifecycle — from enterprise tech apps and package apps to phygital and hardware infrastructure, from SAP to Salesforce. Teams leverage DevSecOps to foster collaboration between development, security, and operations functions, fully ingreating security and quality assurance throughout. Wipro's Gen AI-driven testing enhances the tester experience across 60+ Gen AI use cases, optimizing scenario planning, scale executions, and integration with CI/CD pipelines. Collaboration with the Wipro Ventures ecosystem connects businesses with cutting-edge digital solutions to help them stay ahead of the curve, while Wipro's automation excellence, powered by AI and GenAI, leads to more

agile, secure, and exceptional product experiences. Our Offerings From traditional software testing to strategic business assurance. In today's digital and cloud-first world, Quality Engineering is evolving into Business Assurance as businesses seek to stay competitive in a rapidly changing technology landscape. An automation-first approach to enable Quality Engineering transformation. Elevate your E2E testing of microservices architecture for successful cloud modernization. Blueprint your future-ready roadmap for transforming and elevating quality assurance landscape. Ensure an exceptional application performance which is scalable & reliable resulting in outstanding user experience. Achieve business outcomes with consumption based, integrated, scalable, flexible quality assurance services. Enhance QA outcomes with secure, stable and reliable testing infrastructure. Gen AI centric intelligent quality powered by Wipro's Ai360. Safeguard your digital transformation ensuring exceptional performance, reliability and security quality engineering at speed. Embark on your testing journey with Wipro's AI-driven enterprise grade intelligent automation, enhancing scalability and ROI. SaaS application assurance for business processes & domain specific solutions. E2E testing infrastructures to ensure seamless performance in distributed architectures on cloud. Tap into the complete experience of your AI/ML driven applications with a strategic assurance framework and our cutting-edge testing methodologies. Complete controllability and transparency of your IT architecture aligning to your business process preventing downtime. Partners Our Success Stories Kholofelo Maketa speaks about how Wipro assured the seamless integration of Liber8, a brand new financial service. Traditional IT monitoring techniques are not enough for today's complex cloud environments. What We Think Prevent pitfalls with a well-designed quality engineering program. News, Awards & Recognition   Contact Us
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SAP S/4 HANA Assurance

----- Arcticle source ----- https://www.wipro.com/cloud/quality-engineering-and-testing/sap-s4-hana-assurance/ ----- Services Accelerating Business Assurance: Strategies for SAP S/4HANA Transformation Contact Wipro SAP Functional Testing Intelligent Test Automation SAP Data Assurance SAP Security Testing Observability & Non-Functional Testing Decoding Intelligent SAP Quality Assurance with Wipro, SAP and Tricentis SAP Testing Factory: Transforming Testing Services for the Era of Intelligent Enterprises Please fill the required details to access the content SAP S/4 HANA Assurance From traditional software testing to strategic business assurance As the 2027 deadline for SAP ECC retirement approaches, businesses are under mounting pressure to transition smoothly to SAP S/4HANA. The key challenges they face include maintaining business continuity after the switch and realizing the anticipated benefits of the transformation. The complexity of the transformation combined with the rising cost pressures makes managing this change a significant challenge. Wipro combines deep technical knowledge and functional expertise in SAP to execute a seamless S/4HANA migration, ensuring quality, speed and cost efficiency. Our SAP S/4 HANA Assurance solutions are designed to identify,

assess, and mitigate critical risks across functional, performance, operational, security, and data areas, preventing potential business disruptions. Employing a proactive approach to quality, Wipro emphasizes defect prevention as well as detection. Our intelligent test automation, integrated across the software development lifecycle (SDLC), reduces efforts by up to 40% and accelerates time to market by up to 25%. 20+ Years SAP Testing Experience 200+ Global Engagement 1400+ Test Automation Engineers 6 SAP-Specific Automation BOTs AI/GenAI-Powered Automation Test lifecycle automation and domain knowledge for productivity gains Industrialized Delivery SAP TCoEs for enhanced governance, standardization, knowledge and testing Consulting-Driven QE Assessments, vision definition, transformation roadmap and rollout Streamline processes with tailored approaches to SAP modules and systems. Boost efficiency and quality with smart automation for SAP testing. Ensure data integrity and accuracy across SAP landscapes. Safeguard environments with robust testing, risk management and mitigation. Ensure continuous availability and reliability with performance insights. Case Studies Domtar, a Canada-based manufacturer of paper, pulp, and packaging products, sought to transform its legacy payroll system into a modern and cohesive human experience management solution. Featured Resources With the 2027 deadline looming, strategic assurance practices offer businesses a roadmap to SAP S/4HANA migration success. Contact Us
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Managed Testing Services Powered by AI & GenAI

----- Arcticle source ----- https://www.wipro.com/cloud/quality-engineering-and-testing/managed-testing-services-powered-by-ai-and-genai/ ----- Contact Wipro Please fill the required details to access the content Managed Testing Services Powered by AI & GenAI In today's rapidly evolving digital landscape, ensuring resilience and reliability of software applications is crucial for organizations to stay competitive. However, the complexity of modern software systems coupled with the need for rapid deployment often poses significant challenges for traditional testing approaches. Additionally, the strategic shift towards agile, specialized testing solutions is leading businesses to turn towards a strategic partner who can consult, own and implement Quality Engineering transformation so that Quality can become a competitive advantage. This is where Wipro's Managed Testing Services steps in. This approach allows businesses to harness dedicated teams tailored to their unique needs, providing scalable and cost-effective solutions. By embracing managed testing services, organizations not only accelerate time-to-market and improve software quality but also democratize testing resources, empowering teams to focus on innovation (rather than correct utilization of efforts). Managed Testing Services also leads to significant cost savings of up to 30%, 99% defect removal efficiency and higher adoption/ maturity of AI/ GenAI. We enable scalability and flexibility, we offer multiple innovative operating and financial models that can seamlessly scale up or down to accommodate varying testing needs,

optimizing cost efficiency without compromising quality. Our suite of services are powered by our 30+ Centres of Excellence which encompass apps, products, hardware and infra. At the core of all our services is an automation first approach powered by our Intelliassure intelligent quality platform in conjunction with partners and Wipro Venture portfolio organizations which bring to the table cutting edge capabilities powered by AI and GenAI. Partner with Wipro to unlock unparalleled efficiency, agility, and innovation in software testing, enabling your organization to stay ahead in today's competitive industry landscape.

===================== ----- Arcticle source ----- https://www.wipro.com/cloud/leader-roadmap/ ----- Contact Wipro Please fill the required details to access the content Wipro FullStride Cloud Services global report Making Business Thrive: A Cloud Leader Roadmap for Achieving 10x ROI confirms that leaders are moving to the next generation of cloud. Maximizing the cloud's transformative capabilities to move beyond cost optimization to now being the platform for growth and unlocking new business opportunities.   Most importantly, this global survey of 1,300 executives from 11 industries across six countries provides a roadmap of 7 actionable steps companies can start taking immediately to accelerate cloud adoption and become a cloud leader. Steps that enable them to take a full stride forward and fully scale their cloud investments across the entire enterprise. Key findings include: Download your personal copy here

===================== ----- Arcticle source ----- https://www.wipro.com/cloud/financial-services-report/ ----- Contact Wipro Please fill the required details to access the content The financial services sector is undergoing unprecedented disruption, a wild ride created by the digital revolution smashing up against COVID-19's social and business upheavals. The collision of these two forces in 2020 and 2021 quickly altered the competitive landscape. Financial services institutions (FSIs) had to become smarter and nimbler, working in new ways with unfamiliar technologies at an unparalleled pace to meet clients' escalating digital demands. Firms also had to deal with increased competition as fintechs and technology giants looked to take advantage of uncertain macro and micro economic environments. In this paper, Capco and Wipro FullStride Cloud Services lay out the industry's current state as seen through the eyes of practitioners, how cloud technologies are being used as an accelerant to drive growth and return on investment (ROI), and what lies ahead for our clients during the next few years. Key findings include: …and many more Download your personal copy here ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/the-cloud-growth-strategy-for-cmi/ ----- Contact Wipro Please fill the required details to access the content The Cloud Growth Strategy for CMI Companies worldwide are driving growth through the cloud, some more quickly and successfully than others. Early cloud leaders have found that their investments boost resilience and efficiency, and enable long-term gains. Among the most diligent early adopters are communications, media and information services (CMI) companies. As a sector, CMI embraces cloud as the growth strategy according to Wipro FullStride Cloud Services research. Operating from a single, cloud-based platform "quickly saves costs, sharpens predictions, and allows us to innovate more," said the CEO of one Australian CMI company included in our survey. Although they see some cloud ROI today, CMI companies are reinvesting their returns into long-term ventures to position

themselves for bigger growth in the future. Compared to other sectors, CMI companies: Download your personal copy here ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/redefining-manufacturing-for-the-digital-era/ ----- Contact Wipro Please fill the required details to access the content Cloud innovations are providing the manufacturing industry with newfound business opportunities through valuable customer insights, greater agility, and reduced costs. Within the industry, the businesses that have established themselves as cloud leaders have adopted multifaceted strategies to achieve these kinds of benefits. By examining their investments and tactics, organizations that are new to cloud computing can develop effective pathways to improve their maturity and fuel ways to redefine their business models. The Wipro FullStride Cloud Service report, Redefining Manufacturing for the Digital Era, examines both how cloud leaders are using cloud as an innovation platform to their advantage and how beginners and intermediate users can strengthen their cloud operations. Based on industry-specific research, the global report breaks down the most effective steps for developing a cloud strategy that helps drive business growth: Download your personal copy here ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/the-prescription-for-healthcare-provider-cloud-success/ ----- More from Wipro FullStride Cloud Services Contact Wipro Please fill the required details to access the content The Prescription for Healthcare Provider Cloud Success Strategic Steps for Enhancing Cloud Benefits and Preparing for the Future Healthcare providers generate nearly a third of the world's data, and cloud use within the industry is increasing as organizations seek effective tools for managing and securing their data. Digital engagements have become more common now that providers are connecting with patients through telehealth apps and online portals, making cloud-driven data management a top priority. For organizations at new or intermediate stages of their cloud initiatives, Wipro FullStride Cloud Services The Prescription for Healthcare Provider Cloud Success Global Report offers insights into effective tactics for further developing cloud transformations and developing greater maturity. It covers how the industry's cloud leaders have innovated IT operations and workflow efficiencies with a modernized infrastructure. By creating a cloud strategy built around these tactics, providers can accelerate their progress toward a series of operational advantages: Moving to cloud helped the industry's leaders realize other benefits as well, including an average 6.58% revenue gain from their cloud use. Download your personal copy here ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/key-strategies-for-life-sciences-cloud-innovations/ ----- Contact Wipro Please fill the required details to access the content Key Strategies for Life Sciences Cloud Innovations When it comes to cloud-based product development and R&D, the life sciences industry's cloud performance is ahead of others, with a high level of cloud maturity throughout the sector. Cloud technologies have allowed enterprises to gain the resiliency that's essential to staying competitive, yet creating an effective company-wide cloud strategy and making the best technology choices remain ongoing challenges for organizations new to cloud environments. Key Strategies for Life Sciences Cloud Innovations offers life sciences firms an effective resource for developing a comprehensive cloud strategy that will drive greater maturity and advanced cloud benefits. Based

on input from life sciences brands across six countries, this Wipro FullStride Cloud Services report breaks down the common strategies that the cloud leaders have taken to accelerate drug production while staying compliant with industry standards. Crafting a well-planned approach based on the report's outlined strategies can strengthen a company's cloud maturity and help deliver a range of valuable benefits: Download report ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/powering-cloud-innovation-energy-utilities-industry/ ----- Contact Wipro Please fill the required details to access the content The future of the energy and utilities industry is one in which energy demands are rising, sustainability efforts remain a high priority, and cloud technologies play a vital role in modernizing operations. On average, energy and utilities providers have an annualized return on investment (ROI) of 43% from their cloud initiatives, compared to the cross-industry average of 34%, according to our calculations. Yet Wipro research reveals that the industry has fewer enterprises with a high degree of cloud maturity in comparison to other industries. Organizations that are just beginning to see cloud-driven benefits from their investments can learn how to accelerate their cloud transformations with the Wipro FullStride Cloud Services report, Powering Cloud Innovation in the Energy and Utilities Industry. The report outlines how enterprises can further the progress they've made with the following tactics: By developing a strategy built around these tactics, energy and utilities companies can reach new levels of business value from cloud modernizations and create a foundation for continuous innovation. As covered in the report, a U.K.-based chief product officer says his company is "moving our on-premises IT infrastructure to the cloud, which reduces our operational cost and helps in delivering business value." Download the report to create a strategy for enhancing infrastructure performance and developing greater cloud maturity. Cloud maturity in the energy and utilities industry Download report ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/wipro-and-evanta-cio-community-discuss-cloud-strategies-business-growth/ ----- Contact Wipro Please fill the required details to access the content CIO participants discussed how the cloud is not just an alternative to data centers, but a strategic means to driving their overall business. This shift in thinking has evolved the role of CIO's to being the primary owners of digital strategy and organizational change. Key takeaways from the discussion 1. CIOs increasingly see the need for a digital-first mentality at their organizations. 2. The CIO role is ever-evolving – just like the technology they manage. 3. CIOs need to know the business — and align their initiatives accordingly. =====================

Enterprise AI: Lessons from the Early Adopters

----- Arcticle source ----- https://www.wipro.com/cloud/articles/enterprise-ai-lessons-from-the-early-adopters/ ----- Contact Wipro Please fill the required details to access the content Enterprise AI: Lessons from the Early Adopters A Harvard Business Review Analytic Services report in association with

Wipro FullStride Cloud The experience of AI leaders across multiple industries demonstrates the importance of creating an enterprise AI platform that serves as a unified environment for developing, deploying, and managing intelligent technology assets. As enterprise leaders adopt AI and generative AI (gen AI) at breakneck speed, they are forced to rethink business strategies that generate business value with this newfound AI functionality. This report from Harvard Business Review Analytic Services sponsored by Wipro FullStride Cloud, is a valuable guide to positioning their enterprises for success in the AI era. It presents compelling, real-world examples of how chief information officers, chief data officers, and other senior managers are applying AI to their domains. It also outlines approaches to becoming AI-ready and explore how their strategies aim to integrate AI in a way that drives concrete business value. A few key highlights from the report include: Download report
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State of Cybersecurity Report

----- Arcticle source ----- https://www.wipro.com/cybersecurity/ ----- Fuel Your Growth with Cyber Resilience. Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response News, Awards & Recognitions Contact Wipro Cyber Defense Centers Why Leading CISOs are Adopting a Strategy-First Approach to Identity and Access Management (IAM) Modernize Your Enterprise Security Operations Center(SOC) Everest Group Names Wipro a Leader in Cybersecurity Services PEAK Matrix® Assessment 2024 – North America NEW PODCASTS: Cybersecurity by Cybersecurists Join Wipro Women in Cyber(WWIC) and Become the New Face of Gobal Cybersecurity Elevating multi-cloud security for a leading American bank You may be spending too much on the cybersecurity Enterprise Cybersecurity Solutions for Zero Trust Maturity How Security Leaders Should Evaluate GenAI Systems Please fill the required details to access the content We are cybersecurity specialists We are cybersecurists. 9,000+ Cybersecurists 600+ Clients 60+ Countries 8 Global Cyber Defense Centers CyberTransformSM starts with strategy CyberShieldSM keeps you running Wipro CyberTransform is our integrated risk and security platform that delivers strategy-first cybersecurity advisory and implementation services. CyberShield is our industry-leading suite of managed services that defend business operations with on-demand cyber resilience management. Our Services Our Cybersecurity Advisory Services, part of our CyberTransform platform, include plan, build, run capabilities that assess and strengthen cybersecurity posture to safeguard brand reputation, business processes and regulatory compliance with cost-optimized security controls. Our System Integration and Managed Security Services, part of our CyberShield platform, defend business operations and enhance cyber resilience across clouds, networks, perimeters, endpoints, identities, data and apps. These integrated solutions and managed services increase business agility and secure the modern enterprise. We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence,

Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Our expert Cybersecurists deliver managed and hosted services out of Cyber Defense Centers strategically located around the globe, ensuring we are always close to our 600+ customers. Expertise Across a Broad Range of Industries Healthcare and Medical Devices Consumer Goods and Lifesciences Retail, Transportation and Services Communications, Media and Information services Technology Products and Platforms Banking, Financial Services Security, Investment Banking and Insurance Hi-tech Energy, Natural Resources and Utilities (ENU) Manufacturing Get your copy now! The 5th edition of Wipro's cybersecurity report presents the latest cyber trends and insights to tell the story of how modern enterprises are working to achieve cyber resilience. Over the past few years, major technological, geopolitical and economic disruptions have exposed enterprises to new and unexpected risks, and have forced security leaders to change how they approach cybersecurity threats and risk management. This report explains how enterprises are stepping up to meet new and unexpected risks and presents the serious challenges facing security leaders. Wipro routinely hosts and participates in CISO peer-to-peer events, with some events being private (CISO private summits) and others hosted publicly at industry events (roundtables, panel discussions). In this global assessment, Everest Group reviewed 30 leading cybersecurity services providers and found Wipro to be among the best Listen as Wipro Cybersecurists, customers from all industries and Wipro strategic partners dive into the latest trends. WWIC was founded in 2022 to focus on developing an inclusive and open culture that guarantees opportunities for women in CRS. Thought Leadership Partners Venture partners Connect with the Cybersecurists Rajesh Pillai Americas Leader for Healthcare and Medical Devices, Consumer Goods and Lifesciences, Retail, Transportation and Services, Communications, Media and Information services, Technology Products and Platforms Mark Vanston Americas Leader for Banking, Financial Services Security, Investment Banking and Insurance, Hi-tech, Energy, Natural Resources and Utilities, Manufacturing John Hermans Europe Leader for UK and Ireland, Northern Europe, Southern Europe, Germany, Switzerland Bharat Shetty APMEA Leader for India, Middle East, Australia and New Zealand, Southeast Asia, Japan, Africa Looking career in cybersecurity? Join our Talent Network and enhance your job search and application process.
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How a top telco launched its business in the US market on Cloud

----- Arcticle source ----- https://www.wipro.com/cybersecurity/how-a-top-telco-launched-its-business-in-the-us-market-on-cloud/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a top telco launched its business in the US market on Cloud Client Background Client: Global Telecom Company Industry: Telecommunications Products/Services: Telecommunications providers to the world's largest MNCs covering fixed, unified communications solutions, hosting-based services Area of Operation: Worldwide Challenge The telecommunications company crafted a business plan to enter the US market for the first time as an MNVO (Mobile Virtual Network Operator) for enterprise customers. The service was planned to be launched in less than nine months. This required low upfront investment and increased subscriber base over a period of three years. The company wanted a partner that would help architecture design and implement the MNVO IT solution in a stipulated timeframe, at the same time the environment had to be designed securely. The entire AWS based environment needed to be secured with security controls and assurance levels that were similar or equivalent to that of datacentre deployments. The client had concerns and anxiety over data confidentiality, integrity and authenticity on account of moving to the cloud. Native/built-in security controls were inadequate to meet the client's information security requirements. Solution The company selected Wipro as it's IT and BPO solutions and services partner. Wipro leveraged its CloudTrust framework, which provides Defense in Depth approach covering governance, risk and compliance, security of infrastructure, and data and application on the cloud. A requisite resiliency was built in the client's AWS environment. Wipro deliveredthese key components as part of the solution: Business Impact Wipro supported the client in launching their business plan in the US market within nine months and with required quality deliverables, on the AWS cloud. Custom parsers built by Wipro for security monitoring helped the client monitor their AWS environment for native and third party security controls. Wipro helped the company achieve 23% reduction in their operating expenditure in the first year of engagement. Specific areas of business impact included: "Wipro delivered best in class AWS cloud based security solution comprising of native and third party security controls to meet customer's business needs and controls requirements. Wipro built custom integrations between AWS and SIEM solution to meet specific security requirements for customer and helped in reducing the operational cost of security management" - Sudheesh Babu, General Manager & Head of Strategy and M&A, Cybersecurity & Risk Services, Wipro Ltd. Wipro enables compliance to regulatory bodies through 150% faster onboarding of critical applications and removal of open business sensitive risks for a leading

banking organization Wipro enabled the road and public infrastructure safety agency... =====================

Application Onboarding Streamlined

----- Arcticle source ----- https://www.wipro.com/cybersecurity/application-onboarding-streamlined/ ----- Related Articles Contact Wipro Please fill the required details to access the content Application Onboarding Streamlined Wipro enables compliance to regulatory bodies through 150% faster onboarding of critical applications and removal of open business sensitive risks for a leading banking organization Industry Landscape Banking Sector in the Asia Pacific region has been undergoing significant change with increasing mandates from regulatory authorities. For instance, Monitoring for security threat scenarios has been made mandatory in order to be in compliance with regulations from authorities Hong Kong Monetary Authority (HKMA), Monetary Authority of Singapore (MAS) etc. But a number of factors like high costs of application on boarding, slow speeds of on-boarding, lack of skilled resources in this area have been posing serious hindrance to this initiative The Opportunity Being one of the largest banks in the APAC region, the client wanted to meet the regulations by quickly on boarding critical log sources to be monitored and remove open risks due to in-ability to monitor for business sensitive risks. However the client was facing the following challenges (a) Slow on-boarding of log sources onto the Security event monitoring platform (b) Identifying skilled resources and their retention (c) Higher costs for on-boarding. The delay in on boarding of critical log sources to be monitored was resulting in open risks due to inability to monitor for business sensitive risks. Initial efforts with a different vendor to address these issues were not successful for the client since it resulted in high costs and speed of on boarding was also an issue. Solution Wipro adopted a factory-based approach for on-boarding assets for the client. The method employs a rigorous process to ensure alignment with existing use-cases and Compliance requirements and also has a structured capacity monitoring processes to highlight bottlenecks in advance. Business Impact 150% - Improvement in time savings for onboarding 50% - Operational Cost Reduction as a result of the implementation 45 days - Short time span for structured on-boarding Wipro delivered best in class AWS cloud based security solution comprising of native and third party security controls to meet customer's business needs.. Wipro enabled the road and public infrastructure safety agency... =====================

How a Leading Government Agency Ensured Fast and Secure Migration to AWS Cloud

----- Arcticle source ----- https://www.wipro.com/cybersecurity/how-a-leading-government-agency-ensured-fast-and-secure-migration-to-aws-cloud/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a Leading Government Agency Ensured Fast and Secure Migration to AWS Cloud Client Background Challenge The client wanted to securely migrate its 150+ sensitive business applications spread across different technology stacks including COTs, Java and Microsoft .net applications to the AWS cloud. They needed a trusted advisor to help build a strategy to securely migrate and operationalize business applications and associated workloads. While the client wanted to move its workloads to AWS cloud, one of the outcomes to be achieved was to reduce administrative overheads with centralized management of policies and compliance reporting. The need was to realize benefits of cloud at reduced costs with optimal efficiency. The client also wanted to quick-start on AWS by ensuring AWS-ready security monitoring and incident response capabilities with latest use cases. They wanted to extend their capability to identify application security vulnerabilities and identify risks before go-live while managing the evolving need of stringent compliance and regulatory requirements. Solution Wipro, as a trusted advisor, enabled the client on their cloud journey by performing end-to-end AWS security strategy and architecture design for hosting modernized business applications. Wipro established and operationalized Security Operations Centre (SOC) and vulnerability management capabilities on AWS. The key aspects of the solution include: Business Impact Wipro's security solution and advisory enabled shift-left approach for secure application migration to AWS in a short time frame. Wipro's security strategy and solutions enhanced security posture and enabled reduction in the threat landscape. Some of the other benefits were: Wipro delivered best in class AWS cloud based security solution comprising of native and third party security controls to meet customer's business needs.. Wipro enables compliance to regulatory bodies through 150% faster onboarding of critical applications and removal of open business sensitive risks for a leading banking organization ======================

Elevating multi-cloud security for a leading American bank

----- Arcticle source ----- https://www.wipro.com/cybersecurity/elevating-multi-cloud-security-for-a-leading-american-bank/ ----- Contact Wipro Please fill the required details to access the content Elevating multi-cloud security for a leading American bank Ambition For many companies, a lack of in-

house cybersecurity talent threatens to turn well-intentioned technology innovation into a liability. A leading bank based in the United States sought to avoid falling into this all-too-common cybersecurity capability gap. The bank recognized the potential for several critical security risks in its multi-cloud infrastructure, including misconfigurations, manual security management practices, and regulatory compliance issues. Existing security guardrails and compliance controls were leaving sensitive data vulnerable and presented a risk of unauthorized access. The bank's AWS and Microsoft Azure cloud platforms were delivering measurable business benefits. However, to keep pace with ever-changing policy developments and avoid non-compliance penalties, the bank's IT organization needed to improve security configurations, remediate complex legacy code, strengthen governance, and introduce security automation.   Action The bank partnered with Wipro to implement security automation across the AWS and Azure platforms. By transitioning to an Infrastructure-as-Code (IaC) approach, the client was able to codify infrastructure configurations, ensuring consistency, repeatability, and efficient version control. Custom and contextualised guardrails acted as proactive checks, preventing security misconfigurations and further ensuring compliance. Wipro developed Policy-as-Code (PaC) and Security-as-Code (SaC) tailored to client's Azure and AWS environment, enabling automated cyber policy enforcement. Automated image scanning brought container security and custom modules covering various aspects of the multi-cloud environment to enforce third-party security controls. Ambitions Realized Through close collaboration with the bank's security leaders, Wipro's implementation of third-party security controls and automation for AWS and Azure delivered across-the-board security, compliance, and productivity improvements. The bank achieved a 25% increase in regulatory compliance by automating security controls and enforcing consistent policies. Additionally, streamlined security practices led to a 30% increase in user productivity, allowing employees to focus on core tasks without disruptions. Custom guardrails, automated security scanning, and proactive measures contributed to a 40% improvement in overall security posture. Furthermore, operational disruptions decreased by 20% due to faster and more secure workload deployment and migration, enabling seamless adaptation to changing business needs while maintaining security. The bank is now more prepared than ever to achieve a secure and agile future in the cloud. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/cyber-security-in-the-communication-sector/ ----- Contact Wipro Please fill the required details to access the content Cybersecurity in the Communications Sector January | 2020 Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Digital transformation has taken center stage and new technologies like cloud and IoT are increasing the attack surface of an organization's digital assets. As a result, attackers around the world are arming themselves with innovative tool sets. In order to provide resistance to impending attacks, it is crucial for organizations to heighten their level of preparedness and strive to achieve proactive resilience. What makes the communications industry so vulnerable? Communications carriers are in the middle of a technological evolution. Software Defined Networks (SDNs) are transforming network management and cloud computing is helping telcos scale for growth. But

with these opportunities come risks. Telcos often open themselves up to cyber threats since they are responsible for the construction and operation of crucial infrastructure needed to communicate and store sensitive data. Skilled hackers and government agencies employ advanced persistent threats that can operate undetected. Communication channel components like edge devices, core network elements, and end user services that run on them are often targeted. Customer data and leased infrastructure equipment are other common targets. Telcos store personal, highly sensitive customer information like names, addresses and financial data. Cybercriminals also target house routers from internet service providers to steal or store data. Telcos are restructuring their security governance processes, functions and structures to address these new threats. Download your personal copy here The World Economic Forum's (WEF) Global Risk Report 2019 has rated cyberattacks amongst the top four global risks, only behind climate change, extreme weather events and natural disasters. Adopting a cyber-resilience framework that can propel the maturity of security processes and technology in the new-age communications enterprise will help mitigate new emerging risks. User security awareness, consumer identity management, third-party risk management, and good patch management is expected to aid in reducing cybersecurity risks across both the carrier network and organizations attached to it. =====================

Asymmetric uncertainty for Cyber Threats & its potential

----- Arcticle source ----- https://www.wipro.com/cybersecurity/asymmetric-uncertainty-for-cyber-threats-and-its-potential/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Asymmetric uncertainty for Cyber Threats & its potential December | 2019 This article discusses: Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. Asymmetric uncertainty / Moving Target Defense (MTD) introduces a shift in paradigm by imposing asymmetric disadvantages against cyber-adversaries. The cyber-adversaries face an increase in uncertainty and complexity as the target systems are induced with multi-faceted changes. Higher level of uncertainties and complexities increase the cost of malicious probing and attack efforts preventing and limiting system intrusion. The common means through which MTD can be introduced are virtualization and workload migration, widespread and redundant network connectivity, instruction set and address space layout randomization, just-in-time compilers etc. This is an upcoming area that is yet to see more adoption within enterprises. MTD techniques are often evaluated against system performance and increased ongoing management effort. This document describes in general about MTD and puts forward a point of view towards its current adoption within security product vendors and enterprises. Data breaches have been all over the news for a while now. Early September 2017 witnessed the Equifax cyber-attack. The attack vector used at Equifax was based upon the Apache

Struts web application. The specific vulnerability in Apache Struts allowed the use of file uploads and the attackers were able to send malicious code and commands directly to the targeted server. 1 Year 2019 witnessed major breach at Blur where unsecured server exposed a file containing 2.4 million user names, email addresses, password hints, IP addresses, and encrypted passwords. Numerous breaches have been reported since the start of year 2019 with notable ones involving tech giants, such as Microsoft email service, Citrix, Wyzant, WhatsApp and Instagram. The message is very clear. Enterprise CXOs are aware that this is a running war. Every day, new exploits, new tools are developed to breach the networks. The techniques are sophisticated and operated by determined cyber criminals. Current cyber defense strategies within enterprise are insufficient to detect and prevent such attacks, as these attacks proliferate in possible directions within the network, conducting inspection, identifying resources and exfiltrating valuable data. It is an attacker's world The core of current malware attacks and corresponding defense are focused into the utilization of network and systems vulnerabilities. The root cause of MTD is derived from the current defensive techniques used in Cyber-attack prevention. At a high level, Cyber kill-chain is a multistage segmental type intrusive model: The current defense mechanism is stationary with obstruction and system remodeling as two categories. Obstructions are physical and logical isolation, access rules, segmentations etc. Obstruction method is oblivious to side channel attackers and suffers from complexity of rules and storage constraints. System remodeling involves modification to existing system structure via patching and upgrades to cope with inherent flaws. System remodeling is limited to partial changes and known flaws. Hence, existing defensive methods are ineffective to resist continuous reconnaissance and analysis in the attack phase. The situation is further complicated by interconnectivity and vulnerable environments like missing software updates and patches, networks with internet of things (IoT) devices, end of support and end of live processors in turnkey systems. The static nature of network and systems, homogenous network elements and certainty of composition often work in the attackers' favor. For example, zero down to a target system by collecting information about the network and remaining knowledge gaps can this knowledge with zero day and known vulnerabilities to reach assault collection. Defense mechanisms that are based on prior knowledge will grapple to enumerate all possible attack scenarios and sources of vulnerabilities. Therefore, the gap between attackers' ability to comprehend target systems and their vulnerabilities versus defenders' little knowledge of security threats leaves an information advantage for attackers. Asymmetric Uncertainty Constructs "Shell Game /Thimblerig/Three Shells and a Pea," ages back to ancient Greece in which a target (usually a pea or ball) is hidden under one of three shells or cups. The object of the game is to find the target after the shells have been moved. The same analogy can be drawn to the concept of asymmetric uncertainty. The premise of defense is based on dynamic or continuous changing of system, network attributes with respect to configurations. The change increases difficulty of an attacker's intrusion and capability of acquiring and maintaining system privileges. This concept is still developing and currently we can see the following types of constructs to change the attack surface: Defense Measure Ratio Vulnerability Transformed / Vulnerability set exploited Higher coverage Degree of uncertainty to the attack surface Higher randomness In

time transformation before intrusive actions. Change frequency In time transformation ahead of attack Performance and availability of the system Less/No impact Variation MTD mechanisms, and ability to synergize with existing defense mechanism Integration capability Current state of adoption in the enterprise While asymmetric uncertainty/MTD is a new concept with tools, techniques and processes emerging, US federal government has funded and made significant efforts in this area. Organizations like Polyverse offer services and solutions by leveraging the concept of asymmetric uncertainty. For example, compiler-based scrambling (polymorphic Linux) intended to recycle containers offers full suite of MTD functionality. These innovations have made it easier for much smaller enterprises to integrate MTD into their existing security suite. Similar to Polyverse other organizations, such as Morphisec are also involved with MTD strategies and related products/solution/services. Several other private organizations like Cylance, SentinelOne, Bromium, and Cybereason have their respective products and solutions in this space. The National Institute of Standards and Technologies has also been involved with various initiatives related to asymmetric uncertainty. Conclusion Moving Target Defense initiatives have been going very well since 2015. Next few years should be exciting for MTD in terms of commercialization of its concepts and integration with existing security infrastructure. Early products in the market will continue to solidify, mature and much innovation is expected in this space among end user organizations with respect to application and integration of MTD product. References 1 https://www.pcmag.com/news/365672/blur-users-personal-details-potentially-exposed Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. With increasing willingness to use wearable and share personal information over the web, patients want healthcare to be delivered as a service. =====================

Cloud Security

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cloud-security-compliance-assurance-program/ ----- Related Articles Contact Wipro Please fill the required details to access the content Cloud Security Compliance Assurance Program The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. Healthcare providers are catering to these expectations by building their digital ecosystem, with around 60% of them having made this a top priority. Due to this, Protected Health Information (PHI) & Personally Identifiable Information (PII) over the Cloud has proliferated, leading to innumerable Cybersecurity challenges. For instance, The Wannacry ransomware attacks on healthcare institutions resulted in $100s of millions in losses. Compliance requirements like Health Information Portability & Accountability Act (HIPAA), General Data Protection Regulation (GDPR) etc. have increased CISO/Privacy Officers' focus towards protecting PHI & PII data. Healthcare organizations in reality

are finding it difficult to protect patient data due to a lack of single source of truth on personal data in the cloud ecosystem. Proliferation of IoT and mobile devices in healthcare has increased the attack surface several fold. The rise of highly innovative and sophisticated fraudsters coupled with non-availability of skilled talent to counter new types of attacks has amplified the challenges associated with ensuring a secure digital ecosystem. Healthcare companies have to ensure secure storage and usage of sensitive patient data. Added to this are complexities related to multiple cloud systems connecting with each other within the healthcare ecosystem and advanced threats targeting them. The compliance requirement are innumerable – HIPAA, HITECH, FDA regulations, GDPR, CCPA, PCI DSS etc. just to name a few. Given these complex compliance requirements, it is best to adopt Wipro's Common Control Framework incorporating the various regulations and standards governing the healthcare industry. We use a risk-based approach to decide on appropriate controls as per business needs, as a blanket enforcement of all controls will be cost prohibitive.   Wipro's Cloud Security Compliance Assurance Program provides a holistic approach for Cloud Risk Assessment. It uses an effective strategy to treat and mitigate risks, utilizing Wipro's Common Control Framework and best practices to proceed with recommendations and implement appropriate controls. This service is delivered using our Cyber Defense Platform, which uses a top down questionnaire based threat assessment method by leveraging MITRE attack framework, SANS threat vectors and SANS top 20 critical security controls. The platform also uses best of breed technologies like QualysGuard for vulnerability assessment and provides a real time assessment of regulatory compliance posture and efficacy of controls adopted. We provide quantified predictive risks obtained by Monte Carlo simulation of business criticality and associated risks of respective assets. We also provide qualitative inputs on risks derived at organization level, control level and asset level. Automation of the continuous compliance process can be achieved using appropriate tools, such as RSA Archer, MetricStream etc. This will help perform complex multi object validations, provide comparisons and appropriate benchmarks, provide actionable path to improvement and prioritize the remediation process. Continuous Compliance - A Holistic Approach Summary of the key benefits delivered by Wipro's Cloud Security Compliance Assurance Program : Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. With increasing willingness to use wearable and share personal information over the web, patients want healthcare to be delivered as a service.
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Improving digital trust in the healthcare industry

Improving digital trust in the healthcare industry September | 2019 With increasing willingness to use wearables and share personal information over the web, patients want healthcare to be delivered as a service. Healthcare providers are catering to these expectations by building their digital ecosystem, with around 60% of them having made this a top priority. Availability of Protected Health Information (PHI) and Personally Identifiable Information (PII) over the Cloud has proliferated leading to innumerable cybersecurity challenges. Compliance requirements like Health Information Portability & Accountability Act (HIPAA), General Data Protection Regulation (GDPR) etc. have increased CISO/Privacy Officers' focus towards protecting PHI & PII data. Proliferation of Internet-of-Things (IoT) and mobile devices in healthcare has expanded the attack surface several fold. The rise of highly innovative and sophisticated fraudsters coupled with non-availability of skilled talent to counter new types of attacks has amplified the challenges associated with ensuring a secure digital ecosystem. Two examples to illustrate the extreme damage that can be caused by hackers are: Some key practices that healthcare companies should adopt to enhance digital trust are: Cloud security compliance assurance program Healthcare companies have to ensure secure storage and usage of sensitive patient data. Added to this are complexities related to multiple cloud systems connecting with each other within the healthcare ecosystem and advanced threats targeting them. It is best to adopt a common control framework incorporating the various regulations and standards governing the healthcare industry. A risk based approach is needed to decide on appropriate controls as required by the business. Blanket enforcement of all controls will be cost prohibitive. The risk assessment model used needs to use adequate change controls, traceability and auditable configuration controls. After the initial assessment and remediation, healthcare organizations must adopt automation methods to make continuous compliance to industry regulations and standards a painless process. Doing this can help healthcare companies improve their cybersecurity preparedness in an ongoing manner. 3rd party risk assessment and compliance program Changing patient expectations to deliver healthcare as a service has resulted in digital mobile engagement between the patient, hospital, doctor, insurance company and the pharmaceutical company. Such a distributed and seamlessly connected ecosystem has enhanced the chances of cyber breaches. Studies have repeatedly thrown up the fact that 41-63% of the breaches involved 3rd parties. Therefore healthcare companies need to adopt an integrated 3rd party risk assessment and compliance program. A robust 3rd party risk assessment and compliance program should classify vendors according to their criticality based on business impact and use different risk assessment questions and controls

depending on their criticality. Typical domains based on which the risk assessment is done are digital, cloud, financial, geo political, information security, human rights, privacy laws, health and safety and environment. A custom made risk scoring methodology is used based on the specific vertical the healthcare company belongs to and a weighted scoring method is used based on the responses across each of the domains. Threat feed information from external sources can be used to arrive at the overall risk score. Both domain based scores and the overall score should be factored while taking remediation decisions. Finally automation of this process will ensure repeatability and smooth functioning of the process on a continuous basis. Secure by design Medical device manufacturers and pharmaceutical companies operate in a highly regulated environment. The proliferation of IoT usage in this industry has underlined the need for ensuring continuous operational security. The usage of over the shelf software with a different lifecycle compared to the underlying device and the ever changing threat landscape during the lifecycle of the equipment has made 'secure by design' an imperative process rather than a nice to have process. Secure by design process involves the implementation of Secure Software Development Lifecycle (SSDLC) principles in the manufacture of medical devices and pharmaceutical manufacturing equipment. Food and Drug Administration (FDA) and European Union (EU) regulations and laws are applicable in this industry. During the software design stage STRIDE threat modeling framework is used to ensure a secure design. STRIDE checks for security threats around six categories of security threats – Spoofing of user identity, Tampering, Repudiation, Information disclosure (privacy disclosure or data leak), Denial of service and Escalation of privilege. Continuous vulnerability assessment and penetration testing using FDA & EU medical device and pharmaceutical industry regulatory controls and the popular OWASP top 10 and SANS top 25 vulnerabilities library ensures comprehensive security testing of the software under development. Immediate remediation of the identified vulnerabilities will ensure the software, when it is fully developed, is almost vulnerabilities free. This will make it almost impossible for hackers to gain access to the medical devices and pharmaceuticals manufacturing equipment to perpetrate their malicious acts. 24/7 managed detection & response services With innovative hackers on the rise and potential financial losses due to cyberattacks touching 100s of millions of dollars, it is important for healthcare companies to put in place 24/7 threat intelligence and detections systems. Security Information and Event Management (SIEM) tools are typically used to keep track of network traffic and provide real time analysis of potential threats and trigger security alerts for taking appropriate action. These tools are programmed to look for use cases developed based on typical cyberattacks. Some typical examples of use cases are – repeated failure of login attempts, repeated scanning of firewall ports from a single IP, malware check and detection of insider threat. Nowadays anomalous behavior based SIEM tools that look for potentially malicious behavior, identified using continuous threat feeds, are gaining ground. This is an improvement from the purely use cases based methodology as it can lag behind creative hackers who develop new techniques on a continuous basis. This uses threat hunting techniques in which humans based on information provided by continuous intelligence feeds actively chase down hackers by identifying malicious behavior early in the attack cycle. They then take evasive action to prevent such cyberattacks

from progressing. threat hunting uses a cyber kill chain model which systematically tracks down potential attacks through its different stages. Healthcare companies using managed detection and response services can ensure they are one step ahead of fraudsters and thereby keep their data, IT infrastructure and operations safe. Regular cyber resilience assessment Major cyber breaches can result in damage to reputation of the enterprise, disruption in business operations, financial losses and erosion of trust placed by customers. This necessitates adequate organizational preparedness to handle such breaches and recover from them quickly. An ideal cyber resilience framework should use a six stage approach: Prepare – Understand the organization and its cyber risk landscape Protect – Develop appropriate strategies and controls to effectively manage them Detect – Put in place processes to identify anomalies and breaches. Conduct regular control testing to identify control breaks Respond – Once a breach is identified the organization should deploy an incident response process. For major incidents an appropriate crisis management process involving C level management should be deployed Recover – Business continuity and disaster recovery processes should be invoked to move to business as usual once the situation has been stabilized Improve – Once the organization recovers and moves to normal business operations it needs to do a root cause analysis to identify what went wrong and derive learnings from it. The cybersecurity practices listed above are reasonably comprehensive and will help healthcare companies improve digital trust. Thereby the digital ecosystem can be leveraged to provide better and safe patient care. Kannan SBU Practice Director and Head -Health and Communications, Wipro Limited. Kannan has 17 years of experience in the cybersecurity domain as a business leader and has rich experience in starting and building the cybersecurity business in several companies. He has experience in starting and building the cybersecurity business into a multi Practice business stream consisting of Identity & Access Management Services, Application Security & Infrastructure Security Testing Services, Governance, Risk & Compliance Services and Global Security Operations Services including Managed Detection & Response Services. Kannan has a Bachelor of Engineering degree and a MBA in marketing. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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The need for secure-by-design approach to business process controls

About The Author Related Articles Contact Wipro Please fill the required details to access the content The need for secure-by-design approach to business process controls The ERP landscape is changing fast. Currently, most organizations use hybrid models of on premise and cloud (SaaS, private, etc.). This brings new inherent risks that have to be addressed by the controls framework. The business process controls framework has to be standardized across the organization, irrespective of the geography, and yet help achieve compliance with legislations like GDPR, SOX, etc. In most ERP projects, implementation or upgrade focus is on access controls, i.e. segregation of duties and business process controls are left for design and implementation post go-live of the ERP system. This means that go-live happens without identifying the risks and controls from a business process perspective. Organizations that want a robust ERP business process controls framework that is proactive and resilient rather than reactive before go-live, should think of security by design across the ERP from the blueprinting/ requirements gathering phase to ensure that controls are designed in a timely and effective manner at lower costs. Security by design in ERP needs to focus on continuous controls that are inline, real-time, detective and preventive across all transactional systems to ensure that the ERP is designed to achieve internal controls, regulatory compliance, and accounting standards. The business process control journey In an integrated business applications environment where transactions flow seamlessly across in-house and third party applications, platforms, ERPs, modules, cross-functions, and departments, the controls need to be embedded in the business processes. The suggested steps to identify the risks and controls across the business should be as follows: In brief, the need is to identify the risks, and propose controls across below-given activities in the ERP project to achieve a robust business process control framework across an ERP landscape: Best approach to business process control Security by design for business process controls across an ERP should begin in phase one of the project when a business process like procure to pay order to cash is being designed. These business process controls will ensure that risks at both the entity/business-process level are identified, and controls options i.e. configuration, customization or compensating controls are evaluated during business process design itself. This will lead to a one-time effort with little need to redesign business processes and controls later, after go live. Below are the key business process control focus areas during various phases of the ERP project to ensure security by design: Before the upgrade or implementation During the upgrade or implementation Design and build

technical controls as per the L1 to L6 design during this phase. During the build and test, look at proactively identifying additional risks at both the entity and business-process level, which might be product specific, so that additional controls can be designed accordingly. This is an iterative process until the risks are mitigated or are down to an acceptable level. After the upgrade or implementation Go live with all critical risks already addressed in the 'to be ERP system' using the security by design approach. Look at building best practices for monitoring transactions to identify additional risks and build new controls if required. Conclusion The secure by design approach for business process controls helps the organization with cost savings and business benefits. Any other approach would mean revisiting entire project lifecycle, beginning with business process controls design, build, test, and migration to production. Rajesh Udayamurthy Practice Head - ERP GRC, Consulting & Advisory Services -Cybersecurity & Risk, Wipro Limited. Rajesh is a qualified CPA and certified CISA with 20+ years of experience in the domain of finance, auditing, and ERP implementation and security. He has extensive experience in security design and implementation across ERP landscapes. He provides consulting and advisory services for Design of Access and Business Process Controls across ERP in greenfield and business transformation projects. He can be reached at rajesh.udayamurthy@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Combating Cyber Threats:

A how to for the CISO

----- Arcticle source ----- https://www.wipro.com/cybersecurity/combating-cyber-threats--a-how-to-for-the-ciso/ ----- Contact Wipro Please fill the required details to access the content Combating Cyber Threats: A how to for the CISO Abstract Digitization and the consumerization of IT have resulted in an increasingly connected world with enterprises adopting mobility to enhance collaboration, productivity and retain talent. Enterprise IT, however, is struggling to ensure the security of sensitive data in an environment where employees seek anytime, anywhere and any device access to corporate networks and applications. This is further compounded by the continually evolving threat landscape with hackers developing sophisticated tools to launch targeted attacks that the existing security tools are powerless to detect or prevent. Moreover, enterprise IT lacks complete visibility over end-user activities on unsecure mobile devices and organizations are not equipped with the necessary expertise or resources to manage end-to-end security in-house. To address these challenges and

improve their response to security incidents, organizations are partnering with strategic security service providers. This paper takes a look at the emerging security and threat landscape, the evolving role of the information security officer and the approach organizations need to adopt to overcome their security limitations. Introduction Today, enterprises operate under the looming threat of online attacks that can occur at any time. Successful attacks can wreak havoc with an enterprise's reputation, adversely impact business and employee productivity underscoring the need for adopting a strategic approach towards enterprise security. However, the in-house security function of enterprises often lack the requisite resources to detect and effectively respond to emerging and advanced threats forcing IT teams into reactive postures. As a result, several enterprises are outsourcing the management and implementation of their security programs to Managed Security Service Providers (MSPPs) equipped with advanced technologies, expertise, processes and tools. Enterprises can enhance security without investing heavily by partnering with MSSPs. Cyber Crime Reaches a New High Cyber criminals are successfully infiltrating numerous government and corporate networks and the range of attacks is expanding to include government-sponsored spying, watering hole attacks and zero day threats. Organizations are therefore finding it increasingly difficult to protect critical, proprietary and sensitive data. Going forward, the frequency and magnitude of security attacks is only set to increase. Also, the attacks will target a variety of components making their detection almost impossible. Given the advanced nature of security attacks, organizations will find it challenging to combat them effectively. Cyber criminals invest in developing sophisticated hacking tools to exploit security vulnerabilities and have successfully developed robust tools with advanced features such as anti-forensics, easy to customize application programming interfaces (APIs), etc. Cyber criminals use advanced exploit kits that take advantage of vulnerabilities in the browsers and their plug-in features, email spams, operating systems, infrastructure and applications. Traditional security solutions such as intrusion detection systems/intrusion prevention systems, firewalls, content filtering and anti-spam products are powerless to detect these attacks. Security Demands Are Growing As enterprises increasingly rely on security technologies to help alleviate risks and reduce vulnerabilities, security naturally is slated to become a top priority for enterprises by 2020. Organizations are facing cyber security threats such as data breaches that steal user/organization data, attacks on social media that exploit the trust of the brand, mobile malware attacks, sophisticated Distributed Denial of Service attacks particularly those on targeted host, and denial of service attacks. In most cases, security vulnerabilities are identified only after the organization has suffered the consequences of a security incident or attack with substantial impact on business. Such incidents are primarily due to improper assessment of business risk, poor security incident detection, inadequate monitoring and weak response mechanism/controls. Cyber Threat and Risk Landscape Malicious entities use a variety of methods to infiltrate corporate networks thereby eroding customer confidence. Figure 1:Depicts the different types of tools Enterprises need to "Gear Up" Enterprises need to change the way security operations are managed to handle the complex cyber threat landscape, its sophistication and the havoc it can create. They should invest to build the necessary infrastructure and hire skilled resources to proactively gain

intelligence on threats, traffic behaviors and risk that cannot be detected by traditional means. They should therefore hire threat intelligence analysts to proactively detect suspicious/malicious behavior. While some entities in the government and financial sectors have integrated this function into their organizational setup, a majority of the enterprises have not taken this step. Leveraging and seamlessly integrating existing physical and IT security systems with unified communications and flexible command and control systems is essential to enhance an organization's ability to foresee and protect itself from potential threats. Changing Role of Today's CISO In today's increasingly connected world, the role of the Chief Information Security Officer (CISO) has evolved into the role of a chief security officer encompassing physical and technical aspects of organizational security. Additionally, the CISO is expected to: Handling these responsibilities efficiently and implementing a comprehensive security program demand specific skills and expertise that may not be available in-house. As a result, despite investing substantially in security technologies, organizations continue to face data breaches due to improper implementation of security programs. In this scenario, CISOs should consider engaging with a service provider equipped with the expertise to provide the support that enables them to fulfill their responsibilities without compromising quality. While outsourcing will relieve the CISO from managing security systems in-house, lower total cost of ownership and capital expenditure besides providing better security expertise, the responsibility of a data breach will lie within the organization. Hence, CISOs should conduct a thorough investigation of the Managed Security Services Provider (MSSP) before entering into an agreement. CISOs should carefully examine the following criteria while selecting the MSSP: An MSSP's Role in the Current Landscape Several industry sources have predicted that the global managed security services market will grow at over 16 percent in the coming few years. It is evident from this data that organizations no longer believe that they are equipped to handle the evolving needs of information security. As a result, MSSPs will play a greater role in the security landscape and offer the following benefits: Conclusion The continual occurrence of security breaches has underlined the inadequacy of enterprise IT to protect confidential information and manage the security needs of the organization effectively. Enterprises can, however, engage with an MSSP and leverage their superior technologies, processes, tools and expertise to enhance security which is essential for protecting data as well as ensuring regulatory compliance.
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Integration of security in devops-a

bigger picture

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Integration of security in devops- a bigger picture The global paradox Software is the king and developers are the kingmakers. This statement indicates the growing demand for software, as the current business transformation requires interaction with computers or computer-assisted objects. This omnipresent computing has the potential to uptrend the incentives for misuse, thereby increasing the risk portfolio especially towards software. In the thick of things lies agile software development, a methodology rapidly adopted by organizations developing software. Being responsive to change, and delivering software at speed is the main essence of agile methodology. Security both as a process and as a technology requires intense planning and detailed analysis in order to arrive at the desired result. Even some of the best practices and frameworks encourage security testers to adopt manual intrusive approach for the best outcome. This brings us to the global paradox - whether to deliver software at high velocity, which propelled the need for competitiveness in the current marketplace, or focus on imperative security challenge to deliver secure software, perceived to have negative influence on the velocity. Defining new approach We should understand that the state of security today is similar to the state of operations back when DevOps was at its nascent phase. The velocity of change does create a major challenge and requires a new way of thinking about security. To ensure seamless alignment to agile methodology and integration with DevOps, a change in approach is required in the following aspects: DevSecOps framework Approach security as a journey, not a destination - this means developing a progressive security program. The program should not only focus on the technical aspects but also create the right framework that fits the business objective of the organization. To create such a framework, it is important to understand the eco-system governing the organization in terms of people, process, and technology. The below section enumerates best practices to adopt for building an effective and robust DevSecOps framework encompassing the golden triad: Fig. 1: Framework People The get-go for any successful implementation of a program are people – they are the starting point. The idea is to create a common goal among development, security, and operations by building the right culture and developing the required skillset to achieve the collective objective. Process

Organizations have to create acceptable and repeatable process to facilitate secure development and deployment without comprising the objective of faster delivery. Technology DevSecOps provides a new spin to technology driving more automation and innovation. There is a demand to both create new and extend the existing tool sets to cater not only to the security professional but also the developers. Conclusion DevSecOps as a practice is getting increasing popular as organizations look to tackle ever-evolving challenges in security. Imparting the agile mindset in security is challenging as it conflicts the well-known and agreed methodical approach. However, the transformation is dependent on how people, process, and technology can be brought together to achieve overall business objectives in this new paradigm. This calls for defining a new philosophy towards security thereby bringing an inclusive culture and building the right set of process and technology. In this era of digital transformation, security should be an influencing factor along with agility, availability, and scalability. Sriram Krishnan - Practice head, Cybersecurity & Risk Services, Wipro Ltd. Sriram Krishnan is currently the Practice Head for Security Assurance Services

within Wipro's Cybersecurity and Risk Services (CRS) division. He has over 13 years of experience in strategizing, leading, and implementing cyber security initiatives in organizations across product development, banking and big 4 consulting. He has worked and managed projects relating to Secure SDLC, threat modelling, secure coding, and penetration testing, and has advised on security best practices for global clients in telecom, technology, banking and financial services, and public sector. Sriram holds a Master's degree in Computer Application from Anna University and has completed the Chief Information Security Officer (CISO) Executive Education Program from the Carnegie Mellon University. He can be reached at sriram.07@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.

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How to fortify security in the era of Internet of Things

----- Arcticle source ----- https://www.wipro.com/cybersecurity/how-to-fortify-security-in-the-era-of-internet-of-things/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content How to fortify security in the era of Internet of Things There is an increasing pace in adoption of Internet of Things (IoT) by businesses globally as it has proven to open new revenue streams through new smart offerings. The rising phenomenon of IoT in conjunction with the expanding cyber-threat landscape opens new avenues for attackers to go beyond the enterprise boundaries. There is much concern about the edge platform, which is often regarded as one of the weakest links in the IoT chain. Understandably, this link is attracting much traction from the hacker community. For example, in the case of connected medical devices, security researchers have demonstrated how a hacker can gain unauthorized access and hijack an insulin pump to deliver fatal doses to diabetic patients. Hence, in an IoT ecosystem, it becomes imperative to secure device authentication to ensure that only trusted devices connect to the IoT infrastructure cloud. For enterprises, the common approach for securing communication between different systems today involves authentication by a password/certificate/key and secure network protocols. This approach has been derived from traditional Identity Management solutions, which are equipped for user/ human identity and access. In this traditional approach, user identity lifecycle has achieved maturity in terms of alignment with business to follow business logic and to provide need-based access. But, in the case of IoT, device identity lifecycle is blurred with too many supply chain entities, device ownership issues, data ownership on device, device authentication

and privilege access management on device. Hence, implementing a traditional approach is not feasible in the IoT model. Combating the IoT threats By being cognizant of a few key design principles while building the IoT solution, organizations can strengthen their cyber resilience controls to square up to any future IoT attacks. The design principles are as listed below: Device ownership: The Original Device Manufacturer's (ODM) responsibility for secure design should be limited to firsttime infusion of security keys. The ODM security key must be used for first-time connection and be replaced with another key while registering the device. This will ensure transfer of ownership from ODM to business owner. Privilege access: Common pitfalls of using either default passwords or even storage of passwords must be omitted while onboarding. Agent-based software can be used to generate a random key which can be time/location-based to access devices. That will ensure that there is no exchange of password data across the wire to mitigate any packet sniffing over the wire. Each device needs to carry its own unique token-based privilege access. Data security: Encryption should be on by default and wherever possible from edge to application interface over secure channels. IoT edge devices are constrained and may not have the necessary computing power to support secure communication. In such scenarios, random keys can be used to encrypt the data and decrypt at application end. So, even in the case of unsecure communication, data will stay protected. Data privacy: With stringent data privacy laws, it becomes important to manage privacy data right from the source/edge. Privacy data components must be masked/hashed before they become part of the data stream that flows over the wire. This will save costs to protect the privacy data across all upstream components. The same key can be used to decrypt the data for legitimate use for authorized entities. Automation: Considering the scale of IoT deployment where device volume is huge, it is not possible to manage operations manually. This is one of the practical challenges which drives IoT deployments to either use static keys/ certificates or extend the expiry times to higher limits to balance operational overheads (renewal, expiry) - eventually lowering the security. Certificate renewal/expiry should be automated to initiate the change whenever device connects or initiates (push/pull) action within the renewal time window. Integration capabilities: Having no common standards for IoT solutions during integration with underlying components, is a challenge. To overcome this challenge, the solution should have tighter integration capabilities with major cloud service providers (CSPs), device protocols, devices and internal/ external certificate authorities. Logs/events should be integrated with event management platform sufficing audit and security event correlation capabilities. The scope the Computer Emergency Response Team (CERT) and incident response team must be extended to cover edge layer. Device lifecycle: The device lifecycle must be maintained either physically or logically. If a device gets compromised, it should be blacklisted and keys should be revoked immediately, ceasing all access from this device. The hardware/software root of trust must be maintained within the device so that any anomaly should either encrypt or hash the entire device data. Approach to a secure future Businesses need to realize the urgent need for looking at security through the IoT lens, which will guide them towards the path of integration with their existing IT security systems. Unlike traditional user identity management, a combination of dynamic key algorithms and unique properties of device must be leveraged for any authenticated

operation or secure data transfer in an IoT environment. Also, a combination of security principles, as discussed above, will ensure defense in depth and tighter integration with CERT, paving the way for digital cyber resilient response mechanisms. Pankaj Anand - Cyber Security & Risk Services, Wipro Ltd. Pankaj, a certified security practitioner, has been associated with Cyber Security & Risk Services practice for more than 20 years. During this period, he played various roles across multiple domains of cyber security, traversing through consulting, delivery, system integration, advisor and practice development. In his current role, he is responsible for developing IoT security solutions within Wipro. He engages with various Wipro teams/ clients to ensure security in IoT solutions. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Quantum cryptography for data heliocentric world

----- Arcticle source ----- https://www.wipro.com/cybersecurity/quantum-cryptography-for-data-heliocentric-world/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Quantum cryptography for data heliocentric world The heliocentrism of digital world is data and everything whirls around data. Data-driven strategy is taking center stage and has transformed the traditional technology. Data is ubiquitous and many successful businesses have realized, data is a vital asset they possess. They rely extensively on data, for designing new business model, pricing, predicting the market, competitive insights. Today, sole existence of several global businesses is on data; for making complex decisions businesses rely on data for making meaningful intelligence. As more and more organizations are becoming data driven, securing the data is becoming the number one priority. Recent mega-breaches have demonstrated one commonality; data is the ultimate target which attackers are behindi,ii. They will get there irrespective of enterprises fortified network security. As the traditional approach of network security is failing, it is wise to protect the core (data) with reinforced data layer. Cryptography, one of the oldest domain in security, can be the most apt companion for data security. Perfectly designed cryptography with a robust algorithm and strong master key would deter attacker against all types of cryptanalysis attack. While, cryptography is prevalent as a network layer security, but is least adopted at data layer. This is due two main challenges in cryptography key management process: i. In multiple data breachesiii, it was found that data was encrypted, but due to improper implementation of crucial key management process, attackers were able to decrypt into plaintext data. Key

generation and distribution is an extremely intricate process to design, implement and sustain. ii.Inherent risks in traditional key generation and distribution process These inherent initial implementation challenges and operational issues in key management process have refrained IT and application teams from adopting as data-layer security. These limitations have weakened the case for security practitioners to strongly pursue with application team for implementing data-layer cryptography. Global technology giants and several start-ups are in a race to design and develop the fastest quantum computer, using quantum physics. As of the writing of this article, IBM had developed 50-qubitiv and Google announced a 72-qubitv system. With this speed not very far, quantum computers will be commercialized and becomes a commodity. The day this happens, attackers get access and start using the power of quantum compute and target traditional cryptography keys. Is there an elegant solution to this present and future problem? The answer is in quantum physics. The discovery of "uncertainty principle", in quantum mechanics, lead to innovation of "Quantum Key Distribution" (QKD) which can be the driver for exchanging secret key used in the process of encryption/decryption. QKD can transform the way cryptography is used in data encryption and decryption. Figure: Benefits of quantum key distribution Today commercial quantum security solution is available in the market, which is capable of secure quantum random number generator and quantum key generation and distribution. Quantum cryptography when applied to protect at the data layer, can defend data when in-rest, in-motion and in-use. Quantum random number generator (RNG) can be adopted for delivering true randomness in one-time pad encryption, the resultant ciphertext will be unyielding to cryptanalysis. Quantum cryptography has numerous application in various business, government and industries. Banking & finance - Core banking database Government - Citizens unique identifier database, classified data Defense - Voice and data communication Critical infrastructure - Authentication records Healthcare - Health records IP protection - Research and development documents The quantum technology will penetrate cloud, artificial intelligence and automation. This proliferation could have a destructive impact to traditional cryptography technologies. Enterprises opting for first-mover adoption will benefit from adequate time for planning and migration from traditional to quantum cryptography. Those who choose to wait and watch will have very less time for planning and implementation, which can lead to major business disruption. Let us proactively secure the core of digital world "Data" and leap into the quantum era. References

[1] https://oversight.house.gov/wp-content/uploads/2016/09/The-OPM-Data-Breach-How-the-Government-Jeopardized-Our-National-Sec urity-for-More-than-a-Generation.pdf [2] https://www.ftc.gov/equifax-data-breach [3] http://fortune.com/2016/05/18/linkedin-data-breach-email-password/ [4] https://www.research.ibm.com/ibm-q/ [5] https://research.googleblog.com/2018/03/a-preview-of-bristlecone-googles-new.html
Sridhar Govardhan - General Manager and Head of Cyber Security, Wipro Sridhar's core competency, accumulated over 18 years of professional experience, are in the business-critical domain of Cyber Defense, Information Protection and Regulatory Compliance. He spearheads organizational initiatives in building self-defensible networks, cloud security and promoting security conscious behavior in employees. Sridhar has acquired 11 industry-recognized certifications in the domains of IT, Information Security, Security Framework

and Secure Enterprise Architecture (SABSA, CISA, CISM). He holds a bachelor's degree in engineering and M. Tech from BITS Pilani; he has two patents (pending) in Cognitive Security. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.

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Eliminating the complexity in cybersecurity with Artificial Intelligence

----- Arcticle source ----- https://www.wipro.com/cybersecurity/eliminating-the-complexity-in-cybersecurity-with-artificial-intelligence/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Eliminating the complexity in cybersecurity with Artificial Intelligence Proliferation of mobility combined with faster internet has increased the scope of connected systems. What was once on-premise applications, with access restricted to corporate-approved devices, are now 'Appified' and 'Cloudified' for anywhere, anytime and any device access. This transformation has reduced the enterprise boundary and moved users, data and device out from within the enterprise perimeter. The threat landscape, as a result, has changed. Fraudsters have developed sophisticated skills and capabilities, and the lack of cybersecurity professionals-with the requisite skills and knowledge to counteract cyber-attacks-poses a challenge. Cybersecurity involves multiple issues related to people, process and technology (see figure 1). Cyber defenders are grappling with traditional, commercial off-the-shelf (COTS) security solutions that are built as one-size-fits-all, for all industries and segments. These security solutions heavily rely on predefined signatures for detection and prevention, and totally lack the context for human behavior. Fraudsters have found sophisticated ways to evade signature-based technology and are exploiting humans to gain access to the enterprise. Disruptions in traditional industries, and proliferation of pay-as-you-go models, are leading enterprises to enable 'Change' initiatives in addition to optimizing 'Run' investment. This, combined with the fact that government and regulators have placed priority on data security and privacy, is forcing CISOs to look at the most recent security technologies to develop, implement, continually monitor and report compliance. Artificial Intelligence: The future of cybersecurity Cybersecurity is crucial, as any failure affects the entire enterprise ecosystem and its stakeholders. Artificial Intelligence (AI), which is driving a revolution in almost every industry, can be the catalyst in increasing the effectiveness of cybersecurity. Human

intervention is significant in cybersecurity. Benefits of adopting AI are obvious in use cases involving voluminous event reviews and real-time monitoring. AI complements security efforts by providing persistent monitoring, and enabling a contextualized view. It can automate to learn and adapt instantly, and enable synchronous actions across security technologies. Properly designed and implemented, AI technology can: Bridging security technology gaps: Enterprises are constantly looking at adopting the latest and more innovative technologies that enable business growth. The fact that these emerging technologies may only have basic inbuilt security features need not be a hindrance to early adoption. AI can provide contextualized security, which augments the built-in security in niche products. Security teams can leverage AI to build adequate monitoring capabilities using the context of the solution deployed. Multiple real-time monitoring and reporting capabilities can be built using AI algorithms. For instance - AI integrates with the enterprise ecosystem and provides real-time contextualized alerts when data is uploaded to cloud storage, subsequently followed by download, and deletes the action when using a different environment. It can monitor upload/download files to cloud storage and for access by employees. Build next generation security teams: Producing actionable intelligence from Threat Intelligence (TI) is a subjective and humongous effort for security analysts, due to the volume and variety of intelligence. AI technology can assist their human counterparts by gathering TI, perform initial impact assessment of the intelligence by factoring in the enterprise landscape and then map the intelligence for action. AI plays the first and second responder roles and helps the security analysts with the required information for decision-making. Instill security culture in the enterprise: As per the Verizon data breach report1 43% of breaches begin with a social engineering attack. The axiom "employees are the weakest link in the security chain" is truer in today's context than ever before. Enterprises confront this challenge by raising awareness amongst employees via emails, posters and mandatory training. But the effectiveness of any training diminishes with time, if not practiced frequently. A successfully defended security threat by using the right technology is a point-in-time success for the security team. Fraudsters will target again with enhanced customized attacks to circumvent the controls. This puts employees as the last line of defense to detect the threat. AI can deliver continuous lessons for enterprise users. It will enable customized cybersecurity learning experiences. focused on user based on their behavior, contextualized to the user, enabling insights into attack type and the focus of the attack. AI has the inbuilt capability to learn and provide custom training to users. It sensitizes employees on security through visualizing the security posture of the systems used by employees via scoring; For instance AI bots connect email security gateways, collate all relevant information of blocked emails belonging to the phishing category, and do pattern recognition. Handle large and repetitive events: As anywhere, anytime and any device access increases, the attack surface also grows exponentially. This generates additional security events, forcing the enterprise to deploy additional resources for triaging, analysis, reporting and mitigation. A large volume of events at the Security Operations Center is commodity malware infections. AI technology can identify the class of malware, and its criticality. Based on the infection observed, AI can intelligently build contextualized remediation steps for the user as self-help.

This way a sizable chunk of the manual process is hyper-automated using AI. Bridge human and operating environment context gap in cybersecurity: Today's security problem is complex and involves human actions and the surrounding environment (location, device, user privilege and role). A properly designed and deployed AI, can observe, learn and add the required context to the event, providing accurate information for analysis. This will ensure the incident is escalated for further analysis, if the AI added context raises a red flag. For instance: A laptop loss is reported stolen, the security team and IT are notified - this could be a regular incident in many organizations. AI can contextualize this event with information: does it belong to a senior executive, sales, or an R&D employee? Is the laptop HDD encrypted? Another instance: A large firewall deny event, the security team is notified: a typical analysis will lead to the identification of the end system trying to connect. AI can contextualize the event with malicious traffic, malware infection history, and server sensitivity. Continuous monitoring and reporting: Data and privacy regulations have become high priority action areas for management. Enterprises are mandated to define, implement and continuously monitor the effectiveness of the controls, and report compliance to the competent authorities. Companies have dedicated in-house staff or have outsourced compliance management, leading to a significant increase in the cost of security. AI is an efficient and cost-effective way to achieve compliance. AI can continuously monitor all the deployed controls and alert compliance in case of irregularities. After achieving a mature stage, AI can be trained for auto-remediation, so that the control status is automatically reinstated. An army of AI bots can provide a unified, layered security for the enterprise - sufficient to counter the capabilities of advanced cyber-attacks and enhance the overall security position of the enterprise. Reference: [1] - http://www.verizonenterprise.com/verizon-insights-lab/data-breach-digest/2017/ Sridhar Govardhan - General Manager and Head of Cybersecurity, Wipro Ltd. Sridhar's core competency, accumulated over 18 years of professional experience, are in the business-critical domain of Cyber Defense, Information Protection and Regulatory Compliance. He spearheads organizational initiatives in building self-defensible networks, cloud security and promoting security conscious behavior in employees. Sridhar has acquired 11 industry-recognized certifications in the domains of IT, Information Security, Security Framework and Secure Enterprise Architecture (SABSA, CISA, CISM). He holds a bachelor's degree in engineering and M. Tech from BITS Pilani; he has two patents (pending) in Cognitive Security. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Dealing with APIs Threats:

Are you ready?

----- Arcticle source ----- https://www.wipro.com/cybersecurity/dealing-with-apis-threats--are-you-ready-/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Dealing with APIs Threats: Are you ready? Protect your API from Internet threat Last couple of years, APIs have established themselves as an essential part of an enterprise architecture. Security plays a tremendous role in API management as the APIs expose enterprise assets directly to the Internet. However, there is a problem with the common approach to API security. It is highly focused on implementing OAuth and Op and tends to neglect other important aspects of a complete API security solution. This fictional story illustrates what happens when an individual decides to hack or exploit your APIs and how the IT security manager can counteract such a threat. Two fictitious characters, John (the hacker) and Michael (the security manager) will help us to shape up our simplified storyline. Multi-faceted aspects of API security While focusing on threat protection, it is equally important to understand that API security is a much broader topic. The table below summarizes all areas which should be considered as part of an end-to-end API security solution: The background John (hacker) has heard that the company Acme Corp based out of HackMeLand, where Michael (Security Manager) works, has recently deployed the Application Programming Interface (API) version of some geo location services they used to sell as a stand-alone application. As many other Internet companies, such as Google, they realized that they can monetize the usage of their core service by making it available to developers for a fee as public API. John's guess (and hope!) is that, as they are new to APIs, this first version of their API will be buggy and/or possibly not very well protected. Although Michael is not an amateur in his business he is relatively new to API security. He understands that while it has much in common with Web applications security, it also has its peculiarities. Michael asks his trusted partner, ApiAcmeConsulting to help. The battlefield To begin with ApiAcmeConsulting provides Michael with the 'whole picture'. To protect something, it is important to understand the different layers between the hacker and the valuable assets (in the case of Acme Corp., their geo location database) and from where the attack can arrive. The diagram below reproduces a common scenario. The hacker's weapons John has a long and despicable record of Web application hacking during which he has developed a few techniques. The OWASP (Open Web Application Security Project) organization is the established authority in Web application security related matters. It keeps track of the vulnerabilities and attacks occurring on the Internet on their website. The list of top 10 Internet threats can be found here1. Let us give a closer look to the most common ones. The security manager's ammunitions Michael and ApiAcmeConsulting decide to sit together to elaborate a strategy to counter internet threats. ApiAcmeConsulting suggested to work on the gateway configuration, to enforce physical security and to activate all security policies designed to

address the threats described in the previous section. The API gateways implement the gateway architectural pattern . The objective is to avoid direct access to the Web services and rather have a mediation layer: the gateway. From a security point of view this makes much sense, as with the gateway we have a single point of security policy enforcement, another common security pattern. As per the mentioned security pattern the gateway is policy enforcement point (PEP), policy administration point (PAP) and policy decision point (PDP) in one single compon-ent (although different vendors might have different modules for those logical blocks). API Gateways security rules called policies. Policies can be activated on proxies and implement specific controls to address the different threats. Proxies are logical containers for all the pre and post processing of client requests and might be required before they reach the service itself. As per ApiAcmeConsulting's suggestion Michael also instructs his team to integrate the API gateway with their SOC (Security Operating Center) incident management tool. This will ensure that anomalous behaviour is detected and (depending on the gravity) an alarm is triggered. The battle Assuming he has previously managed to get some valid API keys, John sends a malicious request with recurring XML structures. The gateway checks the request before passing it over to the background geo-location service as part of the normal in-transit policy processing. One of the configured security policies detects that the request is malformed, drops the call and sends an alarm to the incident management tool, which in turn alerts the SOC team. As first measure, the team can deactivate those keys, block the requestor. Off-line Michael will work with the API business manager to investigate the case further. Some of the improvements and best practices ApiConsultingAcme could recommend to their customers are: The way ahead APIs give businesses a wealth of new and unforseen opportunities to amplify their reach by empowering the larger community of application developers. API security however is not an option, neither should it be treated as stand-alone. Rather the security team has to own it and make sure that API security is aligned, in terms of policies and controls, to the company's overall security strategy. References Vamshidhar Babu Seetha is a Cloud Security Architect at Wipro. Vamshi has over 16 years of Security experience in IT Industry and has an expertise in Cloud Security and Enterprise Security Solutions designing and implementation across various industry verticals across the multiple regions. Nicola Venditti is a Principal Security Consultant at Wipro Technologies based in Zurich, Switzerland. Nicola has over 15 years of experiences in the IT security industry and has worked on large engagements across the EMEA region. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Harnessing Risk Intelligence for Effective Business Decisions

Harnessing Risk Intelligence for Effective Business Decisions An effective Risk Intelligence Solution framework can help businesses identify risks near real-time, enabling stakeholders to take actions and decisions based on priority. One of the largest financial services organizations in US had as many as 29+ risk management applications in different business units to address their risk and compliance needs. The organization had established a Policy & Control Framework to meet the regulatory and internal policy mandates. Each business unit had maintained different risk taxonomy and carried out risk and control assessments. Though several initiatives were undertaken, the Governance, Risk and Compliance Management activities were driven by stakeholders with different objectives. The organization lacked an integrated view of risks, vulnerabilities, and non-compliances to policies and controls. The organization struggled to standardize its risk functional organization structure, business processes, risk taxonomy, reports and dashboards. Multiple frameworks and overlapping compliance requirements that were managed in silos caused duplication of effort and inefficiency in compliance management processes. Understanding effective risk management Risk intelligence is the ability of an organization to gather information or events that will help to identify the uncertainties; present them in the business context; enable the organization to make more informed business and security decisions in a proactive manner. To manage risk effectively, the criticalities of business processes and enterprise infrastructure including applications, servers, network devices, data centers and mobile devices, the key is to have a solution that will bring the business context to the systems. With the process and system profiling performed, having known which are the critical business processes and systems to be protected, half the battle is won. The other aspect is to understand the enemy. What different risk events are causing uncertainty to the processes, people and systems? How to collect them and present them with the business context? How to prioritize the remediation? How to get a multi-dimensional view from different stakeholders' perspective - business perspective, asset perspective risk/-threat perspective, compliance and control perspective. How to perform all these in a proactive manner and at the same time not get bogged down with innumerable battles? Risk Intelligence Solution Many organizations do not leverage proactive data monitoring and risk analytics in their risk and compliance initiatives. Traditional methods and siloed risk assessments, control monitoring efforts of the enterprises are unsuccessful. Hence, there is a need to approach governance, risk and compliance processes differently

by organizations. Risk Intelligence Framework leverages risk data analytics, artificial intelligence, machine learning techniques and uses past incident data, abnormal events, internal and external risk information, audit findings, control test results, threat feeds, feeds from anomaly detection platforms, security management tools and ERP based risk tools . The impact of various events, incidents and control failures are analyzed to provide the organization a view of risk and changes in risk scores, which in turn help to take the right decisions. The Risk Intelligent Solution integrates different risk domains (including business strategic risks, business process risks, functional/ operational risks and information technology risks, cyber risks) to provide a holistic view of the risk posture to relevant stakeholders. The solution is built by leveraging big data anomaly detection platform, risk analytics engine and integrating into the Governance, Risk and Compliance (GRC) platform. The solution architecture, driven by industry best practices and frameworks, help the GRC process owners to address their ROI goals as well. Solution implementation approach The Risk Intelligence framework and solution architecture can be implemented using any leading GRC tool available in the market. It is tool agnostic, and can be rolled out using the Assess - Design - Deploy methodology with a GRC tool. It would be fundamental to understand the current state of GRC process in any organization. Organizations should have clarity and a well-defined roadmap in terms of their GRC maturity roadmap. GRC benchmark study and maturity roadmap would help organizations to assess where they stand and where they intend to reach. This would help to drive and strategize the whole GRC journey. It's a consultative approach to design and conceptualize the Risk Intelligence framework and solution by understanding the organization's business goals, GRC priorities, level of GRC maturity, resource availability, compliance requirements, etc. The blueprint must be prepared based on the requirement gathering inputs and signed off by the process owners. GRC processes have to be standardized across the organization and a common framework has to be implemented across business units. Organizations have to choose the right and best suited GRC tool for automating the whole GRC process. In this phase, functional and technical consultants have to work together to develop and deploy the framework and solution. Based on the selected GRC tool, the organization has to invest its resources in development and deployment of the solution, which has to be tested and transported to production by adhering to the SDLC processes. Key value proposition An effective Risk Intelligence Solution framework will help organizations to identify risks on near real-time basis, which will enable stakeholders to take required actions and decisions based on priority. The solution framework will enable proactive risk and compliance management through data analytics and near real-time risk dashboards. This will give the senior management better control and visibility on governance initiatives. Looking beyond GRC automation As disruptive technologies are changing the landscape of business models, risk managers would need to strategize approaches for addressing digital risks due to large scale adoption of Cloud, Mobile, Internet of Things (IoT), etc. Figure 1: Risk Intelligence Framework The Risk Intelligence Solution framework also has elements to extend and leverage cognitive technologies such as artificial intelligence and machine learning techniques in risk management space, which can transform organization's GRC initiatives and the way they manage their risk and compliance programs today. With

cognitive technologies being explored and adopted by GRC programs, they can generate deeper risk insights, limit exposure and reduce the impact of issues/ events.   Anitha Selvaraj is a Senior Practice Manager, Cybersecurity and Risk Services, at Wipro. She is currently responsible for solution development, leveraging industry leading GRC automation platforms and tools like Archer GRC, MetricStream GRC, OpenPages GRC. She can be reached at selvaraj.anitha@wipro.com Kiran Kumar Gudekota is a Senior Practice Manager, Cyber Security & Risk Services (CRS) at Wipro. He is currently responsible for Risk & Compliance solution conceptualization and transformation. He has over 15 years of experience in GRC Consulting, Internal Audit, Fraud Examination, managing large Compliance programs and implementing Risk Management programs. He can be reached at kiran.gudekota@wipro.com. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Hyper-Automation Candidates in Security Operations Center

----- Arcticle source ----- https://www.wipro.com/cybersecurity/hyper-automation-candidates-in-security-operations-center/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Hyper-automation Candidates in Security Operations Center Remember the days when customers would call their banks or customer care to find the status of money debited/credited, credit limit, billing dates etc.? The calls were answered by customer care associates. Over the years, we have seen that all of this information is rendered by an Interactive Voice Recording system and there is very little-to-no human interaction for most of the simple queries you may have for a service provider. There has been a drastic change in the back ground where a machine is doing the job that, who knows, how many customer care associates were doing. The changes behind the screen is not visible to the customer, however the customer still gets the requested information. Let's now try to relate that to our cyber security life and draw a parallel. Based on the survey conducted by Black Hat in Aug 2016 "Nearly three-quarters (72%) of respondents felt it is likely that their organizations would have to deal with a major data breach in the year ahead. Approximately two-thirds of respondents said they did not have enough staff, budget, or training to meet those challenges". The gap between what we expect will happen and what we need to do is widening. A team from Wipro participated in Black Hat and DefCon conferences. Reputed and established vendors were showcasing their capabilities and were vying against each other to tell how their product fares better than

others in the market. Stall after stall, more and more jargons, dashboards and survey results were thrown at us. A portion of the estate at the Black Hat business hall was allocated to "Innovation City", where little known organizations were bustling with people. We ran into two vendor booths, Phantom and Demisto. Phantom and Demisto, call themselves Security Orchestration / Incident Response Platform and they both functionally do the same thing. They automate tasks that are simple, flow based and repeatable. Tasks that rely on standard operating procedures or on playbooks can be digitized and can be accomplished by running scripts. Let's consider an example of a phishing email which keeps the security team busy. Once there is a trigger on a phishing email, we can have the platform perform the following tasks automagically: All of this happens with the existing environment in a non-disruptive manner. It thus relieves an analyst of mundane jobs and gives more elbow space for the analyst to contribute higher up in the value chain. So, do these Security Orchestration / Incident Response Platforms address the challenge of shortage of resources and having to deal with an incident or a breach in the near future? To a great extent, yes! Efforts and tasks accomplished with a tool are more measurable than tasks accomplished manually. Hence usage of these tools in an organizations would make tasks accountable, auditable and because it is automated, it becomes efficient in terms of time. Apparel and merchandise is delivered to customers via drones, driverless cars, robotic and remote surgery are all a reality today. There is no reason why Security Incident Response should not take the next big step, automation! Prasanna Prabhakara - Lead Consultant, Information Security, Wipro, Ltd. Prasanna Prabhakara (GCFA, GREM) has 12 years' experience in Information Security and has worked in various capacities such as Security Analyst, Lead Security Analyst, Trainer in Incident Response, Intrusion Analysis and as a Senior Incident Responder. Prasanna has rich experience in End-point Malware Detection and Response, Forensic Analysis, Malware Analysis and has worked on investigation of some very sophisticated cyber-attacks during his stint as an Incident Responder. He is currently working as a Lead Consultant in the Security Intelligence Analytics and Assurance practice under the CRS in Wipro. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Resilience Against Cyber Attacks

----- Arcticle source ----- https://www.wipro.com/cybersecurity/resilience-against-cyber-attacks/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Resilience Against Cyber Attacks Protecting Critical Infrastructure Information The recent increase in the frequency and impact of cyber-attacks have kept Critical Infrastructure companies on their toes, fearing the worst for their

organizations if an attack occurs on their critical infrastructure. A recent news article published by the New York Times states that cyber attacks are on the rise against corporations in the United States, with a particular focus on Energy companies. Reports of an attack similar to the Shamoon – Saudi Aramco attack are expected but the impact of such an attack in the United States would be of a magnitude much greater than Shamoon. These threats have made governments across the world wake up and take notice of Critical Infrastructure Protection as one of their highest priorities. Why is Infrastructure Critical? An infrastructure becomes critical when a disruption to this infrastructure results in irreversible and enormous loss (e.g. loss of life, environment etc.). The growing threat of international terrorism led policy makers to reconsider the definition of "infrastructure" in the context of specific non-functional requirements (NFR) of the business. These NFRs included Security, Performance, Availability, Integrity and Confidentiality (SPAIC). Each business has its own definition of SPAIC based on the regulatory requirements and country specific policies. Critical Infrastructure is always associated with regulatory requirements and key resources who are directly handling the critical infrastructure. As such, any intentional or unintentional disruption to these will have a significant impact on the environment and life. The following areas are considered to be a part of Critical Infrastructure: There is an impending need for countries to develop a national critical infrastructure strategy which will provide a comprehensive and collaborative approach to enhance the resiliency of critical infrastructure. This common approach will enable partners to respond collectively to risks and target resources to the most vulnerable areas of critical infrastructure. Guidelines to Defining a Successful Critical Infrastructure Protection (CIP) Strategy Industry leaders suggest that the government and the private sector should collaborate to protect a nation's critical infrastructure. This collaboration calls for the development of trusted partnerships to build regulatory requirements, governance processes, and resilience options jointly based on the existing mandates and responsibilities. The strategy should outline mechanisms to: 1. Create a government owned CIP Forum to share information about potential threats and disruptions through a highly confidential government owned body. Discussions in this forum should: 2. Create guidelines to protect critical assets and information 3. Build country specific risk frameworks for each critical infrastructure with guidelines to define asset criticality 4. Build a RACI (responsibility, accountability, consulted, informed) matrix The Strategy should: Actionizing the Strategy for a Safer Future Level 1: Define Critical Infrastructure and Assets Level 2: Build Partnerships Level 3: Risk Management Level 4: Regulate and Standardize the CIP Security Cyber Security and Critical Infrastructure Cyber security for critical infrastructure depends a lot on the sector to which the critical infrastructure belongs. Its objectives are: Broadly, cyber security can be classified into the following components for all Sectors: Illustration: Example of Industrial Control Systems Networks Cyber security is becoming important for critical infrastructure due to the latest technology implementations like IP communications, BYOD policies etc. Similar to IT Infrastructure, Critical Infrastructure has its share of vulnerabilities that can't be addressed due to the proprietary nature of the OS and hardware. These devices are not regularly patched as the hardware patch release cycle is adhoc or longer than software patches. This being the problem statement, the critical

infrastructure component becomes vulnerable to malwares, advanced persistent threats and service disruption. In general, ICS networks lack features like monitoring, metrics, analytics and intelligence to predict threats. The solution should be capable of handling known problems and zero day vulnerabilities. Solution for securing Industrial Control Systems Networks The solution platform should address the issues mapping the solution-to-sector specific value chain, applying global regulatory requirements and defining points of vulnerability to address known and unknown threat vectors. Cyber Security Solution Roadmap Cyber security for critical infrastructure should be broadly developed as per the roadmap shown in the illustration below The level of maturity of a Cyber Security solution for CIP needs to progress through the stages shown in the illustration, gradually making the transformation from Core Security Services to Security Convergence and finally to Integrated Security Solutions – which involve predictive analytics and intelligence spanning business processes and architecture. Conclusion The implications of a Critical Infrastructure collapse are huge and need to be looked at from a long-term perspective. Close synergies between the government and the private sector need to be present to develop a comprehensive and robust strategy for thwarting off impending threats from politically motivated groups, cyber criminals and other such rogues. Steps should be taken to ensure CIP across all layers of CI Architecture, with components addressing business and operational processes, applications, data, communication, network and perimeter for IT and Operations Technology Network. Saritha Auti, Practice Head - Enterprise Security Solutions, Wipro Saritha has over 17 years of experience in Enterprise Security & Architecture, spanning a wide gamut across product development, application security, systems integration, Enterprise Architecture and security architecture consulting. She heads Enterprise Security Architecture and Industrial Security Practice for Wipro with specific focus on Critical Infrastructure Security. She has devised several security solutions and architecture strategy for Oil & Gas, Telecom, Financial Sectors, Utilities, Defense, and has lead Security Architecture transformation programs. Apart from technology she is an ardent trekker, culture enthusiast and loves connecting with people. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Data Privacy for Cloud Based Analytics

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Wipro Please fill the required details to access the content Data Privacy for Cloud Based Analytics Data security and privacy in cloud based analytics platform While a cloud based solution has its own set of security and privacy challenges, data analytics also brings in the stringent aspects of data privacy. As data privacy deals with the personal/customer data, it enhances customer experience and anticipates an increase in top line/bottom line. To address cloud security, the (privacy) controls are implemented at different layers such as infrastructure, network, application and data (at rest, in motion). However, with a cloud based analytics platform, we need to adhere to data privacy regulations and also provide the required outcome for the organization to make informed decisions. Data privacy applies to the processing of personal data, namely any information relating to an identified or identifiable natural person. In the context of Big Data, the focus is more on indirect identification of personal data by following data privacy regulation, such as GDPR principles, notice, choice, consent, purpose of processing, privacy by design, etc. Risk based proactive approach to data privacy Organizations must take a risk based proactive approach to data privacy by creating data privacy standards and privacy control frameworks which can be applied consistently across all geographies and solution(s). This would minimize complexities and maximize data protection. Such a framework must provide guidance on what constitutes personal data, what are the requirements for personal data collection, process of managing consent, rules for accessing and using personal data, how to classify and protect personal data, implement the right set of processes and controls, based on the risk. Also, guidelines must be created in a way that integrates privacy as a key component from design to delivery of the products and services. In addition, privacy requirements into the initial phase of the software development life cycle, which will then decrease compliance risks and improve customer confidence in the product or services, will need to be incorporated. Key design principles in data privacy in the Data Analytics platform Data Minimization Collects data that is necessary to provide a feature or service. Conduct a Privacy Impact Assessment to define the exact data processing needs thereby limiting data to what is essential. Data Hiding Hides personal data and its interrelationship from plain view. Leverages data anonymization solutions to anonymize the data at source. Data Separation Personal data will be processed in a distributed fashion in separate compartments whenever possible. The data separation controls will be implemented at the data center level, to meet the data privacy regulations in different countries. Data Aggregation Processes personal data at the highest level of aggregation, and with the least possible detail, yet is still useful. Consent and Notice Informs data subjects about the data being collected and takes consent from individuals at the time of data collection. Data with customer consent should be used for data processing in Aata Analytics. Security Controls Implements proper security controls such as firewalls, anti-virus, access controls, authorizations, audit logs, data encryption motion and rest, masking, anonymization, etc. Ways to approach data privacy in Cloud Analytics platform To secure sensitive data within the analytics ecosystem on the cloud, data protection is applied to sensitive data close to the source, i.e. up-stream application by integrating the application/ job with Formation Preserving Encryption. The data flows in an encrypted format to the cloud and is made available for processing and analytical purposes without the risk of exposure. Applications/tools running on the

cloud works on the encrypted data for reporting or analytical purposes. Format Preserving Encryption (FPE) preserves the format of the sensitive data fields, while providing AES level of encryption strength. Here is a typical example of FPE: Figure 1: Data Privacy in Cloud Analytics Platform All the data, collected from different data sources, needs to be classified to create thePersonally Identified Information (PII) inventory and define which data elements need to be anonymized and de-identified with the appropriate risk level and consent details while capturing the data. The data, before being sent to the Cloud Analytics platform, needs to be encrypted with de-identification techniques such as format preserving encryption, tokenization, and masking. It can then be sent to the Cloud Analytics platform for data mining and analysis over the encrypted communication mechanism. All data mining, correlation and reporting is performed by the analytics platform. For consumption of the data by other on premise applications, the data re-identification techniques need to be applied on need based. While dealing with data privacy issues, the solution needs to address data security controls (data at rest and data in motion), cloud infrastructure security controls (Firewall, Anti-virus, IDS, IPS, DDOS, etc.), technical tools (for example, authentication and access control) and security assurance (penetration testing, vulnerability assessment, etc.). Along with technical security controls, the solution needs to address governance controls at process (for example, approvals for access) and people (for example, training, background checks, etc.). This approach holistically addresses data privacy challenges while adhering to data privacy regulations, along with other security controls, making the security solution robust and scalable. Srinivas Morishetti Cybersecurity & Risk Services- Srinivas Morishetti has 16 years of experience in the IT industry and 14 years in Cybersecurity & Risk Services. As the principal consultant, he is responsible for thought leadership, solution strategy and transformation in application security services. He is adept at handling risk and compliance, application, infrastructure, cloud and data security solutions, and service delivery management across industry verticals. He can be reached at srinivas.morishetti@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Risk based approach

to data privacy

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approach to data privacy Risk based approach to data privacy can help businesses manage global data privacy risks, apply, calibrate and enforce controls based on the risk exposure, in a manner that is flexible and more agile. Personal information has huge potential to create economic and social value for both the customers and the organizations who serve them. The ability of the organizations to acquire and use personal information to launch new products, services and enhancing customer experience has increased immensely with innovative use of technology; however, it also increases the risk to the privacy of personal information. Ensuring data privacy through every stage of information life cycle (collection, storage, processing, retention, sharing and disposal) has become very critical for organizations to stay relevant. Evidently there is a need for organizations to take a risk based approach to data privacy and protect personal information to maintain business competitive edge. Risk based approach to privacy is a process that allows organizations to identify potential high risks and focus their efforts towards high risk areas. This white paper explores a risk based approach to privacy with the intention of helping the organizations to manage data privacy effectively. New horizons – new risks Technology is growing in a rapid manner to enable business growth and the amount of data is proliferating at an exponential rate. The risks to privacy of personal information has been and will continue to be affected by automation and adoption of new technologies in every industry and every geography and across all functions. Figure 1 : New Technology Adoption & New Business Models Bring Privacy Risks The key trends that are altering the threat landscape include adoption of Cloud, expanding usage of mobile applications, social media, location based services, machine to machine communications, Internet of Things, mobile advertising, wearable devices, etc. With the privacy regulations enforcing principles like 'Right to be forgotten', 'Privacy by Design', 'Data Portability,' etc., a checkbox approach to data privacy is not sustainable. A paradigm shift in privacy mindset is necessary to mitigate these risks arising due to usage of these disruptive technologies. Data privacy challenges All the data privacy acts provide only guidelines for privacy compliance and do not contain any control framework or standards for ensuring compliance. The privacy laws are based on principles; hence, they are subject to interpretation, leaving it both to organizations to decide on how to implement these principles, and to regulators on how to interpret and impose the law. Figure 2 : Current State of Data Privacy in a Hyper Connected Ecosystem Data privacy challenges Today there is no standard methodology to implement privacy controls and comply with the privacy principles obligations that are imposed by the regulators. To comply with the privacy principles, each organization has to derive their own methodology for achieving compliance. The privacy compliance becomes complicated when an organization services customers across multiple geographies where multiple country regulations come into the picture. Risk based approach would bridge the gap between the privacy principles on one hand, and privacy controls on the other, using a methodology that would help organizations to apply, calibrate and implement privacy requirements appropriately and effectively. A risk based approach to data privacy can help organizations enforce controls based on the risk exposure, in a manner that is flexible and more agile. Proactive approach to data privacy Organizations must take a proactive approach to data privacy by creating a data privacy standard and privacy control

framework, which can be applied consistently across all functions and geographies to minimize complexity and maximize data protection. Such a framework must provide guidance on what constitutes personal data, what are the requirements for personal data collection, process of managing consent, rules for accessing and using personal data, how to classify and protect personal data, implement the right set of processes and controls based on the risk. This should be followed by creating a data privacy strategy that would help the organizations to manage the privacy of data life cycle right from data collection, storage to disposal. The road ahead Data is becoming a fundamental asset in the digital transformation of economies. The increasing use of disruptive technologies has created an unprecedented flow of personal information. Data subjects are becoming increasingly aware of their privacy rights and are rightfully demanding more control over how their personal information is used, shared, and assurances that the privacy of their personal data will be protected. Organizations across industries and geographies continue to be challenged by disruptive technologies. The boundaries of the digital world are not fully established. The data breaches continue to make headlines and data privacy has become a focal point of discussions in boardroom. Data breaches can do irreparable harm to the organizations brand equity, credibility, trust and customer relationship. It is apparent that there is no one-size-fits-all solution that is available to comply with the ever evolving data privacy regulations. There is a need for organizations to take a comprehensive risk based approach to privacy where globally defined privacy risks are identified and countermeasures are built. This would be far more effective and more likely to respond to cross-border requirements. Ramkumar Narayanan is a Senior Practice Manager for Wipro's Cybersecurity & Risk Services (CRS) business. He heads the data privacy and data security governance practice within CRS, and is currently responsible for making Wipro's customers succeed in their data privacy and security journey. He can be reached at ramkumar.narayanan@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. ======================

Demystifying machine learning for threat detection

----- Arcticle source ----- https://www.wipro.com/cybersecurity/demystifying-machine-learning-for-threat-detection/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content Demystifying Machine learning for threat detection Defending organizations against cyber threats is becoming an increasingly sophisticated science. Detailed analysis of the high profile data breaches at second largest retailer

in the US or the more recent bank heist confirm that determined attackers breach into organizations months before they finally carry out their objective and are able to evade detection. Further to this, as a growing number of systems and devices across the world get connected to the Internet of Things, attack surfaces have expanded, leading organizations to examine new ways to protect their assets. There is an ever-growing acceptance among the Information Security Officers (ISOs) to the fact that it is just a matter of time before their organizations experience a significant IT security breach. This paradigm change in the drivers influencing information security strategy of organizations has also influenced the shift in focus from protection against threats to timely detection and effective response to these threats. Challenges in identifying 'low and slow' breaches Protection and detection security controls from the past decade have primarily used signature based approaches to detect threats. However, this approach has a few downsides: • Controls could only detect previously known threat vectors and actors; • Controls including security information and event management solutions (SIEM) could only review and assimilate information over a short period of time; • Mature SIEM threat detection use-cases reflected the organization's collective knowledge of previously known (or well researched) threat scenarios. These solutions are ineffective when indicators of compromise of a 'low and slow' breach have to be accumulated over a long period. Leveraging machine learning Detection of these 'low and slow' threats primarily require: Over the past 18 months, the security controls domain has been abuzz with commercial solutions using machine learning capability to detect these previously unknown threats. Machine learning is a type of artificial intelligence (AI) that provides computers with the ability to learn without being explicitly programmed. Such algorithms are often categorized as being supervised or unsupervised1 . Supervised algorithms can apply what has been learned in the past, to new data. In the context of threat detection, it manifests in the form of: For example, by analyzing large numbers of remote access tools RATs, a supervised machine learning model can learn how traffic from these tools differ from normal traffic. Supervised learning algorithms support detection of threats on 'day one' of their use within the organization's network and do not have an organization specific learning phase. Unsupervised learning models augment their intelligence specific to the customer's environment. While supervised learning models are useful to provide day one benefits, detection of some threat scenarios can only be learned specific to each customer's environment. For example, to determine anonymous employee access behavior. Unsupervised learning algorithms focus on understanding what makes the customer's IT usage pattern unique and identifies abnormalities when they occur. The risk carried by unsupervised learning algorithms is, that it may learn bad behavior as the baseline if it is exposed to bad usage. In general, this category of algorithms has a higher degree of being associated with false positives. Adoption of machine learning capabilities According to me, the selection of machine learning capabilities is underpinned by the following belief: Given the above belief, the endpoint is the best pivot point to start the journey towards adopting machine learning capabilities for threat detection. The class of solutions generally categorized as Endpoint Threat Detection and Response (ETDR) offers considerable promise. Beyond threat detection, these solutions also provide extensive threat containment and forensics capabilities on the endpoints. While the ETDR solutions provide a granular

visibility to the endpoint threat surface, organizations do have the challenges with the roll-out and lifecycle management of their agents on the endpoints. Further to this, with the disruptions such as BYOD and IoT, the form factor of the endpoint is constantly changing and the agent based approach may not be scalable in-time. For such organizations, the network provides the best pivot point to detect these 'low and slow' threats. It is said that 'the network never lies'. An interesting category of solution is Network Traffic Analysis (NTA). Through the intelligent use of supervised and unsupervised learning algorithms coupled with host and asset context as well as tracking the threat progression over time, NTA solutions offers a quick way to gauge the organization's security posture from the perspective of these 'low and slow' threats. Given such solutions can be introduced in the organization's network with least amount of intrusive changes, organizations find it very easy to adopt them. Finally, pivoting around the usage of user's access credentials is another approach to leverage machine learning capabilities to detect these 'low and slow' threats. This segment of solutions is classified as User and Entity Behavior (UEBA). While it offers an alternate approach towards leveraging machine learning threat detection capabilities; it primarily leverages unsupervised learning algorithms for threat detection. Key use-cases covered by this segment of solution include privileged account usage analytics, insider threats, data exfiltration, account sharing, etc. Finally... While the selection of the solution is specific to each organization's context, the following recommendations can help in the selection of the right solution. It would be an overstatement to suggest that machine learning can effectively solve any cybersecurity problem. However, machine learning does offer a chance to use the vast amount of data being created by organizations to weed out the 'low and slow' threats better than human experts. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Behind the Scenes :

Hollywood Encounters

Cyber Security

----- Arcticle source ----- https://www.wipro.com/cybersecurity/behind-the-scenes--hollywood-encounters-cyber-security1/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Behind the Scenes: Hollywood Encounters Cyber Security Whenever you read the words 'Hollywood' and 'Security' in the same sentence, your

mind probably wanders of in the direction of movies likeDie Hard 4.0 or Swordfish where uber-cool and suave hackers like Hugh Jackman trying to hack $9.5 Billion off the government from a computer with seven screens. Or if you are in the security business (or have the slightest interest in world news and technology) you would be aware of the Sony Pictures hack which sent the entire world into a tizzy and this according to some was the primary reason why Sony Pictures Co-Chairman Amy Pascal stepped down. But the relationship between Hollywood and Cyber Security these days has far transcended the traditional connotation of blockbuster sensationalism. Hollywood is getting far more serious about cyber security and its impact – both on the global landscape and within the film industry in itself. It is not just about the movies Hollywood makes; cyber threats have impacted the very foundations of how the industry works. Movie production houses have now woken up and are becoming highly cognizant of the dangers posed by confidential/ sensitive information falling into the wrong hands. Even till a couple of years ago, movie scripts were protected by watermarks or printed on specialty papers and all that production houses had to worry about was physical photocopies being taken of the script or similar sensitive documents. However, the shift to digitization and the advent of smart phones has exposed these production houses to internal as well as external threats. Cyber hackers are constantly knocking at their doors in search of the slightest security loophole which could be leveraged to breach the network. Either motivated by curiosity about how their next movie will pan out (James Bond Spectre script leaked) or sometimes politically motivated (like the Sony Pictures Hack), these hackers are not looking for financial gains. Nevertheless, the resulting financial impact on the movie industry is huge. Today, hackers are not the biggest security challenge the industry faces – they are the internal employees or crew. Every document and communication pertaining to the movie is now in digital format and a large chunk of the movie crew has the movie script either on their iPads or smartphones. While companies cannot really avoid any of the above mentioned changes, they can surely implement controls which can ensure proper security So what measures can the industry adopt to thwart off these attacks and ensure complete protection of sensitive information? An 'Air-Gap' Network – Taking a cue from the critical infrastructure industry, production houses could adopt the concept of air-gaps to protect their sensitive data. Air-Gap is a concept in which sensitive information resides on a network which is physically isolated from the larger network so that even if that network is compromised, the sensitive data is still safe. The script of The Interview or James Bond's Spectre would have been untouched had Sony Pictures used air-gaps. Suitable Access Governance – Determining who can access, edit, download, and print documents pertaining to the movie script or budget details is extremely important. Role-Based Access and Context-Aware Access Governance would go a long way in protecting unauthorized usage and data being accessed by adversaries. The controls should be such that if the movie script is accessed by the spot-boy (role-based) or by someone from Romania (context-aware), it immediately sends out alerts and ask for additional authentication requirements. Data Encryption – This is a tried and tested way of protecting sensitive information. In this method, data is encrypted so that people who do not have the proper access rights or the correct password will only be able to see gibberish. This is relevant because generally movie scripts are shared

with the key actors and crew members and there are high chances of it falling in the wrong hands. However an encrypted file can only be accessed by people having the right passwords and those without the password will see gibberish. Security Awareness – In most cases, breaches happen due to the lack of awareness and carelessness of employees. Employees need to be properly trained about the basic security processes and controls they need to adopt at an individual level. Elementary do's and dont's like not clicking on email links or setting strong passwords should be mandated across the organization. It is surprising to note how many networks have been breached due to employees not following security fundamentals. Cyber-attacks are constantly evolving and we need to ensure that we evolve at a faster pace. Even the movie industry, which definitely is not the primary target of the hacker community is gearing up in anticipation of further cyber-attacks and it is time that we, irrespective of which industry we belong to, gear up too. We need to be alert and be aware that the reason for a breach could either be a highly skilled hacker on the outside or your friendly innocent colleague from the inside "Tell me, is something eluding you, sunshine? Is this not what you expected to see? If you wanna find out what's behind these cold eyes You'll just have to claw your way through this disguise" Promit Sanyal- Marketing Manager, Enterprise Security Solutions Promit handles global marketing for the Enterprise Security Solutions business in Wipro. He has 7+ years of experience in the IT marketing domain and brings extensive knowledge across product & services marketing spanning product launch, go-to-market strategy, digital & offline marketing campaigns, and last but not the least brand building. In his current role Promit is responsible for enhancing brand value and positioning for Wipro's security business across the globe. Apart from being a music and sports enthusiast, Promit loves reading and learning new languages Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

In the cross-hairs of IoT security threats? Here's how you can tool up.

----- Arcticle source ----- https://www.wipro.com/cybersecurity/iot-security-monitoring/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content In the cross-hairs of IoT security threats? Here's how you can tool up. Security monitoring has always been critical to protecting IT ecosystems but with the rise in IoT-enabled devices and connected systems, the fear of cyberattacks has grown exponentially.

No business today, no matter what its nature, can afford to compromise on the spend for security monitoring. Pre-empting security breaches and mitigating chances of cybersecurity attacks is, therefore, an imperative. So, can a traditional IT security framework work in an IoT environment as well? Well, not really. Where's the chink in the armor? The IoT environment, unlike an IT one, has three layers to it: edge, platform/cloud and enterprise. Most edge devices work in constrained environments, that is, they have low compute, memory and storage capabilities. Gateway devices can still hold some power, but that deteriorates with the growing volume of devices connecting to it. The sheer volume of connected devices in geo-dispersed clusters makes it impossible to work-unlike in an IT environment. Also, the edge layer is not equipped with any logging framework and, even if it were present, it may not have any standard logging format and the ability to capture all events. What makes the edge layer most vulnerable to attacks is its lack of physical and logical controls. This layer could be porous, allowing spurious data to creep in and lead to flawed analytics, thereby impacting business decision-making. These devices can be used for PDOS (permanent denial of service) and DDOS attacks, causing major disruptions. Even though these are low powered, the volume makes a huge difference. Hence, it is crucial to have rules for these scenarios in security monitoring solutions. The edge layer, in an IoT environment, must be firmly integrated with the IT security framework and should have standards and policies in place. In the platform/cloud layer, there are the CSPs, software service providers and multiple parties involved, who take care of core capabilities for IaaS, PaaS and SaaS. All these, which together define the IoT suite, are physically dispersed and loosely coupled when compared with a traditional IT application. At an enterprise level, effectiveness of incident response relies heavily on synergy among different IT teams and how well these teams are connected. However, that's not what happens in an IoT environment, where responsibility lies with the engineering staff rather than the IT staff. One other important area, at the level of enterprise, is "policy and governance," which constitutes one of the basic hygiene factors for security maturity. However, in an IoT environment, where multiple stakeholders are involved (including consumers), the ownership is dispersed. Hence, in an IoT environment, policies must be redefined to factor in these aspects so that there's wider adaptability and compliance. Looking at a holistic approach We have seen security monitoring tightening around IT infrastructure, moving from reactive to proactive threat hunting. Threat intelligence, analytics and hyper automation have fortified that landscape today. How can we adopt the same for IoT environments? What can be done to bring in the cybersecurity maturity of an IT environment to an IoT environment, to make its processes and technologies effectively threat-ready? IoT, a critical business driver today, is more in the discovery phase of the security monitoring journey. It is imperative to build a solution where IT and IoT frameworks can co-exist. The traditional approach can no longer work in an IoT format. IoT security monitoring must embrace all tiers, along with security monitoring tools, such as the SIEM (Security Incident and Event Monitoring) tool. One way can be for organizations to establish standards in IoT, so they can put in their own policies and standards as an extension of the IT landscape. This, however, is unlikely to happen in the short term because it adds to the complexity of the situation as IoT technology is at a different level of maturity and is much more

diverse. The other way can be to "innovate" a model that encompasses the needs of both IT and IoT environments, thereby bridging existing gaps. Agent-less tools need to be used at the edge layer to ensure that it doesn't impact any device functionality while cloud-based solutions need to excel on PaaS capabilities. So, the idea here is to initially segment the solution and then add specific security monitoring layers before we capture the context/behavior of each segment. We close the loop by building an integration layer, encompassing all segments-edge, platform/cloud and enterprise. Finally, by being cognizant of the threat intelligence feed generated post integration of all segmented components, organizations can be prepared for likely IoT attacks. Pankaj Anand Practice Head for Wipro's IoT security, Pankaj works closely with clients to ensure security is embedded into their IoT solutions. He is a certified security practitioner and has been associated with the cybersecurity and risk services practice for the past 20 years. In cybersecurity, Pankaj has been working in the areas of consulting, delivery, system integration and practice development. He can be reached at pankaj.anand@wipro.com. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Resilience Against Cyber Attacks

----- Arcticle source ----- https://www.wipro.com/cybersecurity/resilience-against-cyber-attacks1/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Protecting Critical Infrastructure Information Protecting Critical Infrastructure Information Why is Infrastructure Critical? An infrastructure becomes critical when a disruption to this infrastructure results in irreversible and enormous loss (e.g. loss of life, environment etc.). The growing threat of international terrorism led policy makers to reconsider the definition of "infrastructure" in the context of specific non-functional requirements (NFR) of the business. These NFRs included Security, Performance, Availability, Integrity and Confidentiality (SPAIC). Each business has its own definition of SPAIC based on the regulatory requirements and country specific policies. Critical Infrastructure is always associated with regulatory requirements and key resources who are directly handling the critical infrastructure. As such, any intentional or unintentional disruption to these will have a significant impact on the environment and life. The following areas are considered to be a part of Critical Infrastructure: There is an impending need for countries to develop a national critical infrastructure strategy which will provide a comprehensive and collaborative approach to enhance the resiliency of critical infrastructure. This common approach will enable partners to respond collectively to risks and target resources to the most vulnerable areas of critical infrastructure. Guidelines to Defining a Successful Critical

Infrastructure Protection (CIP) Strategy Industry leaders suggest that the government and the private sector should collaborate to protect a nation's critical infrastructure. This collaboration calls for the development of trusted partnerships to build regulatory requirements, governance processes, and resilience options jointly based on the existing mandates and responsibilities. The strategy should outline mechanisms to: The Strategy should: Actionizing the Strategy for a Safer Future Level 1: Define Critical Infrastructure and Assets Level 2: Build Partnerships Level 3: Risk Management Level 4: Regulate and Standardize the CIP Security Cyber Security and Critical Infrastructure Cyber security for critical infrastructure depends a lot on the sector to which the critical infrastructure belongs. Its objectives are: Broadly, cyber security can be classified into the following components for all Sectors: Illustration: Example of Industrial Control Systems Networks Cyber security is becoming important for critical infrastructure due to the latest technology implementations like IP communications, BYOD policies etc. Similar to IT Infrastructure, Critical Infrastructure has its share of vulnerabilities that can't be addressed due to the proprietary nature of the OS and hardware. These devices are not regularly patched as the hardware patch release cycle is adhoc or longer than software patches. This being the problem statement, the critical infrastructure component becomes vulnerable to malwares, advanced persistent threats and service disruption. In general, ICS networks lack features like monitoring, metrics, analytics and intelligence to predict threats. The solution should be capable of handling known problems and zero day vulnerabilities. Solution for securing Industrial Control Systems Networks The solution platform should address the issues mapping the solution-to-sector specific value chain, applying global regulatory requirements and defining points of vulnerability to address known and unknown threat vectors. Cyber Security Solution Roadmap Cyber security for critical infrastructure should be broadly developed as per the roadmap shown in the illustration below The level of maturity of a Cyber Security solution for CIP needs to progress through the stages shown in the illustration, gradually making the transformation from Core Security Services to Security Convergence and finally to Integrated Security Solutions – which involve predictive analytics and intelligence spanning business processes and architecture. Conclusion The implications of a Critical Infrastructure collapse are huge and need to be looked at from a long-term perspective. Close synergies between the government and the private sector need to be present to develop a comprehensive and robust strategy for thwarting off impending threats from politically motivated groups, cyber criminals and other such rogues. Steps should be taken to ensure CIP across all layers of CI Architecture, with components addressing business and operational processes, applications, data, communication, network and perimeter for IT and Operations Technology Network. Saritha Auti - Practice Head, Enterprise Security Solutions, Wipro Saritha has over 17 years of experience in Enterprise Security & Architecture, spanning a wide gamut across product development, application security, systems integration, Enterprise Architecture and security architecture consulting. She heads Enterprise Security Architecture and Industrial Security Practice for Wipro with specific focus on Critical Infrastructure Security. She has devised several security solutions and architecture strategy for Oil & Gas, Telecom, Financial Sectors, Utilities, Defense, and has lead Security

Architecture transformation programs. Apart from technology she is an ardent trekker, culture enthusiast and loves connecting with people. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. ======================

OT security – The need of the hour for Industry 4.0

----- Arcticle source ----- https://www.wipro.com/cybersecurity/ot-security-the-need-of-the-hour-for-industry-4-0/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content OT security – The need of the hour for Industry 4.0 Traditionally, most manufacturing industries, whether process manufacturing or discrete manufacturing, rely on OT (Operational Technology) systems, such as Industrial Control Systems (ICS) and Supervisory Control and Data Acquisition systems (SCADA) to ensure efficient manufacturing processes, so that the resulting end products are of the highest quality, at cheaper cost and ease of operations. OT systems by definition are the computer systems that control the physical state of a system or processes. Threats to OT systems ranges from malware to sabotage to data theft or data manipulation, with serious consequences. Industrial Control Systems (ICS) and SCADA and such broad category of systems are generally known as OT (Operational Technology) systems and OT Security implies implementing security controls around these systems. The impact of breaches to OT Security is felt on Personnel Safety, Availability of critical manufacturing processes, loss of data integrity, data confidentiality and data theft particularly of IP (Intellectual property). Hence, the threats which are constantly attempting to breach these controls need to be constantly monitored and managed on a 24X7 basis from an OT-SOC (Operational Technology Security Operations Center). OT-IT Convergence Earlier, OT systems were mostly stand-alone systems, operated by trained humans to control various elements of the manufacturing processes. However the scenario is changing fast as a run up to Industry 4.0. With the proliferation of Information Technology (IT) and networked OT systems, many of these systems need to be connected online to make optimal use of the new technologies, such as Big Data, Machine learning, Artificial Intelligence and 3D printing that results in efficient productivity. Broadly categorized as Industry 4.0, these new technologies bring in added risks which were earlier associated only with IT systems. This changes the dynamics of managing cyber security risks in these industrial control systems. This becomes all the more critical because, impact of security breaches in these OT systems affects reliability and safety of both personnel, plant and material. With the

advance in OT systems and the advantage of analytics and data mining capabilities of IT, IT-OT Convergence is a natural progression. While on the one hand we need to segregate the IT-OT systems and their networks, in order to prevent the threats and malicious activities spreading from one to the other, on the other hand for the sake of taking advantage of newer capabilities of IT, such as data mining, data analytics and cloud storage, unified processing of OT and IT data at the logical layer and the need to integrate the processing of real-time threat data, the solution is to integrate OT and IT Cyber security operations. The integration brings in its own challenges – technical, operational and cultural. Technical challenges are mostly in terms of the diversity of data formats, the communications protocols and the difficulty of parsing and normalizing diverse types of data in a unified, normalized form. The operational challenges may manifest in modifying operational processes and changes to organizational structures. The cultural challenges may come in the form of reluctance of the traditional OT personnel sharing their data with the IT teams and the results of analysis which may point out to flaws and weaknesses hitherto not known and the need for the OT personnel to learn and adapt to new technologies and processes. Overcoming these challenges can be eased by the adoption of OT-IT integration by means of an integrated OT-IT SOC, whereby all the threats are monitored and systems are managed by single, well trained experts of the OT-IT SOC. Vijayakumar A J Practice Director in Cyber Security & Risk Services (CRS) Currently a Practice Director in Cyber Security & Risk Services (CRS) team, is leading the CRS focus on Manufacturing Business Unit of Wipro. He is a Cyber Security professional with over 20 years of experience in conceptualizing and implementing security controls in Embedded Systems, Enterprise Networks, Applications and Global Telecom Networks. He has been a Chief Information Security Officer (CISO) of a Global Telecom Service Provider for over eight years. He holds a Master's degree in Computer Science from the Indian Institute of Technology (IIT) Madras and is a speaker in many forums and conferences on Cyber Security. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/cybersecurity-in-the-manufacturing-industry/ ----- Contact Wipro Please fill the required details to access the content Cybersecurity in the Manufacturing Industry In 2018, there were 52 significant, publicly reported breaches in the manufacturing sector, in which attackers targeted information pertaining to intellectual property. The global manufacturing industry is being shaken by a revolution in technology. Cyberattacks are actively targeting the sector, yet the maturity of cyber defense responses is lagging compared to other highly targeted sectors, like healthcare and banking. This technological sea change—driven by Industry 4.0, the industrial internet of things (IIoT) and the need to address operational technology (OT) security—is putting significant pressure on chief information security officers (CISOs) to rapidly assess risks and put in place strategic programs to defend against ever-increasing threats. We

surveyed 211 organizations across six industries and 27 countries for our State of Cybersecurity 2019 report—to get a thorough understanding of the current state of cybersecurity worldwide. This article focuses on the data we gathered from organizations in the manufacturing space, and highlights trends in cybersecurity throughout the industry. Download your personal copy here Summary The manufacturing sector is at an inflection point as it responds to the revolution in technology, and its impacts on the industry's previous modus operandi. Industry 4.0 and Smart Factory production, alongside the development of IIoT solutions, will shape the future of the manufacturing sector. Success for these new business operating models is underpinned by effective cybersecurity and data privacy. Establishing an accelerated and sustainable approach to delivering the fundamentals of cyber hygiene is necessary to protect core business. Failure to do so will negatively impact consumer and institutional confidence, and fundamentally weaken future trading capability and position in the marketplace. 2019/2020 is likely to see an era of unprecedented cybersecurity investments across the manufacturing sector as organizations play catch-up, and seek to rapidly address current shortcomings and future risks. To learn more about cybersecurity trends across this and other industries, read our full report. ===================== ----- Arcticle source ----- https:// www.wipro.com/cybersecurity/cybersecurity-in-the-healthcare-and-life-sciences-industry/ ----- Contact Wipro Please fill the required details to access the content Cybersecurity in the Healthcare and Life Sciences Industry January | 2020 2018 saw 485 significant, publicly reported breaches in the healthcare and life sciences sector. Attackers were after personally identifiable information (PII) and medical records, along with valuable pharmaceutical intellectual property. The healthcare industry has consistently been the most targeted sector for cyberattacks over the last few years. Many organizations, especially in the provider space, are known to operate on insecure legacy IT infrastructures, which are weak from a security perspective. This problem has been compounded by the arrival of the internet of medical things (IoMT), which is connecting more devices and making them difficult to secure. As a result, cybersecurity risks are no longer confined to IT assets and data breaches; they are now directly impacting patient safety. We surveyed 211 organizations across six industries and 27 countries for our State of Cybersecurity 2019 report—to get a thorough understanding of the current state of cybersecurity worldwide. This article focuses on the data we gathered from organizations in the healthcare and life sciences space, and highlights trends in cybersecurity throughout the industry. Download your personal copy here Summary The healthcare industry is witnessing a transformation in cybersecurity strategy—from a narrow compliance and HIPAA-focused approach, to a more comprehensive and security-centric approach. As regulations around the world start to address the safety and security of IoMT devices, healthcare providers will have to step up their game to ensure greater cyber resilience for their practices and their clients. To learn more about cybersecurity trends across this and other industries, read our full report. ===================== ----- Arcticle source ----- https:// www.wipro.com/cybersecurity/cybersecurity-in-the-consumer-sector/ ----- Contact Wipro Please fill the required details to access the content Cybersecurity in the Consumer Sector January | 2020 Cybersecurity in the Retail & Consumer Goods industry In 2018, the retail and consumer goods

industry faced 198 significant, publicly reported breaches. The most sought-after data in these breaches was customer card data and personally identifiable information (PII). Despite many dissimilarities in the consumer industry—which includes markets ranging from retail, media and food, to consumer products, travel and hospitality—companies in this sector have a lot in common when it comes to cybersecurity. We surveyed 211 organizations across six industries and 27 countries for our State of Cybersecurity 2019 report—to get a thorough understanding of the current state of cybersecurity worldwide. This article focuses on the data we gathered from organizations in the retail and consumer goods space, and highlights trends in cybersecurity throughout the industry. For example, across the sector, digital transformation is being expedited by the adoption of connected technologies, while budgets for chief information security officers (CISOs), as a percentage of IT budgets, are still low compared to other industries. As regulatory pressure for greater security increases, this will change, but the struggle represents one of the most significant cybersecurity challenges for the consumer industry: Promoting data protection at the core of the business culture. Download your personal copy here Summary Consumer organizations riding the digital wave have the added pressure of protecting customer data. CISOs are playing catch-up with their security strategies and have a huge responsibility of adopting more mature security practices to ensure digital resilience. To learn more about cybersecurity trends across this and other industries, read our full report. =======================

Embedding security into new ways of working

----- Arcticle source ----- https://www.wipro.com/cybersecurity/embedding-security-into-new-ways-of-working/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Embedding security into new ways of working March | 2020 Figure 1: Application Security Vulnerability trend by Industry since 2019-20i This brings us to Enterprise IT paradox, how to go faster and innovate and yet stay secure delivering competitive software at high velocity maneuvering the imperative security challenges to deliver secure software. Organizations adopted DevOps, the principle of integrating software development and IT operations under a single automated umbrella, achieving frequent releases and stable application. Security in large is regarded as the main obstacle to rapid development; resulting in application security suffering in DevOps ecosystem. Shifting Focus to DevSecOps – the bigger picture A holistic and proactive approach embracing DevSecOps, envisioning long term gains for customer. Application with built-in security from inception phase will resist attacks and avoid potential devastation to daily operations. To ensure seamless alignment to agile methodology and integration with DevSecOps, a change in below approach is required around people, process and technology aspects: Figure 2: Approach on Shifting from DevOps to DevSecOps DevSecOps Reference Architecture DevSecOps architecture aims at improving the security DNA envisioning it as a journey, not a

destination. The below reference architecture helps deliver an ecosystem that is tool agnostic, platform independent, allowing out-of-box integration offering defense-in-depth capabilities to the SDLC supply chain. Wipro's DevSecOps ecosystem overcomes the fundamental challenges of stitching security into DevOps, harnessing security into each phase of software development lifecycle. The below diagram is an outcome from varying implementation across customer base to be leveraged as reference and not a takeaway recipe. Figure3: DevSecOps Reference Architecture The below section enumerates the application security capability while leveraging the above DevSecOps architecture. One of the prominent reasons why any architecture is not meant to be consumed as a copy-paste template for DevSec- Ops adoption is due to the eco-system governing the organization in terms of people, technology and process. The reference architecture addresses the people, process and technology aspects as part of implementation approach followed by integrating Continuous Identification, Continuous Integration & Deployment, Continuous Monitoring & Auditing and Continuous Security Governance & Compliance. a) Continuous Identification empowers the planning phase of SDLC with security offering of conducting Threat Model for business requirements creating a risk profile followed by security control recommendations. Introducing security controls at the right place and time decides the effectiveness of the control with minimal impact on the CI/CD pipeline. A risk-based approach towards security requirements and design goes long way allowing business to prioritize strategic goals in the inception phase of SDLC. b) Continuous Integration & Deployment empowers the code, build, test, release and deploy phase of SDLC with security capability, conducting verification and validation on proactive security recommendations from Continuous Identification phase. Security Verification entails development team to continuously discover and fix issue on daily basis prior to deploy phase performing Static Application Security Testing (SAST), while Security Validation allows developer to discover and fix issues post deploy phase performing Dynamic Application Security Testing. A risk-based approach towards implementing of security requirement & design reaps cascading returns allowing delivery teams priorities tactical goals. c) Continuous Monitoring & Audit empowers the operational phase of SDLC with security capability, performing vulnerability confirmation and exploit prevention leveraging agent-based monitoring for application in production and during implementation. Interactive Application Security Testing (IAST) entails continuous monitoring into maintenance code while baking continuous compliance and remediation. Runtime application Self Protection allows to discover and protect live attacks for applications deployed in production environment. A risk-based approach to monitor and audit applications allows operations team to prioritize daily operational objectives. d) Continuous Security Governance and Compliance empowers all phases of SDLC with automated correlation of vulnerability result, smart vulnerability management and remediation; integrated with leading Governance, Risk and Compliance (GRC) tools for better application security risk management. Placing application security squarely in front of management decision makers for analysis and comparison to arrive at risk-based decisions. Reference above aims at helping adopter to strategize and implement best practices to deliver continuous security across software development supply chain delivering value to customer. Conclusion Wipro's

DevSecOps ecosystem aims at evolving maturity levels rather than an end state. DevSecOps has become a popular buzz word for organizations tackling the ever-evolving security challenge in the digital era. Adopting security into DevOps means incorporating security culture, practice and tooling into all phases of SDLC supply chain. DevSecOps success depends on how an organization can marry culture, automation, measurement and sharing into the golden triad of people, process and technology achieving the business objectives thus making security an influencing factor alongside agility and innovation. References ihttps://info.whitehatsec.com/rs/675-YBI-674/images/WhiteHatStatsReport2018.pdf iihttps://www.wipro.com/en-IN/applications/integration-of-security-in-devops-a-bigger-picture/ iiihttps://www.nist.gov/cyberframework/framework https://medium.com/@seanguthrie/devops-principles-the-cams-model-9687591ca37a ivhttps://www.veracode.com/state-of-software-security-report#snap_subnav_43941 Arun Pillai Security Architect, Cybersecurity & Risk Services Wipro Ltd. Arun Pillai Security Architect who champions DevSecOps for Security Assurance Service within Wipro's Cybersecurity and Risk Services (CRS) division. He has over 14 years of experience, with specilization in the security domain and is responsible for evangelising DevSecOps across Wipro. He has worked and managed projects related to Security Architecture, Secure SDLC, Threat Modelling, Secure Coding, Penetration Testing and Security Consulting. Arun is ISC2 Certified Information Systems Security Professional (CISSP) and ISACA's Certified in Risk and Information Systems Control (CRISC). Arun holds a Master's degree in Information Technology from Sikkim Manipal University of Science & Technology and TOGAF certified Enterprise Architect from The OpenGroup. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =======================

Next Generation Digital Retail & Cyberdefence

----- Arcticle source ----- https://www.wipro.com/cybersecurity/next-generation-digital-retail-and-cyberdefence/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Next Generation Digital Retail & Cyberdefence March | 2020 The retail sector is currently witnessing an intense technological disruption. The proliferation of online shopping, social media and ever-changing expectations of consumers are the key forces driving the change. The future of retail players would highly depend on how effectively they use technology to interact with their customers. The stores of the future are very likely to have no queues for checkout and will enable hassle free payments. Payments would be simplified using connected devices, such as wearables. Key

features that next generation digital retail will exhibit are the following: The variety of wearable gadgets available on the market is rapidly growing and envisioned to reach roughly 600 million through 2020. This means that a growing number of people will be carrying smartwatches, activity trackers and other wearables that will help track data of their personal identity details, banking and payment transactions, as well as their buying behaviour. We are also seeing a boom in tap-and-go mobile payments, with biometric technologies, such as facial recognition, eliminating the need for credit scorecards, pin codes and signatures. Thus permitting a consumer to walk into a shop, take what she or he desires and then without a doubt walk out. Imagine a future of hands-free purchasing wherein the complete purchasing experience – from browsing to buying, are completed digitally. The reality of Digital Retail: Virtual reality (VR) and augmented reality (AR) enable retail stores to personalise the delight of the purchasers. The sector is gaining momentum with VR, and AR funding in retail estimated to attain around $30 billion with the aid of 2020. Virtual reality immerses the person in a simulated environment, while augmented reality overlays digital records onto the real world experienced through a tab or smartphone. Both VR and AR offer offline and online retailers the opportunity to revolutionise the way their customers shop. Whether a customer wants to try on an outfit or see if a piece of furniture fits in their living room, virtual reality and augmented reality are making it all possible. With online VR applications, customers can engage with retail stores anytime, anywhere. For instance, an e-commerce apparel retailer could create 3D surroundings that offers customers the experience of being in a brick-and-mortar shop and allow them to try apparels at the convenience of their homes. Cyber and Privacy Risks of AR / VR a. Ransomwares – recording of consumer behaviour in a personal immersive environment and later misusing the information for extracting ransom b. Device control compromised – hackers gaining control of the consumer's device / store devices with destructive intent c. Privacy breach – compromised AR/VR devices can lead to personal data breach of the consumer's personal information d. Device damage – compromised AR/VR devices can enable hacker to damage the firmware and inturn the device too The hyperconnected Retail: In a hyperconnected world 'Everything' might be communicating with 'everything'. In the retail sector this means that indoor and outdoor digital signage, show cabinets, sensors, smart product tags, wearables, smartphones and other devices will monitor, track, analyse, report, endorse and advise. Retailers' stocks get tracked and replenished mechanically and clients will receive automated updates on new arrivals and special personalised offers while they are in near proximity of a store they have formerly shopped at or had proven interest. Advertising and content streamed to connected digital or digital presentations can expect and address the demands of customers based on time of day, month, season, region and weather. By using a drone, groceries can probably be delivered to your house routinely. Hyperconnectivity allows products, gadgets and appliances to form multidimensional layers, streamlining operations in stores, offices and homes in addition to enriching client experiences. Cyber Risks of IOT Devices a. Device discovery - You can't protect what you can't see. ... b. Authentication and authorization – unauthorized connected devices for attack surfaces c. Device updates – illegitimate OTA updates d. Disruption, DDoS attacks and IoT botnets – sophisticated automated attacks e. IoT passwords – weak passwords including no password f. Weak

Encryption – weak encryption algorithms leading to decrypting of the information and compromising the communication channel A Hi-Tech shopping arcade: The automated shopping experience is made possible by a system of sensors, computer vision and deep learning, what we call artificial intelligence and deep machine learning. This enables the sophisticated virtual shopping cart system to keep track of what is taken off and/or placed (back) on the shelves. When the consumer is done with shopping, he or she can just walk out of the store, after which the amount is debited from his or her shopping account. Consumers are now seeking to fulfil their specific needs with services and products. For retail to thrive and remain vibrant, embracing new technological innovations will be crucial. Cyber Risks associated to Technology a. Vulnerable libraries used within the software package, exposing attack surfaces b. API integrations over unsecured protocols leading information disclosure while parsing c. Open source stack used as-is without undergoing security sanitization d. Inadequate skilled workforce to support the technology stack e. Functional and Operational behaviour anomaly – the technology stack does not function or operate as intended Cyberdefence Measure for the Next Generation Digital Retail: With the massive scale of digital transformation within the retail sector, shopping experiences with wearables (IOT), smart devices for AR and VR and hyper data personalisation will definitely enrich the end consumer experience. However, as the data grows to drive analytics-based business, so will the exposure to the various cyber threats, such as data breach, data exfiltration, online frauds - both identity and financial, IOT based attacks, multi path attacks over 5G network etc. The control objectives one should focus on to secure the next generation retail, are as mentioned below, though not limited to: Conclusion: As we foresee the coming years to bring in more enriching experience to the consumers, elevating their spending on shopping, all on the foundation of hyper data personalisation, technology enablement into the digital space. This will increase the drivers for hackers to attack and mine into the technology anomalies stealing a hell amount of personal data, financial data and executing more sophisticated attacks. The cybersecurity will become an essential and hygiene element of any business, including the next generation retail, and will not be limited within the organisation board. It is time for each one of us to be vigilant and educated on protecting our personal data and identity of the future. Hiten Panchal Practice Director - Cyber Risk Services, Consumer Business Hiten has around two decades of experience into the information security and cyber risk. He spearheads the Change & Transformation of the Cyber Risk Advisory and Services for the Consumer's Business Unit @ Wipro. He is a thought leader backed with certifications in Blockchain, Data Privacy - GDPR, PCI-DSS and Information Security Management. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Why Managing Risk Exceptions

----- Arcticle source ----- https://www.wipro.com/cybersecurity/why-managing-risk-exceptions-matters-during-the-unprecedented-times/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Why Managing Risk Exceptions Matters During the Unprecedented Times May | 2020 Amid the coronavirus pandemic, organizations have deviated from their standard operations to maintain some sense of business as usual – working from home, for example, rather than on site. Such shifts can expose an organization to new risks, and even elevate existing ones. The pandemic may have changed the operating models of some businesses, but not the responsibilities of executive leadership, who are still expected to manage risks and meet corporate obligations. Leadership teams are still accountable for the decisions they make today and their potential impact on the future of the organization, making risk management programs more important than ever. How is your organization keeping track of decisions? Do you have processes and systems in place to provide a holistic view of the underlying risks to your organization? How are you managing risk exceptions and mitigating underlying risks today? When exceptions and deviations aren't tracked, when their severity is not evaluated, when the appropriate compensating controls are not in place, decisions can pose great risks to the organization. The concept of risk exception management is not new; it is a vital component of any risk management program. A risk exception management program enables users to request exception or exemption to comply with corporate policy, or deviate from standard practice for a stipulated period of time. A typical risk exception management process consists of several steps: Risk exception management provides a great deal of flexibility for users who are unable to comply with a corporate policy or standard practice or mitigate risk due to technical constraints or circumstances beyond their control. For instance, the application owners who aren't able to comply with password policy requirements may request exception due to technology constraints in a legacy application or till the budgets allocated to make necessary enhancements to a legacy application.   At the same time, programs enable organizations to keep track of risks and ensure appropriate compensating controls are in place to guard the backdoors that were left open due to the risk exception. Common pitfalls: The importance of understanding your program It's common for organizations to struggle with risk exception management programs, but it doesn't have to be. Most challenges to implementation stem from a lack of familiarity with the processes: Key elements of an effective risk exception management program A good risk exception management program should: Challenges in managing risk exceptions Risk exception management may seem straightforward, but many organizations that are slow to go digital, standardize, train, and govern also struggle with the following common challenges: Seven steps to build an effective risk exception management program Step 1: Evaluate the maturity of the program Understanding the maturity of the current program is the key to developing and implementing an effective risk exception management program. Step 2: Define a framework Establish a cross-walk between risk exception, risk, policies, and controls, with an ability to fully engage data to mitigate and manage risks. Step 3: Define a governance

structure An ideal governance model should include a clearly laid-out RACI matrix, including process and procedures for reporting willful violations. Step 4: Define metrics Define risk exception metrics to track, monitor, and predict potential impacts on risk posture and be proactive in mitigating risks. Step 5: Automate processes Automate the risk exception management process, including checks and balances, to eliminate silos, standardize programs throughout the organizations, and establish a single source of truth. Step 6: Create awareness Create roll-out awareness sessions to educate users on the process for requesting exceptions, their roles and responsibilities in managing risk exceptions. Conduct awareness sessions via WebEx based, e-modules, and class room based trainings. Also, roll-out campaigns to review and report metrics on level of awareness via quick polls, surveys, contests, and quizzes as part of awareness initiative. Step 7: Track and monitor metrics Keep thorough accounting of metrics and take timely actions on expired risk exceptions. As stated above, untracked risk exceptions may result in the underlying risks being left open when things return to normal, posing greater risks to the organization. Managing risk exceptions is therefore key to managing risks, especially during unprecedented times. How can we help? With deep roots in technology and domain expertise, Wipro is uniquely positioned to help organizations implement risk and compliance programs successfully. We provide end-to-end services – from developing governance, risk, and compliance (GRC) strategies, selecting the right tools to implementing programs, and work closely with executive and stakeholders to design, configure, onboard, and maintain solutions for managing various risk and compliance programs. We have developed pre-defined frameworks, toolkits that can help you to understand the maturity of your current risk exception management program, address gaps, and jumpstart automation with plug-and-play solutions. To learn more about how Wipro enables enterprises to better manage risk exceptions, click here. Sesh Vaidyula Sesh heads the Americas region of Wipro's risk compliance and assurance practice. He is a seasoned professional with 20+ years of experience advising companies on cybersecurity, risk, compliance, and audit matters. Sesh is a subject matter specialist in GRC with a multi-domain exposure to the areas of enterprise/ operational risk, cybersecurity, third-party risk, internal audit, systems audit, fraud investigations, business cycle and ITGC reviews, and compliance, especially with respect to Sarbanes-Oxley, HIPAA, CCPA and the like. Email: seshagiri.vaidyula@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Securing a Remote Workforce

----- Arcticle source ----- https://www.wipro.com/cybersecurity/securing-a-remote-workforce/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Securing a Remote Workforce Digital Workspace (VDI) Security May | 2020 To effectively manage business continuity, enterprises are rapidly working to support a remote workforce, which has become a "New Normal" way of working remotely. While each one of us fights against the pandemic, businesses are making sure that employees and vendors are working as usual from home, like working from the office. It has brought many service providers and technology vendors to collaborate to build an agile solution which will help organisations to rapidly activate their remote workforce. Technology vendors have released digital workspace (virtual desktop infrastructure – VDI) solutions, which provide prompt activation of services. Often, while rapidly enabling a turnkey solution to allow a remote workforce, security controls are missed, which increases the risk to a business. While organisations are busy enabling remote working using digital workspace environment, many security challenges with limited control are introduced. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. ======================

How to Maintain Data Security in Uncertain Times

----- Arcticle source ----- https://www.wipro.com/cybersecurity/how-to-maintain-data-security-in-uncertain-times/ ----- Related Articles Contact Wipro Please fill the required details to access the content How to Maintain Data Security in Uncertain Times May | 2020 Disruptive situations force businesses to change the way they function. Stringent data security used to be an afterthought for some businesses, until privacy issues gave rise to GDPR regulations. Now, data security is an essential element of all business strategies. The principal challenge of an organization is to keep critical business functions running while maintaining adequate security. Security threats in the current state With more employees working remotely now – either on a device issued and managed by the company or on an unmanaged personal device – company data faces greater risks than it did in the workplace. Public Wi-Fi networks, for example, are less secure than private networks. In many cases, employees are taking home workplace desktops, which have not been equipped with the technology to manage them

remotely and ensure security is maintained, and hackers are taking advantage of the vulnerabilities. But the highest risk for any business involves privileged users who have access to sensitive information in database. Without adequate security, remote access by these users can provide hackers a foot in the door to critical company information. For many organizations, the rush to provide remote-working technology has led them to cloud platforms and SaaS providers. However, cloud service providers treat cloud security risks as a shared responsibility with their customers. Without the proper defence mechanisms, there is always a possibility of data theft from cloud applications by malicious actors. Bring your own device (BYOD) programs have encouraged the adoption of shadow IT, which can put an organization's security at risk as employees process and store company data on unapproved cloud services without much thought. How businesses should respond The current coronavirus pandemic has created significant security challenges for businesses. It's also provided an opportunity to build more resilient environments for remote work. All organizations need are the proper information, tools, processes, and the right training for their employees. Build a robust environment There are many tools and approaches for data protection, including data governance, access control, classification, encryption, and data loss prevention. One of the first steps an organization should take is to protect data at the source by enabling content security on centralized repositories. Sensitive data should be available remotely to employees based on permissions: Employees should have access only to the data they need to do their jobs. Companies must identify the precise levels of access needed by remote employees and implement least privilege rights to ensure employees only access what they've been permitted to. Organizations should also assess cloud data access policies, as access from unmanaged devices will increase. This will enable IT to maintain control, even remotely, and identify any irregularities which could indicate data breaches or threats. Businesses must also enable data loss prevention policies at endpoints to prevent data exfiltration, and support remote compliance with data-protection legislation by applying policies to sensitive data directly. Device encryption should be enabled to secure data in case a device is lost or stolen. For employees using their own devices, information rights management solutions must be applied to control access to files and ensure they're shared only with approved audiences. In a multi cloud environment, cloud access security brokers (CASBs) must be employed to establish security parameters for data, which can help organizations achieve zero-trust security. Shadow IT is not going away. Organizations need to take steps to minimize the security risks. IT departments need to know which applications are being used and the risks that they pose to data security. They need to improve visibility and optimize monitoring procedures. How Wipro can help Wipro's data security practice has over 13 years of experience in the field, enabling global enterprises (including many fortune 500 companies) to manage their data security requirements. We help organizations define processes, identify solutions, and enable controls based on their current needs. We perform data protection impact assessments, and provide end-to-end data governance services including data loss prevention, information rights management, encryption, data privacy and data security in cloud. Together, with clients, we build comprehensive data security frameworks to ensure they have the support they need to continue business operations while strengthening the

security of their critical data. To learn more about how Wipro helps enterprise clients secure their data, contact us. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.

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Managing third-party risk during unprecedented times

----- Arcticle source ----- https://www.wipro.com/cybersecurity/managing-third-party-risk-during-unprecedented-times/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Managing third-party risk during unprecedented times Why traditional risk management practices fall short May | 2020 Amid the COVID-19 pandemic, global economies have come to standstill, significantly affecting the global supply chain. Businesses – regardless of size, geography, or sector – have shut down their operations either partially or completely to help flatten the curve. COVID-19 hasn't just affected business operations, though. The entire third-party ecosystem has felt the impact, including vendors, business partners, suppliers, and service providers. It may even challenge their ability to support organizations in the post-COVID-19 world. To combat this, organizations have allowed vendors remote access to their enterprise systems for remote executions – creating a backdoor for perpetrators launching cyberattacks. The recent rise in cyberattacks indicates perpetrators are taking advantage of the remote access allowed by business organizations and their third parties to facilitate remote working. Businesses have pivoted from frequent touchpoints with their vendors to creating exceptions that facilitate remote work. But with reduced insight to what their vendors are working on or even need, the potential for cyberattacks happening undetected rises significantly. "Unless organizations closely monitor the health of their third-party ecosystem during these unprecedented times, the temporary shutdown might permanently affect their ability to resume business operations due to the rippling effects of COVID-19 on the global supply chain." Considering these new working conditions, traditional risk management practices adopted by organizations to manage third-party risk may not be sufficient due to assessments that: Additionally, key stakeholders (business managers, procurement, and risk management teams) who manage third-party risk often operate in silos, using disparate, non-information-sharing technologies that result in problems: gaps in identification of risks, redundant/missing controls, duplication of efforts, and ineffective risk management strategies. In addition to these factors, traditional third-party risk management programs often suffer from these pitfalls: To overcome the current crisis, organizations

must look beyond traditional third-party risk management and adopt practices that uncover hidden patterns and anomalies for risk analysis. Then, they must proactively monitor and manage third-party risk while considering the changing enterprise risk landscape – i.e. adopt an integrated approach that: Integrated third-party risk management extends third-party risk coverage throughout the third-party lifecycle from onboarding to off boarding with increased scope -- i.e. non-traditional areas such as geo-political, human rights, social media, and more. In addition, it enables organizations to collect real-time insights on third-party activity. Using these insights, it proactively detects potential threats and fraud involving third parties on the dark web and clear web. In nutshell, integrated third-party risk management equips organization with intelligence to identify, prioritize, and manage critical third parties to minimize the impact that third-party ecosystem changes have on an organization's ability to resume operations in the post-COVID world. Also, it enables organizations to direct their limited resources, efforts, and budgets to maximize third-party risk management coverage during unprecedented times. How can we help? With deep roots in technology, as well as domain expertise in risk and compliance, we are uniquely positioned to help organizations implement risk and compliance programs successfully. We leverage years of rich experience helping organizations – from developing third-party risk management strategies and programs to performing risk assessments, implementing TRPM solutions, and providing TPRM as a service that proactively manages and monitors third party risk. Our TPRM framework and solution set is technology agnostic and deployable on multiple GRC tools, helping you jumpstart your journey to adopt an integrated approach to managing third parties – all while accelerating your return on investment via "TPRM as a Service." Sesh Vaidyula Sesh heads Risk, Compliance and Assurance practice for America's geo. He is a seasoned professional with 20+ years of experience in advising companies on cybersecurity, risk, compliance, and audit matters. Sesh is a subject matter specialist in GRC with multi-domain experience in enterprise/operational risk, cybersecurity, third-party risk, internal audits, systems audits, fraud investigations, business cycle and ITGC reviews, and compliance with a focus on Sarbanes-Oxley, HIPAA, CCPA, and the like. Email: seshagiri.vaidyula@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Rebooting to a secure and resilient vendor ecosystem

----- Arcticle source ----- https://www.wipro.com/cybersecurity/rebooting-to-a-secure-and-resilient-vendor-ecosystem/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Rebooting to a secure and resilient vendor ecosystem May | 2020 In the movie 'After Earth', Will Smith asks his son Kitai to "take a knee" whenever he is out of ideas during a crisis. This 'forced break' amidst commotion provided the mental clarity and logical rebooting that Kitai needed, so that he could overcome challenges and obstacles and push his abilities. The current COVID-19 pandemic has forced the entire planet to "take a knee'. Organizations have been compelled to pause, take a mental break, and utilize this opportunity to ideate and formulate the right strategy to propel them ahead when the horizon becomes clear. Managing cybersecurity risks in the vendor ecosystem is one such strategy that can be employed to increase productivity, optimize contracts and assets, and enhance customer trust, to gain a competitive advantage. Businesses have realized the importance of suppliers, and the impact that non-availability of critical and urgent products and services can have on their top-line, brand image and employee satisfaction. Considering the rise of cybersecurity threats and attacks banking on the Coronavirus, the security and availability of the third-party ecosystem cannot be taken lightly. Enterprises need to consider third-party risk management as one of the top priorities of their cybersecurity program, because customers do not regard the enterprise as a separate entity from its third parties. The investments in vendor security risk management should be a business enabler. Key considerations to revamp third-party risk management capabilities and gain the most out of the program are listed below: Conducting Diagnosis and Capability Assessment An in-depth diagnosis of 'As-is' third-party risk management capability of the organization will identify the scope of improvements in people, process, and technology to augment the maturity of the third-party risk management program. Such an assessment can provide insights into queries like: Closure of the gaps identified from such a maturity assessment will lead to optimization of cost, standardization of efforts, flexibility, and improvement of performance. Establishing a vendor data map There are no regulations that mandate creating a vendor data map, unlike what GDPR prescribes for personally identified/identifiable information. To evaluate the security posture or risk of vendor relationships, organizations need to know how many third parties they have, who the third parties are and the relationship of the vendors to organizational functions, assets, and processes. It presents a challenging situation for CISO to receive notifications from an unknown third party that they experienced a breach affecting the enterprise! A dynamic supplier information database can act as a single source of all suppliers within the organization. It can have linkage with procurement, business continuity, risk and compliance, and privacy office and business lines. Creating a better experience for vendors

participating in the assessment process Vendors are inundated with security questions from multiple organizations consuming or going to consume their products and services. In responding to the assessment questions, probability for human error increases and the response review cycle takes more time and effort. Adopting Zero trust model for third-party security In 2013, why did the HVAC vendor of the breached retail organization have access to the retailer's billing and project management systems? Provisioning access of third-party personnel to organizational applications and data on a need-to-know and least privilege principle lays the foundation of zero-trust strategy. These privileges should be granted post approval from both business and the CISO office. Access granted should be monitored and immediately decommissioned on change of vendor personnel role or end of contract. Real-time monitoring of vendor risk Point-in-time risk assessments no longer provide the right information for an effective TPRM. A vendor triage process determines the frequency and rigour of the vendor security assessment questionnaire. Instead of determining a snapshot of the vendor security posture annually, organizations are shifting to technology enabling real-time monitoring and treatment of risks such as unsafe authentication mechanisms, vulnerable applications, exposed sensitive data and potential phishing and Denial-of-Service threats across their high-, medium- and low-risk vendor ecosystems. Near real-time identification of a geo-political risk or data leakage alert impacting vendors can shorten the path to mitigate risk and assist in effective decision-making. Automating the third-party risk management process A solution that provisions the vendor database and automates end-to-end workflow for assessing and managing third-party risk over the lifecycle of their relationship can be a good investment choice. Such third-party risk assessment solutions have the capability to incorporate supplier security insights from external security score providers and ingest feeds from independent external sources to analyze disparate sources of threat and risk scores using AI and ML. Dashboards and reports can provide visibility into vendor performance trends, open issues and risk across the vendor ecosystem, thereby enabling faster risk-informed decision-making. This pandemic will create opportunities for organizations "taking a knee" to ideate and formulate the right third-party risk management strategy. Organizations will take progressive steps for a consolidated, leaner, efficient and effective third-party risk management system, considering these changes brought on by the current COVID-19 scenario: Bhaskar Maheshwari is an industry-recognized cybersecurity consulting professional. For the last 13 years, he has been delivering business value to multiple clients across the globe in the fields of cybersecurity, risk & compliance, data privacy, and business resiliency. Bhaskar is part of Wipro's Cybersecurity Consulting & Advisory Practice. Bhaskar has an MBA and a Bachelor of Engineering degree in addition to being a TOGAF 9, CISA, CISM, MBCI, ITIL Expert, BS25999LA, CPISI, COBIT F, CBCI, PMP and CPEGP professional. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Navigating Uncertainty with Cyber-Resilient and Compliant Cloud

About the Author Related Articles Contact Wipro Please fill the required details to access the content Navigating Uncertainty with Cyber-Resilient and Compliant Cloud June | 2020 Reports suggest that, over the last two years, more than 33 billion documents faced security breaches due to misconfigurations of cloud-native services, costing businesses worldwide nearly $5 trillion. Security breaches due to cloud misconfigurations are witnessed across industry verticals. Another report reveals that an average of 230 million misconfigurations are carried out per day! Fueled by the continued spread of the coronavirus pandemic, businesses have been acting quickly to enable remote connectivity. Microsoft has reported 775%2 increase in Microsoft Teams monthly users in Italy due to social distancing. Other collaboration tools are also experiencing a spike in usage, although some are exhibiting serious weaknesses and vulnerabilities. When moving business applications to the cloud, extending cloud-based collaboration tools, or enabling business continuity, cybersecurity has generally taken a back seat. Cyber threats are increasing due to a lack of necessary security controls on work-from-home devices and a weakened security architecture due to swift increases in cloud usage. At the same time, remote access of the hybrid cloud environment, by workers, partners, and consumers, is increasing existing risks and presenting new vulnerabilities. In the current environment, enterprises should consider the following recommendations to strengthen their cloud security posture across cloud service models. Cyber Resilient and Compliant Cloud Usage Secure Remote Work and Collaboration Businesses rushing to the cloud to enable millions of workforces for remote work during the COVID-19 crisis are facing various security challenges. At the same time, to meet regulations and compliance, businesses need a curated security approach. Looking forward, organizations must examine their short-term security measures and embrace zero-trust based initiatives to strengthen their cloud security posture and achieve sustained compliance. Bhaveshkumar Bhatt Bhavesh is a cloud security practice lead at Wipro's Cybersecurity and Risk Services. He is a knowledgeable cybersecurity professional with 18+ years of experience in security covering business strategy design, solutions and services development, and program and delivery management across industry verticals. He leads efforts to enhance cloud security practice offerings and provides thought leadership. He can be reached at bhaveshkumar.bhatt1@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by

monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Are you ready?

----- Arcticle source ----- https://www.wipro.com/cybersecurity/working-from-home-how-safe-is-your-organization/ ----- Remote Access Personal Devices Data Security Threat Monitoring Compliance Contact Wipro Please fill the required details to access the content Working from Home: How Safe Is Your Organization? By now, remote work may feel like old news. Whether you've been remote-friendly for years or just made the switch to working from home in the last few months, you've probably got some systems in place to host meetings, manage projects, and collaborate virtually. What you may now have is a strong sense of security in these systems. As a leader among IT security service providers, Wipro has a long history of helping businesses enhance their cybersecurity through digital transformation, and we've found that while remote work increases business flexibility it also increases vulnerability to cyber threats. Fortunately, these threats are entirely manageable. The only catch is that businesses need to understand the risks before they can mitigate them. How familiar are you with the risks associated with working from home? How prepared are you to mitigate those risks? To help you answer these questions, we've provided a brief self-assessment based on frequently asked questions from enterprise clients about their own work-from-home programs. Does your workforce have secure sign-in and remote access? On-site, workers likely pass through several layers of security just to access a secure network. What are you doing to extend those protections to remote access? Because remote access means new devices and networks and accounts, credentials need to be obtained, verified, stored, and secured. Access needs to be managed appropriately and monitored thoroughly. Are workers using personal devices to work from home? Do those devices meet your organization's security standards? Personal devices can be risky because they're managed by individuals rather than the organization. How can you say for sure whether your workers' devices meet company security standards, and that they aren't being used in ways that put the company at risk? Old devices not up to date on antivirus protection will be more vulnerable to cyberattacks, but even devices supplied by the company and managed by the company are not immune. Security controls need to be extended to all personal and remote devices to ensure they're protected to the same extent as on-site devices. How are you securing company data, and ensuring it's only used for the intended purposes by the intended people? Data security is always important, but remote access makes data security a top concern. New networks and devices provide more vulnerabilities for hackers to exploit, putting critical company information at risk when accessed remotely. Least access measures and endpoint controls are essential for remote work. So are detailed analytics about access and usage. How are you monitoring threats associated with remote working? How are you mitigating those threats? As the IT infrastructure expands to accommodate remote devices, the visibility

over that infrastructure must increase so much more. IT needs to know who's accessing what, when, and from where. They also need to be able to identify potential threats from end to end, throughout that entire line of communication. Clearly, this requires sophisticated monitors and controls. It also requires an efficient system to communicate and act before threats have the chance to become attacks. Does your WFH program meet government regulations? Your on-site systems may have been compliant with government data and security regulations, but what about your remote systems? From personal devices to new networks to third-party applications, staples of remote work can jeopardize company and personal information, as well as security compliance.   =====================

Ready to enhance your risk preparedness?

----- Arcticle source ----- https://www.wipro.com/cybersecurity/risk-and-readiness/ ----- The new threat landscape Cybersecurity touchpoints across your organization What to look for: Top cybersecurity issues What to do: Planning your response Contact Wipro Please fill the required details to access the content Risk and Readiness In just two months, between January and March of this year, usage of virtual private networks (VPNs) and remote desktop protocols (RDPs) increased 124% and 41%respectively in North America. Businesses have shifted to remote work fast – but are they aware of the risks associated with this new paradigm? An OpenVPN survey reports that 73% of executives "believe remote workers pose a greater risk than onsite employees." Remote workforces require enhanced security controls. New applications and infrastructure changes that allow employees to work from home also increase an organization's exposure to cyber threats. As businesses move quickly to cloud-based solutions that support remote work, many are neglecting their security architecture and the necessary monitors and protocols, leaving them more vulnerable than ever to the rising number of cyberattacks. Named as a leader in Everest Group's 2020 PEAK Matrix Assessment for IT security services   providers, Wipro is well positioned to help you achieve cyber resilience while transitioning to new ways of working. Here, we'll get you started by guiding you through the first steps toward cybersecurity preparedness.   How sound is your security architecture? To answer this question, CISOs need to consider their organizations' cybersecurity across all touchpoints: from highcontact entry points to essential infrastructure to monitoring and oversight. Information leaks Accessing company data from a home or pubic network puts sensitive information at risk. Accessing company data from a home or pubic network puts sensitive information at risk. Vulnerable Devices Unlike workstations and devices managed by the organization, personal devices may not meet company security standards, or be equipped with the necessary monitors or controls. Unlike workstations and devices managed by the organization, personal devices may not meet company security standards, or be equipped with the necessary monitors or controls. Supply chain disruptions Visibility throughout your supply chain is essential for continuity planning as well as security planning. To stay ahead of disruptions, businesses need to be able

to identify threats all along the pipeline. Visibility throughout your supply chain is essential for continuity planning as well as security planning. To stay ahead of disruptions, businesses need to be able to identify threats all along the pipeline. Exposure to threats Network changes, new VPN configurations, alternate devices, ports, and IP addresses: transitioning to new operations can leave your organization temporarily exposed and more vulnerable to cyber threats. Network changes, new VPN configurations, alternate devices, ports, and IP addresses: transitioning to new operations can leave your organization temporarily exposed and more vulnerable to cyber threats. Regulation oversight How well do your existing security regulations apply to remote work? Unless you're reviewing and renewing them, it's hard to say for sure. Remote work presents new scenarios and applications that may not be accounted for in traditional regulations, resulting in security oversights. How well do your existing security regulations apply to remote work? Unless you're reviewing and renewing them, it's hard to say for sure. Remote work presents new scenarios and applications that may not be accounted for in traditional regulations, resulting in security oversights. Human errors Quick shifts to new processes with little notice increase the chance of people making mistakes. Without proper training, workers may not be aware of security best practices, inadvertently putting the organization at risk. Quick shifts to new processes with little notice increase the chance of people making mistakes. Without proper training, workers may not be aware of security best practices, inadvertently putting the organization at risk. Limited system capabilities How many VPN connections will your remote workforce require? How many can your IT infrastructure support? Not knowing your system's capabilities can doom your shift to remote work before it even begins. How many VPN connections will your remote workforce require? How many can your IT infrastructure support? Not knowing your system's capabilities can doom your shift to remote work before it even begins. Identity threats Identity theft has always been a big threat to cybersecurity, and remote connections elevate the risk. Insufficient access monitoring (least privilege standards, gated controls) and weak authentication processes for third-party applications (cloud, SaaS) open the doors to fraudulent activity. Still, many organizations lack adequate endpoint controls for remote work. Hackers know this, and they're exploiting these weaknesses, flooding organizations with digital identity threats. Identity theft has always been a big threat to cybersecurity, and remote connections elevate the risk. Insufficient access monitoring (least privilege standards, gated controls) and weak authentication processes for third-party applications (cloud, SaaS) open the doors to fraudulent activity. Still, many organizations lack adequate endpoint controls for remote work. Hackers know this, and they're exploiting these weaknesses, flooding organizations with digital identity threats. 1. Comprehensive risk assesment Evaluate your security architecture and any planned changes to support your cloud-based or remote-friendly workforce. We put together a free WFH self-assessment to get you started. It's based on frequently asked questions from enterprise clients about their own work-from-home programs. These questions will test your familiarity of the risks associated with working from home, how prepared you are to mitigate them, and guide you toward a more efficient cybersecurity preparedness plan. Evaluate your security architecture and any planned changes to support your cloud-based or remote-friendly workforce. We put together a free WFH

self-assessment to get you started. It's based on frequently asked questions from enterprise clients about their own work-from-home programs. These questions will test your familiarity of the risks associated with working from home, how prepared you are to mitigate them, and guide you toward a more efficient cybersecurity preparedness plan. 2. Robust strategy Focus on filling any gaps in your security system and reinforcing potential weaknesses. At Wipro, we divide our response-planning into several targeted scenarios to be sure we fully cover all aspects of the cybersecurity ecosystem. Common response scenarios for cybersecurity include: • Remote access and computing • Privileged access and operations • SaaS adoption for short-term business continuity plans • Multi-factor authentication for enterprise • Supply chain continuity and capacity Focus on filling any gaps in your security system and reinforcing potential weaknesses. At Wipro, we divide our response-planning into several targeted scenarios to be sure we fully cover all aspects of the cybersecurity ecosystem. Common response scenarios for cybersecurity include: • Remote access and computing • Privileged access and operations • SaaS adoption for short-term business continuity plans • Multi-factor authentication for enterprise • Supply chain continuity and capacity 3. Concerted, impactful action With a holistic approach, you'll balance short-term and long-term objectives With a holistic approach, you'll balance short-term and long-term objectives
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DevSecOps Demystified: Securing the Dev and Ops Worlds

----- Arcticle source ----- https://www.wipro.com/cybersecurity/devsecops-demystified-securing-the-dev-and-ops-worlds/ ----- About the Author(s) Related Articles Contact Wipro Please fill the required details to access the content DevSecOps Demystified Securing the Dev and Ops Worlds August | 2020 As digital journeys become the cornerstone of IT ecosystems, agile has become a preferred SDLC model, inviting an abundance of open source, third party solutions to the market, and making these journeys faster and smoother. This has led many organizations to move toward an automated DevOps ecosystem where continuous integration, testing, and deployment orchestrate in tandem. As new-age applications created artifacts using the DevOps ecosystem, organizations realized the following benefits. Organizations liked the DevOps ecosystem because there was hope for standardization amidst the "engineering democratization" and IT governance becoming more data-centric. Today, more and more organizations are leveraging DevOps data to build quantifiable information for KPI and governance automation. As the application development, testing, and support worlds are unifying under continuous delivery (CD), the cloud is making Infrastructure as Code (IaC) mandatory, therefore uniting the infra and app worlds. Despite these new ways of working, the IT ecosystem's security and risk management worlds still occur in silos, meaning: Importing increasingly vulnerable tools and technology into the IT landscape made customers think about how to bring security and related ops into the pipelines for better governance. Below are scenarios where organizations

could benefit from a DevSecOps approach. a) Static analysis and security testing (SAST)/Dynamic analysis and security testing (DAST) b) Enterprise leveraging DevOps tools c) Dynamic spin-up of an environment If an organization wants to deploy, provision environment, provision infrastructure, and provision application automatically, security hardening and related sanity testing of the environment must occur. Ignoring security, risk, and compliance outside of the DevOps ecosystem is not a consideration. Looking at SecOps inclusive DevOps or DevSecOps is now a mandate. Speed without compromising security is the new mantra. Allam Vinodh Kumar Practice Partner, Cybersecurity & Risk Services Wipro Ltd. A globally recognized Cybersecurity Assurance Evangelist, Vinodh A has more than 20 years' experience architecting, developing, and securing web-based software systems. As Practice Partner at Cybersecurity & Risk Services Wipro Limited, his technology teams launch and expand critical application security initiatives and build secure applications and infrastructures, integrating security throughout the development process. Annapoorna Venkateswaran consultant with a focus on DevOps and Mainframe modernization. In her current role, Annapoorna focuses on engineering productivity across the enterprise. In previous roles, Annapoorna has led delivery organizations serving global leaders in the financial sector and mainframe practices, including the related Modernization (In-the-Box) and automation Center of Excellence. With Wipro for 23 years, Annapoorna continues to lead the DevOps practice across the enterprise. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Recovery from COVID-19 Crisis Demands a Balancing Act from CISOs

----- Arcticle source ----- https://www.wipro.com/cybersecurity/recovery-from-covid-19-crisis-demands-a-balancing-act-from-cisos/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Recovery from COVID-19 Crisis Demands a Balancing Act from CISOs August | 2020 As businesses battle the severe economic downturn due to the COVID-19 crisis, there is an expectation that CxOs will focus on prudent cost management. CISOs have already started thinking on these lines and identified discretionary spend that can be rationalized. They are currently balancing between reducing costs and positioning for recovery and future growth. How CISOs can drive cost optimization in the new normal CISOs can look at a range or methods to release funds for current and future needs (See Figure 1). By applying a combination of measures, one

can unblock the potential use cases needing attention: 1)　Business 'line of sight': Realign to the shift in business priorities by capturing revised Business & IT directives into a capability map. Undertake a broad-based view of cybersecurity capabilities and the present and planned cost models. Figure 1: Strategies for cost optimization　2)　Drive simplification: The present situation provides the best opportunity to organize simplification drives across business. 3)　Improve productivity: The CISO organization, while being largely understaffed, has multiple activities and responsibilities that could be optimized through process streamlining and re-organizing working methods. Assurance, Operations, Service-Delivery are domains that can be prioritized. 4)　Exercise flexibility with partners: While current service contracts are multi-year or due for renewals, CISOs can tap into the flexibility built into these constructs and adapt to change in demands. Close to 20% reduction in costs can be exercised by exploring options that can allow operations at planned volumes. Reducing service levels, decommissioning low usage systems, limiting capacity of some environments, and right-sourcing using a global delivery model can be explored with partners. 5)　Hyper-accelerate cloud journeys: CISO functions, while being the enabler for IT cloud initiatives, could use some of the cloud-specific cost attributes themselves. A quick assessment of current service characteristics from a 'cloud-readiness attribute' should deliver a view of controls and services that can leverage cloud-specific consumption models. Re-platforming and retooling may not deliver immediate cost benefits, but it is a step in the right direction. Focus should be towards a detailed execution plan and a clear view of the savings that is to be unlocked (See Figure 2). The execution team should also be empowered with quick decision-making and resources. Figure 2: A plan to unlock savings Investing for a cyber-resilient future CISOs also have an interesting opportunity at hand. While it must contribute to overall cost savings, it must establish Cyber-Resilience as an important context for business/board support. The savings, if invested into cyber resilience initiatives, will prepare the enterprise for the new normal. The newer business imperatives and need to drive revenues, in most industries, is a shift to Digital and the channels it offers. CISOs' priorities for investments are: Balancing cost reduction while re-organizing investments for business priorities is the new normal for CISO offices while taking their functions to the next normal. Rajesh Pillai Sr. Partner – Consulting & Advisory, Wipro Rajesh represents Consulting & Advisory at Wipro and works from the London office. He has over 2 decades of experience in Risk Management & Cybersecurity advisory, and has worked with clients across multiple continents. Email: pillai.rajesh@wipro.com or cybersecurity.services@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

The What, Where & When for Effective Dark Web Threat Hunting

----- Arcticle source ----- https://www.wipro.com/cybersecurity/the-what-where-when-for-effective-dark-web-threat-hunting/ ----- About IntSights Related Articles Contact Wipro Please fill the required details to access the content The What, Where & When for Effective Dark Web Threat Hunting September | 2020 As the cyber-crime ecosystem evolves, cyberattacks are becoming more complex, creative, and tailored to the industries and organizations they target. To do this, attackers must research, prepare and seek out information on their targets prior to an attack. While each attack may differ, the general types of information an attacker is required to have to succeed remain similar. So, by setting up the right monitoring and investigative processes, it is possible for organizations to detect and gain context around an attacker's plan of attack before damage is done by tracking what they seek out. Today, the cybersecurity community focuses a great deal on technical elements and indicators of malicious activity to detect threats - and has thus invested heavily in technologically driven solutions. However, at IntSights, we believe there is much to be gained from investigating the human factor behind attacks and that in doing so, it is possible to uncover actionable warning signs much earlier in the cyberattack chain than through technological means alone. That is why we continuously monitor the dark web, collecting millions of data points on hacker behavior to give our clients the best chance at detecting an attack before damage is done. When classifying each data point we gather, we always start with the same three questions: No matter the maturity level of your organization, when analyzing a new piece of intelligence, you should always start by asking yourself these three questions. They will enable you to better understand the scope and nature of detected threats, form a strategy to prioritize and monitor risk, and finally, if and how to allocate resources towards a response or intervention. The Big Three: What, Where, When. When it comes to identifying new sources of risk and potential indicators of attack, there are three guiding questions: What? Where? When? They may seem obvious, but from our experience working with clients across the globe, sometimes answering these questions can be quite challenging. Let's break them down: What Where When   Am I Protecting • Asset Types • Employee Groups • Geographic Locations • Customer Data • Secret Projects or IP   Am I Defending Against • TTPs • Adversary Groups • Insider Threats • Customer Fraud   Did this Info Come From • Forums & Markets • 3rd Party Data Leaks • Mobile Messaging Apps • Government Notification   Am I Defending Against • TTPs • Adversary Groups • Insider Threats • Customer Fraud   Was It Detected • Reconnaissance • Initial Compromise • Early Foothold • Lateral Movement • Data Exfiltration   Is Action Required • Immediately • In the near term • Longer term What. There are two big 'whats' every threat hunter needs to be able to answer: When answering these questions, avoid generic statements or groupings,

and try to be specific. If you work at a large retailer for example, rather than protecting "company assets", try and focus on the two or three key targets that keep you up at night – perhaps POS and customer loyalty databases – and the techniques or groups focused on those asset types – perhaps ransomware and Russian organized crime. Being able to answer the two whats is essential to sourcing the right threat intelligence and analyzing what is truly actionable, as they define the basis from which relevance, actionability, and impact severity can be derived. Where. Where can I find actionable intelligence? Having defined what you are protecting and what types of attacks you are most likely to encounter, this is the logical next question. Given the proliferation of both high quality and low quality threat intelligence sources, information on likely attack techniques or indications of an attack can be found in a lot of different places. For beginners, dark web forums are a great place to start. The forums, of which there are hundreds, are popular communities where hackers exchange ideas and even trade illegal merchandise. The type, topic and users on the forum varies - they can be malware analysis sites that have samples of malware that could be analyzed for attack indicators – or they could be mobile based chat groups with attackers seeking specific information related to your organization to better inform an upcoming attack. For the less sophisticated, industry specific ISACs and threat intelligence firms, such as IntSights, can be a great resource for those without the resources or desire to go dark web hunting on their own. Understanding where, even at a broad level, hackers may be sharing or discussing information relevant to your organizational needs will dramatically narrow your scope of monitoring and enable you to get the most out of your limited resources. When. When in the attack chain does a particular threat occur? And when can it be detected? Understanding the answers to these questions can enable you to better gather the right qualitative indicators that appear earlier in the attack chain. These human driven factors often appear far earlier than technical indicators and can enable preventative action such as reporting and removing of fake domains before a phishing attack is executed. It is also possible sometimes to directly engage with an attacker, using avatars, to gain more information on the nature or severity of the threat. By focusing on these questions and developing systems to watch and alert as threats arise, you'll be able to peer earlier into the attacker supply chain and be positioned to act quickly and with the context needed to minimize damage or stop an attack entirely. Classifying Threats - The IntSights Process Having answered the big three (what, when, where), you should now have a solid understanding of what information is useful to begin collecting and gathering, and the focus can shift to data classification and filtering. As stated earlier, threat intelligence can come in many forms and being able to bucket and group this information into a framework that can be leveraged and acted upon is essential. At IntSights, we've spent a great deal of time thinking about this problem and use the answers gained from the big three to classify the cyber threat intelligence we gather into six main categories: Attack Indication, Data Leakage, Phishing, Brand Security, Exploitable Data and VIP. Attack Indication: Attack indications are, as the name suggests, documented indications that an attack may be being planned, organized, actively executed, or recently occurred. These are typically soft indicators, such as online chatter between hackers or derived from a new item up for sale. While often not directly actionable, this information can provide critical

insight into the types of threat actors targeting your organization, how they plan to exploit a vulnerability in your defenses to gain entry, or what types of information they are attempting to steal. Data Leakage: Unfortunately, this is often a retroactive indicator suggesting an attack has occurred. Data leakage is the posting of confidential information online. This type of data can help incident response teams more quickly scope what type of data may have been stolen, the source of intrusion, and if caught quickly, prevent further damage. Phishing: This branch of social engineering has become a favorite of hackers of late due to its relative ease to set-up and high success rate. Cyber criminals use domains similar to company domains or spoof legitimate accounts aimed at getting employees or customers to volunteer sensitive information. In recent years, dark web vendors have popped up offering customized turnkey phishing solutions targeting well-known brands – making it even easier for hackers to launch these types of attacks at scale. Brand Security: Brand security and Phishing often overlap, but brand security is a broader term designed to encompass the misuse of a corporate or organizational brand. This can include phishing emails and spoof websites, misleading social media ads, fake app listings, digital messages, fake employee profiles or accounts and misrepresentation forums. Exploitable Data: Exploitable data relates to vulnerabilities and holes in existing enterprise defenses. Unlike Data Leakage which focuses on the data itself, Exploitable Data relates more closely to exposure and vulnerability gaps that could enable a bad actor to access or steal sensitive information. Threat intelligence examples of this could include chatter on stolen credentials, unpatched systems, expired signatures, unencrypted data, and network vulnerabilities. VIP: This catch-all category refers specifically to threats related to key figures in an organization that are, for obvious reasons, prime targets for a campaign. They could be high profile individuals, employees with access to sensitive data or employee groups at higher risk of targeting due to some other factor. Type What Where When IntSight Approach Attack Identification •Announced intention •Domain specific malware •Target lists •Stolen goods •Insider recruitment •Scam pages •Accounts for sale •Forums •Malware repositories •Black markets •Paste sites •IM platforms •IRC chats All stages We use avatars to contact the threat actor, and try to either gain a sample of the data that is offered for sale, or extract more information from them. Then we can understand where the data came from, and try to understand the scope of the attack and the capabilities of the attacker. Data Leakage •Confidential information •Leaked credentials •Email •Paste sites •Company website •Data breaches •Insider leaks After initial compromise Varies based on type of leak, but we will investigate source of leak, change passwords and encourage user awareness training and dark web monitoring. Phishing •Social engineering via original domains or domains similar to corporate domains •Employee or customer targeted emails •Whois services •Spam report sites •Internal IT •Customer support •FBI Initial recon, compromise, and privilege escalation Block suspicious domains from communicating with email gateways and firewalls. Remediate domains by contacting registrar and host service provider. Encourage user awareness training. Brand Security •Social engineering via unauthorized use of brands aimed at high employees or customers •Fake account profiles •Fake corporate apps •Social media •Fake spoof sites •App stores Preparation stage (before the attack, very early stage or ongoing attack) Warn employees not to communicate with

suspicious profiles or download suspicious apps. Request fake apps be removed from app stores. Exploitable Data •Unpatched vulnerabilities •Open ports •Unencrypted login pages •Internal pages accessible via IP •Exposed •Corp/partner sites •Vulnerable software •Bug bounty programs •Dark web forums •Zero days exploits After initial compromise Investigate vulnerable points or open ports, ensure all relevant software updates are downloaded and patched. Review and secure web and service login pages. VIP •Top executives •Board members, •R&D team members •Email •Social media •Credential theft All stages Tighter IT controls and improved user awareness training. Case Study - The IntSights Process in Action Having detailed how IntSights gathers and classifies threat intelligence, let's step back and take a look at how this all comes together to make a meaningful impact on an organization's security by examining how a leading North American retailer used threat intelligence gathered by IntSights' to clamp down on gift card fraud. At the time of this attack, hackers had focused in on gift card theft due to their lower profile and less stringent security oversight when compared to credit cards. They had been racking up large financial gains as consumers, retailers and providers had not fully awoken to the risks involved or losses being generated. While monitoring dark web chatter on behalf of this retailer, IntSights discovered that unknown to the company, their gift cards were being systematically produced and later sold on the black market. Leveraging IntSights' platform, the retailers' security team was able to rapidly alert the company, and provide them valuable context to the incident - including attack identification, brand security and exploitable data examples - and suggest recommended remediation actions through the IntSights dashboard. IntSights Intelligence Dashboard visualizes and categorizes threats by type and severity from across the clear, deep and dark web. As a result, IntSights was able to raise the company's awareness to a growing and unknown source of fraud. The company was then able to use this information to justify the creation of an ongoing monitoring program, the implementation of better security measures in store gift cards and reduce the amount of black market activities using store gift cards. Reimagining Security with Threat Intelligence As you've seen, there is a great deal that can be gained by focusing on the human element of cybersecurity. Leveraging dark web threat intelligence can provide tips or context to a potential attack weeks or months before the use of technical indicators alone. As you look ahead and begin to apply the lessons learned in this paper, here are a few closing tips to remember: Threat intelligence is more than IOCs: While many organizations focus on technical indicators, there is great value to be gained from qualitative and non-technical indicators of attack. Take a moment to step back and make sure you are considering how all forms of intelligence can advance your goals. Get clarity on the big three – What, When, and Where: Every decision made related to sourcing or responding to threat intelligence should tie back to the answers gained from these questions. Being unclear or not fully understanding the answers to these questions can lead to gathering the wrong information or responding to the wrong threats. Know what is actionable to you: There are many forms of threat intelligence and some will be more valuable to you than others. Use the big three questions to help focus on gathering only the intelligence and data types that are actionable to you. Classify, then analyze: Having a solid classification process is critical to deciphering threat intelligence.

Attempting to analyze raw data without context is a slow and painful process. Make sure you have the right tools: Before jumping head first into the world of threat hunting, make sure that you and your team are equipped for success. Enterprise threat intelligence and mitigation platforms such as IntSight's can help by automating much of the gathering and analysis of threat intelligence and even aid in remediation to dramatically shorten your time to value. If you decide to walk alone on the dark web - don't forget to take basic precautions to ensure your operational safety - use VPN proxies, operate inside VMs, and develop unique non-identifiable avatars. No amount of intelligence is worth compromising your organization's operational security.   This article is contributed by IntSights Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Take Control of Your Security

----- Arcticle source ----- https://www.wipro.com/cybersecurity/take-control-of-your-security/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content Take Control of Your Security Why Wipro's Zero Trust Security Framework is Your Best Defense Strategy November | 2022 As they refine and redefine their cybersecurity strategies and pursue digital transformation, banking and finance enterprises should consider the importance of an integrated architecture to transform their cybersecurity environment. Zero-trust security, in particular, is proving itself to be a holistic, practical and adaptable solution to the cybersecurity challenges that banking and finance enterprises now face. Even for organizations that have already adopted zero-trust, this is a moment to step back and reconsider the potential gaps in the enterprise's zero-trust cybersecurity estate. The move to remote work at the outset of the pandemic created instantaneous cybersecurity risks for the banking and finance industries. A cybersecurity strategy could no longer rely mostly on the defined network perimeter of a large office. Instead, companies were forced to trade their traditional security architectures for ecosystems that allowed employees to access cloud services from anywhere. Most enterprises handled the situation using temporary cybersecurity fixes. However, it is now abundantly clear that remote and hybrid work are here to stay, and companies must convert ad-hoc remote/hybrid cybersecurity strategies into durable strategies for the new reality. As they refine and redefine their cybersecurity strategies, banking and finance enterprises should consider the importance of an integrated architecture to transform their cybersecurity environment. Zero-trust security, in particular, is proving itself to be a holistic, practical and adaptable solution to the cybersecurity challenges that banking and finance enterprises now face. Even for organizations that have already adopted zero-trust, this is a moment to step

back and reconsider the potential gaps in the enterprise's zero-trust cybersecurity estate. Cyber security strategy using zero-trust Verizon's most recent Data Breach Investigation Report states that external threats currently account for 73% of all data breaches in finance and insurance companies. Most external data breaches take advantage of a lack of internal control mechanisms, which allows for unhindered lateral movement of malware in the network. The other 27% of breaches are internal. In these cases, the employee enabling the data breach has legitimate reasons to access company data and applications. However, in the case of a threat, they are using the network or accessing the data in a way that goes far beyond their business function. In both cases, the problem is that bad actors can navigate through IT systems with very little friction or visibility. A zero-trust approach to cybersecurity aims to solve the problem of wide-open, un-policed internal IT systems. Zero-trust, first coined by Forrester more than a decade ago, takes into account information about data, networks, people, workloads and devices (see Figure 1). This strategy leverages analytics and automation to provide visibility and access based on a trust-but-verify approach. The goal is to protect sensitive data and information while also providing access to users based on legitimate business needs. As such, zero-trust is becoming a vital cybersecurity framework for organizations that rely on significant amounts of sensitive or private information. Because this approach responds to an organization's unique data types, management structure and networks/devices, it can be adapted and fine-tuned based on the business priorities of a given enterprise. Figure 1: Five elements of zero trust security and use cases Zero-trust security for the banking & finance industry Wipro provides a holistic approach to zero-trust security, leveraging a framework and a working model that relies on a comprehensive range of security tools and functionalities while also integrating elements of cybersecurity controls. This approach helps enterprises adopt zero-trust security seamlessly, using specific process-driven security toolsets to define and control various levels of access to organizational resources. For example, in one client engagement with a large private bank, we employed zero-trust security to both strengthen the security architecture and adhere to regulatory mandates. We assessed the entire network and controls, recommended changes in the security architecture based on application data flow and user access, and strengthened security controls for the "crown jewel" applications. The result: improved remote access for users combined with a reduction in attack surface. Wipro leverages a zero-trust framework (Figure 2) derived from the Forrester ZTX framework and other industry standards. This framework follows the National Institute of Standards and Technology (NIST) approach, but expands further to an adaptable architecture. Figure 2: Wipro's Operational Framework of Zero-trust Security Multiple security products with zero-trust capabilities can contribute as building blocks of the overall solution. The centralized platform enables visibility of an entire security estate and identifies potential security risks, driving constant monitoring that continuously improves the security posture. A truly mature cybersecurity architecture is fully interconnected; any anomaly in the system can trigger changes in the levels of access. Figure 3: Data flow of zero trust security architecture Wipro's approach to zero-trust Leveraging our zero-trust framework, Wipro assesses the enterprise environment's current cybersecurity maturity, rationalizes its security tools and strengthens the controls to creates a cohesive

architecture with the appropriate ecosystem of security tools. (See Figure 4 for more context on the five zero-trust capability levels that inform our maturity assessment.) Figure 4: Sample Analysis of Zero-trust Security Maturity Our assessment reports current zero-trust maturity and defines the direction for a cybersecurity roadmap. Based on this assessment, we prioritize focus areas and align a suite of cybersecurity products and approaches that will address those focus areas. We build use cases related to infrastructure, data and identity, and explore which enhancements, integration mechanisms and orchestrator tools will most effectively address the identified use cases. Finally, we deliver a comprehensive business case for adopting zero-trust, including the expected level of resulting cybersecurity maturity and the business benefits of an improved security posture. Benefits of a zero-trust framework for banks and financial institutions Angshuman Chattopadhyay Infrastructure Security, Zero-trust Security Head within Cybersecurity and Risk Services at Wipro Angshuman Chattopadhyay is the infrastructure security and zero-trust security leader within Cybersecurity and Risk Services at Wipro. He brings extensive experience with over 21 years in IT and cybersecurity across a wide range of global roles. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Why Zero Trust User Access is vital for secure remote working?

----- Arcticle source ----- https://www.wipro.com/cybersecurity/why-zero-trust-user-access-is-vital-for-secure-remote-working/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content Why Zero Trust User Access is vital for secure remote working? September | 2020 Abstract Wipro and Microsoft recently hosted a joint CISO panel event on the topic of Zero Trust user access for a secure remote working environment. The purpose of this white paper is to discuss the role played by Zero Trust user access in securing the remote working, elaborate some of the key points from the CISO panel discussions and learn how Microsoft security solutions enable organizations to secure their users, devices, network, applications, and data through Zero Trust security approaches. The trusted perimeter is no longer effective A rare global crisis like COVID-19 has transformed human life as well as the enterprise operating model. Working remotely on a massive scale is bringing new security challenges to organizations as untrusted networks and unhealthy devices are being leveraged to connect to the enterprise network, systems and services. While leveraging existing remote connectivity solutions and trust-model dependent security solutions to meet the remote working requirements, organizations

are witnessing their attack surface grow in today's increasingly hostile threat landscape. All the CISOs in the panel echoed the same opinion - the need to rethink the fundamentals of perimeter centric and trust-based security and the way it protects enterprise critical applications, data, devices, and users. Zero Trust – The new security fundamental Today, organizations require a security model that effectively adapts to the complexity of the current modern workplace environment and safeguard from the evolving threat landscape. It should efficiently support the mobile workforce and protect users, devices, applications, and data wherever they are located. The Zero Trust security model is not new and it has been in discussions and practice for quite some time. However, it was majorly leveraged in a narrowed scope among risk signal sources such as network, data, applications, users, and devices. They work independently and do not share the threat signals and intelligence with each other, preventing it from being a comprehensive and effective security model. However, they all share the common Zero Trust principles such as: But with the new normal working atmosphere, we are all in a perimeter-less world and identity is the new perimeter. Hence the Zero Trust should start from the user access, and it is very critical that the enterprise access management solution supports the above three core Zero Trust security principles. Based on a majority view of the CISOs at the panel discussion on the Zero Trust user access, it appears that several organizations are in the process of adopting the Zero Trust security model and would start with identities. Start your Zero Trust journey with Microsoft Security Stack Microsoft provides a strong foundational security solution to kick start your zero trust journey. Azure Active Directory Conditional Access helps organization to provide granular access to users and devices to access applications and data securely by leveraging billions of threat signals and providing real-time threat protections. Figure 1: Microsoft working model of Zero Trust User Access reference architecture Azure AD native integrations with mobile device management systems (Intune), Advanced Threat Protections (ATPs) and Cloud App Security provide a strong Zero Trust orchestration platform to enforce your organizational Zero Trust user access policies. Microsoft Graph APIs allow integrating with third party risk signals and automating real-time risks remediation before the user trust is established to gain access to corporate data. Microsoft security solutions provide adequate building blocks to drive your Zero Trust user access implementation. Some of the key pillars of the Zero Trust user access include: Conclusion and Takeaways: From the collective view points from the panel discussion, it is obvious that most of the organizations are re-prioritizing their security programs to focus on strengthening their remote workplace environment by adopting Zero Trust security principles. Some of the key learnings from this event include: Prakash Narayanamoorthy Microsoft Security Practice Partner & Principal Security Architect at Wipro Prakash Narayanamoorthy is the Microsoft Security Practice Partner & Principal Security Architect at Wipro. He has spent 17+ years in the Identity and Security domain, and helped multiple large global organizations to solve complex IAM challenges. He can be reached out at Prakash.narayanamoorthy@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by

monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Security Management Center

About the author Related Articles Contact Wipro Please fill the required details to access the content Security Management Center Why Your Security Operations Need this Productized Service September | 2020 Traditionally, security infrastructure and components are managed using a hierarchical support model, with engineers and service desk team performing pre-defined set of activities. They are responsible for the upkeep of the infrastructure, management of the devices, handling of service requests, and reporting of service status as part of regular review with the stakeholders. Various commercial tools and platforms are used to help in the operations. These are tools to monitor device availability or performance, scripts to automate generic tasks, along with service management platforms for ticket and workflow management in the operations process. With the increase in the number of security products and the associated complexity, enterprises and service providers have started using orchestrators and compliance management tools to reduce the effort of managing these products, and to improve compliance of the infrastructure. Despite the presence of these security tools and technologies, enterprises face cyber-attacks, and malware infections. The main reason for the security gap is missing "security hygiene" of the infrastructure and limited visibility of infrastructure and associated service effectiveness. A proactive and cohesive approach to security Effective security service requires standardized infrastructure and components. It also stipulates the use of a platform that can provide the required set of services, yet be flexible enough to cater to any new or complex requirement. Hence, the concept of productized services is highly effective in ensuring service effectiveness and filling the gaps in traditional security operations. Wipro's state-of-the-art Security Management Center (SMC), built on the principle of "Beat Before Beaten", has an integrated approach combining Predictive, Preventive and Proactive activities based on automation and analytics, which ensures a 360-degree business-oriented view of security operations and thus, SMC is a purpose-built security operations and orchestration product to help deliver managed security services. It offers operational insights, prioritization of risks, pre-integrated tools, short deployment time, reusable use cases, etc. to help enterprises attain operational maturity, thereby greatly reducing time-to-market. Its unique proactive approach to provide insights into the security infrastructure gives organizations visibility into their security posture. Wipro uses Security Management Center to visualize the security infrastructure, holistically to view its customer's security posture. The consolidated view comprises of risk, reliability and efficiency posture of the infrastructure. It delivers the richness of correlated data, aggregated information, and transparency related to the offered services. Figure 1: Effective security operations with

Security Management Center SMC provides a unified view translating individual tool views/ reports into meaningful dashboards to stakeholders within the enterprise hierarchy. For instance, an executive view for the CISO shows whether any risks are manifesting due to ineffective or inconsistent application of security controls or if configurations are not meeting the baselines. Similarly, it provides an operational view to Operations Manager and a technology view to Analysts and Engineers. Figure 2: Snapshots of Security Management Center dashboards Security Management Center: Ensuring integrated visibility SMC service architecture consists of multiple tools, collector and different data access methods using which the data is captured, correlated and aggregated to create the required views in the portal. Figure 3: Indicative diagram for SMC data flow The architecture consists of a server hosting SMC platform with the data collection module, with IP connectivity to various security devices available in the infrastructure. The configuration of these security devices, are assessed using set of use cases defined as the baseline criteria. These use cases are derived from security frameworks, regulatory standards, vendor best practices and Wipro's experience. SMC integrates with these security devices using APIs to collect the required information. The vulnerability management tool deployed at customer infrastructure is integrated to collect relevant information defined by pre-defined use cases. SMC integrates with orchestrator tools deployed at the customer's premise, which integrates with the firewall, load balancer devices to collect the configuration and rule bases, and access Firewall logs to analyze and create meta data content. The meta data is then sent to management server for further analysis. The service management tool hosted at customer data center is integrated with SMC using supported mechanisms and collect security operations ticket data in pre-defined time interval. The health monitoring tool is hosted in the data center, which monitors the infrastructure security devices including firewall, load balancer, forward proxy, end point security management servers, etc. to collect health and performance related data, for analysis and reporting to SMC. The data gathered from all the above processes are then sent to the database of SMC platform, where it is further correlated and aggregated, to provide integrated visibility towards security infrastructure and security posture. SMC portal shows consolidated view of security posture as operational risk, efficiency and reliability view, with the capability to drill down to individual device status. Angshuman Chattopadhyay Infrastructure Security within Cybersecurity and Risk Services, Wipro Angshuman Chattopadhyay is the Consulting & Solutions Lead for Infrastructure Security within Cybersecurity and Risk Services at Wipro. He brings extensive experience with over 19 years in IT and cybersecurity across a wide range of global roles. Angshuman can be reached at angshuman.chattopadhyay1@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. ===================== ----- Arcticle source ----- https://

of Cybersecurity Report 2020 State of Cybersecurity Report 2020 Making of the Cybersecurity Report Making of the Cybersecurity Report The Latest on Cybersecurity Discover In-Depth The Latest on Cybersecurity Discover In-Depth Security Trends by Industry Contact Wipro State of Attacks, Breaches, and Laws: COVID-19 & Cybersecurity: State of Cyber Resilience: State of Collaboration: Future of Cybersecurity: Next Gen SOC: Secure by Design: Data Security: Cloud Security: OT Security: State of Attacks, Breaches, and Laws: COVID-19 & Cybersecurity: State of Cyber Resilience: State of Collaboration: Future of Cybersecurity: Next Gen SOC: Secure by Design: Data Security: Cloud Security: OT Security: Please fill the required details to access the content State of Cybersecurity Report 2020 The 4th edition of Wipro's annual cybersecurity report provides a unique perspective on the changing nature of cybersecurity globally in the wake of the COVID-19 pandemic breakout. With global cyber threats on the rise, our research offers insights on how threats are evolving, the latest cybersecurity trends, and advice for how organizations can stay ahead of the curve in these demanding times. The 4th edition of Wipro's annual cybersecurity report provides a unique perspective on the changing nature of cybersecurity globally in the wake of the COVID-19 pandemic breakout. With global cyber threats on the rise, our research offers insights on how threats are evolving, the latest cybersecurity trends, and advice for how organizations can stay ahead of the curve in these demanding times. Wipro developed the State of Cybersecurity Report 2020 over four months, conducting primary research with security leadership and our Cyber Defense Centers worldwide. Secondary research involved various public databases, research platforms, and academic and industry collaboration. In total, this cybersecurity report incorporates exhaustive research to help strengthen any organization's cyber resilience. Wipro developed the State of Cybersecurity Report 2020 over four months, conducting primary research with security leadership and our Cyber Defense Centers worldwide. Secondary research involved various public databases, research platforms, and academic and industry collaboration. In total, this cybersecurity report incorporates exhaustive research to help strengthen any organization's cyber resilience. Cybersecurity is a rapidly evolving field. To get the full picture and stay ahead of bad actors, business leaders, CISOs, and IT departments must pay close attention to both macro and micro cybersecurity trends, changing privacy laws, and new technology trends. Here are some key aspects covered in the State of Cybersecurity Report: Macro-level cybersecurity trends The radical shifts sparked by the pandemic An inside-out perspective Information Sharing & Collaboration Strategies Cybersecurity Patent & Technology Trends How can organizations grapple with cybersecurity challenges? What are the trends in security practices that businesses are employing? The report research identifies significant trends over the past three years, in selected domains. Get the Inside out perspective on security governance and practices. Extend cognitive detection capabilities to Next-Gen SOC Implement secure by design by embedding security in DevOps Automate data security controls from discovery to protection Govern permissions in the cloud Step up industrial asset identification and monitoring with OT security Cybersecurity is a rapidly evolving field. To get the full picture and stay ahead of bad actors, business leaders, CISOs, and IT departments must pay close attention to

both macro and micro cybersecurity trends, changing privacy laws, and new technology trends. Here are some key aspects covered in the State of Cybersecurity Report: Macro-level cybersecurity trends The radical shifts sparked by the pandemic An inside-out perspective Information Sharing & Collaboration Strategies Cybersecurity Patent & Technology Trends How can organizations grapple with cybersecurity challenges? What are the trends in security practices that businesses are employing? The report research identifies significant trends over the past three years, in selected domains. Get the Inside out perspective on security governance and practices. Extend cognitive detection capabilities to Next-Gen SOC Implement secure by design by embedding security in DevOps Automate data security controls from discovery to protection Govern permissions in the cloud Step up industrial asset identification and monitoring with OT security ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/state-of-attacks-breaches-and-laws/ ----- Contact Wipro Please fill the required details to access the content State of Attacks, Breaches and Laws October | 2020 In a world of accelerating and intensifying digitalization, cybersecurity is becoming a competitive driver. More than a shield that protects intellectual property, innovation, and people, security is a foundation for building digital trust. With cyber attacks on the rise and remote working exposing an organization's security vulnerabilities, data breaches and cyber intelligence have transcended the CISO's interests, garnering the executive management and the board's attention. The evolving cybersecurity ecosystem With high-profile cyberattacks making the headlines and increased network security vulnerabilities with vast numbers of people working from home for the first time, newfound vulnerabilities and sophisticated bad actors are causing many to reassess their organizations in the wake of stricter cyber laws and shared accountability. It's said that the best defense is a good offense, and the same philosophy applies to cybersecurity. Data breaches happen when security is perceived as an IT responsibility and not a shared organizational responsibility. From shoring up your digital defenses to tracking cyber risks to building a more cyber-resilient organization, the challenges are many. Over the past three years, nation-state cyber attacks have changed, requiring more collaboration and coordination to keep sensitive information, people, and systems safe. Check out the infographic below for a quick overview of the trends around data breaches, cybersecurity intelligence alerts, global malware statistics, vulnerabilities in security products and open-source projects, and changing cyber laws around the globe. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/covid-19/ ----- Contact Wipro Please fill the required details to access the content COVID-19 October | 2020 How strong is your cyber response? COVID-19 changed how we work, shop, and interact. Lockdowns accelerated the rise of remote work, which was already gaining traction within many industries. With entire economies at a standstill, critical links in the global supply chain were broken, supply chain disruption rippled across every industry. Consumer fear, bottlenecks, and shipping delays created surges in demand and shortages in supply. With operations focused on meeting demand and sourcing hard-to-find materials, bad actors' opportunities to target vulnerabilities in a 'keep-the-lights-on' frenzy magnified. While nations and businesses grappled with the pandemic,

cybersecurity ecosystems scrambled to manage new realities. The opportunities for profiting from espionage, IP theft, ransom, and other criminal activities increased while the world directed their attention to the clear and present danger. Today, as economies enter recovery and the world prepares for a potential second wave, the focus has shifted to a fortified cyber response. The pandemic made many businesses, from auto manufacturing to energy and life sciences, fully appreciate the need for enhanced security monitoring strategies to better prepare for future supply chain disruption and to stay competitive in a post-COVID-19 world. Keep reading how organizations' cyber responses have evolved since the COVID-19 outbreak. Download The State of Cybersecurity Report 2020 to level up your cyber response. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/state-of-cyber-resilience/ ----- Contact Wipro Please fill the required details to access the content State of Cyber Resilience October | 2020 What is Cyber Resilience? COVID-19 was an impetus for rapid digitization virtually overnight. With thousands of employees working remotely, CISOs were tasked with creating a secure remote work environment to ensure business continuity. CISOs had to grapple with data security, application security, and endpoint security in an unprecedented context. The lessons learned in this hyper-accelerated transition to remote working catalyzed a radical shift to traditional security governance and cyber-resilience efforts. A cyber-resilience framework With more organizations adopting cloud, automation, and digital transformation to prepare themselves better for future disruptions, the need for a secure foundation has never been stronger. Organizations that want to reap the benefits of cloud and emergent technologies need a cyber-resilience framework that provides the mechanisms for communicating roles and responsibilities, feedback, and critical imperatives between corporate hierarchies to strengthen an enterprise's posture. The journey toward cyber security resilience starts with a continuous appreciation of cyber risks that can impact an organization's ability to thrive and deliver on its core business imperatives. Zero trust architecture will play a critical role in managing threats as organizations shift their traditional approaches to keeping data, people, and systems secure. Keep reading for a high-level overview of where organizations are on the road to cyber security resilience. Download the State of Cybersecurity Report 2020 to dig deep into trends driving greater cybersecurity and business alignment. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/the-state-of-collaboration/ ----- Contact Wipro Please fill the required details to access the content The State of Collaboration October | 2020 Lasting change can only come through collaboration. When people work together within organizations and with external stakeholders to enhance threat intelligence, remediation measures, and best practices, they're better prepared for increasingly sophisticated cyber attacks. Strong collaboration between the public and private sectors can help identify new cyber threats and develop strategies to counter them. Collaboration becomes even more critical when protecting national, critical infrastructure operated by the private sector. Governments around the world are facilitating collaboration through legal and quasi-legal constructs, including sharing networks. Given various factors, such as reputational risks and reservations around working with competitors, the private sector has

been cautious in their participation. Despite the trepidation, more organizations are participating in cyber-attack simulation exercises to assess their preparedness level and identify critical gaps in their application security, supply chain security, and endpoint security. To hedge their losses from cyber attacks, enterprises are adopting cyber insurance as a risk transfer mechanism. While cyber attacks can lead to erosion of trust and negative publicity, organizations can use cyber insurance policies to cover some legal and recovery expenses. However, cyber insurance policies aren't a primary risk management strategy. To learn more about the levels of cyber-insurance coverage and to dig into the nuances of the state of collaboration, download The State of Cybersecurity Report 2020. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/future-of-cybersecurity/ ----- Contact Wipro Please fill the required details to access the content Future of Cybersecurity October | 2020 We analyzed cyber patents, cyber startup funding, and cybersecurity trends to lay out our perspective on the future of cybersecurity. A nearly 350% increase in cyber patent filings from 2015 to 2018 indicates a rapid rise in cybersecurity research, technology growth, and adoption. One cybersecurity prediction is the coming dominance of artificial intelligence and machine learning to monitor threats, detect anomalies, and predict user behavior. Additionally, 5G, quantum computing, and digital twin will see gains in the coming years as more businesses worldwide embrace these game-changing technologies. As part of digital transformation, new technology adoption will widen a business's attack surface and expand operational risks. In the post-COVID-19 era, cybersecurity implementations will have to rely on collaboration and trustware, which encapsulates a broad set of trust-enhancing technologies, frameworks, and standards. Trust-as-a-service will be a pressing demand, and organizations will have to realign their business processes to take advantage of this service. For all ten predictions, download The State of Cybersecurity Report 2020. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/banking-financial-services-and-insurance/ ----- Contact Wipro Please fill the required details to access the content Banking, Financial Services & Insurance October | 2020 With cybersecurity, one size doesn't fit all. IT security challenges vary widely across sectors, but they have one in common: devastating financial and reputational consequences when cyber risks don't get the attention they deserve. In a world racing toward digitization, cloud, and IoT, growth opportunities seem limitless, but without a strong IT security foundation and collaboration between the CISO and other vital stakeholders, banks and financial services institutions expose themselves to vulnerabilities, waiting to be exploited by bad actors. The Banking and Financial Services industry has always been a prime target for social engineering attacks. The financial rewards and volume of PCI and insurance data available make the industry a tempting target. "41% of the information sold on the black market comes from banking and financial services," according to IntSights. Despite this, the industry has been a trendsetter when addressing cyber risks, often being an early adopter of new defense strategies. To learn more about the banking and financial security landscape, download The State of Cybersecurity Report 2020 here. ===================== ----- Arcticle source ----- https://

www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/ communications/ ----- Contact Wipro Please fill the required details to access the content Communications October | 2020 With great power comes great responsibility. From the web to TV to radio, you can't help but notice the imminent rollout of 5G. 5G communications will revolutionize the way we live, work, and socialize. Still, this radical shift requires significant evolution of radio and core management systems and protocol layers, creating new security risks throughout the entire 5G network. Cloud and virtualization-as-a-service help telcos reduce costs and deploy and optimize services faster. Still, they expose APIs toward users and third-party services providers and execute programs on shared hardware platforms alongside dedicated telecom software. The result: remote updates of software, open architecture, and digital technology that enables 5G communications will create more significant security issues and create new opportunities for bad actors. Through Software Defined Networks (SDN) and cloud computing, the Communications industry will pivot at the center of this growth. Attacks on remote industrial systems, utility networks, medical devices, and self-driving vehicles will continue to rise through these expanding networks. To learn more about 5G communications, digital technology, and proactive frameworks to understand the current threat landscape better and fortify your cyber response, download the State of Cybersecurity Report here. ===================== ----- Arcticle source ----- https:// www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/consumer/ ----- Contact Wipro Please fill the required details to access the content Consumer October | 2020 Cybersecurity for consumer industries The consumer industry encompasses various markets and company profiles, ranging from retail, food, and consumer products. Despite differences, businesses in this sector have shared concerns around consumer trust and identity protection. COVID-19 changed how business is done (maybe forever). With people being more home-centric and increasingly shopping on desktop and mobile for the first time, the number of consumers keying their credit card numbers and other sensitive personal information into cloud-based commerce platforms has grown exponentially. In a world of eroding consumer loyalty, a diminished brand reputation isn't easy to recover. Embarrassing data breaches and interruptions to service can drive consumers to brands that prioritize their security and privacy. Brand reputation, regulatory pressure, and consumer action will continue to drive improved practices across consumer industries, especially as brands prioritize user experience. Learn how to build digital trust and address evolving cybersecurity for consumers by downloading The State of Cybersecurity Report. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/ healthcare-and-lifesciences/ ----- Contact Wipro Please fill the required details to access the content Healthcare & Lifesciences October | 2020 Health and Pharmaceutical Industry The global pandemic has put a spotlight on cyber security for healthcare. From supply chain security vulnerabilities to large-scale legacy infrastructure breaches, the health and pharmaceutical industry is no stranger to ransomware or emboldened threat actors. The health and pharmaceutical industry is evolving rapidly. Technology is transforming how patients are diagnosed, treated, and managed. With the Amazon Effect rippling across industries, today's patients have higher expectations and want more convenience, choice, and flexibility to manage

their health. Yet innovation without a secure foundation can lead to challenges for organizations, supply chain operators, medical professionals, caregivers, and patients. But that's not all—cybersecurity risks are moving beyond traditional IT assets to connected medical devices. With deeper vulnerabilities exposed in new remote and mobile working environments, ensuring your infrastructure, IP, supply chains, and medical devices are secure enough is more challenging than ever. As we go back to the office and adopt flexible workplaces, cyber threats aren't going to vanish suddenly —they're here to stay. To learn more about supply chain security risks and cybersecurity trends impacting the health and pharmaceutical industry, download the State of Cybersecurity Report. ======================= ----- Arcticle source ----- https:// www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/energy-natural-resources-and-utilities/ ----- Contact Wipro Please fill the required details to access the content Energy, Natural Resources & Utilities October | 2020 If you're in the Energy, Natural Resources, and Utilities industry, you're often the backbone of a society's critical infrastructure. But if the pandemic taught us anything, it's that every industry can be a target for cybercriminals. With an increased focus on digitization, cloud, and operational technology (OT) and the rise of sophisticated ransomware, malware, bad actors, and hacktivists, cyber security for energy has never been more important. To avoid operational disruption and data breaches and to keep ahead in a hyper-competitive environment, your enterprise will need to take proactive measures to secure what matters. From investing in cyber security for utilities strategies to leveling up your existing threat monitoring capabilities with artificial intelligence and predictive insights, you will need to approach security holistically, especially as you modernize to improve user experience and support complex remote field operations. Energy and utilities have long been a prime target for threat actors because they handle and store vast amounts of IP and innovation gained over decades. Information may be stored on vulnerable legacy systems ill-equipped for cyber security for utilities frameworks. To dig deeper into cyber security for energy trends, download The State of Cybersecurity Report. =======================

Wipro's Data, Analytics & Intelligence

----- Arcticle source ----- https://www.wipro.com/analytics/ ----- Services Strategic Advisory Business Analytics Insights Transformation Data

Engineering & Management Managed Services Contact Wipro Wipro and Integra LifeSciences, Continuum of Care Delivered Through Technology Modernization Driving better, faster water resource decisions at WaterNSW Using data-driven intelligence to innovate BT Group's contract governance reporting process Enhancing customer experience and accelerating Digital Transformation for Telkomsel ISG Briefing Note: Elevating Retail with Wipro & Microsoft's GenAI-led Intelligent Contact Center Wipro received the highest deal consideration rate in the D&A Competitive Landscape in the Gartner® Peer Insights™ January 2022 to December 2023 Wipro Positioned 'a Leader' in Everest Group Data and Analytics (D&A) Services PEAK Matrix® Assessment 2023 Wipro Positioned as 'Leader' in Everest Group Data and Analytics (D&A) Services PEAK Matrix® Assessment 2022 Wipro named a Leader in 2022 Gartner® Magic Quadrant™ for Data and Analytics Service Providers Please fill the required details to access the content Unlock opportunities with powerful data insights and innovation Data is the fundamental building block of business. Powered by technology, enhanced by AI, harnessed by people. Data is information, insight, and opportunity. Wipro lives at the heart of it. We connect art and science, intelligence and creativity, data and people. We see the opportunities that data puts within reach and our experience, helps us put it to work. Turning ambitions into reality. Guidance and expertise that helps reimagine business models, enhance experiences and create value. Build growth-focused channels and unlock valuable insights through a data-driven approach. Reimagine processes and drive new experiences through augmented analytics and BI modernization to stay ahead of the curve. Agility, security and reliability delivered through a modern data platform and smart data supply chain. Build a resilient business with our end-to-end critical capabilities and expertise in data, analytics, and intelligence. TURNING AMBITIONS FINANCIAL SERVICES HEALTH AND LIFE SCIENCES RETAIL Our Success Stories Cigna boosts compliance and efficiency with automation and EPM modernization. By collaborating with Wipro, Integra solidified its leadership in the medical device industry and expanded the tech maturity of its organization. WaterNSW is responsible for operating NSW's rivers and 41 major water supply dams and supplies more than two-thirds of the water used across NSW. For an organization the size of BT Group, one of the world's leading telecommunications and network providers, managing its contracts with multinational clients is an enormous task involving multiple workflow. Telkomsel's Vice President of Business Intelligence and Analytics Platforms describes how Wipro is helping drive customer-centric innovations to develop a sustainable and inclusive digital ecosystem. News, Awards & Recognitions Contact Us ====================

Store Labor Optimization Driven by Advanced Analytics

Store Labor Optimization Driven by Advanced Analytics Client Background The client is a leading US retailer with 2000+ stores and offers basics and differentiated merchandize at low prices. Industry Landscape The need for a superior customer experience is driving a massive transformation in the retail industry. Retailing is undergoing huge pressure on costs and hence improving employee productivity has become an imperative. Interestingly, store labor operations (trailer unloading, backroom stocking, promotion execution, pricing updates, customer service) mark the second largest pie on the retailer's cost, after COGS, amounting to around 7-15% of the sales. This is compelling retailers to rethink on their existing store labor allocation approach. Analytics has emerged as a key tool enabling retailers meet this strategic objective. Opportunity The dynamics of the industry currently challenge the client to maintain workload- workforce levels in tandem with the demands. The problem client faced was that the corporate sales forecasts, labor plans, and budgets did not reflect the on ground staffing, scheduling, and operational needs of individual stores. This lack of collaboration made it difficult for store and area managers to meet corporate goals regarding productivity, improving retail customer service, and sales. Hence, the client was looking to find an optimal balance between the store staffing level and revenue growth potential. Solution Wipro proposed an analytics based approach to precisely determine the payroll need (workforce allocation) for the store's expected workload to increase the likelihood of meeting their corporate sales goal. The client used to have an ad-hoc method for payroll allocation/store where in a simple average of historical sales data was arrived at, by the corporate team, to allocate man hours required per store without considering the factors affecting individual stores. While the client had followed a top-down approach based on sales forecast, Wipro recommended a bottoms-up framework, that factored in the needs of each store, work centers and workload drivers (like number of pull trips, number of returns, Number of Items in Planograms etc.). Instead of relying only on 'sales' as the single payroll driver for the stores, Wipro's framework reviews other factors in store which impact the payroll. Payroll Optimization Framework Discover Predict Optimize Key highligts included: Business Impact Wipro optimized payroll hours to the right store at the right time for the right task to meet the corporate productivity goals by gaining sales and improving customer experience. we helped the client in terms of: Designing a new operating model: To enable adoption of the current dynamics of the payroll allocation according to the current performance,

corporate goals and sales Advisory services: Redefined the business processes for the corporate level payroll in order to percolate at the store level and provide remove a comprehensive plan for remove store planning. End- to-End Solution Architect: Provisioned the solution from identification of the problem to implementation of the solution by creating forecasting and regression models. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major Wipro's driver-based forecasting solution helped integrate treasury and product planning for a banking major =======================

Trade Surveillance: The Future of Banks

----- Arcticle source ----- https://www.wipro.com/analytics/trade-surveillance--the-future-of-banks/ ----- Related Articles Contact Wipro Please fill the required details to access the content Trade Surveillance: The Future of Banks Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30%   Industry Landscape Technology will keep aiding financial institutions in handling growing complexities of business in times when customer's need for convenience, increasing regulatory compliance and other such centric role in the business. Intensifying demand for transparency and consolidated outputs from trade systems is leading to deployment of capabilities to analyze historical data alongside real-time data for investigation and surveillance purposes. This would help the financial firms translate liabilities into an advantage. Client Background The company is a global financial services firm with offices in over 50 countries. It caters to private, corporate and institutional clients, offering wealth management, asset management, and investment banking services. The Europe-based firm employs more than 50,000 employees worldwide. Opportunity In Europe, the client had multiple systems for AML and Trade Surveillance – technology platforms and custom developed solutions with excel macros etc. – resulting in challenges like: The client was looking for technology intervention to streamline and standardize the processes in order to increase efficiency, thereby reducing the Total Cost of Ownership (TCO) to manage and maintain its systems. The Solution Wipro enabled the client to upgrade their legacy solutions to the latest version and as a single consolidated platform for AML and Trade Surveillance across geographies – EMEA, AMER, APAC. The implementation spanned business consulting, development and maintenance support. Key highlights of the engagement included:: Business Impact   15% reduced time-to-market for each application/source system with reusable components   25% reduction in the report-related production incidents and maintenance requests   Infrastructural Costs 30% reduction in annual TCO Through standardized alert workflows and case management system Wipro

also executed a 'SMARTS alert integration' to client's technology platform on a T+1 and near real-time basis. It enables efficient identification of potentially abusive instances by: Wipro helped the client upload information to SMARTS surveillance system generating alerts which were downloaded via their technology platform for client's compliance users to proceed with further investigations, reviews and closure process. Wipro also developed many reporting solutions in client's Risk Case Management which highlight the abnormal/un-accepted trader or employee actions. Few instances of reporting solutions include: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major Wipro's driver-based forecasting solution helped integrate treasury and product planning for a banking major =====================

Boosting Marketing ROI:

Big Data Platforms

to the Rescue

----- Arcticle source ----- https://www.wipro.com/analytics/boosting-marketing-roi--big-data-platforms-to-the-rescue/ ----- Related Articles Contact Wipro Please fill the required details to access the content Boosting Marketing ROI: Big Data Platforms To The Rescue The client is a leading global medical device, pharmaceutical and consumer packaged goods manufacturer, with over 250 subsidiary companies and operations across 57 countries. Medical devices, pharmaceuticals and consumer packaged goods industry has a fragmented marketing environment. Major players are focusing on reducing their infrastructure costs and scaling their data platforms to accommodate their ever-growing customer and vendor base. To maximize sales outcomes in very short lead times, with optimized budget allocation to categories, markets and media, enterprises are looking to adopt cloud-based Big Data platforms. The client's online advertising and electronic media business had data sourced by multiple vendors, cleansed and hosted on the client's proprietary platform to evaluate campaign effectiveness and ROI of their marketing strategies. But their legacy platform was not built to support large data volumes, perform advanced analytics or visualization on the processed data. The prolonged decision-making cycle times due to data quality and data redundancy issues, coupled with huge capital and operational expenses owing to duplication in vendor service charges, prompted the client to adopt a new high-performance Big Data platform. Wipro deployed and operated a Big Data platform on Amazon Web Services (AWS) using Hadoop (EMR) and Redshift Technologies. The platform acted as the single source of truth for all Lines of Business (LOBs) and was the cornerstone of all commercial analytics across the client organization including marketing, operations and sales performance. Key highlights of

the engagement include: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's driver-based forecasting solution helped integrate treasury and product planning for a banking major =====================

Infusing Accuracy in Budgets with Advanced Analytics

----- Arcticle source ----- https://www.wipro.com/analytics/infusing-accuracy-in-budgets-with-advanced-analytics/ ----- Related Articles Contact Wipro Please fill the required details to access the content Infusing Accuracy In Budgets With Advanced Analytics Wipro's driver-based forecasting solution helped integrate treasury and product planning for a banking major   Client Background The client is a global bank with presence in Retail, Corporate and Commercial segments, and operations in more than 100 countries and territories around the world, with an employee strength of over 300,000. Industry Landscape Treasury departments in most Banking and Financial Services companies are leveraging advanced tools to manage their cash flow planning and forecasting needs. However, with cut-throat competition, increasing range of products, wafer-thin margins and the increasing interest rate risk, these firms are now looking to adopt an integrated and real-time planning process that can couple product and treasury planning operations tightly. While there are some vendor offered solutions in this space, most customers are still looking at customized solutions to address their specific needs. Opportunity The client's treasury and product forecasting models were based on excel which was complex, error-prone and highly inefficient. The cost of funds calculated from products had an error-prone spread, leading to inaccurate decisions both on interest rates as well as matching fund flows between deposits and loan products. Also, they weren't equipped to run concurrent scenarios and multiple forecasts for real-time decision making. The client needed driver-based forecasting to improve accuracy of the budgets, with timely data updates to enable near real-time decision making. They were looking to eliminate multiple data entries and reconciliation between product & treasury budgets, and improve the accuracy of the planning process. The Solution Wipro identified client's key business drivers and built a driver-based forecasting model based on user controlled business rules to help driver-based budgetary allocations. The solution also allowed adoption of single source of truth for treasury and product planning by implementing single data entry into one application and then leveraging the data across applications through automated data transfer mechanism. Some other highlights of the engagement include: Business Impact   Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and

Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ======================

Faster Claims Settlement

at Lower Cost

----- Arcticle source ----- https://www.wipro.com/analytics/faster-claims-settlement-at-lower-cost/ ----- Related Articles Contact Wipro Please fill the required details to access the content Faster Claims Settlement at Lower Cost Using predictive analytics, Wipro delivered an efficient claims settlement process for a major European insurance provider, facilitating higher customer satisfaction through better and faster settlements   Client Background The client is a large banking group in Europe with activities spread across Retail banking, Commerce, Insurance etc. Additionally, it has operations spread across the US, Europe, the Middle East and Asia. Industry Landscape Customer research indicates that while 85% of customers shop around at policy renewal, those unhappy with a claim settlement almost certainly change insurers. Conversely, those who have been delighted with the claim settlement become "sticky". The major determinant in satisfaction is managing the customers' expectation in terms of the redressal they can expect and the speed at which that remedy will be delivered. The fast growth of the direct online channel has also led to a greater choice for customers, greater transparency in pricing and policy coverage details, as well as openly reported levels of customer satisfaction. As a result, it has become imperative for innovative insurers to focus on ensuring excellence in their claims service both to attract customers and to improve customer loyalty and advocacy. The Opportunity By achieving greater predictability and certainty over the claims process (regardless of the claim type), an insurer can guarantee that customers are made fully aware of all the steps to be taken very early on, thus avoiding delays and disappointments arising from mismatches in expectations. The head of claims operations at the client organisation introduced several innovations into the home insurance claims processes in order to increase control over the process and to meet customer's expectations. Some of these innovations include: It is important that as soon as a claim is raised, the insurer is able to predict its complexity and the likely settlement route. Thus, the client wanted to identify ways through which the above initiatives could be complemented using a claims triage and profiling system so that the most suitable Claims handler could be assigned as early as possible. A single named point of contact assures the customer of a clear and consistent journey together with an agreed set of expectations. The Solution The triage decision needs to be accurate and happen in a sensitive customer-focused manner. While the customer is raising the claim, it needs to quickly determine the likely claim profile. Wipro's approach based its solution on the knowledge that by integrating a 3600 view of claims with the 3600 view of the customer and their coverage, it will be possible to extract the patterns that explain the differences

between claims' characteristics. These patterns can be used to define 'claim profiles' that form the basis of the triage step so that each new claim is sent to a specific expert who has the specific competency to deal with the selected profile. The difficulty centred on the fact that the relevant data lay in many places (thousands of word documents containing claims reports of initial investigators), was voluminous (thousands of excel workbooks detailing damages, associated repair estimates and subsequent actual costs), and was often in narrative form. Essentially, this presented what we call a 'Big Data Analytics' problem comprising terabytes of unstructured and structured data on customers, covers and claims never assimilated and analysed before. Wipro developed a strategy based on Text Analytics techniques to extract signals from text and blended them with data from structured and semi-structured sources into a larger modelling data mart. Many more sophisticated patterns emerged out of this strategy and the insight thus obtained played a powerful role in achieving the required accuracy of claims' profile predictions. Wipro demonstrated how its larger ecosystem can facilitate such a complex project to deliver a comprehensive analytical view through: Business Impact The insurer now benefits from an efficient claims settlement process powered by predictive analytics. The claims handling process now has the capability to control the variance in costs, durations and customer interactions arising from the complex range of settlement routes. This has resulted in a 33% faster claims resolution process. The claims handler (whose assignment is based on the analytics that Wipro delivered) is now fully informed of the predicted key metrics of the claims and is able to keep the customer duly informed. This has resulted in higher levels of customer satisfaction – 28% reduction in customer complaints, and a steady fall in attrition. Overall, the initiative has led to a 20% reduction in cost.   Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Grow with Total Customer Relationship Analytics

----- Arcticle source ----- https://www.wipro.com/analytics/grow-with-total-customer-relationship-analytics/ ----- Related Articles Contact Wipro Please fill the required details to access the content Grow With Total Customer Relationship Analytics For a global hi-tech major, Wipro delivered a modern customer master data ecosystem to empower the customer facing teams with improved analytics and faster time-to-market The Client Background The client is a multinational electronics and semiconductor manufacturer headquartered in Europe. It is among the world leaders in a broad range of segments, including semi-conductors for industrial applications, smartcard

chips, automotive integrated circuits, computer peripherals, and chips for wireless and mobile applications. Industry Landscape Due to the proliferation of several customer touch points, it has become extremely critical and challenging for enterprises to build a single view of customer and derive a total customer relationship. But a number of factors like siloed operations, lack of high quality trusted master data and sub-optimal data management processes pose a serious threat to the ongoing business transformation initiatives. A golden copy of the master data enables a single view of customer on top of which customer analytics can yield actionable insights leading to definite business outcomes. The Opportunity In order to propel itself into the next level of growth, the client was looking at improving its global accounts coverage through better visibility, freeing up salesmen time for more customer contact and capturing new accounts and design opportunities. However, some of the major impediments were: The Solution The client needed a substantial change in the existing way of customer management by defining a customer model that is extensible and provides enriched and trustworthy information to key applications like CRM and EDWH. To achieve this, the client partnered with Wipro and embarked on a CMDM-CRM (SFDC) implementation program. The Customer MDM journey transformed their complex legacy business and IT landscape into a modern customer data ecosystem empowering their customer facing teams with improved analytics and faster time-to-market. Highlights Of The Engagement: Business Impact This CMDM program was intended as a paradigm shift for the client across critical dimensions such as Sales & Marketing business processes, information assets and change management. The implementation of solution not only proved to be major facilitator in enhancing business operations and decision making capability but also played a major role in boosting IT infrastructure and capability.   Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ======================

Accelerating Planning Cycles with Advanced Analytics

----- Arcticle source ----- https://www.wipro.com/analytics/accelerating-planning-cycles-with-advanced-analytics/ ----- Related Articles Contact Wipro Please fill the required details to access the content Accelerating Planning Cycles With Advanced Analytics Wipro's robust analytics solution shortened the planning and forecasting cycle by over 90% for an American chain of department stores Client Background The client is an American chain of off-price departmental stores, with over 1,200 stores spread across the country. Industry Landscape The planning and forecasting process for retail domain is undergoing a major shift. While the group or corporate level top-down

approach to budgeting has been adopted by many customers already, the challenges associated with running a profitable retail chain like managing overheads, working with wafer-thin margins has led to the need for detailed store planning. Major retail chains are moving beyond sales and P&L planning to operational areas including merchandise, store operations, labor & manpower and integrating them with corporate financial planning. Opportunity The client had no unified system for budgeting, planning & forecasting and no centralized location for corporate plans. Their existing processes were manual, cumbersome and not user-friendly – resulting in an inability to handle multiple versions, iterations, data integrity, robust variance analysis, simulations and alternative scenarios evaluations. They had no system of record for official version of plans or audit-trail for adjustments. Data upload extended to about three days, which led to longer planning cycles. The client needed to implement a unified and centralized budgeting and planning system that could perform on-the-fly evaluation of alternative scenarios, thus reducing the overall time taken for planning and forecasting. The Soluition Wipro enabled the client to implement an Integrated Budgeting Solution using the Hyperion EPM stack on Exalytics appliance. The solution enabled the client to replace existing desktop-based Cognos TM1 solution used for store expenses budgeting and extend the planning process. Business Impact   Reduced data load time in budget cycles from 2-3 days to 4 hours   Enabled planning for a 5 year time horizon   Reduced IT manual intervention, enhanced accuracy of planning   Including multiple versions   Analyzed stores across 26 different attributes   Key highlights of the engagement are given below: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Empowering Public Transportation

with Analytics

----- Arcticle source ----- https://www.wipro.com/analytics/empowering-public-transportation-with-analytics1/ ----- Related Articles Contact Wipro Please fill the required details to access the content Empowering Public Transportation with Analytics   For a Government transport authority in APAC, Wipro delivered 19% savings in a year through its best-in-class analytics driven solution Client Background The client is a statutory board under the Ministry of Transport of an Asian country, which spearheads land transport developments across the country. It is responsible for the planning, design, development, management and maintenance of the transit

systems, roads and related facilities. It also plans the long-term transport needs of a major city of the country with the ultimate goal of providing a smooth and seamless journey for its inhabitants Industry Landscape While planning long-term transport goals, the transportation departments of most governments face dual challenges of creating a scalable as well as streamlined infrastructure. Confronted with fast paced socio-economic development and increased pressure on land transport networks, the use of analytics emerged as highly useful in planning and policy formulation. The Opportunity With a population of over 4 million, the city of interest for the client body is expecting the population to grow by 25% by 2020 and host more than 10 million tourists per day. The economy is growing significantly and all these trends were adding to the pressure on the existing infrastructure. The client body handles more than 12 million ticketing transactions per day and wanted to develop and fine-tune the land transport (whether by car, bus or train) policies using advanced analytics to ensure comfort, convenience and pricing of the city public transport. The scope was identified as the implementation of an enterprise data warehousing platform that would enable the client to perform in depth analysis of bus, train ridership and taxi availability for meaningful trend analysis, long term policy planning and data mining. The Solution With over 12 million records being captured on a daily transport basis, Wipro designed its solution to enable speedy response time and to provide comprehensive information for the analysis of historical performance and general traveling patterns. Wipro's solution consolidated anonymized data from disparate transactional systems, performed high-volume data crunching and enabled the business users to perform statistical analysis on the information from different perspectives. This solution was built leveraging the following components: This system is now an integral part of client's policy planning to support an overall vision of making public transport a preferred mode of transport, optimizing road network and meeting diverse needs of people. A data-driven policy and planning decisions with fast turnaround enabled the client to build a people-centered land transport system. Solution Highlights Data Integration process implemented for incoming data from Transit and Traffic Management Applications, Vehicles and Manual sheets Data Layer constituted an ODS, normalized data warehouse and subject oriented data marts Presentation layer set up with 100+ reports, 20+ dashboards, OLAP & Data mining models Improved daily data transformation and loading by 67% Business Benefits   Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major
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Business Insight

on Demand

Related Articles Contact Wipro Please fill the required details to access the content Business Insight on Demand The energy company is one of the largest natural gas gathering, natural gas liquids (NGL) and gas transportation and processing companies in the United States. Industry Landscape The US energy gathering, processing, storage and transportation industry is highly competitive and is characterized by transactional activity and operational data that offer opportunity for business analysis and idea "mining." Companies rely on data-driven insight into operational and financial activity to help them identify trends, understand opportunities and improve performance. Business intelligence is a key lever for enabling these objectives. The Opportunity The company found that their traditional reporting platform supplied only a portion of the required flexibility. Employees were routinely performing detailed analyses by copying data from the standard reporting platform into other productivity tools such as spreadsheets, to conduct ad-hoc analyses. Leadership recognized that business insight could be accelerated by empowering end-users through self-service business intelligence, enabling both reporting and detailed analyses. Solution This solution reinforces key concepts such as data-as-a-service and self-serve business intelligence, while leveraging everyday productivity tools for usability. The scope included migration of reports to a Microsoft® business intelligence platorm without changes to existing report functionality. In addition, it enables the ability to leverage Microsoft PowerView to create and interact with reports based on tabular models and/ or Microsoft PowerPivot workbooks. The Microsoft Report Designer allows users to create operational reports, shared data sources, shared datasets and report viewer controls used across a variety of data sources.   In addition to front-end analytic tools, the solution includes SharePoint services and business intelligent platform components that include SQL Server Analysis Services, SQL Server Reporting Services and the SQL Server DBMS. Business Impact Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Optimized Operations by Leveraging Master Data

Please fill the required details to access the content Optimized Operations By Leveraging Master Data Wipro is delivering the back office transformation across multiple operating countries through a multi-domain MDM implementation for a Telecom major Client Background The client is a telecommunications leader focused on the African continent with over 75 million subscriber based across countries in Africa and the Middle East. Industry Landscape Telecom communication service providers are stressed due to dipping call rates and reducing call volumes - requiring them to look at improving efficiencies in operations. Several leading companies are looking at standardizing their back office operations across multiple operating countries and setting up central shared services to provide better control of the operations and costs across the enterprise. Opportunity The client was experiencing extreme cost pressure in several markets across due to several factors like limited growth opportunities in mature markets, rising competition from OTT players like Skype, demanding customers, limited decline in fixed-costs and rising bandwidth requirements needing CAPEX (> US$10 billion in past 5 years). These business challenges were aggravated further with inconsistent, incomplete and incorrect master-data across the enterprise leading to challenges like: As a result, the group company embarked on a broad transformation initiative across multiple operating companies involving a back-office transformation program across divisions. It includes an ERP & MDM implementation to support divisions and a common shared service center to ensure consistency across business functions and operating companies in 18 countries. The Solution Wipro is the partner for this strategic back office transformation program with a responsibility to implement a global template solution utilizing Oracle E-business suite products and rolling out the solution to 18 operating countries. As part of this program, Wipro implemented an ERP solution to automate SCM, Enterprise Asset Management (EAM), Finance and HR Management Processes. In order to ensure consistent, complete and correct master data to these business processes, Wipro implemented a multi-domain Master data management (MDM) and Data Governance (DG) solution. Key highlights included: Business Impact Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Decision Making Powered by Deeper Insights

----- Arcticle source ----- https://www.wipro.com/analytics/decision-making-powered-by-deeper-insights/ ----- Related Articles Contact Wipro Please fill the required details to access the content Decision Making Powered by Deeper Insights The client is a leading US-based health care services company who specializes in distribution of pharmaceuticals and medical products, serving more than 100,000 locations. They also manufacture medical and surgical products, including gloves, surgical apparel and fluid management products, in addition to operating one of the largest network of radiopharmacies in the US. Global Healthcare is facing unprecedented challenge with the prevalent information platforms which are not architected to deliver an intuitive, user-friendly interface for efficient performance management, data mining and research. Moreover, with inconsistent data delivery in the upstream processes, major players are facing challenges to take business decisions in a highly competitive landscape. This has compelled most enterprise to embrace SAP HANA for better performance and high visibility. The client had disparate reporting systems across the organization and ad-hoc reporting was a real challenge with more than a million data sets. Their data was growing rapidly, especially in areas like Demand Planning and SNP, which resulted in lengthy data load cycles. The client needed to implement a scalable reporting framework for speed, agility and performance to realize deeper insight across Sales and Finance statistics providing competitive edge and helping innovate faster.In order to deliver business visibility. The global healthcare major needed to improve the current state of performance, usability and timelines of information delivery. Wipro enabled the client to implement high performance SAP HANA Platform to accelerate and streamline the operational reporting systems. As part of the engagement, Wipro recommended the overall application roadmap, and constructed efficient HANA Models and Business Object Reports leveraging Agile Methodology. The client is now empowered to run reports faster and improve productivity by utilizing their time for analysis and better decision making. Key engagement highlights include: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Reducing Cost by Transparent Vendor Data Management

Reducing Cost by Transparent Vendor Data Management For a global Pharma major, Wipro delivered 25% reduction in Cost of Operations through a vendor master Data Lifecycle Solution enabling enterprise Client Background The client is a pharma major with a diversified portfolio and an innovative approach to pharmaceuticals that helps improve the lives of people in over 100 countries where it operates. Industry Landscape The need to manage product, customer and vendor, clinical and research data is extremely critical to the pharmaceutical industry. A top priority for the industry is to integrate and manage data with consistency across product and operational silos. This is proving to be a challenge, especially with the rising industry trend of rapid inorganic growth and swift acquisitions. Many companies find themselves vulnerable to operational and reputational risk by ignoring the need for data standards backed by superior data management. Poor data management is also hurting them because it negatively impacts costs, service quality, efficiency and productivity. The Opportunity The client realized that inadequate vendor data management was negatively impacting productivity which in turn impeded growth and innovation. Additionally, there were inconsistencies leading to inaccurate or misleading business insight. The key challenges faced by the client were: The opportunity was to create a Vendor Data Foundation program aimed at transforming the sourcing and procurement function. Once implemented, this program could drive operational efficiencies, improve decision-making, enhance productivity and re-ignite innovation while remaining compliant to the ever increasing rigor of industry regulations. Solution Wipro developed a single scalable solution to manage end to end vendor master data lifecycle enabling enhanced enterprise wide master data visibility into the data management process. For the client, this program was central to achieving sustained long-term success. Their vision to transform the procurement function chiefly focused on setting up a centrally managed vendor master. Wipro designed and implemented the Vendor Data Foundation program enabling: The Wipro solution comprised the following: Business Impact Optimizing vendor master data enabled the client to access early vendor risk indictors that are vital for compliance in Pharma. The benefits included: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Sharpen Planning Accuracy with a 360° View

Sharpen Planning Accuracy With A 360° View Wipro's robust analytics solution simplified planning, forecasting, and optimized staff resources, resulting in GBP 60K annual savings for an electricity distribution major Client Background The client is a UK-based Electricity Distribution Network Operator who owns, operates and maintains UK's North West region's electricity distribution network, connecting 2.4 million properties, and more than 5 million people to the National Grid, with the annual revenues of over £500 million. Industry Landscape The game for the power & utilities sector is fast changing across business, regulatory and operational environments. Companies are faced with the paradoxical challenges of meeting increased demands against growing environmental regulations, keeping customer costs down against increasing buying power and lower switching cost, maintaining system reliability against diversifying needs. In order to remain competitive, companies are looking at achieving sustainable advantages by investing in a range of measures aimed at ensuring lower costs, agility, and responsiveness. They are as well looking for deeper and sharper insights into their customers, markets, and operations and the macroeconomic environment. These have compelled leading companies to embrace BI for a complete process transformation. The Opportunity The client's decision making and information flow for matters of network demand & generation, asset monitoring, faults tracking, fleet management, resource planning & forecasting etc. were highly localized. The data resided at the department/program/operations level. There was no reliable tool for historical comparison and trend analysis - to integrate data at all operational levels and furnish actionable insights for resource planning and forecasting. Solution Wipro identified the client's key business drivers and implemented a data warehouse and reporting solution which improved the turnaround time for regulatory reporting, data analysis/ trending information. The BI solution provided a centralized dashboard to drive overall productivity & improved management control in Operations, Finance, Customer Service, and Human Resources, Costs effectively. The key highlights of the engagement include: Business Impact
 resulting from FTE staff reductions through improved processes through automation of the estimation process, minimising manual effort resulting in lower penalties being paid   with lesser complaints through process improvement Being an electricity distribution company, the client has to optimize CAPEX & OPEX costs related to network assets for delivering quality power supply/connections as per Guaranteed Standards of Performance (GSoP) standards under RIIO ED1 framework. The UK regulatory body - Office of Gas and Electricity Markets (Ofgem), used to levy

huge fines for non-conformance and non-compliance. The client needed all their information corrected, centralized and available for the nearly real-time analysis, decision making and regulatory reporting. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Tracking Customer Sentiment on Social Media

----- Arcticle source ----- https://www.wipro.com/analytics/tracking-customer-sentiment-on-social-media/ ----- Related Articles Contact Wipro Please fill the required details to access the content Tracking Customer Sentiment on Social Media The digital disruption is impacting the media industry significantly. Access to and consumption of content is continually being reshaped by constant technological advances. The ability to download easily and watch, play or listen to the content is both helping the industry giants to cater to the ever growing needs of the audience quickly as well as creating more demand. As companies put in efforts on social media engagement and content for their brands, the next step is to optimize investment, understand social reach and issues and track analytics to evaluate performance. Social Media Analytics is emerging as a key tool in understanding customer sentiment. The company is one of the forerunners in products and services for the Entertainment and Media Industry. The company provides paid applications that help stream millions of movies and songs on different device platforms like mobile phones, tablets, laptops, TVs, gaming consoles, media players, projectors etc. The client had launched their applications services recently and needed a way to understand customers' perception, issues, demands and their overall experience with this new launch based on real customer feedback. They lacked a method to improve promotional activities and constructively engage with customers. Also, they were facing a long response time for customer issue resolution. In an industry that must generate profits to invest in new content experiences, it is very important to take cognizance of customer feedback in order to stay relevant. Social media analytics, in the form of Sentiment Analysis, could provide these key insights to the client's strategic marketing and customer relationship management team. It promised the power to improve promotional activities and constructively engage with customers to constantly improve services. The Solution Wipro's Social Media Analytics (SMA) solution, which has been built over time through various client engagements, was used to accurately understand customers' core sentiments and translate them into key business insights. The SMA solution was runon social media data collected from Twitter, Facebook, blogs, forums etc. where customers express their feelings about the products and the services. The solution, based on Naïve Bayesian

and Association Mining Technique, is also capable of handling data that has noise. Based on the insights generated out of the SMA, recommendation reports were sent out to the client on a weekly/fortnightly basis. The frequency of reporting was determined by the business requirement of the respective client business. Highlights of the Solution   Taxonomy Generation Wipro used a Taxonomy Generator, built in-house, forthe categorization of social media data into relevant themes like functionality, issues, network, environment, competition and content. Data Collection Based on preset rules and configurations defined by the client, data was collected from diverse social media in real time, using a social listening tool. Data Preparation by categorization Data categorization was leveraged to identify critical issues, recent trending topics and the right customer sentiments about the product under analysis. Text Analytics Engine The data was then fed into an in-house built Text Analytics Engine which transforms social media data into a more structured format that can be analyzed quantitatively. Insights Generation Finally, insights were obtained around competitor trends, geography/demography/topic based sentiment, product launches, campaigns, product/service performance to assess how sentiments were changing over time.   Business Impact Reduction in Response Time The resolution time of the network issue for the newly launched game console was reduced by 65%(within two weeks of identification). New Market Expansion The client was able to track the popularity in various countries/ cities and is launching services in 3 new countries (in Europe). Better Customer Segmentation The client was able to identify the age groups that were generating maximum buzz on social media and could plan promotional activities accordingly Wipro's Socila Media Analytics solution enabled promotional activities for customers to constantly improve services by performing Buzz Analysis, Launch Analysis and Campaign Analysis. The business benefits include: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ======================

Enterprise Data Warehouse Transformation for a Leading Networking Company

----- Arcticle source ----- https://www.wipro.com/analytics/enterprise-data-warehouse-transformation-for-a-leading-network-c0/ ----- Related Articles Contact Wipro Please fill the required details to access the content Enterprise Data Warehouse Transformation for a Leading Network Company Wipro enabled faster data processing and computing for a leading

manufacturer of networking equipment with centralized data systems Client Background The client is one of the world's leading manufacturer of networking equipment. Their product categories include networking devices, network management, optical networking, storage area networks. Industry Landscape The current emphasis of network equipment industry is on new technologies like data storage, network mobility, VoIP, networking, internet and new forms of internet security. Research and development becomes extremely critical as the networking technology and products are constantly getting innovated. In order to keep the impact on market in globalized world, network equipment companies need to develop new and improved products constantly to sustain their position in the industry as niche player. The Opportunity With increasing Lines of Business (LoBs), the client's enterprise data warehouse found it challenging to accommodate growing data volumes and support faster report generation. The legacy platform was nearing obsolescence and needed to be upgraded. The client was looking for a centralized data warehouse architecture model to reduce support and maintenance costs, while enabling business users to adapt to the new Enterprise Data Warehousing Platform. Solution Wipro established a centralized data warehouse based on Teradata for catering to all geographies and lines of business. To ensure greater user acceptance for the new platform, the team created 'Landing Zone' where the same architecture as that of Oracle was created in Teradata and data was loaded in both tables. Users were asked to point their reports to both these data systems. This helped users compare the systems and appreciate technological advantages with Teradata. With greater acceptance of the Teradata platform, the team gradually migrated other applications to the new platform and EDW was established. Business Impact   Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Enhanced Gaming Experience with Cloud Platform

----- Arcticle source ----- https://www.wipro.com/analytics/enhanced-gaming-experience-with-cloud-platform/ ----- Related Articles Contact Wipro Please fill the required details to access the content Enhanced Gaming Experience with Cloud Platform The client is world's leading provider of software products and services. They offer a public website for online gaming, which is a significant source of revenue. The online gaming industry has evolved to become a place for social connections for people of all age groups. The evolution, aptly fueled by rapid emergence of gaming sites and technological innovations is offering a 'never before' kind of experience to gamers. In this fiercely competitive landscape, poor application performance and inability to

scale seamlessly to accommodate an ever growing user base are the major threats for gaming giants to retain a loyal user base. Any drag in experience leads to customer attrition and brand dilution. The Opportunity The client's legacy software posed a challenge to improve site performances. The software stack, based on Windows 2003 and Content Management System 2003 on which the games were hosted, were near obsolescence. Besides, these servers resided on client owned data centers, making it difficult to scale to accommodate a rapidly expanding user base. They were looking to migrate their applications and infrastructure to a cloud-based platform to enable on-demand scaling based on usage and to ensure improved user experience so as to retain their loyal gamer community. Another key aspect for them was to support new game formats such as HTML5 that enables to attract new game developers onto their gaming site. With the legacy software they were not able to add new game types. Solution Wipro's Microsoft Azure Platform implementation provided a comprehensive solution to the client's challenges. The end-to-end engagement covered Requirement Gathering and Analysis, Design, Implementation and Testing. The key highlights of the engagement include: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Business Decisions Empowered by Self-Service BI

----- Arcticle source ----- https://www.wipro.com/analytics/business-decisions-empowered-by-self-service-bi/ ----- Related Articles Contact Wipro Please fill the required details to access the content Business Decisions Empowered by Self-Service BI Wipro's reporting and visualization solution enabled improved reporting efficiency and productivity for a leading healthcare provider Client Background The client is global healthcare company headquartered in the UK with offices in over 100 countries and major research centers in the UK, USA, Spain, Belgium and China. They have a portfolio of products for major disease areas such as asthma, cancer, infections, mental-health, diabetes and digestive conditions. Industry Landscape As the healthcare service provider industry moves from its traditional sales and marketing approach to customer-centric service models, companies are seeking to better cater to physicians' need for product, information, disease state etc. A recent IMS study indicates that physicians want fewer, but stronger relationships with company representatives who can provide more valuable information, deliver more relevant services, and better respond to specific needs of the practice.

Hence, innovative companies need to adopt a value-based approach to engage physicians, using new personnel structures, communications, training, and performance metrics. The Opportunity The client's existing processes for internal requests on critical data for performance monitoring/ analysis were manual and cumbersome. Their processes also outlined the creation of detailed presentation decks for each of the 19 Business Units/ Therapeutic Areas, most of which required a manual update of graphs and charts. The resulting long lead times and high risk of error and rework compelled the client to adopt a BI reporting and visualization platform to simplify data and mine insights from business decisions. Solution Wipro employed a Scrum Based Agile Development approach which is an iterative and incremental agile software development method for managing software projects and product or application development. With QlikView's Business Intelligence tool, Wipro enabled an accelerated solution delivery and rapid turn-around. Key highlights of the engagement include: Business Impact Faster decision making through easy and fast access to business critical information Enhanced reporting efficiency 60% reduction in slides per business unit, with automatic updates for all Improved Productivity An estimated 6 weeks saved, which is available for other important initiatives Self-Service BI Stakeholders can directly access data or reports themselves Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Large Pharmaceutical Company

transforms Marketing and Sales in the

US using Master Data Management

----- Arcticle source ----- https://www.wipro.com/analytics/large-pharmaceutical-company-transforms-marketing-and-sales-in-the-us-using-master-data-management/ ----- Contact Wipro Please fill the required details to access the content Large Pharmaceutical Company transforms Marketing and Sales in the US using Master Data Management Client background Client: A leading pharmaceutical company Revenue: USD 39.9 Billion Industry: Pharmaceutical Area of operations: Global Customers: Anyone with a medical and dental condition Challenges The client was charged for poor compliance and record-keeping by the FDA. They were also overpaying for getting provider data for marketing and sales across all its departments.

One of the significant challenges was to harmonize data across platforms along with centrally managing the data, resulting in silos of similar redundant data of pharma & consumer systems across the enterprise. Lastly there was a time gap in order processing which needed to be cut short to achieve more effectiveness and optimization in sales. Solution Wipro implemented Informatica MDM, a comprehensive Master Data Management solution, along with Informatica Data Director and real-time APIs, to overcome the challenges which the client faced. Business impact Implementation of best-in-class Master Data Management solutions resulted in a central repository of customer, product and alignment with a single source of truth for all data. Quote: On successful implementation of CERPS project which integrated Consumer and Pharma data, the order processing time was brought down to 2hrs. "It has been a long 18 months, but you guys did it and I'm very thankful for all your efforts over this time period" - Director for information Systems PD =====================

Largest European global corporation transforms its field services personnel efficiency across eight countries

----- Arcticle source ----- https://www.wipro.com/analytics/largest-european-global-corporation-transforms-its-field-services-personnel-efficiency-across-eight-countries/ ----- Related Articles Contact Wipro Please fill the required details to access the content Largest European global corporation transforms its field services personnel efficiency across eight countries A leading energy management and automation service provider enables simulation for workload and capacity in field services to improve utilization rate by 35% using cloud based, in-memory Anaplan solution Client background Client: European multinational corporation providing energy management and automation solutions in homes, buildings, data centers, infrastructure and industries. Industry: Manufacturing Area of operations: France, Germany, Italy, US, Canada, India, UK, UAE, Australia, China etc. Customers: IT, Buildings, Power, Energy Utilities and Automation companies. Challenges The client did not have any system that would provide a short/mid/long term view of their workload vs. capacity, and would provide them opportunity to perform simulations and what-if analysis. Operation managers had no means to ensure if they had enough resources to cater to customer requirements. Field service vice presidents had no concrete means to challenge operations and sales to improve workload and capacity. HR business partners were lacking the view of training, cross skilling, hiring employees and contractors in short & mid-term view. Solution

Wipro implemented Cloud based Anaplan solution, a comprehensive simulation product that is based on in-memory and SaaS model. The entire solution was integrated using Informatica Cloud to eliminate manual processes on a day to day basis, providing business a truly business-owned model. Business impact Implementation of best-in-class Anaplan Cloud solution which is highly optimized to consider the space constraints at hand, enabling the master planners, HR business partners, field service managers, operations managers, field service directors and VPs to have transparent and detailed information on workload vs. capacity which was never available before. Quote: "Thank you very much to you and your team for the great job you have performed in the last 6 months (since we have started the project). We really appreciated your reactivity and your flexibility. The agile way for handling the project was I think a key reason for the success of this project, to be delivered on time with the business expectations fulfilled. Last, but not least, we were very satisfied, and to tell you the truth, positively surprised, by the level of understanding, you and your team, had on our business requirements." - Client Manager Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Data Warehouse modernization for fast analytical reports

----- Arcticle source ----- https://www.wipro.com/analytics/how-a-global-company-enabled-faster-business-decisions/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a global company enabled faster business decisions US business services company drives 83 percent reduction in operational expenses over a period of three years by moving on-premise data warehouse to Amazon Redshift Client Background Client: Business services company Industry: Commercial & professional services Services: Business data, Credit & risk, Sales & marketing, Analytics Area of operation: United States, Canada, United Kingdom, Ireland, Greater China, India Number of Employees: Over 4000 Challenge The client was running a commercial enterprise data warehouse that contained aggregated data from different internal reporting systems across geographies. The data warehouse was growing at over 20 percent year over year (YoY), with higher growth expected in the future. This growth required them to keep upgrading the hardware to meet the storage and compute needs, which was expensive. Also, licensing was based on CPU cores, so adding hardware to support the growth required additional investment in licenses, further spiralling the costs. The on-premises data warehouse environment was an extension of the transactional system. Analytical queries experienced performance issues when they were executed

against large datasets and the client's customer queries took longer time for execution, which ultimately impacted their interactive experience with dashboards. With data growing by 20 percent YoY, the query performance further degraded. The client realized the need for a dedicated analytical environment to address the performance and scale issues for user reports. The primary need was to enable quick and accurate analytics to drive faster business decisions. Solution Amazon Redshift was identified as the ideal solution for setting up a new analytical reporting environment. Business Impact The migration to Amazon Redshift provided the client an agile data warehouse infrastructure with no additional licensing costs and effort for software and hardware upgrades. The client saw immediate performance improvements at significantly lower costs. Data users were able to query and obtain reports quickly using features of Amazon Redshift. Quote The legacy database to cloud transformation program enabled operational savings of 83% and 70% performance improvement for the client. With cloud as a new data platform, the client is getting access to quality data 20 hours earlier than the legacy, helping to improve customer satisfaction by generating right business insights, faster and better. Wipro brought in the right tool stack to maximize automation during implementations. They also played a good balancing act by keeping 'the lights on' for the existing KYC application while being 100% focused on new implementation. Rakesh Verma, Practice Head – Data, Analytics & AI, Wipro Read the Amazon blog for more details https://aws.amazon.com/blogs/database/using-amazon-redshift-for-fast-analytical-reports/ Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

How a large energy company turbocharged its asset management

----- Arcticle source ----- https://www.wipro.com/analytics/a-large-energy-company-turbocharged-its-asset-management/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a large energy company turbocharged its asset management Client background Client: A large Energy & Utilities company Industry: Power Headquarters: Canada Employee: Over 6,000 employees Area of operations: Global Customers: Over 650,000 Challenge The client's asset management processes were manual, decentralized and managed by legacy SAP ERP and other systems, which lacked relevant functionalities. The previous SAP solution had grown organically (with little historic documentation) and business processes were in siloes. This led to poor tracking of asset financial

data, revenue loss, and compliance issues. The client initiated a business transformation program through ERP implementation. The intent was to adopt ISO 55000 standard of compliance, enable process documentation, enhance portfolio and project management, segregate roles and responsibilities for the workforce, and implement predictive asset failure analytics. Solution Wipro enabled the consolidation of assets and work management data by implementing SAP ECC 6.0 solution and migrating data from legacy SAP ERP, GIS and flat files. The key aspects of the solution approach were: Business Impact Implementation of the fully integrated ERP solution brought in compliance, cost efficiency, improved health of assets and accelerated performance. The solution automated contractor work allocation and invoicing, aligned business processes to ISO 55000 with redesigned asset hierarchy, and provided quantitative risk assessment tools via predictive asset failure analytics. It also enabled management of assets right from acquisition to disposal from the shop floor to the financial/ regulatory asset registers. Migration to asset management platform enables ISO 55000 compliance and annual savings of $2.5 Million Quote The full scale asset management transformation enabled redesign of the client's asset hierarchy, bringing this in line with industry standards of ISO 55000. It automated client's business processes and procedures, and enabled an objective and metrical way for decisions on asset investment planning. - Narayanan Ram Ramji, Client Partner, Wipro Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

How a top utility company achieved

GDPR compliance

----- Arcticle source ----- https://www.wipro.com/analytics/how-a-top-utility-company-achieved-gdpr-compliance/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a top utility company achieved GDPR compliance The multinational company built data inventory and enabled data protection with Data Discovery as a Service Client background Client: A leading Energy & Utilities company Industry: Energy & Utilities Area of operations: UK and USA Revenue: £15 Billion Challenge The client had major challenges in discovering and managing personal data that was spread across their vast data ecosystem consisting of 600+ data applications. Their applications and systems landscape consisted of multiple diverse technologies including legacy systems and other applications. Many of these systems were old and thus, there was lack of clarity about systems carrying personal data. The client needed an

appropriate solution that would support data discovery and creation of data inventory to help discover and protect data as required for GDPR compliance. Solution Wipro implemented Data Discovery as a Service using a data security intelligence and analytics product, and solutions for managing unstructured data on the client's systems and applications to help discover and build inventory for personal data. Solution highlights: Business impact The implementation of the data discovery solution enabled the client to take a holistic approach towards compliance, data discovery and data protection, and helped: "Wipro team delivered 'structured and unstructured data discovery engagement' for the client as part of GDPR compliance. The engagement started with the team assessing customer needs and suggesting the best possible technology solutions. The engagement had stringent deadlines and demanded high level of data accuracy due to regulatory nature of the engagement. Wipro team delivered the solution on time, exceeding client expectations. " - Raman Awal, General Manager, Information Management – Data, Analytics & AI, Wipro   Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

How a top tech company enabled consistent and trusted master data

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environments in to a single system of record with tight automated linkages to Business Intelligence, Channel Data Management, CRM, and Sales Compensation. This was a large MDM implementation on the cloud in terms of scale and size. The innovative cloud-based MDM solution helped the client move to a scalable platform with a strong foundation for master data governance. This resulted in savings of $12 Million over a period of five years. – Raman Awal, Global Practice Head - Information Management, DAAI, Wipro Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major
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Global pharma drives 60% cost savings

in ERP data migration

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year– this was one of our largest SAP ECC data migration implementations. The implementation enabled the client to meet compliance and regulatory requirements, and accelerated time to market by 20%." – Raman Awal, Global Practice Head - Information Management, Data Analytics and AI, Wipro Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major

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University evolves into a data-driven enterprise

----- Arcticle source ----- https://www.wipro.com/analytics/university-evolves-into-a-data-driven-enterprise/ ----- Related Articles Contact Wipro Please fill the required details to access the content University evolves into a data-driven enterprise University establishes modern data environment and develops actionable insights at all levels of the organization Client background Client: A prestigious university in Australia Industry type: Education Number of students: Over 50,000 Challenges The university had disparate source systems for institutional data, leading to challenges in developing actionable insights. It wanted to build a modern data environment by integrating data from multiple data sources to enable analytics and relevant insights. The university needed automated information analysis and analytical reporting capabilities through data warehousing and business intelligence technologies. One of the major intents was to analyze the corporate credit card data to understand the spending patterns of the staff for compliance to rules and regulations. Solution Wipro implemented an effective data management solution and learning analytics solution for the client leveraging Talend Cloud-based SaaS platform hosted on AWS. As part of the learning analytics solution, Cloudera was leveraged for Big Data along with Talend as data ingestion and transformation layer, and Tableau as a consumption layer. Solution highlights: Some of the use-cases developed for consumption of insights were: Business impact The new modern data environment served as the backbone infrastructure for the university staff to enable spend analysis, student retention, contextual and demographic understanding of the student, and fine-tuning of the courses. This was a large Talend Big Data real time implementation on the Talend Cloud in terms of scale and size. Enterprise data warehouse and dashboard enabled the university to have improved visibility of spends incurred through the corporate credit card. The modern data environment helped in providing a university-wide resource for storage, management and review. It also allowed the university to keep its intellectual property safe and usable. -Raman Awal, Global Practice Head - Information Management, Data, Analytics and AI, Wipro

Limited. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major
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How a health tech major became a data-driven enterprise

----- Arcticle source ----- https://www.wipro.com/analytics/how-a-health-tech-major-became-a-data-driven-enterprise/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a health tech major became a data-driven enterprise Client background Client: A multinational technology company Products/Services: Electronics, medical equipment Areas of operations: Global Challenges The client's business data was spread across multiple regions with each region having a different way of storing and reporting data. The client wanted to enable a single source of truth by consolidating its data and standardizing its data management processes. The current data landscape included 49 ERP kernels (data silos) residing across the globe in non-standard formats. The need was a re-usable and scalable ERP system compliant to latest standards, which could support reporting and tracking. To enable this, the client wanted to consolidate business data from all geographies into eight kernels and migrate data from the legacy SAP system to S/4 HANA system. Solution Wipro and the client worked together to build a strong competency centre to enable migration of data and native HANA reporting to support global deployments. For efficient deployment, many countries were merged under certain geographies, for instance - NLATAM was Peru, Costa Rica, and Colombia Solution highlights: Business impact Wipro efficiently orchestrated data migration from the disparate legacy systems to the centralized system for the client and delivered the project seamlessly with savings of 3300 person-weeks of effort by leveraging cross teams for deployment. The consolidation and standardization of data led to increased productivity and operational efficiencies. This was a large data migration program to accelerate data management across many geographies through a simplified and faster time to market solution. This enhanced clarity on data helped in rapid onboarding of new geos and new acquired entities. -Sridhar Havaldar, Sr. Program Manager - Information Management, Data, Analytics & AI Wipro Limited. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

How a large global bank simplified FATCA compliance

----- Arcticle source ----- https://www.wipro.com/analytics/how-a-large-global-bank-simplified-fatca-compliance/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a large global bank simplified FATCA compliance Client background Client: Multinational banking and financial services holding company Industry: Banking, financial services Products/Services: Retail banking, corporate banking, investment banking, mortgage loans, wealth management, credit cards, finance and insurance Areas of operations: Global Challenges The Foreign Account Tax Compliance Act (FATCA) is a legislation introduced by the United States government to help counter US tax evasion by encouraging better reporting of FATCA reportable customers' information. FATCA intends to increase transparency for the Internal Revenue Service with respect to US persons that may be investing and earning income through non-US institutions. While the primary goal of FATCA is to gain information about US persons, FATCA imposes a withholding tax where the applicable documentation and reporting requirements are not met. The client was committed to become fully FATCA-compliant in all countries and territories where they operate. The main challenge was to meet the stringent timelines and avoid huge penalties for not adhering to FACTA implementation guidelines. Solution Wipro implemented a FATCA-compliance solution for the client with increased due diligence for commercial banking customers in stipulated timelines and in accordance with legal and compliance requirements, leveraging ETL, data integration, and database management tools. Solution highlights: Business impact Wipro implemented a commercial banking-remediation compliance solution for four European countries in record time of 12 months. This helped the bank in timely regulatory reporting, leading to increased reputation and trust with the bank's clients, shareholders and media. Wipro identified FATCA reportable customers by establishing complex algorithms and data analysis, leveraging various AI techniques, which helped timely regulatory reporting for the client and made it FATCA-complaint. - Raman Awal, General Manager, Information Management – Data, Analytics & AI, Wipro Limited. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Financial services company takes control of its data

Financial services company takes control of its data Client background Client: A financial services company Industry: Insurance Products/Services: Insurance and superannuation, banking Areas of operations: Australia and NZ Challenges The client wanted to provide and maintain high standard of services to their customers. However, managing humongous customer information was challenging due to scalability issues. To meet their vision, they required data and analytics capability, which could provide actionable insights and support them in better decision making. The client need was a foundational information and master data management (MDM) system that could support analytical capabilities, understand the customer needs better, and generate more revenue opportunity. Solution Wipro implemented automation for MDM to maintain the golden records and utilize the information effectively. This helped keep the data accurate, complete and current/valid. The MDM solution had CRM and other business apps, which provided inputs and acted as source to the MDM app. The MDM solution was also integrated with an enterprise data warehouse (EDW) application. Solution highlights: Business impact The MDM application decommissioned the legacy CRM application and proved to be the key point for customer data and analytics capability. It allowed them to focus more on insights rather than data preparation. The client now has more control over the data with its MDM application taking care of all the data quality, governance and security issues. "This strategic MDM support proved to be the foundation for our client's data and analytics capability. The implementation of MDM test automation was enabled along with DevOps. This PaaS implementation manages millions of customers and is one of the largest implementations, in terms of scale and size. Automation improved the business responsiveness to their customers with cost savings of 20%." Raman Awal General Manager, Information Management – Data, Analytics & AI, Wipro Limited. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =======================

US financial services company makes data work for it.

Here's how.

US financial services company makes data work for it. Here's how. Client Background Challenge The client's data processing system had been built over two decades across multiple lines of business with over seven thousand data pipelines. These pipelines/workflows carried out extract, transform, and load of data as well as various analytical calculations, which was then stored in the enterprise data warehouse. The legacy system had scalability issues, as the throughput was not adequate to meet the client's growth plans. The tool also had low adaptability to new big data technologies. To add to that, the customer was paying millions of dollars as license cost for the legacy product. The client was bracing for more sophisticated fraud detection, enhanced security protection, etc. and this required additional data processing for new data attributes being captured, real time data processing and quicker turnaround time. Solution Wipro built a new platform on Spark, the open source data processing framework, using Java/Scala due to its ability to scale up easily as well as process high and varied data volumes within a limited time. The solution components included: Business Impact The transformation to Spark platform enabled the client with a comprehensive framework to manage big data processing and sophisticated analytics with speed and flexibility. This led to a number of benefits, both short term, and long term: The new Big Data platform provided the customer the processing power required to minutely analyze the data and capture every aspect of the dynamics of the business. The company is geared for future business expansion as it is no more restricted by the computational power of the system. Judhajit Senmazumdar, Director - Data Analytics & AI - Global Sales, Wipro Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ====================

Top manufacturer creates pricing advantage

Top manufacturer creates pricing advantage Client background Client: A leading multinational company Industry: Manufacturing Products / Services: Industrial machinery, electronics Areas of operations: Worldwide Challenges The client, which manufactures multiple products in different business segments and markets them globally, were facing difficulties in achieving faster quote turnaround time for pricing negotiations with its customers. The client's existing technology had limited capabilities to capture and measure market pricing, assess the impact of pricing actions and decisions, and support transactional negotiations across all products. They were not able to identify the pricing levers that were affecting their profitability. Therefore, pricing and sales tactics were not meeting market trends and requirements, resulting in inconsistency in pricing execution, significant margin drop and lost revenue. Solution Wipro implemented a pricing transformation initiative that assessed the client's pricing and sales effectiveness as well as transformed key elements of strategy, price setting, and transaction and performance management. The solution included data integration, transformation, building of a data lake, automation using the open source business intelligence tool Pentaho, and data storage in Amazon Redshift. Solution highlights: Business impact The client enabled best-in-class pricing capability as a core competency and competitive differentiator. The pricing transformation enabled the client to measure the impact and effectiveness of pricing decisions throughout the pricing lifecycle. It enabled automated, intelligent, and data-driven negotiation governed by policies and pricing guidelines. This was a complicated data integration implementation in terms of scale and size. The pricing data mart enabled business users to identify poor pricing practices, make data-driven decisions, identify high and low performing customers and products, and measure impact on revenue. - Raman Awal Global Practice Head - Information Management, Data Analytics and AI, Wipro Limited. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Telecom company transforms into an intelligent enterprise. Here's how.

Contact Wipro Please fill the required details to access the content Telecom company transforms into an intelligent enterprise. Here's how. March | 2020 Client background Challenge The client was adding a variety of customer-facing services and applications across its digital channels. These channels and services, in turn, were generating valuable customer data that could help draw insights to further fuel business. However, the client's legacy data warehousing and campaign management systems could not be easily integrated with the digital channels. The new sources of data and the systems were not streamlined to handle various data formats. These could not be scaled to store the growing data volumes, and batch processing/ latency issues prevented the client from making effective use of the data. The option to add storage to the legacy system was not cost-effective as it would mean making large investments in license and maintenance costs. The client's campaign management system was also not able to cope up with the various business demands due to technical constraints in their legacy data warehouse system. Solution To leverage the availability of rich data, to extract real-time actionable intelligence, and to execute real-time personalized campaigns, the client engaged Wipro to build its next-generation data-warehousing platform and campaign management platform. The goal was to build a foundation that could measure customer inventory, launch real-time marketing campaigns and evaluate 160 KPIs used to improve uptake of new products and services while delivering an increase in average revenue per user. Over a period of 1.5 years, Wipro worked on a program that cut across the user base leveraging a modern Ab Initio Collect/ Integrate framework and Cloudera Big Data and Hadoop ecosystem. The system was architected to provide scalability and the ability to process high volume and variety of data in real time. The Ab Initio interface provided business users the ability to add new sources of data and configure new business and campaign rules without any dependency on the technology team. The implementation of the campaign management platform involved complex integrations with channels and other surrounding systems including business intelligence. Business impact Business impact with the new data warehousing system and campaign management solution, the client placed itself firmly on the road to becoming an intelligent enterprise. The new platforms provided several business capabilities and benefits "This was an innovation and insights-driven implementation, enabling revenue growth for the client. Overcoming the legacy barriers, we created a real-time data provisioning and insights platform and deployed configurable campaign management solution to help provide personalized offers to its subscribers and thus improve customer experience." - Raman Awal, Practice

Head - Information Management, Wipro Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Leading Canada and US Bank Develops Intelligent Decision-Making Capability through Data Transformation

Related Articles Contact Wipro Please fill the required details to access the content Leading Canada and US Bank Develops Intelligent Decision Making Capability through Data Transformation July | 2020 Client background Challenge The client's data management environment was highly fragmented with data stored in disparate information management systems. This hampered timely delivery of transactional reports, impacting customer experience and business continuity. Lack of visibility into enterprise-wide data, combined with a sluggish data processing platform hindered users' ability to get comprehensive insights into customer needs. In addition, it was crucial to modernize the legacy data platforms to optimize costs. The client was therefore looking to build enterprise data lake infrastructure and framework for insights- and AI/ML-driven analytics while modernizing legacy data repositories. This was crucial to reduce infrastructure cost, avoid duplication of data sets, and enhance regulatory compliance by adhering to international standards, such as DFA and BCBS principles. Solution Wipro implemented data modernization across the enterprise to create an integrated data ecosystem spanning across more than 100 source systems and 10+ lines of business. The layered architecture helped the client improve data consistency, enabling business users to gain access to enterprise-wide data in Information-as-a Service model. Wipro also enabled advisory services for strategic maturity assessment, helping clients develop their new age data and analytics roadmap. The highlights of the solution include: Business impact Wipro helped the company leverage intelligence by enabling transformation of their data and insights processes. The solution helped the client: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5

Global IT giant manages 1.3 billion customer data with intelligent data platform

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Leading aerospace company harnesses best-in-class HR analytics capability in their journey to becoming an Intelligent Enterprise

----- Arcticle source ----- https://www.wipro.com/analytics/leading-aerospace-company-harnesses-best-in-class-hr-analytics-capability-in-their-journey-to-becoming-an-intelligent-enterprise/ ----- Related Articles Contact Wipro Please fill the required details to access the content Leading aerospace company harnesses best-in-class HR analytics capability in their journey to becoming an Intelligent Enterprise Leveraging Azure cloud helps the customer save costs, reduce processing time and efficiently manage enterprise data December | 2020 Client background Client: A leading aerospace company Industry: Manufacturing – Aerospace products Products/Services: Aerospace machinery Areas of operations: Worldwide Challenges The client's two-decade old HR analytics system was inadequate to meet modern-day real time reporting needs for the client. The data warehouse ran HR reports (employee productivity, satisfaction, diversity, ethnicity, etc.) in batch mode on a monthly basis and took up to 20 hours for report generation. As a result, it was difficult to make real-time data-driven decisions on matters such as employee incentive and project bonus to attract, manage and retain employees effectively. Moreover, these HR reports were critical in nature as they were accessed directly by the Chief Financial Officer (CFO), and other c-suite executives to ensure compliance to government and regulatory bodies' guidelines on employee diversity, workplace practices, etc. Non-compliance could invite heavy legal, financial and reputational damages to the client. Also, in the current context of the COVID-19 pandemic, it was important for the client to have real-time employee information in order to implement dynamic changeover of resources as needed. For instance, mapping employees' location proximity to field locations to ensure employees residing nearby were sent on site visits, thus minimizing travel and ensuring employee safety. The client decided to embark on a digital analytical platform implementation initiative to transform the existing HR analytics data warehouse and business intelligence systems for the digital age. Solution The client partnered with Wipro to spearhead a large-scale intelligent HR transformation exercise leveraging the power of digital technologies. The Wipro team migrated the legacy HR system to Azure cloud to ensure agility and on-demand scalability in reporting. Wipro's intelligent HR analytics solution covered three broad dimensions: Business impact Wipro's proven solution and accelerated implementation helped migrate historical data from legacy HR system to Azure cloud. The new platform handles 500 GB of data daily. With this best-in-class HR analytics capability as a core competency and competitive differentiator, data-driven decisions were enabled for the client, accelerating

their journey to an Intelligent Enterprise. Key business benefits delivered to the client include: Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ========================

Wipro Teams with Large US Bank to Reduce Infrastructure Costs and Align with 'Data Centre Exit' Strategy with Hadoop Platform

----- Arcticle source ----- https://www.wipro.com/analytics/wipro-teams-with-large-US-bank-to-reduce-infrastructure-costs-and-align-with-data-centre-exit-strategy-with-hadoop-platform/ ----- Related Articles Contact Wipro Please fill the required details to access the content Wipro Teams with Large US Bank to Reduce Infrastructure Costs and Align with 'Data Centre Exit' Strategy with Hadoop Platform Situation A large international bank had a long-term strategy of reducing the company's data centre footprint. Using its Cloud-first approach, it sought to transform the banking customer experience. With more than 40,000 employees and operations in the US, UK, and Canada, this bank renders a variety of services in retail and commercial banking, credit cards, and auto loans. To achieve this strategy, a key requirement was implementing a Cloudera EDH platform migration on cloud that included: Solution Wipro's Delivery Transformation group focused on agile transformation to reduce delivery times and drive best DataOps practices. The innovation council led the way by creating architectural design patterns to accelerate the migration of their Hadoop platform to cloud. Cloud-native modern design patterns were used to build the automated reusable frameworks for migration, data quality, EDW and ETL modernization accelerators, data lake and cloud data engineering tools, and big data applications, successfully deployed at scale using these frameworks. The following best practices were followed for EMR consumption: Business Outcome The Hadoop platform migration journey, brought immediate benefits, including In addition, the team added more than 20 global scrum teams across different LOBs, 1000+ Cloudera workloads were rationalized and re-engineered on AWS, and 500+ new big data applications built on AWS Hadoop platforms using cloud-native and open-source frameworks. The client's long-term strategy of reducing the company's data center footprint was realized, going from eight in 2014 to three in 2018, and none by 2020.   Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML

and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Accelerating a Pharmaceutical Leader's Time to Market with BI Modernization

----- Arcticle source ----- https://www.wipro.com/analytics/accelerating-a-pharmaceutical-leaders-time-to-market-with-bi-modernization/ ----- Related Articles Contact Wipro Please fill the required details to access the content Accelerating a Pharmaceutical Leader's Time to Market with BI Modernization March | 2021 Client Background Challenge The global pharmaceutical market is projected to grow at a compound annual growth rate of 13.74% from 2020 to 2027. To maintain its position in this fast-growing industry, a global pharmaceutical leader sought to reduce the time to market for its healthcare innovations. The company recognized that boosting its efficiency, eliminating redundancies, and launching a next-gen reporting platform could deliver greater insights and lead to improved decision-making for its global teams. Optimizing its business intelligence (BI) landscape to be faster, more systematic, and standardized was critical to achieving this objective. Solution Wipro studied the pharmaceutical leader's existing BI inventory on its legacy COGNOS system. The COGNOS platform had functioned for years across multiple lines of business for enterprise and self-service reporting. Although it had supported strategic decisions, operational KPI monitoring, ad-hoc analytical reports and visual canvases, the BI system required modernization to handle the company's future needs. Based on strategic discussions with the client's BI teams, Wipro proposed a robust, flexible solution to migrate the company's platform to Tableau using SNIPE, Wipro's next-gen BI transformation toolkit. This solution helped to simplify and standardize the COGNOS landscape by creating detailed rationalization outputs based on reports and usage data for each line of business. SNIPE's automation capabilities to accelerate Tableau migration empowered the pharmaceutical leader to begin its transforming into an intelligent enterprise in a scalable way. Meanwhile, Wipro's BI modernization competency center served as the backbone for the pharmaceutical leader's migration to a future-ready BI landscape. Business benefits The automated metadata extraction of more than 3,000 COGNOS reports into a central repository enabled full self-service through an advanced UI, delivering a 25% increase in business productivity. Furthermore, the BI landscape became 22% leaner due to the migration to Tableau and elimination of redundant and obsolete reports on COGNOS. The Tableau transition also increased BI migration productivity by 35%, significantly reducing the leader's time to market for its pharmaceutical innovations. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major

implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major

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Improving Processes and Cost Savings through Automation for a Financial-Services Leader

----- Arcticle source ----- https://www.wipro.com/analytics/improving-processes-and-cost-savings-through-automation-for-a-financial-services-leader/ ----- Related Articles Contact Wipro Please fill the required details to access the content Improving Processes and Cost Savings through Automation for a Financial-Services Leader June | 2021 Client Background: Challenge: A multinational investment bank and financial-services company had experienced significant growth, and business projections anticipated the positive trend to continue. The subsequent growth in data would stress the company's existing storage and computing capabilities, and operational risks would arise if the data became too siloed and caused increased on-premise expenses. To maximize its efficiency, visibility, and collaboration, the company hoped to migrate to a platform that would improve its ability to process large data sets while scaling to meet growth projections. It also hoped to save costs while enhancing overall security. Solution: The client wanted to offload a significant amount of their big-data workloads and consolidate their data lake on Azure to reduce operational expenses and enhance security for their entire ecosystem through a scalable platform that responds to clients more quickly, even during peak operational hours. With an aim to facilitate seamless platform modernization and faster delivery, Wipro developed a platform based on solution accelerator IntelliProc to automate big data workload conversion to a Spark equivalent and deploy it into Azure Databricks. The Databricks platform was set up to ingest data from various sources and perform analytics, eliminating the problem of siloed data. IntelliProc's high-level automation of business logic conversion and data mapping validation features was designed to improve data integrity and accuracy for the client, which previously was a challenge for their teams. Business Impact: IntelliProc modernized existing big-data workloads at scale to leverage the benefits of Azure Databricks. The development, data quality, and testing phase guaranteed 35% effort savings, and implementing the Azure Databricks environment significantly reduced the on-premise expenses and helped in elimination of the traditional siloed data ecosystem which led to better collaboration among the data teams in a more secured environment. The use of Databricks improved client data team productivity by 20%, and the scalable environment provided better computing capabilities with increased operating efficiency and lowered infrastructure costs by 25%. IntelliProc also converted big data workloads–Hive and Impala scripts into their Spark equivalent—which led to a more than 60% overall effort reduction. The converted scripts had no changes to the business logic,

saving cost and time. The requirement gathering phase manifested up to 40% effort savings. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ======================

Transforming Data to Accelerate Business Value for Software Leader

----- Arcticle source ----- https://www.wipro.com/analytics/transforming-data-to-accelerate-business-value-for-software-leader/ ----- Related Articles Contact Wipro Please fill the required details to access the content Transforming Data to Accelerate Business Value for Software Leader September | 2021 Client background Challenges To accommodate its continued growth through mergers and acquisitions, one of the world's largest enterprise software providers needed an efficient way to manage the vast amount of data associated with its strategic initiatives. Its existing IT system aggregated 35 disparate systems, each with varied processes, business models, and legacy applications. The software leader sought a solution that would provide a single source of truth, streamline and integrate end-to-end business processes, and reduce operational costs. Such an integrated platform would also empower the company to improve sales planning, enable various planning and forecasting use cases, and gain a 360-degree view of its four business domains: customer, vendor, products, and finance. Solution: Wipro partnered with the company to create a six-layer data migration program to provide a consolidated view of enterprise data across all four domains. This initiative accounted for 200 million records spread across eight target systems and created a 360-degree view of customer data, enriched with vendor and product master data to help with cross- and up-sell opportunities. This allowed the sales team to target its most profitable customers and accelerate the sales planning process. The system smoothed the migration process by using pre-built canonical models to map data from all source systems with target data model and a stringent program governance with multi-layer data reconciliation. Wipro also implemented a new BI solution with data-acquisition layers to enable near-real-time reporting for business users, thus improving data consistency and maintaining a single source of truth. To manage data enrichment from third-party vendors, the system seamlessly integrated a multi-domain master data management (MDM) platform from Informatica. Batch and real-time integration of business applications like SFDC, NetSuite, Workday and Anaplan enabled the software leader to improve use cases like sales planning, IT project cost planning and human capital management. Meanwhile, a legal consolidation system (OneStream) was integrated into

the overall architecture to help meet the company's compliance requirements. Outcomes This large-scale implementation consolidated 70 SaaS applications into 20, allowing the enterprise software leader to reduce operational expenditures by 50% to 60%. The state-of-the-art framework also transformed the company into a future-ready enterprise with the ability to easily onboard any new acquisition and integrate it seamlessly with the existing MDM system. With the informatica MDM, the software company realized a 45% reduction in the number of duplicate accounts and reduced its master data setup cycle time to less than 5 hours, thus accelerating the end-to-end the business process integration. The company's improved data visibility across its planning models empowered business users to forecast efficiently and more accurately, while its newly simplified planning process reduced the planning duration from two weeks to two days. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ======================

Boosting HR Efficiencies through Artificial Intelligence

----- Arcticle source ----- https://www.wipro.com/analytics/boosting-hr-efficiencies-through-artificial-intelligence/ ----- Related Articles Contact Wipro Please fill the required details to access the content Boosting HR Efficiencies through Artificial Intelligence September | 2021 Client Background Client name: Wipro HRSS Industry type: IT consultancy Area of operations: Global Products or Services: IT Services Challenge Wipro's Human Resources Shared Services (HRSS) serves more than 200,000 employees across six continents. This expansive workforce leads to extraordinary volumes of data, complicated by process variations for each country, that risked causing delays in onboarding, background-check verifications, insurance enrollments, and payroll. Mindful of the company's growth projections, Wipro HRSS hoped to design and implement a system that not only enhanced the employee experience, but also generated measurable business value by accelerating process turnaround times, thus reducing operational expenses and freeing HR to focus on strategic issues rather than manual and transactional activities. Solution Wipro's AI Solutions team used an Enterprise IQ framework to help develop a transformational plan that identified and implemented multiple use cases across the full "Hire to Retire" track. This approach used several AI solutions and Wipro's Holmes augmented intelligence platform to create and implement a new, more efficient system. The solution combined Wipro Holmes with Google OCR and advanced machine-learning techniques, automating tasks such as new-hire and agency background verification, enrollment via a third-party insurance portal, and digitizing payroll accounting. The solution also achieved 100% touchless hyperautomation of

HR processes by applying a re-engineered, AI-first process that combined smart data capture, AI, RPA, and chatbots. Automating these processes would improve turnaround times, reduce errors, and eliminate the manual processes that were stymying the teams' abilities to focus on value-added activities. In addition, the employee experience and compliance elements were improved with use cases such as Employee Appraisal Conversational Assistant, Employee State Insurance Registration, the Embark Assistant, and travel and expense fraud detection. These features added flexibility and security while enhancing the customer experience through automation, quick responses to queries, and real-time fraud prevention. Outcomes This AI-driven approach generated a total business value of approximately $25 million due to operational savings in the form of efficiency and productivity gains. Background document verification speed increased 10x, payroll turnaround times reduced by 98%, and productivity doubled while maintaining 90% accuracy of data extraction. Meanwhile, the automation in this award-winning solution helped reduce employee onboarding times from 7-8 days to 3-4 days and eliminated many repetitive tasks, enabling HR teams to focus on more-strategic tasks while transforming the employee experience touchpoints. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ======================

Enabling a Customer-Centric Future for an Australian Telecommunications Leader

Related Articles Contact Wipro Please fill the required details to access the content Enabling a Customer-Centric Future for an Australian Telecommunications Leader September | 2021 Client background Challenges: One of the largest telecommunications companies in Australia collected and stored data across more than 20 siloed sources. Eliminating these siloes would allow the company to increase its data quality and consistency, boost data-access speeds, and improve the customer experience. It would also enable data scientists to spend time creating models that could bolster the company's cross-selling/upselling efforts and ROI. The telecommunications leader envisioned a system that provided a 360-degree view of the customer and eliminated the need for data scientists to spend more than 80% of their time organizing, formatting, and cleaning data. With improved customer data quality and access, business users could spend more time developing analytics, use cases, and models that allowed them to better track and improve customer churn analytics, estimate

customer lifetime value, and provide personalized product and content recommendations. In short, the transformation would make the Australian company a customer-centric enterprise. Solution: Wipro eliminated the data silos and created an easily accessed single source of truth by implementing an Informatica master data-management (MDM) solution across business, governance, data, and technology functions. This approach, coupled with a data-governance strategy and ETL tools, resulted in a master repository that provided a 360-degree view of the Australian company's 85+ million customers. The solution then accelerated data-science workflows by implementing feature engineering as a separate process. This enabled data scientists to reduce their model-building times and deploy analytical models more quickly, avoiding the previous time commitments for non-analytical work. With this easily accessible and simple-to-use data product, analysts could complete daily tasks without complex programming skills. Meanwhile, the MDM solution provided a seamless customer experience with real-time marketing updates via a self-service portal, and it improved customer serviceability via consolidated customer addresses. Outcomes: The new customer-centric view eliminating the need for manual efforts from data scientists, delivering 87% accuracy in customer match rates and 400 transactions per second in the customer-data hub. It also generated more cross-selling/upselling opportunities and increased marketing effectiveness by 60% due to seamless data flow to the campaign management system, which created better insights. Existing customer data quality improved by more than 90%, increasing ROI from data science projects. The solution also improved business experience with API-based self-service for marketing, billing and customer care teams to access customer data in real time. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major ======================

Strengthening Business Processes and Customer Experiences through Cloud-enabled platform

----- Related Articles Contact Wipro Please fill the required details to access the content Strengthening Business Processes and Customer Experiences through Cloud-enabled platform December | 2021 Challenge An Australian energy-distribution company wanted to become more customer-centric across its organization and provide a superior customer experience. Achieving this required migrating business processes to a cloud-based infrastructure, a strategic decision that would consolidate data from disparate third-party vendors, enable the company to gain valuable insights

by breaking down data silos, and improve operational efficiencies. This transformation would also minimize delayed and potentially erroneous communications to customers regarding outage and financial reconciliations. Solution Wipro's solution was built to enable a consolidated view of energy customers and simplify operations management for the brand's customer business teams. This was achieved by adopting an industry-leading, new-age SAP IS-U platform on S/4HANA using Azure cloud, which entailed extensive data migration. Wipro developed and executed an end-to-end strategy for migrating and consolidating two years of historical data from four different source systems comanaged by the energy leader and a third-party IT partner. Upfront data profiling helped identify data gaps early and improved business process efficiency, allowing manual cleansing activities to be planned on a monthly basis for 100-plus business rules. An automated data remediation using rule-based cleansing resulted in increased throughput, especially for high-volume data scenarios. The automated migration resulted in a 99.99% success rate, and a Wipro solution built on SAP Business Object Data Services (BODS) and EMIGALL enabled a minimized error rate. Benefits With the migration and consolidation complete, the Australian company gained a unified view of its consumers' data to better serve their needs. By retiring its legacy system, the energy distributor dramatically simplified its customer and billing business processes with minimal disruptions. Its omnichannel customer experiences were enhanced with timely, data-driven customer communications, and no time was wasted on correcting or reconciling data that's critical to managing outage notifications to customers. The organization also saw a reduction in the total cost of ownership of its IT infrastructure for the migrated legacy applications related to customer, billing, and revenue management operations. Migrating right the first time led to further financial benefits, saving the enterprise approximately AUD$3 million (on average). This was mainly based on avoiding 5% of billing and revenue exceptions that typically occurred in legacy applications attributed to 50,000 National Metering Identifiers (NMIs). The successful data migration of these NMIs to a new-age platform resulted in savings of approximately 25,000 person-hours of effort. Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major =====================

Volkswagen Credit, Inc. Transforms
Data Science Capabilities with
Amazon SageMaker

Contact Wipro Please fill the required details to access the content Volkswagen Credit, Inc. Transforms Data Science Capabilities with Amazon SageMaker Challenge VW Credit, Inc. (VCI), a financial services arm of Volkswagen Group of America, provides competitive financial services to its dealers and 1.2 million customers. The credit arm wanted to provide more timely and customized products to its customer base. VCI was working with disparate on-premises data-science platforms. Achieving its goals would require consolidated data that provide timely insights to improve price-prediction models and MLOps efficiencies to improve the time to market. Better insights and decision-making are essential for near real-time loan approvals, adaptive price prediction models, etc. These improvements would help VCI offer its customers the right mix of services exactly when needed. Solution Cloud migration was required to allow integration of all platforms, provide a unified view of data and provide the ability to see market changes in real-time. VCI collaborated with Wipro and the AWS team for the cloud migration journey. Wipro proposed a modular phased approach with the creation of a detailed architecture design for data model migration. Wipro leveraged the Amazon SageMaker ecosystem for the cloud migration journey and other required features like security (encryption keys, VPC), automation, notification and alerts, integrated and automated logging, monitoring services and future model scalability. The complete solution leveraged a wide range of AWS services: SageMaker notebooks help VCI data scientists quickly build new machine learning models – from developing, building, training and deploying. Reusable frameworks expedite feature engineering, model training and model deployment. SageMaker Model Monitoring service automated model monitoring – if there is data drift, the accuracy of models could impact the price prediction leading to potential revenue losses. Automated monitoring helps VCI capture all inference requests, compare them against baseline on a defined schedule (hourly, daily, etc.) and send timely alerts. AWS Step Functions Data Science SDK framework, created by Wipro, helps VCI data scientists quickly create ML lifecycle workflows, effectively orchestrate all model lifecycle steps, ensures conditional checks and approvals for model deployment, and sends notifications for any failures. New machine learning models are published seamlessly to give VCI the agility to respond to changes in the market. Amazon Event Bridge and SNS allow DevOps teams to configure and standardize type and text content for all notifications and alerts. Wipro created event-based triggers to invoke the state of machine model training/ retraining, model scoring and model monitoring. SNS notification service

sends email/SMS notifications for any SDK pipeline status change and success or failure events to promote faster resolution. Amazon Cloud Formation Templates automated the deployment process with no manual interventions for code migration to the higher environment. Reusable cloud formation templates enable automated deployments, minimizing errors from incorrect code promotion. Features include version control with automated CI/CD pipelines resulting in higher code consistency across multiple environments. AWS Lambda provides serverless computing that listens to the event notifications and executes code in response to the events. In addition, it automatically manages compute resources to drive efficiency. AWS S3 stores objects with customer-managed encryption keys and Amazon Cloud Watch is logging and monitoring resources to ensure that data and models are secure. Business Impact For VW Credit, Inc., the benefits of the solution are far-reaching. VCI has reusable templates for model pre-processing, training, deployment templates, etc. The templates reduce the effort required for onboarding new use cases and ML models. The new architecture is scalable and can grow with future needs. The data science team has streamlined workflows to structure their code and promote collaboration and automated pipelines are improving model training and deployment. Batch-based and real-time Inference pipelines help accelerate the model deployment process, and integration with applications is helping improve model adoption. Continuous model monitoring and drift notifications help the team take quicker proactive action on data anomalies or model performance degradation. While all these new capabilities are driving the desired efficiency and performance of the data science and DevOps teams, the features have given VCI the ability to provide new, timely and custom financial products to their customers. According to Chirag Patel, Software Engineer Technical Lead and Jaymin Mehta, Senior Manager, Big Data and Analytics, "With the help of Wipro and the AWS team, we were able to consolidate our data science platforms and automate the MLOps pipeline with proper monitoring. This will help us to achieve elasticity and scalability for our data science platform."
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Wipro and Integra LifeSciences, Continuum of Care Delivered Through Technology Modernization

----- Arcticle source ----- https://www.wipro.com/analytics/wipro-and-integra-lifesciences-continuum-of-care-delivered-through-technology-modernization/ ----- Contact Wipro Please fill the required details to access the content Wipro and Integra LifeSciences, Continuum of Care Delivered Through Technology Modernization Ambition Doctors and surgeons around the world depend on Integra LifeSciences's products and solutions to deliver the vital neurosurgery treatments that patients need. As a global leader in medical devices used in treating soft tissue, nerve, and tendon issues, the

enterprise's ability to continually meet ongoing medical demands requires an extensive and effective data analytics platform. The legacy platform was a source of frustration as it required an eight-to-ten-hour nightly refresh, costly maintenance overhead and integration challenges. Even worse were the delays in processing critical data that was interfering with Integra's ability to make business critical decisions and help patients and surgeons globally. Recognizing that keeping such platforms up to date is necessary for staying competitive, Integra developed a strategic transformation program to modernize its analytics operations and achieve greater business value. Ensuring that Integra's data warehouse was utilizing the latest cloud innovations would enable its teams to make better and faster data-driven business decisions, avoid delays in access to critical information, and better understand their markets. The enterprise also sought to improve product quality, enhance data ingestion processes, and accelerate product development while saving costs. Action Wipro was selected as a strategic partner for the transformation program based on Wipro's deep understanding of the healthcare domain and excellent data and analytics credentials. Working side-by-side with the Integra team, and after careful evaluation and multiple proofs of concept, Wipro architected an ecosystem of the most effective technologies and partners. Azure Data Platform Cloud services were selected for Enterprise Cloud Data Architecture, and a reputed ecosystem partner was selected for data-processing engine for the lakehouse platform. Wipro adopted a two-pronged approach by, first, designing and developing its next-generation data lakehouse, leveraging Wipro FullStride Cloud Services. Second, migrating to a data-processing engine to enable Integra to effectively gather real-time data, enable AI/ML usage and create a single view of its customers. Ambitions Realized With the new platform in place, Integra gained a series of valuable efficiencies, both in its data processes and across business operations. The life sciences leader could decrease manufacturing defects by 10%. The company decreased its lag in data availability by 52% and reduced its data warehouse loading time by 60%. Integra cut the amount of delays its teams were experiencing in receiving and processing stockouts and inventory data by half. The new platform also delivered financial benefits based on reducing operating costs by more than 45% and dropping license costs by 50%. By collaborating with Wipro, Integra solidified its leadership in the medical device industry and expanded the tech maturity of its organization. The faster processing times led to greater agility and the enhanced analytics platform allowed the company to become more customer focused. Following the implementation, Integra can meet its business SLA's with confidence and focus on bringing life-saving medical technologies to surgeons and patients throughout the world. =====================

Stronger Collaboration and Better Decision Making Through EPM Automation at Cigna

----- Arcticle source ----- https://www.wipro.com/analytics/stronger-collaboration-and-better-decision-making-through-epm-automation-at-cigna/ ----- Contact Wipro Please fill the required details to access the content Stronger Collaboration and Better Decision Making Through EPM Automation at Cigna Cigna boosts compliance and efficiency with automation and EPM modernization. Ambition Cigna recognizes the importance of quality data for its external and internal reporting for both its business and its customers and has been taking steps to foster a truly data-driven culture throughout its entire organization. Enterprise performance management (EPM) tools are critical to this process. So, when Cigna went to modernize its EPM landscape, it took a comprehensive approach that would accelerate its digital transformation efforts. The existing Oracle EPM landscape was vast and complicated, designed to meet the numerous financial reporting needs of Cigna's global operations. More than 15 EPM applications were supporting planning, budgeting, forecasting, consolidation, and allocations for multiple users across countries. Multiple source systems fed data into these applications for monthly, quarterly, and yearly reports. By streamlining planning and consolidation processes and increasing efficiency, Cigna hoped it could reduce close-cycle times and ensure that teams completed regulatory reports on time. A new automation-friendly approach to management reporting would also increase forecasting accuracy, enabling the business to cut costs and increase revenues. Cigna knew that financial planning and consolidation processes would require constant monitoring to ensure successful data load and remediation of failures. Due to the criticality of the relevant business processes and strict time-to-market demands, Cigna also needed 24x7 vendor support to meet its strict SLAs. Action Wipro consultants developed multiple end-to-end automations for functions such as data loads, data extracts, data copy, and clear zero data. These automations eliminated manual interventions, improved accuracy, and saved time for both the business and IT. Wipro also worked with Cigna to develop new allocation processes and a solution for integrating newly acquired entities into the EPM landscape, enabling seamless data loads and faster close cycles. Cigna partnered with Wipro to create a team capable of managing its Oracle EPM applications. Wipro implemented an onsite-offshore model with 24x7 support during the month-end and year-end close cycles and budget/forecast cycles to ensure zero downtime for the business. Along with managing production operations, the Wipro team has taken complete ownership of knowledge management (maintaining and creating knowledge repositories and new SOPs) and status reporting. The team also participates in functional and performance application design and testing. With strong program leadership in place, Cigna is now working with Wipro's Managed Services EPM Support team to address additional business KPIs and further enable an IT ecosystem that maximizes business impact. Nafia Sekander Application Development Director Cigna Ambitions Realized By modernizing legacy processes and

adopting new automations, Cigna increased the efficiency and accuracy of its EPM processes, achieving a range of business benefits. Time of data load cycles reduced by 30%, enabling more timely completion of internal and regulatory reporting. Cigna also reduced the database size of this Oracle Essbase application by 40% and reduced its processing time by 25% by customizing allocation rules/calculations. Wipro has delivered on SLAs 98% of the time during steady-state operations, considerably reducing the time it takes to close the month-end reporting cycle. With a more responsive enterprise performance management system now in place, Cigna business users are able to access essential data more quickly and efficiently and leverage that data to make decisions that will drive the business forward. Contact Us =====================

Empowering Business Intelligence through BI Transformation

----- Arcticle source ----- https://www.wipro.com/analytics/empowering-business-intelligence-through-bi-transformation/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Empowering Business Intelligence through BI Transformation August | 2019 Introduction If age is catching up with any business input, it has to beBusiness Intelligence (BI). The ever-popular two-dimensional charts and spreadsheets littering the desks of productionheads, sales managers, procurement executives and financial chiefs are being retired quickly. They are being replaced with sophisticated dashboards, visualizations, reports and query engines. These are not new tools. They have been around, within the domain of IT specialists at very large corporations. But now, they are available to business leaders, small business owners and just about anyone keen to know industry trends, spot business problems and opportunities, improve decision making and boost operational efficiencies. One can imagine how sophisticated and pervasive BI can become when you look at how Uber, the marketplace for drivers, uses it. Uber presents real-time business intelligence to drivers with its dynamic peak-time surge pricing mechanism. By offering more take home dollars for service rendered within a small geographic area, Uber instantly attracts more taxis to the area, keeping supply and demand balanced. What better proof of the efficacy of BI than this every day example? De-bottlenecking technology with technology BI is changing faster than ever before. Driving this change are technology trends like Cloud, Mobility, Big Data, IoT, Artificial Intelligence and Analytics. Simultaneously, the demand for data and insights from users is growing as competition increases and regulatory requirements become more stringent (especially in industries such as BFSI, Retail and HLS). The bottleneck in keeping up with this rate of change is legacy technology. Systems and platforms that were adopted six to seven years ago are unable to keep pace with the demand. These systems are inflexible and lack scalability; integration with other new applications and third party systems is complex; the cost of maintaining them is high; for many, end-of-life support is not available. These are signs that your BI platform is ripe for

transformation. The sooner the better To overcome above challenges, organizations are looking for structured ways and means to standardize the governance of their BI platforms by rationalizing the existing report inventory, standardizing the BI tools across enterprise, migration to newer BI platform and then setting-up the BI governance. There is a significant cost to delaying the transformation. One study showed that organizations with low BI tool consolidation have fewer employees (~12%) using BI tools vis-a-vis organizations with high BI standardization and consolidation having more employees (~25%) using BI tools. Resultantly low BI standardization costs significantly higher on a per employee basis. The study also found that organizations that have standardized their BI tools have on average 36% lower BI spends as a percentage of revenue. The implications of these findings go deep, suggesting that there is a hidden cost to delaying BI transformation, which many organizations fail to appreciate: in the absence of simplfication and consolidation fewer employees use BI leading to lost oppor tunities and operational inefficiencies. BI transformation framework The key to successful BI Transformation is to consider BI consolidation and address simplification, standardization and governance processes holistically with robust migration frameworks, tools and accelerators. The end result should be a BI platform that is flexible, extensible and customizable.The advantages of standardization and consolidation are undeniable. To achieve this, organizations must follow four simple steps: Tools Selection and Standardization: Work with your IT and Business Heads to understand existing and emerging BI needs. This helps choose the right technology stacks and consolidate BI into a single, world class BI platform. This has the immediate effect of improving data trustworthiness by 20 to 25% enterprise semantic models and reducing TCO by 30% owing to lowered support, maintenance and governance of fewer BI tools. Once the tools are selected, they also help define governance around them. Report Rationalization: Multiple BI platforms result in multitude of reports residing within the organizations without any systems to keep tab on their usefulness. Organizations need to document their inventory of reports with a structured and automated process for identification of similar/duplicate and "Unused/Unuseful" reports and their rationalization. Typically, 40-50% of reports are found to be candidates for rationalization and their elimination can bring down generation and maintenance costs by upto 25%1. Platform Transformation: Users are accustomed to set patterns, processes and dashboards. How will they respond to change? There are two aspects to Platform Transformation: technology migration and change management from a user perspective. It is best to define a framework for migration that includes automation to reduce time-to-market and ensure low error rates. Extracting metadata from existing systems and mapping it to the target platform is crucial. You should be able to transform data from your system to any target system of choice. It is also recommended that change management processes be put in early by explaining the technical benefits to users, creating awareness of the simplification and reducing user discomfort. Governance & Roadmap Definition:A sound BI Transformation Plan includes governance (policies and processes) and a roadmap. These need to be aligned with users, organizational process maturity and technology adoption. For example, On-premise, Cloud and Hybrid models will demand different governance processes, depending on industry/ regulatory requirements and technology environments. The value of good

governance cannot be underestimated. Many organizations show 20% more benefit realization when they have good governance in place. Time to make the move To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey. This is because organizations are moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities.Unless efforts and investments towards standardization and consolidation rise up the priority charts of organizations, organizations will continue to be exposed to risks of underachievement on the critical strategic agenda of Business Intelligence. Deepak Maheshwari is a Business Intelligence enthusiast with almost 17 years of experience in helping customers in identifying, consulting and solving underlying "decision management" problems.In his current role, he heads the Enterprise Business Intelligence practice within Wipro and is responsible for managing practice growth. He is one of the key thought leader who helped conceptualize BI Transformation and has architected multiple solutions under it, not only helping customer to understand the risk of their BI landscape standardization and consolidation but also standardized the whole migration process through some well defined frameworks and automated tools. Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption Key trends directing future investments in Enterprise Risk Management =====================

Key Risk Indicators (KRIs): The Custodians of Risk Management

----- Arcticle source ----- https://www.wipro.com/analytics/key-risk-indicators--kris---the-custodians-of-risk-management/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Key Risk Indicators (KRIs): The Custodians of Risk Management Introduction Financial institutions reckon that the close linkages between global markets and businesses means that risk can arise unexpectedly from anywhere. As a result, tracking, measuring and mitigating risk has become a major concern. Additionally, there is an urgent need to meet the ever-changing demands of regulators and of objectively assuring stakeholders of the highest compliance standards towards effective risk management. However, the world of finance is subject to a complex risk landscape from volatile market conditions, unexpected natural, economic and geo-political events, and from exposure to staff oversight and imprudence. The mechanisms put in place to identify and respond to credit, market and operational risks therefore have a major bearing on profitability, liquidity and solvency. Naturally, directors and stakeholders are insisting on improved methodologies to identify risk triggers (a.k.a. risk events), manage risk and ensure that regulators have access to a single view of risk. This has

brought Enterprise Risk Management (ERM) to center stage. With the increase in the uncertainty around global financial markets, risk managers are turning to data and systems that can identify risks and flag threats based on Key Risk Indicators (KRIs). It is not surprising that CROs and CFOs today are busy arming their risk function with technology that can monitor and measure KRIs across various business units. Embracing KRIs KRIs are invaluable tools in the finance industry to provide early insights into how risks shape up and pan out. The advantage of systematically measuring KRIs is that they also function as lead indicators of emerging trends and help expose critical gaps and vulnerabilities within an organization. This places the organization in a position to take early and appropriate evasive action against reputational and business loss. A deep focus on KRIs is becoming indispensable. The flaw lies in measuring KRIs in isolation. For the system to be effective, a host of other parameters related to the financial environment must be measured, co-related and mapped against KRIs. For example, if one of the KRIs is "Loss of key staff", then certain factors might influence the likelihood of this risk occurring, which might include general staff turnover (acting as a proxy for key staff turnover), undocumented processes, salary gaps identified by annual benchmarking exercises etc. Further, warning thresholds can be established by defining limits of acceptability (tolerance) for each of these indicators. Identifying the right KRIs is a result of understanding organizational goals and strategic priorities. It therefore should be apparent that KRIs will remain subject to constant change as the organization adapts to newer strategies. A continuous evaluation and refresh of KRIs and their thresholds is therefore beneficial and recommended. Old KRIs may need to be retired as they may have served their purpose or need to be tweaked to meet emerging scenarios with new trigger levels. Challenges in KRI Management Multiple factors make managing KRIs a complex task. KRIs may go unidentified due to poor data availability. Data collection may not be automated, leaving the organization vulnerable because reporting is not timely or is prone to inadvertent error as well as willful manipulation. And thresholds for KRIs may not have been adjusted as required by business, leading to poor decision-making. It is evident that developing and managing KRIs is not a simple task and calls for high quality data to be available to the risk management team. The data must then be translated into standard KRIs and mapped to other risk-related metrics. Eventually, with accurate measurement, this matrix of data must translate into actionable decisions that mitigate risk. Technology to Manage Risk Emerging risk technologies holds an answer to the problems associated with KRIs and risk management. It can collate risk data accurately, making the process of creating and managing KRIs robust, seamless and dependable. It can combine and collate data across risk events, occurrences, categories, products, services, processes and geographies to provide a comprehensive and unified view of risk. It can isolate the critical from the non-critical metrics, based on changing regulatory requirements and can embed these insights on to a customized dashboard for actionable intelligence. In most current operations within the financial industry, metrics are measured diligently. But, as often seen, the impact of breaches is witnessed before action can be initiated. This is because measuring risk is not yet a completely automated "real-time" process which it needs to be. Technology can place remedial action in the hands of decision-makers before risk thresholds are breached. Among the more interesting outcomes of

leveraging technology to manage risk is that it makes available a clear audit trail for regulators to examine. An Eye on the Future With regulations – and regulatory penalties growing, technology is going to progressively play a critical role in ERM. Financial services organizations will depend on advanced, highly sophisticated data and analytical tools to ensure that their management is enabled with the latest approaches to risk mitigation. There can be little doubt about the efficacy and applicability of technology in the area of risk management. How it is implemented and the extent of flexibility it presents to accommodate future scenarios will differentiate the leaders from the laggards. Sriram Kannan is a senior fin-tech and analytics consulting leader with almost 17 years of extensive and progressive experience in a suite of areas - BI, Analytics, EPM/BPM, Management controllership, Finance-technology, Risk & Compliance - with proven ability to manage large-scale, multi-discipline programs effectively and exceed expectations in delivery of results. At Wipro, he seamlessly collaborates with sales-force and GTM teams in dening and crystallizing strategy, building target operating models, ROI driven road maps and business cases and contributes to crafting and shaping opportunities through "CxO level" engagements. Additionally, his role entails leading Finance, Risk transformation and Performance improvement engagements globally while encouraging the adoption of BI/Analytics solutions for clients - enabling customers gain sustainable competitive advantage through increasing speed and accuracy in reporting, analytics and decision making. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption Key trends directing future investments in Enterprise Risk Management
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CFO: The new Technology Evangelist of the Enterprise

----- Arcticle source ----- https://www.wipro.com/analytics/cfo--the-new-technology-evangelist-of-the-enterprise/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content CFO: The new Technology Evangelist of the Enterprise Evolution of the CFO Role The traditional notion of a CFO, limited to that of the official beancounter and implementer of financial discipline, has morphed. Theorganization recognizes their ability to maximize efficiency and profitability across functions. Now they are seen as service-oriented strategic business partners. Every part of an organization wants to tap into the numeracy and analytical skills of the CFO. And CFOs are happy to oblige with their data-driven expertise and analytical insights. Want to know the new geographies your organization should expand in? Want to have an intelligent business discussion around the profitability of new products and

services? Want to know how a currency hedging strategy can save money? Want to ensure cost savings by paying the right duties and meeting regulatory compliance? Want a risk-adjusted forecast for supply chain efficiency? Make a beeline to the CFO's office Today's CFOs are indeed game changers. They have access to real-time financial numbers flowing in from every part of the organization, from external sales partners and channels, from markets, regulators, news feeds and social media. Their ability to co-relate and cross-pollinate events and data has become enormously powerful. Naturally, the organization expects the CFO's office to add value to verticals. A recent global study of over a thousand CFOs and finance executives found approximately 80% saying they were meeting or exceeding the organization's expectations around real-time analytics for decision making. Aiding these CFOs are a host of stable, robust and disruptive technologies. These range from complex data assimilation and predictive analytics to cloud, digital, mobile and social. Technology is not new to the CFO environment. Payroll management, accounts payable, accounts receivable, general ledger reporting etc. have been outsourced by the CFO for decades using technology. With Finance and Accounting Outsourcing (FAO), CFOs became early beneficiaries of efficiency, accuracy and spend avoidance through technology. They already appreciate the impact technology can have on the organization. Over the last few years, cutting edge technology has been integrated even more intensively within the CFO's workflow. The CFO is creating new real-time, collaborative and analytical capabilities using cloud-based and mobile-friendly financial planning, budgeting and analytical systems available in Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS) models. They are open to proposals around best-of-breed technologies. They are exploring new technology-based operating models. They want to investigate hosting platforms that make them more agile and responsive. Not surprisingly, they are also becoming vocal technology evangelists. Ask a CFO about cost reduction and chances are they will come back with a confident "Have you tried a cloud service? It could deliver annualized TCO reduction of 25 to 40% and substantially improve operational efficiency." They know the benefits of cloud-based data and analytics because they have implemented it within their own function. They may even come up with ways to monetize ERP investments further through the use of data models, embedded BI systems and quick dashboards. They can do this because of their first-hand experience, often an outcome of having to provide BI to the board. There are subtler reasons for the CFO to embrace technologies such as cloud. For example, it is a well-recognized fact that CFOs are cautiously optimistic. They generally don't want to change anything that already works. This is because they have witnessed slow and painful implementations cycles of technology in the past. But in their experience, cloud-based implementations – especially now that cloud security is not a bogey anymore – are turning out to be quick and low risk with interfaces that are leagues ahead of legacy systems. This experience is beneficial to the organization because now, suddenly, thanks to the CFO's understanding of technology, the cycle time between the CIO, business and CFO approval are coming down. The CFO-SaaS experience is equally interesting. For decades the CFO has been burdened with mundane financial and management reporting activity. Armies of accountants have been chartered with collecting data from scores of sources, checking its validity, cleaning and organizing it. Practically close

to 70% of finance office spends its energies around calendared reports (for investors, the board, regulators, etc.). Now, using SaaS, the CFO can deftly move a team of about 30 to 40 people (in a medium to large organization) to analyzing the data rather than preparing it.The primary advantage of SaaS is that it immediately rationalizes the number of technology components and improves efficiency. Significantly, it also arms the CFO with flexibility. Based on changing business needs, the financial applications landscape can be rapidly re-configured with an additional layer of industry and domain specificity. This helps present intelligence in more meaningful and insightful ways. Finally, from a finance perspective, the single-biggest advantages of SaaS are the multiple commercial models like subscription-based services, pay-peruse models, outcome or benefit based models that the organizations can leverage. Clearly technology has become uber-critical to the finance function. It has already helped businesses create the finance organization for tomorrow. Now, it is the turn of the CFO to become the technology evangelist and help business move from Best Practices to Next Practices. Sriram Kannan is a senior fin-tech and analytics consulting leader with almost 17 years of extensive and progressive experience in a suite of areas-BI, Analytics, EPM/BPM, Management controllership, Finance-technology, Risk & Compliance - with proven ability to manage large-scale, multi-discipline programs effectively and exceed expectations in delivery of results. At Wipro, he seamlessly collaborates with sales-force and GTM teams in defining and crystallizing strategy, building target operating models, ROI driven road maps and business cases and contributes to crafting and shaping opportunities through "CxO level" engagements. Additionally, his role entails leading Finance, Risk transformation and Performance improvement engagements globally while encouraging the adoption of BI/Analytics solutions for clients -enabling customers gain sustainable competitive advantage through increasing speed and accuracy in reporting, analytics and decision making. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations Key trends directing future investments in Enterprise Risk Management =====================

Taking the Risk Out Of Risk Technologies

----- Arcticle source ----- https://www.wipro.com/analytics/taking-the-risk-out-of-risk-technologies/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Taking the Risk Out Of Risk Technologies Key trends directing future investments in Enterprise Risk Management Introduction The tremors from the global financial meltdown in 2008-09 were so intense and widespread that they are still being felt across the world. When major Wall Street institutions went under, wiping out billions of dollars of personal wealth at the hands of what were mere

mid-level traders, it triggered a whole new wave of compliance and risk management processes. Such deep, broad and stringent legislative changes and systemic risk regulations have never been unleashed in the financial sector since the Great Depression of 1930s. As per global studies, financial institutions would have invested close to US$30 billion on risk-IT in 2014. This would have gone up by around 13% by end of 2015. Risk governance and integration are at the top of the spend list of financial institutions. Once implemented, these systems should help financial institutions lower their vulnerability to fraud, money laundering, spend and pricing discrepancies while ensuring capital adequacy. However, the fact is that there is little that financial institutions can do to avoid the rising tide of ever increasing risk management legislations. The list is long and continues to grow: the Dodd-Frank Act, Basel III, Enhanced Prudential Standards in the US, Solvency II and the European Market Infrastructure Regulation (EMIR) are just some of them. It is therefore important to understand the key trends that will direct and dictate future investments in Enterprise Risk Management (ERM) frameworks, policies and programs. Key Trends Draining IT Budgets Operational Fraud: Organizations typically tend to have a knee jerk response to major incidents of operational frauds. Typical, it takes approximately 18 months to detect a fraud, if at all it is detected. The cost of these frauds can be between 2-5% of revenues, which is considerably on the higher side. This damage can almost be halved by proactive detection using data and analytics. Current ERM systems may not be the best fit, as they use a sampling approach owing to the massive volumes of data (and the fact that data is locked up in siloes). These systems will need to turn to data integration, predictive modelling, artificial intelligence and real time data and analytics, ensuring that every data point is examined and a lineage is established. With robust implementation of these relevant systems, the cost of operational frauds, duplicate payments, fraudulent claims, etc. be effectively controlled. Stress Tests: Regulators, amidst increasing public and media scrutiny are insisting financial institutions to stress test their systems for capital adequacy, forward looking risk assessments and institutional risk appetite. Having garnered positive results in the industry, especially in the US, the tests have emerged as a key step in building confidence in the financial institutions. Europe is also headed in the same direction. Regulatory Compliance: Risk management is aimed at maintaining capital ratios, capital management/allocation, consumer protection and common reporting standards around trading and transactions (i.e. front-to-back). The investments that need to be made to comply with regulatory requirements are around data models, real-time analytics and capital calculation engines, etc. These models and systems must be flexible, adaptable and customizable in order to seamlessly integrate with future systems and keep pace with a rapidly evolving regulatory environment. Anti-money Laundering (AML): With growing cross-border terrorism (which needs funding) AML regulations have become more stringent. While traditional AML solutions can manage structured records to unravel monetary trail, the industry is now faced with massive volumes of unstructured data as well. New solutions must have sophisticated data and industry-specific analytical systems to establish and unravel monetary trails, flag suspicious activity and predict incidents. The key challenge here is to ensure that automated IT systems do not make errors when dealing with unstructured data that appears to be similar. For instance, tax registration numbers can be confused for social

identity numbers by automated systems. Technology to the Rescue Financial institutions have no room for errors. Inaccuracies and blunders can lead to alarming social, financial and reputational damage. This is one reason why we find sophisticated tools such as Robotic Process Automation (RPA) and Artificial Intelligence (AI) engines being brought to the risk IT management discussion. RPA implementations are able to manage large scale data volumes without incremental costs, reduced processing time and increased accuracy. RPA is proving to be an attractive option for risk IT management practitioners because it can be integrated into existing systems/architectures without disruption. The outcome is exactly what financial institutions need: real-time risk reduction, improvement in process velocity, increased compliance and enhanced monetary savings. Increasing Priority for Reducing Vulnerability Regulations are going to impact both the top-line and bottom-line. As mobile and digital technologies grow, as cloud adoption becomes more widespread, and social media becomes part of business processes, organizations will be vulnerable to new and imminent threats. This is when regulators will have to step in with even wider requirements. Each of these will come with its own cost of compliance. As capital requirements grow and revenue generating opportunities plateau, the only smart way to improve margins will be through astute cost management. This is why risk management must be brought to the top of the operational agenda. Sriram Kannan is a senior fin-tech and analytics consulting leader with almost 17 years of extensive and progressive experience in a suite of areas - BI, Analytics, EPM/BPM, Management controllership, Finance-technology, Risk & Compliance - with proven ability to manage large-scale, multi-discipline programs effectively and exceed expectations in delivery of results. At Wipro, he seamlessly collaborates with sales-force and GTM teams in defining and crystallizing strategy, building target operating models, ROI driven road maps and business cases and contributes to crafting and shaping opportunities through "CXO level" engagements. Additionally, his role entails leading Finance, Risk transformation and Performance improvement engagements globally while encouraging the adoption of BI/Analytics solutions for clients - enabling customers gain sustainable competitive advantage through increasing speed and accuracy in reporting, analytics and decision making. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ====================

Predictive Insight on Batch Analytics – A New Approach

Predictive Insight on Batch Analytics - A New Approach While various industry players are investing in data management systems, several companies globally, face an increasing challenge of system failures and outages resulting in unhappy customers, brand damage and revenue loss. To illustrate, in March 2013, the regulatory body of U.K. fined a multinational banking and financial services holding company for failing to keep updated information on client objectives, risk profile and risk appetite. The regulatory body found that the reason attributed to this was the failure of the bank's data processing systems to allow sufficient client information to be processed and not so much a human failure. Such failures can have long term impact on companies with loss of potential customers even in the future. Out of several factors that can be attributed; failures and delays during data warehouse batch runs are an important area of focus for data managers today. This paper proposes a reference architecture to improve operational IT analytics with predictive capabilities to overcome such challenges. The proposed solution is vendor agnostic and provides consistent experience across a range of Data Integration and Business Intelligence tools. Industry Landscape Data warehouse and application service loss can adversely impact businesses in many ways like delay in financial closure leading to liability, penalty for non-compliance in delivering data on time and down time for information workers. On average, businesses lose between $84,000 and $108,000 (US) for every hour of IT system downtime, according to various estimates from the studies performed by industry analyst firms .Application problems are the single largest source of downtime, causing 30% of annual downtime hours and 32% of downtime cost, on an average .The leading cause of application downtime is software failure (36% of cost on average), followed by human error (22%) and third such rising costs are attributed to complex data warehouse environments that exist in companies today. The dynamic nature and complexity of the data warehouse The increased complexity of the data warehouse environment intensifies the task of data managers manifolds. The ask of troubleshooting under such a dynamic environment becomes tougher. Additionally, a host of other issues such as human error, hardware failure, and natural disasters can disrupt data warehouse availability. Over several years, innovative solution providers have tried to address these problems. There are multiple analytical solutions (Operations Management (OM) tools) existing today which help data managers monitor and measure the data warehouse environment. These solutions are catered to by features within Data Warehouse DI or BI tools and also within infra monitoring schedule management tools. The solutions help identify issues, isolate causes and resolve outages. The solutions also support performance management

through IT infrastructure support. However, these features which are restricted only to each particular tool, do not take into account the business process aspects and at best provide insights into what has gone wrong (instead of finding what would go wrong). These tools do not have the feature to constantly and proactively monitor system behaviour and provide real time insights into system performance and capacity trends. A typical solution today would analyse historical data to develop a certain trend in performance, after the failure has occurred. Whereas data managers are increasingly demanding capabilities to predict a failure before it occurs. This has created a need for predictive analytics driven proactive monitoring of data warehouse processes. Current OM Tools – Limitations As discussed above, a host of OM tools and solutions are used by data managers today. However, these solutions have the following limitations: Current OM Tools – Potential Improvements The limitations of the existing solutions, outlined previously can be plugged in through "predictive insight on batch analytics". The various capabilities of such a solution are outlined below: Proposed Reference Architecture Based on the characteristics outlined previously, below is the proposed reference architecture: The numbered areas in the above reference architecture are described below: 1. Data Acquisition and Conversion 2. Data Integration 3. Predictive Analytics 4. Alert Interface Benefits Several benefits can accrue to the data managers through the new approach: Reduced Risks: The new architectural approach de-risks batch operations through predictability, early warnings and fast issue resolution resulting in lower downtime of operations and improved reliability of data. In addition, infrastructure capacity utilisation forecasts. Optimised Costs: The proposed architecture further improves productivity by reducing manual monitoring and troubleshooting efforts resulting in reduced Total Cost of Ownership, lower cost of batch optimisation exercise and improved productivity of the platform due to reduced downtime and improved system availability. Standardised Operations: Data managers can avail standardised batch operation processes across technology stacks leading to – i) A tool-agnostic approach - the alert management, predictive insights, diagnostics and trend reports are uniform irrespective of the tool used. This also helps reduce system upgrade costs. ii) Simplified operational process and iii) Improved standardisation of IT operations overall Conclusion This proposed architecture catering to improving operational IT analytics is vendor agnostic and provides consistent experience across a range of data integration and business intelligence tools. It provides predictive insights that are business process aware and helps achieve higher availability and better reliability of data environments. It combines ability to monitor infra resources, integration tools as well as job schedules. Data managers will find the proposed solution cost effective in addition to helping reduce overall operational risks and design standardised operations. It will help organisations maintain high customer centricity through improved operational processes. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities &

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Anti-Money Laundering: Get Clued Before It's Late

----- Arcticle source ----- https://www.wipro.com/analytics/anti-money-laundering--get-clued-before-it-s-late/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Anti-Money Laundering: Get Clued Before It's Late Need for Solutions to Evolve to Keep Financial Crime at Bay Cognizance of the Looming Threat A recent disclosure by US law enforcement authorities reported about three Colombian nationals who used Hong Kong banks to launder at least US$5 billion from a global narcotics business . That's more than the GDP of a few nations such as Sierra Leone or Barbados. In this instance, the money was used to largely buy counterfeit products from China and Hong Kong, and ship them to the rest of the world. But it could just as well have been used to pay for weapons or fund terrorist activities. Money laundering is posing one of the biggest threats to societies and economies across the world. Banks are naturally becoming the first line of defence against the dangers of financial crime. Increasingly, regulators are asking banks to gather information about their customers and their transactions that will help surface, identify and prevent potential illegal activities. This has set off an intense chase for data and supporting documentation, inconveniencing customers, causing business delays and further adding to operational costs. The Know Your Customer (KYC) process mandated by regulators is turning into a double-edged sword: while augmenting anti-money laundering (AML) processes, financial institutions are becoming more vulnerable with increasing instances of customer privacy breach and data theft. Uncovering the Challenges Global banks and financial institutions need to comply with the ever increasing regulations, protect their customer data, implement AML technologies and processes, ensure they are not exposed to reputational damage and keep the cost of doing all this under control. While there is no common estimate of what these safety measures cost the financial industry owing to various qualitative factors, they do result in increased lending rates and service fees. Current compliance processes are intensely manual in nature. This means collating information from diverse and disparate sources to include origin of customer, nature of business, holding structure, political affilliations and connections, financial history, referrals, sanctions, indictments, liabilities, news reports, teller/automated clearing, house/wire transaction records, frequency and volume of transactions, currencies and geographies across which transactions take place and so on. The task encompasses country to country, bank to bank and people to people transactions. Almost 80% of this task is done manually by analysts, often spending days and weeks in acquiring, searching, documenting and reporting precise information about people and organizations - their financial standing and their reputations rather than in actually analyzing to make informed decisions. Finally, when the analysis is

done, it may have been weeks, months or even years after a money laundering event Need for AML Solutions 2.0 Current AML solutions have evolved their ability to manage structured records and data. What the industry needs is an automated way of searching and sifting through the growing volumes of unstructured data along with the structured data. The solution must then have an additional layer of analytics that understands and unravels monetary trails using sophisticated models to uncover relationships and predict patterns of suspicious activity. The solution calls for a combination of technological expertise and domain knowledge. Simply put, the system must look for appropriate and high quality data independently across defined sources (public, syndicated and third party), interpret unstructured data (such as descriptions and narratives, opinions and notes), synthesize and standardize it, create profiles that are aligned with regulatory requirements, use a set of industry-and-business-specific models to query and analyze the corpus of data and immediately flag activities that analysts need to take decisions on. Making Smart Solutions Smarter The problem is that even the most sophisticated systems deployed across financial institutions are prone to making errors when dealing with unstructured data. For example, systems may get confused between social identity, tax registration, phone and even travel document numbers. Cognitive Process Automation (CPA) and Artificial Intelligence (AI) engines developed under the guidance of industry compliance and risk practitioners offers a reliable, fast and scalable solution to this problem. CPA is driven by a set of instructions describing processes. CPA-based systems can literally "learn" these instructions by observing the actions of financial analyst and by examining a historical database of actions and behavior. As the system processes more data, it learns continuously to develop new rules and associations, presenting them to analysts for approval and inclusion in the rules engines that analyze data. There is no doubt that growing regulatory requirements, the massive amounts of structured and unstructured data and the cost of managing these present a challenge to the industry at large. The risk associated with poor AML practices cannot be underestimated simply because crime methodologies are getting highly sophisticated and need equally intelligent counter measures. 1. http://www.scmp.com/news/hong-kong/law-crime/article/1857155/ laundering-ring-pumped-billions-drug-money-through-hong 2. As one way to view the broader impact, research by the International Monetary Fund has suggested that proposed reforms could reduce economic output in advanced economies alone by ~3% during 2011–15: https://www.imf.org/external/pubs/ft/wp/2012/wp12233.pdf To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The No-Pain Route to Analytics

The No-Pain Route to Analytics Enabling Speedy Decision Making Through 'Analytics-as-a-Service' Introduction There is a new corner office and it belongs to the Chief Analytics Officer (CAO). This CAO is the outcome of growing data volumes. For businesses with access to large data streams, analytics holds the key to making fast and accurate decisions. CAOs can now use data for a variety of purposes. It can help manage operational efficiencies, discover customer needs, identify new markets, give shape to new products and value-added services and develop defensible differentiators. In other words, the onus to support the organizational business strategy now falls upon the CAO. And assisting CAOs with this goal is the science of analytics Every business function in an enterprise recognizes the need of actionable insights from data. That is why analytics is being recognized as a key-driver of decisions and as a business differentiator. In a competitive environment, every decision counts. CAOs are tasked with making this decisions-which in turn makes it easier for the enterprise – for anyone,, anytime and anywhere. If the CAO fails to deliver actionable insights, it could mean loss of business momentum, customer attrition and erosion of market share. CAOs are therefore careful when they embark upon the analytics transformation journey. They know it requires the ability to balance the business landscape with technological developments. But can they undertake this journey on their own leveraging resources residing within the enterprise in terms of people, processes and technological skills? The answer is tricky. This paper proposes an 'Analytics as a service' model comprising an end-to-end analytics service that covers platform, analytics, domain experts as well as visualization to deliver actionable insights for quicker decision making Can Traditional EDW Support the Chief Analytics Officer? Some enterprises may believe they can continue to rely on existing and proven enterprise data warehouses (EDWs) and management techniques to consolidate their data and run it through their analytical engines. But CAOs know that traditional EDWs are rigid and hard to change. Traditional warehouse platforms and methodologies are reactive – they chiefly deliver reports; they don't understand business change, are not flexible, are forced to be more technology oriented, don't incorporate methodologies that align with business lifecycles, cannot scale for demand and don't execute with agility. Data in existing EDWs is aggregated, making it almost impossible to access at granular levels that analytics demands, leading to performance issues Access to data in most EDWs require operational clearances which means that data scientists may not have access to relevant or complete data sets across functional/divisional silos. For example, marketing data may not be shown to finance data scientist. Rigid functional siloes in which data is trapped (like product development, production, sales and marketing, finance, supply chain etc.) can pose a serious challenge. Above all is the daunting fact that EDW appliances are expensive and as the data volume grows, so do IT investments. Looked at another way, the CAO has a

formidable challenge to bring—and maintain—the enterprise's data and analytical practices up to speed. But the larger question before every forward-thinking CAO is: what is a better platform for changing and unpredictable business needs? Need for 'Analytics as a Service' As a result of these challenges, enterprises tend to avoid using existing EDW platform for their analytical needs. Even if they want to expand the capabilities of their EDW platforms, it is extremely difficult and expensive. But, the danger of not doing so is self-evident: loss of strategic and operational insights and missed business opportunities. However, current technological developments have begun to provide relief to troubled CAOs. The advent of open source and cloud has dramatically changed the data analytics landscape. Big Data demands that enterprises implement analytical platforms that provide greater agility. But the prevailing perception is that these solutions (let's call them Data Discovery Platforms) are complex and expensive. Luckily, this is not the case. When architected meticulously using commodity hardware on cloud that leverages open source technologies and agile methodologies, Data Discovery Platforms are quick to develop, easy to use, reduces time to insights and costs way less than traditional BI systems. Data Discovery Platforms alone don't ensure the speed to analytics. These technologies are sophisticated. Many of the traditional ETL (Extract, Transform, Load) functions are performed using complex custom Map Reduce Code. For an enterprise, meeting all of the above requirements is difficult in terms of people, processes and technological skills. It is therefore important to engage a partner who can provide an end-to-end analytics service that covers platform, analytics, domain experts and visualization through a flexible commercial model. Enterprise Impact Through LoBs A CAO understands the profound organizational changes being led by the data deluge on the entire set of users (end users, super users, business analysts, data scientists and subject matter experts). Its effect cannot be trivialized or overlooked. LOBs have typical questions such as, "What can my business do to prevent customer attrition?" or "How can I identify my bottom 10% customers and ensure their cost-to-serve matches the ROI of the segment?" In addition, they want possible hypothesis to test. In a traditional BI world, the access to data is easy through SQL queries and need not require a deep technical expertise. Now, business users have to rely on IT to provide the data and the transformation dictated by functional needs. They know the data, they have the questions, but they don't have the technical depth to perform the required analytics. The IT staff is in a similar situation – with an understanding of the analytics platform but with no understanding of the business data. Hence, establishing a new operating model (see Figure 1: 'Analytics as a Service' – Operating Model) between business and IT can go a long way in accurately identifying and understanding data that matters to the enterprise, thereby ensuring faster time to insights. It is also imperative for the Data Discovery Platforms to have reusable analytical libraries across the business functions which act as accelerators. Figure 1: 'Analytics as a Service' – Operating Mod Proposed Solution to Enable 'Analytics as a Service' The Data Discovery Platform, as discussed, available on cloud and constructed on open source technologies can be a potential solution to enable 'Analytics as a Service'. This platform has next generation capabilities such as Batch Analytics, Real Time Analytics, Text Analytics and Ad Hoc Analytics. Organizational data (structured, semi-structured and unstructured), needs to be brought into this platform for exploratory

analytics. A unique Analytical Data Mart can capture and store the data in the form of dimensions, events and facts. These form the crux of the exploratory analytics. Backed by this unique and powerful architecture, business users can represent any journey map like customer journeys, customer taste graphs, product lifecycle and production lifecycle on a near real-time basis with significant events being captured and acted upon in real-time or near real-time. Figure2 : Proposed Data Discovery Platform A typical Data Discovery Platform packages Machine Learning algorithms that work on the analytical data mart to unearth patterns and outliers hidden in the data. Such a platform (see Figure 2: Proposed Data Discovery Platform) should provide several accelerators and applications that create a robust foundation with reusable analytical libraries and ways to adapt and accelerate innovations across the enterprise. A simple interface to the Data Discovery Platform enables Self-service Analytics for business users. Usability is an important aspect of the platform. For example, such a platform should be able to provide a set of Map Reduce functions for Descriptive Analytics. The platform should hide the complexities while providing a simple interface to query data in an iterative fashion and test the hypothesis in real-time without IT support. Key Facets of 'Analytics as a Service' 'Analytics as a Service' provides unique capabilities to the CAO that are becoming critical as data volume, velocity and variety grows. These include: The growth in data has certainly not reached a plateau. If anything, there are signs that it will continue to grow. There is no way to tell what data is going to be important a few years or even a few months from now; there is no way to predict how an enterprise may want to query its data. CAOs don't want to spend months—and precious dollars—each time re-architecting and implementing new analytical systems. Instead, the 'Analytics as a Service' model assures them of speed and agility where it is wanted most in today's business – in the analytics department. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Bridging the CFO-CRO Divide

----- Arcticle source ----- https://www.wipro.com/analytics/bridging-the-cfo-cro-divide--answering-the-call-of-converging-ne/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Bridging the CFO-CRO Divide Answering the Call of Converging Needs Pressing Need for Convergence There is an increasing recognition that CFOs and CROs are not on opposite sides of the battlefield. Instead, it is more appropriate to think of them as two sides of the same coin. But, the question to ask is how can this realization actually add value to the organization? The history of capital markets and the banking industry is

steeped in the premise of risk management: The greater the risk, the greater the reward. The harsh side of the risk-reward equation is equally true: The greater the risk, the greater the probability of loss. Risk and reward have always been two sides of the same coin. That perhaps makes it easier to recognize why the roles of the Chief Finance Officer (CFO) and the Chief Risk Officer (CRO) demand better integration. The call for convergence grows even louder in the challenging environment of economic uncertainty with increased defaults, volatile markets, newer (exotic) and riskier products being launched unpredictable consumer behavior, growing regulatory oversight and an increasing demand from stakeholders for more profitability. National standards authorities and industry regulators have been busy confronting these challenges with progressively complex mandates. Regulators have been gradually seeking a unified view of financial and risk data using common and consistent templates (Basel III and Solvency II being good examples to go by). CFOs and CROs too are headed in the same direction. When the CFO-CRO relationship is strengthened, we can expect to reap the benefits of operational stability, predictability of returns, enhanced reporting, increased compliance and improved profitability. Further, whenever need be, they can respond to crisis with utmost resilience. The convergence of data, market and industry research, analytical and modelling tools, and reports across the two functions is inevitable. This convergence makes it simpler to balance operational and strategic decisions and to protect capital in order to meet the looming threat of business disruption. The partnership results in giving a boost to efficiencies and reducing costs. Can there be better reasons for the urgency to integrate the two roles? Bridging the Great Divide The good news is that leaders in BFSI have recognized the need and are in the process of bringing the two roles closer. The bad news? For a majority of the industry, the two roles continue to operate in silos with staunchly held traditional belief that the more independent they are, the better it is for the business. However, the truth lies somewhere in between. The operational niceties may vary from organization to organization. One may prefer to keep the two roles independent, while another may have a direct line of reporting from the CRO to the CFO. A third may see the two roles report directly to the Board. These are organizational structures and managerial hierarchies meant to minimize friction between roles and, operate in the best interest of the organization and its stakeholders. They certainly do not mean the two roles cannot benefit from greater coordination and integration. The most immediate impact of the rising trend of CFO-CRO integration is on enterprise technology. Traditionally IT systems meet the adversarial needs of the two roles, delivering different sets and quality of data, reports, research and analytics to both. This can obviously be counterproductive and risky from a compliance perspective. Clearly, IT must sit down to do a rethink with the CFO-CRO duo to rationalize and unify systems and workflows. The end result of the exercise should be aimed at improving the quality and consistency of information and reducing the cost to manage and process it. Independence with Interdependence The data used by financial institutions is processed through a variety of risk models. The output is consumed by the CEO, COO, CFO and the CRO.By their very nature, risk models are designed by the CRO's offices. Today, risk models must also be viewed from the lens of the CFO, if the two roles are to work in tandem. It is another matter that the CFO and the CRO may disagree over the

interpretation of the output. But the differences, arguments, reasoning and decisions must be based on the results and actionable insights obtained from the same data and underlying models. If anything, it is even more important to ensure that the two roles remain fiercely independent in their perspective of business, even as they build on systemic and operational cooperation. The re-engineering and unification of data and analytical systems are worth the pain. The impact in doing so is felt across the enterprise. In a sense, the concept of shared services and platforms needs to be extended to areas on either side of the CFO/ CRO wall. Many roles and functions within the organization will benefit when the data and analytics being shared is identical for operations, risk-management, reporting and strategic decision-making, across all levels. Face-to-Face to Shoulder-to-Shoulder If they haven't already done so, financial services organizations must re-asses their thinking related to the roles of the CFO and the CRO and to their approaches to risk, governance and oversight. Does narrowing the information, communication, process, workflows and systems gap between the two functions go beyond protecting value and, in fact, add value to the organization by helping it exploit new opportunities with greater confidence? In every instance, the answer to that question will be an unqualified and a resounding "yes". Sriram Kannan is a senior fin-tech and analytics consulting leader with almost 17 years of extensive and progressive experience in a suite of areas - BI, Analytics, EPM/BPM, Management controllership, Finance-technology, Risk & Compliance - with proven ability to manage large-scale, multi-discipline programs effectively and exceed expectations in delivery of results. At Wipro, he seamlessly collaborates with sales-force and GTM teams in defining and crystallizing strategy, building target operating models, ROI driven road maps and business cases and contributes to crafting and shaping opportunities through "CxO level" engagements. Additionally, his role entails leading Finance, Risk transformation and Performance improvement engagements globally while encouraging the adoption of BI/Analytics solutions for clients - enabling customers gain sustainable competitive advantage through increasing speed and accuracy in reporting, analytics and decision making. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Real-Time Data Access Using Restful

Framework for Multi-Platform

Data Warehouse Environment

----- Arcticle source ----- https://www.wipro.com/analytics/real-time-data-access-using-restful-framework/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content The IT departments in enterprises see a lot of value in building service oriented architecture around their data warehouse environment to empower their internal customers. The arrival of the Internet of Things (IoT) introduced a new deluge of data getting processed and used for analytics. With more data getting processed and stored, the need for multi-platform data warehouse environment has emerged. The volume, velocity and variety of data and its potential use for the organic growth of the business elicited the data platforms growing bigger. Today, data warehouse environment in organizations are at the threshold of fulfilling diverse use cases and provide data to broad users across the spectrum like business applications, business intelligence, data analysts, data scientists, etc. Real-time data ingestion and extraction need to be easier with or without the involvement of IT. With the availability of features like text analysis, pattern matching in analytical platforms, REST as a framework is a great vehicle to carry and retrieve data from the data process and storage engines. This paper addresses how RESTFUL framework becomes a cost effective solution to achieve the mounting need to serve data in real-time. Introduction The heavy dependence on Extract, Transform and Load (ETL), and business intelligence tools has created some fatigue among business users. It takes multiple iterations and a long wait for businesses to get the data that they need. The emergence of simple but efficient open source frameworks like REST enable fast movement of data using most popular web protocols. Internet of Things (IoT) and Big Data Internet-enabled computer embedded chips in products and devices are used primarily for data-gathering, offering enterprise-level details on everything from how efficiently their machines are running to the purchasing habits of their consumers. Without proper data-gathering in place, it will be impossible for businesses to sort through all the information flowing in from these embedded sensors. What that means is that, without analytics on the Big Data being captured, the Internet of Things can offer an enterprise only little more than noise. Emergence of Multi-Platform Data Warehouse Environment The 21st century was the period which marked the emergence of data warehouse as a science. The need to process and store data got traction with the business finding its usage. With more and more data getting processed, data appliances became popular. With the arrival of Internet of Things, data collection and processing got a new definition as the amount of data being collected

increased exponentially. The need to build multiple platforms to process and store data has hit the organizations. With the introduction of architectural principles like Teradata Unified Data Architecture (UDA), there are a lot of options to build a true multi-platform data warehouse environment. It is possible to store data of any size. Data Lake gives the options of storing data as it comes and in any data format. A combination of platform which is interconnected gives the facility to move data between platforms. There is now an option to perform insights on data in real-time. Tools like Teradata Query Grid, helps to move data between platforms and also has features to retrieve data from different platforms without the user knowing where the data was stored . The volume and variety of data is directly correlated to the number of components to process. The days of conventional batch processing and canned analytics don't satisfy the new type of users who use this data. That's why organizations are looking out for non-formal ways to integrate, store and access data. The Open Source RESTFUL framework is one of the technologies which facilitate the ease of data integration and extraction. RESTFUL Web services: REST defines a set of architectural principles by which one can design web services that focus on a system's resources. Major advantages being: • Use HTTP methods explicitly • Be stateless • Expose directory structure-like URIs • Transfer XML, JavaScript Object Notation (JSON) or both Building Real-Time Data Access with RESTFUL Framework Given that multi-platform data warehouse environments have different work load capabilities, looking for real-time data ingestion and extraction becomes more difficult. Assume that there is a requirement to load and access unstructured data in real-time into multi-platform data warehouse environment. Being unstructured data, it makes sense to load into Hadoop (which is basically meant/good for batch processing). After the data is cleansed and ready for integration, it is meaningful to load the cleansed data into EDW or IDW to make it more efficient for the need for real-time access. The web HDFS (Hadoop Data File Store) feature which is being offered by Apache or Hortonworks could be used for real-time data ingestion into HDFS. Also, the REST API can easily communicate to the Hadoop clusters. The file read and file write calls are redirected to the corresponding data nodes. It uses full bandwidth of the Hadoop cluster for streaming dataiv. Conceptual Representation of Using REST for Multi-Platform Data Warehouse Environment Data Ingestion The architecture diagrams below elaborate how variety of data from different sources can be injected in to multiple data storage platforms (like UDA) with the help of REST framework. Data Extraction Data access from a multi-platform environment is easy with REST service as it provides the abstraction on top of the storage environment. Below is a sample architecture diagram on how REST acts as a Façade Layer for data storage. Advantages of RESTFUL Framework There are many advantages for using REST in a multi-platform data warehouse environment: • Being a public API, REST API is very easy to adopt and develop • REST API for Teradata provides driverless connectivity to read and write data into Teradata database. Similarly REST API for HDFS makes it easy to work with Hadoop Clusters • Helps in work load balancing; no dependence on ETL tool or ESB (Enterprise Service Bus) for real-time integration • REST works on top of HTTP; thus, only browser is needed for it to work Conclusion Real-time access to Hadoop along with other data warehouse platforms is promising because it provides the data pipeline not only for structured data but also to

handle data types that the average data warehouse environment doesn't support. REST API's natural support to JSON objects add value, when new platforms like Mongo DB, Cassandra gets added in to the data warehouse environment. The major benefit of using REST for real-time access is the low cost of development and the ease of deployment. Moreover REST naturally fits in the world of diverse data storage as it provides the perfect FAÇADE layer to inject and extract data from different platforms. Also, REST gives the ability for data scientists and business analysts to mix and match data on the fly without knowing where they reside. Also, now they don't have to wait for a day or two till the data load jobs complete in the conventional way. Imagine moving machine data or web data in real-time using REST to Data Lake, processed using analytical platforms like Aster or in-memory analytical tools and stored in Teradata for business usage. At the end, the processed and report-ready data can be accessed using REST. All this is possible without the need to use highly priced business intelligence or ETL tools. RESTFUL framework is indeed going to empower the internal customers and provide a cost effective way to integrate and access data in real-time. References 1. http://www.datamation.com/applications/why-big-data-and-the-internet-of-things-are-a-perfect-match.html 2. http://tdwi.org/articles/2014/04/01/executive-summary-evolving-data-warehouse-architectures.aspx 3.http://javadevhell.blogspot.com/2010/11/rest-ful-web-service-basics-with.html 4. http://hortonworks.com/blog/webhdfs-%E2%80%93-http-rest-access-to-hdfs/ 5. http://blogs.teradata.com/tdmo/rest-api-enables-driverless-connectivity/   To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Operational Intelligence

----- Arcticle source ----- https://www.wipro.com/analytics/operational-intelligence-/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Operational Intelligence Extracting Insights of the New Oil Data is the New Oil The phrase "Data is the new oil" has been the recent topic of discussion amongst the business executives. Data is the genesis for insights but the question is how much value do we really extract from it? Extracting value from data has indeed created profitable avenues, just as it has from oil. The oil metaphor for data is interesting and needs to be taken a step further. When put through a data-refinery, especially in real-time or near real-time, it provides invaluable Operational Intelligence (OI). OI answers the question, "What's happening within my business and IT operations now?" OI platforms do this by accumulating mountains of data, refining it, and overlaying it with machine learning and analytical models to extract insights in the form of live

dashboards, reports and real-time alerts (see Table 1: Data Types and their outcomes). This output is invaluable for executives of large and medium size enterprises tasked with dynamic, real-time decision making. For them, real-time updates and continuous insights have become imperative. This data can be used in scenarios for answering questions such as "Should I procure additional servers now or delay the purchase to next quarter?" or "Am I about to miss my SLA for the next 200 customers? What action should I take to mitigate the fallout?" Data Types and their Outcome Data Input Types Offline or slow moving data: Daily, weekly and monthly data from business systems (ERP, CRM,SCM, HRM) and IT inventory. (Asset, Capacity, external data). Near real-time data: Hourly data from servers, storage, router, networks, websites, portals,device telemetry. Real-time data: Continuous data stream from machines, routers, transactional systems, events, etc. Data Output Various input data are correlated together to give OI in the form of reports, dashboards, live monitoring, alerts and actions. It includes: Enterprises need all three data types – historic offline or slow moving data, near real-time data and real-time data – to arrive at sophisticated cross-relations resulting in pro-active diagnostics, event predictions, and recommendations that enable quick and immediate decision-making. The most significant driver for OI adoption is its ability to deal with a dynamic world moving at Google Speed. Decisions can't wait for weeks now; we have minutes or often seconds to take them. For instance, in an e-commerce website, a delay in page loading time by a few seconds results in customer attrition. If there was to be a real-time event correlation (page load times and the number of abandoned carts), it would help resolve the problem in real-time before significant revenue loss. The Data "Refinery" Managing and transforming data into OI is a key remit of CIOs in medium and large enterprises. Their goal is to keep an (digital) eye on business and IT activities so that aberrations, inefficiencies and threats can be dynamically identified along with prescriptive solutions before they impact operations. Data, and how it is captured, stored and correlated, becomes critical to achieve this goal. Sources of data - the new oil wells: Any business or IT operation has several sources of data (Table 1) and the challenge therefore is to rapidly transform the input from multiple and varied sources into desired business and IT operational insights. Moving the data through the "refinery" The "refinery" must ingest and move all types of data to appropriate containers, stores and models. A variety of tools for data collection (e.g. Scoop, Flume) que the data for persistent storage leveraging real-time data streaming technologies and object/file stores. Once the data is inside the `refinery', data processing, search and analytics models and tools are applied (e.g. real-time processing, machine learning for predictive modelling, batch processing). The 'refinery', in essence, transforms the data. The finished data "refinery" products The "refinery" is the insights engine that uses data to extract value and spew out intelligence, action and visualization in formats that operations can intuitively use for accurate decision-making. Operational Intelligence can take the form of authentication and authorization, predictive analytics that preclude threats and system failures, auto-ticketing, availability and capacity forecasting, chargebacks to LoBs and SLA adherence. The efficiency and accuracy of the digital insights engine depends on how the data "pipes" are laid within the "refinery" and how its components are integrated and configured. This determines the manner in which data is ingested, orchestrated and

crunched. The architecture and components within the insights engine determines the types of data an organization can leverage. Ideally, this should range from offline to near real-time to real-time and must include structured, semi-structured and unstructured. Conclusion OiI platforms' abilities to operate in scalable environment, to quickly re-configure itself using accelerators and best practices, to lay the data "pipes" and analytical models in new combinations and structures help enterprises manage their data across its lifecycle and extract from it the fuel that they require to sustain their competitive edge in an ever changing landscape. Balwant Singh Balwant Singh is Practice Head, Data Platform Engineering and Senior Member of DMTS (Distinguished Member of Technical Staff) Group at Wipro. Balwant is a technologist with passion and drive for emerging technology business with more than 17.5 years of experience in Software Products and Internet Scale Solution engineering of highly available, fast, reliable and scalable systems using open source and disruptive technologies such as Cloud, Big Data/Hadoop, HPC and Cluster Computing & Storage Systems. Balwant holds a Bachelor of Technology Degree in Electronics & Communication from the University of Pondicherry, India. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Data Helping Manufacturers Increase Efficiencies and Reduce Cost of Quality

----- Arcticle source ----- https://www.wipro.com/analytics/data-helping-manufacturers-increase-efficiencies-and-reduce-cost0/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content All forms of business management, and all studies of management science, require accurate, duplicable and reliable data at their very foundation. Big Data is helping manufacturers achieve the same. The advanced integrated, systemic data collected has capabilities that are beneficial and is a pathway to greater productivity. In many cases, the gains from adoption of the latest digital control techniques can be substantial. An important principle of business management is to plan before executing any strategic initiative. But what is seen in companies today is a blind rush to collect data. The answer to how should this data be used and implemented still eludes many. According to the Economist Intelligent Unit study commissioned by Wipro, 'Manufacturing and the Data Conundrum', just

42% of companies have a well-defined data management strategy. Deriving applicable insights from the collected data is what will impact your business positively. For example, At Meritor, a maker of drivetrains, brakes and other commercial vehicle components, customers tend to focus on one metric - the number of rejected parts per million (PPM) - to evaluate suppliers. To respond, Meritor quintupled the amount of data it collects and began to track defect rates not just by part, but also by individual production operations. It also decided to differentiate between reject PPM of products shipped to customers and supplier PPM, which takes into account quality levels from component suppliers. In 2013, Meritor's reject rate was 139 parts per million. During the 2014 first quarter, with more plants working to improve the traceability of production issues, the rate fell to 67. Today you are bombarded with tons of data, the path to success lies in putting that data to effective use and drawing valuable insights to understand your customers' needs better. And the customer is happiest with a good quality product and this is where data analytics can prove to be a game-changer for manufacturers. Nearly 72% of the participants in the EIU study feel that data can make a big difference; they pick product quality management in their top three business areas likely to see gains from more data, a much larger proportion than for any of the other areas and 28% points more than the proportion picking the number-two area of potential gains. Data is helping manufacturers understand their customers need better as data-driven product designs that report performance issues automatically to manufacturer service departments. For example, jet aircraft engines that are linked to the Internet and communicate on their own when service is needed. Emerging problems, in turn, lead to an enhanced need to boost analytic capacity linked directly to shop floor production processes. The machines themselves, in other words, feed the need for process data, leading to installation of more linked machines, and more actionable data in the factory. After all is said and done, it turns out that coordinated digital control systems can and do produce insights that are extremely valuable as shown in the study. So have you tasted the benefits of big data yes? Do share your thoughts in the comments section below. Dr. Srinvasa Vegi - VP And Global Practice Head, CXO Services, Advanced Technologies & Solutions, Wipro, Ltd. Dr. Srinivasa Vegi is responsible for practice strategy and management, business and competency development and thought leadership on developing integrated SMAC solutions for CFOs, CROs, CMOs, CPOs etc. With 20+ years of experience in driving business in the areas of Analytics and Information management, Dr. Vegi comes with a deep understanding of critical business drivers for global markets and industries. He has comprehensive experience in Data Warehouse architecture and design with a focus on Business Intelligence, Performance management, Big Data, Social, Mobile, Analytics and Cloud. Dr. Vegi has advised multiple Fortune 100 organizations to deliver transformational Data Warehouse, Business Intelligence and Analytics projects in Banking, Telecom, Healthcare, and Public sector. He has also been a regular speaker at leading industry & CXO forums. Dr. Vegi holds a Ph.D in Computer Engineering from Andhra University. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put

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Big Data Analytics Driving Growth in Retail Banking

----- Arcticle source ----- https://www.wipro.com/analytics/big-data-analytics-driving-revenue-growth-in-retail-banking/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Banking on Big Data Nicolasi has a vision of running a nouveau French restaurant. His grandmother's cooking, which has its origins in the French Basque Country, has taken on an avant-garde twist ever since she arrived in the US. His friends like her cooking style and Nicolas believes he is ready to give a shot at entrepreneurship on the back of his grandma's creativity. At the moment, he is discussing a loan with his banker. But, this is where the "I-dream-of-owning-a-restaurant" story takes a turn. The banker has decided to advance Nicolas the working capital, but, in addition, has some fine business advice. Would Nicolas like to know the best locations in the city for a nouveau French restaurant and the price point at which it can garner customer loyalty much faster? Nicolas is all ears. Many banks would be happy to give Nicolas a loan. Not many would be able to add an invaluable service that opens a new revenue stream for the bank. For Nicolas, the bank sifts through its growing stockpile of customer and transactions data – acquired largely due to regulatory requirements – and churns out remarkable insights. The bank can also help Nicolas acquire customers through targeted promotional campaigns. The bank examines demographic data, income groups, preferences and spend patterns, behavior indicators by area codes and mashes it with social and mobile data, to come-up with great business insights for Nicolas. This is the power of Big Data! Regulatory pressure has been forcing banks to invest in more data acquisition, storage, licenses, security, AMCs and people to manage the data. Practically every bank today has a big data implementation in terms of Hadoop running on their IT systems. But not all can generate revenue from data – turning a liability into an asset. Banks and themselves at the intersection of advanced technology and sophisticated customers in a world gone digital. The data coming-in from IVR, web, mobile devices, ATMs, kiosks, CRM, surveys, social networks and partner services can lead to superior personalization of services. Using advanced analytics on top of Big Data, customer data can help retail banks solve business problems far more complex than those faced by Nicolas. Banks are in the process of transforming their traditional data warehouses into information delivery platforms or 'Insights-as-a-Service' – an area that can aid service diversification and improve profitability. 'Insights-as-a-Service' will help retail banks go beyond non-interest income products. Banks can also improve top-line growth by acquiring new customers, efficient customer servicing through customer lifetime value maximization, by cross-selling/up-selling new products and services, and

preventing customer attrition. Big Data has a way of solving the leading challenges the industry faces that old methods cannot. These include the following: Meeting New Customer Demands: Technology companies like Google and Facebook are setting new customer expectations. As a consequence, customers want scores of new features from their banks as well . Big Data is doing this in three ways: by helping identify the services that customers want; by helping identify the price points for new services and forecasting ROI; and by helping customization of services. Managing Customer Lifetime Value: Big Data can surface campaign strategies to acquire new customers, track customer response across channels, and adjust channel investments. Insights from Big Data can drive offers that matter to individual customers rather than generic approaches with non-optimal returns. Successful on-boarding can be followed with precise cross-selling, up-selling and next best offers. Restricting High Cost of Operations: Channel ROI can be maximized by using Big Data to identify locations where new physical branches need to be established, scaled-down or shut; data can flag services that can make branches profitable; and it can establish cost-effective channels for customer outreach, interaction and service. Dealing with Regulatory Scrutiny: Banks are not sure how regulatory scrutiny will shape-up in the future. But as banks are held more accountable, their stores of Big Data will strengthen their positions vis-à-vis compliance by providing signals that aid early fraud detection. Emerging Core: Leading to Data Independence and Transparency One of the key challenges in banking has been the data silos created due to multi-product/multi-LOB scenario and the data (structured and un-structured) being buried amidst multiple databases and core systems. Retail banks are exploring setting-up a common data repository that lies between front office (channels/touchpoints) and back office (core systems). A replica of all customer data and transactional data, including financial and non-financial data, is pulled-up and held in a common repository that forms parts of the middle office layer also referred by us as "Emerging Core". This has been touted to be the best approach to deal with the digital disruption – increasing the speed and agility to leverage customer data. The set-up of this common data repository, aligned with the maturity and size of the bank is essential. Once consolidated, Big Data can turn into the underlying engine for building unassailable customer intimacy, creating new revenue streams, lowering cost of existing operations and risk management. APIs and Open Source technologies along with new approaches like Emerging Core are helping organizations to get their arms around huge volumetric data and make the prospects of gaining insights faster in a cost effective way. It is easy to see why banks taking bold steps with Big Data will lead the future. References i Our fictitious example who helps explain the business magic that data can conjure ii For example, they want hashtag banking on a social media platform or the ability to transfer funds directly to friends using just an email ID like PayPal   Sandeep Bhagat, Practice Head, Big Data Analytics, Wipro Analytics Sandeep Bhagat is a Big Data technology strategist, product and platform visionary at Wipro. Sandeep plays a vital role in business & practice management, solution conception to execution, innovative application & product development. He is a Data Science practitioner with over 18 years of experience He has extensive experience in Business-Technology alignment, technology strategy advisory, new service offerings launch, new revenue stream generation and capability building for niche skills such as performance engineering, Big

Data & data science. His core technology expertise includes Big Data & Analytics, Data Science, Machine Learning, Business Intelligence, Information Architecture, Designing & Architecting High Performance applications, Product Engineering, Performance Engineering and Cloud Computing. In his past working engagement outside Wipro, acting as the chief architect, he has developed an innovative big data management platform BigDataEdge™. Sandeep holds a Master's Degree in Computer Science from University of Pune & has undergone an Executive Program in Global Business Management from Indian Institute of Management Calcutta (IIM-C). Sandeep also has various industry certifications to his credit in Enterprise Architecture, Data Science, Data Management, High Performance Computing & Cloud Computing. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Big Data - The Alchemist in Manufacturing

----- Arcticle source ----- https://www.wipro.com/analytics/big-data---the-alchemist-in-manufacturing/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Big Data - The Alchemist in Manufacturing Big data has arrived in manufacturing and in a big way. Needless to say that it governs the future of manufacturing as is clear from the Economist Intelligence Study commissioned by Wipro – 'Manufacturing and the Data Conundrum' where 86% survey respondents report major increases in collection of data and 90% respondents saying their companies have mature data analysis capabilities for many manufacturing processes. Having said that, some questions need to be answered. How are manufacturers using these huge volumes of data for deriving valuable insights which in-turn will help in profitability? Is data collection easy or cluttered with problems related to quality and transparency? Is it easy to integrate data from various sources? The time has come to shift from mere forecast of problems using data to actually solving the above questions using data effectively. Despite the complications between shop-floor data theory and practice, companies surveyed have found a number of comfort zones where the benefits of real-time machine-generated information are accessible. As mentioned above, many have mature data analysis capabilities and using insights gathered from production-data analysis, two-thirds of companies report annual savings of 10% or more in terms of the cost of quality and production efficiencies. According to a McKinsey report, nearly 1.8 billion people will enter the

global consuming class over the next 15 years and worldwide consumption will nearly double to $64 trillion. In such a scenario data analytics provide manufacturers with a huge opportunity to predict, innovate and implement. The challenge now is to integrate the data from multiple sources and draw valuable insights. Although state-of-the-art digital systems can predict problems and suggest solutions in advance of actual need, more than half of manufacturers aren't confident that their analytical skills are up to the task. In Professor Daniel Apley's (professor of industrial engineering and management sciences, Northwestern University) words 'It is very difficult to find young, talented people who want to go into manufacturing. They want to be with financial companies, or Google and Facebook'. Just 22% of surveyed companies have predictive analytical capabilities for production throughput, for example; just 16% have mature analytical capacity to generate potential solutions.   After all is said and done, it turns out that coordinated digital control systems can and do produce insights that are extremely valuable. Some 34% of those surveyed have generated annual savings of more than 25% annually in the cost of quality; the same proportion report 25% or better efficiency improvements annually. Effective use of data is the alchemist to the many challenges manufacturers are facing today. Do you have any other thoughts on how data is being used in manufacturing processes to provide transparency, increase efficiencies and reduce cost of quality? Jayant Prabhu - General Manager & Global Practice Head, Big Data Analytics, Wipro, Ltd. Jayant Prabhu is General Manager and Global Practice Head for the Big Data Analytics practice, a part of the Wipro Analytics service line. He is responsible for practice strategy and management, business & competency development and thought leadership on leading technologies like Big Data Analytics, Artificial Intelligence, Machine Learning, Internet of Things etc. Jayant has over 17 years of IT experience around Information Management consultancy, Data Architecture and Implementation road map, Process Modelling, and Design and Implementation of BI & IM solutions around leading product suites. He has advised multiple Fortune 100 organizations on devising strategies to leverage Information as a strategic asset to drive innovation derive competitive advantage and manage costs utilizing leading edge concepts like Big Data, Cloud, and Analytics. He has also been a regular speaker at leading industry & CXO forums organized by Gartner, IDC, MDM Institute on topics around Big Data Analytics, Master Data Management & Information Management strategies. He has also co-authored whitepapers on Big Data Analytics, Information Governance, Data Monetization etc. that have been published in leading publications. He is one of the founders of the 'Wipro MDM Leadership Council', a successful thought leadership platform that brings together practitioners from several organizations that are or are looking at implementing MDM to drive business transformation. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Data Appliances for the Insurance Industry

Data Appliances for the Insurance Industry A Big Step Forward The challenge of data volumes Financial reporting for insurance companies continues to grow in complexity. Regulatory standards are evolving with a host of new and mandatory rules, thresholds, schedules, submissions and disclosures being routinely announced. The time and effort required to meet these technical requirements has ballooned. With it, there is pressure on finance executives to reduce turnaround time and increase accuracy. This is truer for some process than others. One such process is the Finance Close process in Property & Casualty (P&C) insurance. Finance Close is a key accounting activity for the industry and solving problems associated with the process are not only important but they also offer insights and cues into managing other process better. Finance Close is notably complex and time consuming. The process determines how premiums, loss and reinsurances are ultimately recorded at the General Ledger (GL) level. The process is complex because it has dependencies on several operational systems and sub-ledgers. With increased regulatory oversight, the data associated with the Finance Close process has grown exponentially. Insurance companies today urgently need to find ways to manage this exponentially increasing data. The solution lies in a new breed of data appliances that combine data storage and analytical engines. In a business where stakeholders and regulators are demanding more detailed explanations, higher granularity of data, shorter periods for filing technical reports and financial statements, new definitions and disclosures, enhanced governance processes, external auditor testing and reviews, the only way an organization can deliver is to use database appliances to reduce stress on IT systems. The Finance Close landscape also serves very well to explain the more general problem in the industry. An organization may collectively insure thousands of its employees for, say, a period of 10 years. Although the premium for the coverage may be paid upfront on a single day each year, the insurer cannot record the complete revenue in its GL. The premium for each individual covered needs to be broken down for each day across the 10 year period of the policy. Only the portion of the premium calculated until the current date can be recorded as revenue. In essence, a single transaction sets off literally thousands of different records for the duration of the policy. Each record must be meticulously and accurately calculated, verified, captured and stored for retrieval. Regulatory remit may require these records to be stored for upwards of 7 years. Any service request in the future could invoke those records or a query from the Insurance Regulatory Authority (IRA) may require recovery of the records for disclosure and analysis. Now multiple this situation with insurance policies covering the entire P&C spectrum—damage to property, worker compensations, underwriting equipment

warranties and re-insurance—and you have a situation where records management, retrieval and analysis can become a nightmare using traditional tools. Limitations of traditional data management Traditional data management techniques require database administrators to perform a number of time-consuming tasks to define and structure the data before the database can be queried and deliver the quality and performance expected by large sets of users. As the data grows, it must be migrated to an increasing number of servers. This may initially not appear to be problematic as database management technology has been around for over three decades and has evolved considerably. However, the technology was built to manage several millions of records running into a couple of thousand gigabytes. Today, most enterprises deal with several billions of records. Insurance data has reached a point where some institutions have begun to refer to themselves as petabyte companies. Their data often takes 15 to 20 days to process. Teams providing data for the Finance Close for final posting to the GL do not have the luxury of such time. Migrating to an increase number of servers presents several hurdles. To begin with, database administrators must work with different system vendors to get their DBMS to scale out. Secondly, as the IT sprawl associated with the data grows, performance and availability of the complex system become uncertain. Finally, a decision to migrate to multiple serves means a continuous and increasing investment in hardware, storage, software, upgrades, licenses, backups, maintenance and services. How database appliances can take the stress out of the process With pressure on costs and the need to ensure high system availability, database administrators are exploring the use of database appliances. A database appliance is a single-stop solution to today's growing demand for efficient, reliable and scalable data management. These appliances tightly integrate servers, storage, operating system, software and DBMS. They have the tools to extract data and analyze it for business intelligence. In other words, the processing happens as close to the data as possible, eliminating the time required and the stress of securely shipping the data. This also means optimal performance as the software is built for the hardware. When data volumes grow, additional modular components can be simply plugged in. The advantages of database appliance in the insurance industry cannot be overlooked. These include: What to expect with database appliances? In the light of the advantages, it is therefore not surprising to see a surge in interest in database appliances in the insurance business. The focus is on systems that manage between 1 terabyte and 10 terabyte of data. Most large insurance database appliance users will do well to consider systems that manage between 10 terabyte and 100 terabyte of data. With such large data volumes, even a few seconds shaved off each database transaction can result in massive changes in capability. Processes that take two weeks because data is spread over a variety of systems can be brought down to 10 hours with the introduction of database appliances. The fact is that decisions in the industry cannot wait two weeks. Timely reconciliation and the close of certain processes are essential to operational efficiency, minimizing financial risk and reducing the likelihood of regulatory action. Going into the future, a thumb rule would be to bear in mind that investments in database appliances would do better if they had a wide availability of tools – hopefully from the open source space – and were built with industry specifications and standards in mind. A system that is built for purpose will certainly deliver

better ROI and will be, for IT in the long run, simpler to manage. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Data Platform Transformation

----- Arcticle source ----- https://www.wipro.com/analytics/data-platform-transformation/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Taming the data deluge Digital is Driving New Trends in Data Usage The dominance of digital has given rise to an era where the growth of data has become an area of concern. Data isn't bad news. Quite the contrary, organizations are welcoming data into their systems. But they have been caught unprepared by the implications of data at scale and its diversity. That is why data platforms are in urgent need of transformation or rationalization. If organizations don't do this, valuable business intelligence will remain buried and inaccessible within the data. No business can risk that. Today's global business requirements must manage millions of business transactions, an inordinate increase in the number of concurrent users and exponential data growth from internal and external sources. Additionally, as businesses change their processes, data structures undergo a concurrent change. This food of complex data is crippling current systems. What businesses need is robust scalability, resource optimization, consolidation and flexibility to meet even unforeseen business needs. That's why, across industries, there is a growing demand for innovation around data platforms. Migrating to improved data management solutions Database vendors have come up with an effective solution in the form of data appliances. These are pre-packaged servers loaded with OS, database management systems (DBMS), memory, storage, analytical engines, services and support. The appliances are able to support the growing volumes of data and transactions generated by modern businesses. With data being in close proximity to the analytic engine, there is no need to prepare and ship data to remote servers. Time cycles are reduced, the data is more secure and total costs associated with support and maintenance etc. can be brought down. Although more expensive than traditional relational database management systems (RDBMS), data appliances offer an effective solution to the data problem. But the very cost of these appliances is also forcing organizations to migrate their data from one platform to other platform either on premise or cloud based solutions. In these instances, organizations are wary of migration. This stems from a variety of factors and perceptions that play a role in shaping the final data platform and migration solution: Data migration to another RDMS or appliance is risky without SME knowledge about existing platforms The Expertise required to manage new platforms is scarce. The transformation process implies downtime and is too hazardous

for business These are natural anxieties. But they also point to the precautions that must be in place before migration. These precautions include consulting technology partners about standardizing the IT landscape, tailoring the solution to meet specific business needs, restructuring data to meet new process requirements, rapidly deploying the solution without compromising quality and minimizing downtime. 5 ways to tell if you are ready to transform your data platform The foremost question that every organization wants answered is: Am I a candidate for migration? There are multiple scenarios that help identify ideal migration candidates: How to minimize downside and increase upside Once you've worked your way through the Am-I-a-candidate-for migration filter, there is going to be a short list of challenges that will crop up. First and foremost is the problem associated with the required data structures for migration from legacy systems to appliances. The odds that your database knowledge has long gone with an employee are high. You will need to ponder on how to either build that knowledge back into the system (very time consuming and iffy) or outsource it to platform experts (cross checking their ft for your business needs could be daunting) before data can be safely migrated to the target state. It is also necessary to keep an eye out for data integrity and consistency. Given the growing number of platforms spewing data at your business, the source of data needs to be carefully chosen to maintain data integrity. Finally, a non-technical quality is essential for effective data platform transformation. Risk must be minimized by ensuring that the transformation is rolled out in a phased manner, calling for tremendous planning and patience. An aspect of migration that is not well thought-out is the effort required for data validation and quality, post migration. No business should wait for the lack of data quality to affect business before responding. Instead, the migration plan must include a data validation/ reconciliation strategy that is also incremental and in step with the phased roll out. The benefits of data platform transformation can be realized across operations, technology and support groups through: Is it enough to gain the benefits listed above? We think not. Working with an experienced partner to understand existing data structures, create new architectures that meet business needs, identify early migration candidates within the enterprise and create data validation strategies is the complete story. When undertaking such a significant exercise, enterprises must also invest time and effort in improvements. This would mean identifying existing bottle necks, recommending the acquisition of select in-house skills and adopting industry best practices. It is this holistic approach that makes for successful data platform transformation. Is it enough to gain the benefits listed above? We think not. Working with an experienced partner to understand existing data structures, create new architectures that meet business needs, identify early migration candidates within the enterprise and create data validation strategies is the complete story. When undertaking such a significant exercise, enterprises must also invest time and effort in improvements. This would mean identifying existing bottle necks, recommending the acquisition of select in-house skills and adopting industry best practices. It is this holistic approach that makes for successful data platform transformation. Suvakanta Mohanty- Practice Lead - Data Warehouse & Appliance Practice In Wipro Analytics Suvakanta Mohanty is Practice Lead for Database & Architecture Tower - Data Warehouse & Appliance Practice in Wipro Analytics. Suvakanta has more than 19 years of experience in IT Industry

and worked different areas of Database technology led transformations in Wipro. He is a hard core Database Practitioner and deeply involved in almost every aspect of the Database & Data Warehouse Architecture and served with various Customers across a broad range of Industries such as Manufacturing, Pharmaceuticals banking and Retail & High Tech. He has been providing Data driven strategic insight to Customers as well as helping Accounts across WT to develop Scalable and robust Database solutions to meet high performance applications. He has been leading enterprise level end-to-end Database solutions as well as various Data Management strategies for strategic accounts as well as involved in modelling, implementing, debugging and performance tuning of Big Data systems. Has also extensive experience with the Database Design, Development, & Implementation of both OLTP & EDW Applications. Prior to Wipro, he is having signifcant experience with leading global outsourcing and product consulting frms like Manhattan Associates, & Virtusa on areas of Product Architecture, System Architecture and Information Architecture. Suvakanta holds a Master's in Computer Application from Nagarjuna University and has a Bachelor's degree in Mathematics. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Driving Customer Insights for Retailers in the Digital Era

----- Arcticle source ----- https://www.wipro.com/analytics/driving-customer-insights-for-retailers-in-the-digital-era/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Driving Customer Insights for Retailers in the Digital Era Amanda, a working mom , spotted a summer skirt on the website of a top clothing brand and ordered it. When the skirt arrived it was the wrong color. Instead of sending it back by courier and having to exchange endless mails over the return, Amanda took time off from her work and visited the brand's store to have the skirt exchanged. But the store was unable to assist. returns and exchanges which had to happen over the same channel that the purchase was made, said the store manager. "Why can't you refund me and send the skirt back to your warehouse?" asked a miffed Amanda. It is a natural question for a customer – one you must have asked several times yourself. The answer is simple: retailers have been happily adding sales channels without unifying data across them. As a result, one part of the business is blind to the other. And who pays the price? Well, the customer certainly but so does the brand – in dropping customer satisfaction levels. While the

growing volume of customer data is good for business, it is only so when managed well. The growth in digital and Big Data technologies is bringing a deluge of opportunities for retailers. But with it comes operational difficulties. Amanda makes a good example of a customer who has several needs – none of which are managed well by most retailers. For example, Amanda wants to know why she has to repeat her complaint on the phone to the customer service agent when she has already written a mail to the retailer listing and documenting every detail of her transaction. "Last week, I wanted to buy a bluetooth speaker and found that the price at the retailer's online store was different from the price on their mobile shopping app. I wonder if I am being taken for a ride." Of course Amanda is not being taken for a ride. What is happening is this: there is a lack of uniform and coherent omni-channel customer experience due to poor data management. The chaos from growing channel proliferation can be damaging. There have been many such damaging instances in the retail industry. Poor data management is leading to several hiccups: pricing errors and discrepancies across channels, shipment and delivery errors, lack of visibility into inventory, damaging legal action from customers and regulators with serious cost implications. Conflicts in promotions across channels and inadequate customer knowledge are adding to customer dissatisfaction. The question is: how can omni-channel experience be improved? Master data management (MDM) is the key. MDM put in place tools that processes and controls reducing errors, improve data usability, enhance the quality and reliability of master data (core information about the business – customer, product, supplier, etc.), offering a "single version of the truth". A study commissioned by Wipro and conducted by the Economist Intelligence Unit, called The Data Storm – Retail and the Big Data Revolution (see Figure 1), found that only about one-third of retail CXOs admitted to having a well-defined data management strategy. They want data to enable better product pricing. They want it to enable demand forecasting. They know it can shape merchandizing strategy that results in brisk sales. In addition, with adequate customer data, they know it is possible to reward customers and grow loyalty, cross-sell and upsell with a high degree of success, shape promotions and improve customer engagement. But the problem they face is quite frustrating. In your business, in which of the following areas do you see big data analytics yielding the biggest gains? Select the top three (% respondents) Source: The Economist Intelligence Unit study commissioned by Wipro, "The Data Storm – Retail and Big Data Revolution"   Figure 1 : Areas in Retail that hold potential for Historically, the systems to manage these processes were designed in isolation. As a consequence,today, product and customer data is tucked away in various parts of the business. The challenge is to create a "single version of the truth" that aids Business Intelligence (BI) across the enterprise. MDM in an enterprise enables the business processes' access reliable data (customer, product, location and others). This is acquired from enterprise applications, legacy systems and third parties. It is then transformed using data models, governance policies, etc. and synchronized across the enterprise for analytics, reporting, decision making and improving customer interactions. Smart retailers know that adopting MDM is not an IT decision – it is a strategic business decision. It means integrating data from various enterprise systems (ERP, CRM, SCM, warehouse management solutions, ecommerce solutions, legacy apps and others) and external sources (demographic, web, social, mobile, locational),

and allowing different business teams to extract real-time customer insights (see Figure 2). Omni-channel retailing hinges on creating a unified view of the customer and delivering a seamless experience across channels. This means the retailer must be able to integrate all channel data, and leverage it to hyper personalize the experience (see Figure 2).   Figure 2: Success Factors for Omni-Channel Retaili MDM as an enabler: Single trusted view of master data with unique referencing across all the systems or applications. Benefits: As the retail industry continues to witness a surge of data, MDM has become a strategic business imperative. MDM can ultimately improve the satisfactions levels of Amanda and other customers. But it can also guide buying decisions and become a unique way to drive down operational costs. Not surprisingly, MDM is one of the most talked-about initiatives in retail. Is your business talking about it? References To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Smart Factory in the Age of Big Data and IoT

----- Arcticle source ----- https://www.wipro.com/analytics/smart-factory-with-big-data-and-iot/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Smart Factory in the Age of Big Data and IoT The Shape of Things to Come Industrial Revolution 4.0 is here. Where are you? Compared to the acres of floor space once given over to mechanical and electric systems, today's factories are practically unrecognizable. Walk into a plant manufacturing washing machines, automobiles, paints or petroleum products and you'll notice they look quite different. They are humming with hardware, sensors, microprocessors, robots and monitors connected to one another. These plants are getting increasingly connected to external systems and actual users in real time. Thanks to the wide availability of processing power, the miracles of miniaturization and growing connectivity (wired and wireless), factories, production plants and mills are unleashing a new era in industrialization – it is an era of Big Data generated and transmitted by millions of devices on a backbone called the Internet of Things (IoT). In a global study conducted by the Economist Intelligence Unit (EIU) and commissioned by Wipro in 2014 called Manufacturing and the Data Conundrum – Too much? Too little? Or just right? 44% of manufacturers said they understood the value of shop floor data. Manufacturers are beginning to realize they can capitalize on their data to increase shop floor efficiency, reduce waste, impact quality, re-engineer their supply chains for higher effectiveness and to improve

warehousing, shipment and logistics. GE, one of the leaders of the smart factory concept, has crammed its US$170m Durathon battery plant in Schenectady, New York, with 10,000 sensors. All of them are linked to the company's 400 global factories. The sensors capture 10,000 variables from manufacturing process, building information (energy use, temperatures and humidity), and even extend to the rooftop weather station. The data is captured with a frequency of an astonishing 250 milliseconds. Using Wi-Fi links staff members are alerted to anomalies and deviations. The plant is a test bed into how Big Data and IoT can deliver a smart factory – or, what GE calls, the "Brilliant Factory". In other words, Industrial Revolution 4.0 is here. And its central quest is to free the intelligence that lives with zettabytes of data related to your factory and its products. Some interesting smart factory use cases What can factories do with their data? Industries are using it in different ways, shining a light into the future. Defence: In one defence equipment manufacturing plan, the number of times a screw must be turned to tighten it is specified (say 12 times). If the screw turns an additional time, it is flagged as an anomaly and signalled for rectification. The example serves to show the depth to which the pursuit of quality can go using sensors and the data they generate. Automobiles: A growing number of cars equipped with intelligent systems like navigation systems, trip computers and on-board diagnostics systems are becoming smarter with IoT. Sensors are getting better in identifying other cars, objects or people and avoiding accidents. Pharma: IoT in Pharma is driving cost savings with applications like 'Organ in a Chip' which drastically reduce the R&D cost by running rapid trials running multi-stage diagnostics, Clinical Development through faster subject screening and analysis using sensors, and Supply Chain by reducing operations and maintenance cost. Oil & Gas: The industry is using data for preventive maintenance. The returns are forecasted to be huge. For example, a well-known fact is that a 1% improvement in the performance of all Electrical Submersible Pumps (ESPs) currently in use to pull oil from wells can deliver over half a million additional barrels of oil each day. At US$100 per barrel, that translates to over US$50 million a day. Real-time monitoring of data from the ESPs can help prevent downtime and improve asset performance. The gains from smart factories The benefits of data to factories is across several vectors. These include: Let your imagination soar The primary task before realizing a smart factory is to identify equipment and processes that generate valuable data and take the network to the very point where the data is being generated. In other words, where is the tip of your data? What is the format of the data – is it structured, unstructured or semi-structured? Can your network transmit the data coming in from -- and being sent to -- millions of devices? Can your data management system ingest the growing data? Once the answers to those questions are 'yes', you can put the data to practically any use, limited only by imagination. Smart factories are the future. But they don't have to mean abandoning your current investments in technology, data management and monitoring. If your plant has operational expenses of US$100 million a year, a 5% improvement using smart factory technologies can deliver savings of US$5 million a year. That itself should be compelling to consider making data a strong ally in the age of IoT. Narendra Ghate Narendra is a Senior Manager (Data Platform Engineering practice) at Wipro Analytics. Narendra has more than 25 years of experience in Product Engineering in New Technology areas that are at the leading edge of the Technology and Market

trends. His experience spans working on High End UNIX Servers hosting SMP and NUMA architectures, Wireline Products from CPE to Metro Edge, and Radio Network Controllers in the Wireless Networks. He is currently involved in consultation and building of the Big Data and IoT Platforms for different domains and industry segments like Retail, Manufacturing, Healthcare, Medical devices and Banking/Financial Services. Narendra holds a Bachelor of Engineering Degree in Electronics & Communication from the University of Mysore To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Integrated Manufacturing Operations

-Data & Connected Technologies

----- Arcticle source ----- https://www.wipro.com/analytics/integrated-manufacturing-operations---data---connected-technolog/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Integrated Manufacturing Operations - Data & Connected Technologies Over the past few decades, manufacturing operations have undergone a major evolution from being passive and largely human controlled to extremely complex and intelligent. One major driver in this evolution has been the way manufacturing data is handled, analysed and used in making real time manufacturing decisions. According to Manufacturing and the Data Conundrum, a study conducted by the Economist Intelligence Unit regarding data collection and its use in manufacturing, the amount of shop-floor data being collected has increased manifold for a majority of the respondents. This is largely from the widespread availability of real time sensor data at various stages of the manufacturing process which is essential to integrated operations. But, on the other hand, only a minority of manufacturers have advanced data analytics in place to predict issues. Fewer still have managed to integrate data from diverse sources or have skilled personnel to analyse it. Through effective and integrated data management and analysis from various manufacturing process, a significant impact can be made to various facets of manufacturing – from product quality management and process controls to safety and facilities management. The study mentions examples of companies like Meritor, ABB and GE, where increased focus on quality through integrated systems was demanded by new contracts and proves an often debated point on the economics of investing in data analytics for

product quality management. Implementing an integrated and effective data collection and analysis architecture does come with its share of hurdles. Many manufacturing facilities are still on old legacy systems which generate different forms of data. Managing the data in a coherent and common format can be a gargantuan task and moving to a common architecture is not without its birthing pains. Big data also presents with it the problem of staffing the infrastructure with trained personnel. Most often than not, different manufacturing facilities and even departments within the same facility are silos in operation which resist any change to status quo. Rallying them on the importance of moving to common data architecture and an integrated view of operations requires a strong leadership drive. All said and done, the next leap in manufacturing process control is bound to come from effective and integrated management of big data. 34% of the surveyed companies report annual savings of more than 25% through effective implementation of sophisticated, integrated digital control systems. The survey also found that companies which have a well-defined data strategy are more likely to be profitable with average earnings growth of more than 10% annualized. In conclusion, there is no denying the fact that advanced, integrated data capabilities are beneficial to the companies in the long run. Also, availability of data has never presented a problem with most modern manufacturing units being capable of churning out terabytes of data from thousands of sensors. The challenge lies in the capability to effectively store, manage and analyse integrated data to give actionable insights. What are your views on integrated manufacturing operations? Please feel free to write in. Nitesh Kumar Jain- General Manager & Vertical Head - Consumer Goods, Wipro Limited Nitesh Jain is General Manager & Vertical Head - Consumer goods (Europe & Emerging markets) at Wipro. Nitesh has more than 17 years of experience in spearheading different areas of technology led transformations. He has been leading the practice and business portfolios in the areas of analytics, BI, Trade promotions, Foreign exchange trading solutions and corporate performance management practices at Wipro and other leading organizations. He is actively engaged in the field of consulting, business analytics, performance management, data warehousing and implementing strategic analytical solutions for Retail, CPG, Manufacturing, Healthcare, Medical devices and Banking/Financial Services domains. In his career spanning 17 years, he has helped various leading retailers, Manufacturing Companies and Banks implement strategic analytics driven initiatives. Nitesh holds a Master's in Business Administration from Pune University and has a Bachelor's degree in Mathematics. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ====================

Community Analytics Catalyzing Customer Engagement

Community Analytics Catalyzing Customer Engagement Introduction For generations, an individual's community has been the cornerstone of healthy exchange of ideas, knowledge and a source of support. Astute technology companies have relied upon online technical and non-technical communities to help other users with product or service features, highlight glitches, raise red flags, sight early warnings, discuss performance issues, etc. The importance of communities as a platform for collaboration cannot be emphasized enough as businesses increasingly rely on collective participation. But could it be possible that there are ways in which communities can be made to contribute more to the success of a product, service, brand or company than we currently believe? We try to find answers for that in this paper. Communities: A Catalyst for Business Growth Large technology companies with multiple products and services rely on the wisdom of their developers, architects, domain experts, quality leads, testers, product and program managers in the online community platforms they set up within the enterprise. Here, the community posts questions, exchanges information and offers advice, expertise, tips and best practices. Today's advanced online platforms allow participants to express themselves more easily and freely. Participants can "share" the posts of other colleagues, "like" them or vote them up/down based on usefulness, accuracy and relevance and also take part in the online conversations. External communities go a step further, involving a second level of participants. These could be in the form of technology and business partners, direct customers and vendors. Together, this larger community can become the catalyst for gathering more perspectives and collaborate to rapidly solve problems. As the store of ideas, problems and solutions grow, the platform evolves into an institutional knowledge base. In theory this looks perfect. Many enterprises are pleased by the gains. But it is essential to see precisely how these communities impact business. If there is a way to measure the impact of community conversations and collaboration, the logical upshot is: what are the interventions that can improve the business outcomes? There are two clear ways in which community activity can be measured from a business perspective (See Figure 1: Value-driven Community Analytics): Are communities impacting revenue and business? Customer Engagement Level 0 Support Customer Engagement: Let's assume that a technology company has sold its product to 200 customers. Of the 200, we assume 20 are important customers from a revenue, usage and sales-promotion perspective. If these 20 customers are creating original content and their ideas are being leveraged by the other 180, one can assume the community health is good. Soon enough the engagement and interactions of the 20 customers will ensure the entire community becomes

a vibrant source of ideas and advice. This could result in demand for existing products, new products and better ways to use existing products – self-help and troubleshooting. The host enterprise should pay careful attention to the conversation in such a community and use analytics to rapidly extract usable business information. But if the top 20 customers are not engaged, then it is a cause for concern because a major source of business information lies inactive. Immediate remedial steps need to be taken. Level 0 Support: Online communities are a wonderful source of free Level 0 tech support. Customers facing snags, glitches and complications with regard to product installation, usage, errors and performance can find answers within the online community. The community acts as a quick, reliable, helpful and sympathetic support group. When conversations around a problem grow beyond set thresholds, it signals the need for enterprise intervention. Using analytics to understand the content and behavior of customers can be an invaluable tool to re-engineer a product or service, thus reducing support costs and improving customer satisfaction. Cost of Neglecting Community Conversations Enterprises that do not respond promptly to customer queries and problems face several risks. When a customer problem goes unanswered, it increases the cost of support (See Figure 2: Business Impact of Unsupported Customers). The customer is forced to use a customer care centre. This means footing support centre costs. When the number of unanswered questions from customers continues to pile up, not only does the cost of support go up but it also reduces Net Promoter Score (NPS)1. NPS is an indicator of how likely a company or person is to recommend an enterprise's product or service to others. The biggest and simplest opportunity missed in the absence of a healthy community is the ability to cross-sell and up-sell: Existing customers may post questions with regard to a product they are interested in, but they don't get a response. This often happens when an enterprise does not formally list "online community" as a potential sales channel and give it the attention it deserves. When a large number of questions across users remain unanswered, it could spell big trouble. The cost of support goes up, NPS scores fall and there may even be potential contract renewal challenges. The questions and problems posed to an online community offer tremendous product and service insights. They may signal opportunities to re-assess and upgrade product or service documentation and training enhancements. In each of the above cases, analytics plays a crucial role. By deploying analytics, enterprises can discern community signals for beneficial action. Business impact of Unsupported Customers Leveraging Analytics to Improve Community ROI If the complexion and mix of a community could be controlled, there would be little or no problem. But that isn't the case. A typical community has all kinds of users – from the passive to the extremely active. Enterprises need to invest in understanding user types. Communities can be analyzed along different parameters. Some communities could be focused around a product/ service, others may be better defined by geographies, still others by the skills and company size they represent. A quantitative (number of posts, replies, shares,likes, etc.) analysis combined with a text-based sentiment analysis (crawl communities, pick-up keywords that indicate problems) can give insights on which of the community types a group fits into. Getting below the skin of users and their behavior can provide answers to the all important question: what can improve the maturity levels of users so that we can extract business value from them? When users are on top of the

maturity curve, the healthier will be the ROI. (See Figure 3: User maturity curve). Benefit of High User Maturity   User maturity curve Conclusion Text Analytics and community tracking ensures that enterprises keep tabs on customers' voices, understand how active important customers are, what the conversation topics are, who the influencers participating in conversations are, etc. Quite often, alertness within communities for identifying potential problem areas leads to substantial benefits. Community analytics is a useful way to protect the enterprise brand because the chatter can be regulated within a set of closely bonded stakeholders as opposed to uncontrolled criticism on social media. Community analytics can also provide trustworthy insights from enterprise's own user base that can aid product development/enhancement. Often thisrequires intensive research which can be made more focused, based on the insights from these communities. It can also lead to identification of newergeographies for expansion based on the popularity amongst the audience who choose to show interest on the communities. Key influencers (based on frequency and virality of posts, engagement rate) can be tracked and involved in product enhancements as well. Monitoring communities closely, leveraging analytics in conjunction with social media is, therefore, essential for a company aiming to get a competitive edge through active and superior customer engagement. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

A Perfect Combination: 'MDM' and 'Big Data'

----- Arcticle source ----- https://www.wipro.com/analytics/a-perfect-combination-mdm-and-big-data/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content A Perfect Combination: 'MDM' and 'Big Data' Today, enterprises are becoming more customer-centric and are trying to know more and more about their customer preferences by collecting all kinds of data from available sources. These data, essentially termed as 'big data', typically encompasses large volumes of texts and other forms of unstructured behavioral data from a variety of sources. Master data management (MDM) primarily revolves around the creation of a trusted source of highly structured data throughout an enterprise. Data management analysts see a better future for enterprises through better insight into their customers, when they use MDM and big data in tandem. Let us see what is driving this. Big data tools enable the analysis of massive volumes of data from various sources, however, the real challenge is: While big data is certainly an enabler in the direction of customer centricity, it alone does not serve the purpose. What is required is

a combination of a strong MDM along with big data to outpace challenges and realize this objective. Let us see how enterprises can leverage this combination of MDM and big data to build customer-centric strategies: To address the challenges posed from using just big data, there comes the need for a strong enterprise level MDM initiative that has a bigger role to play in aggregating useful information from pools of data and then matching it against the master data spread across an enterprise's transactional systems. Large volume of processed data start making more sense only when it is tagged and related to the master data entities of the organization. Enterprises are starting to see the benefits big data and MDM together could bring. According to a survey result by The Information Difference Ltd. an MDM consulting and Research Company, 67% of survey respondents saw MDM driving big data, rather than the other way around, with just 17% seeing big data producing new master data, including the ability to use master data to automatically detect customer names in sets of big data. The most popular choice was for existing MDM data to help drive big data searches. Essentially, the foundation needs to be laid by master data across a variety of sources that big data brings along. Enterprises will need to move from a single customer record to a single customer profile which will provide an impetus to their business goals. While analyzing big data to unearth findings and insights is important, doing that on clean master data across locations, products, customers, cost centers, plants and other important master data domains will provide the right direction. So for those who want to invest in big data, pause a while and think again. Are you ready for relating data with master data entity in your enterprise? Will a big data strategy alone help you to understand customers better or would it be a perfect combination of MDM and big data? Venkataraman Ramanathan- Senior Architect, Analytics Practice, Wipro, Ltd. Venkataraman has more than 15 years of experience in the areas of MDM, DQ, Data Governance, CRM, BI and Java. He has been involved in various consulting and engagements across geographies for a variety of Fortune 500 companies. He is involved in the areas of customer re-engineering, machine learning, data quality, data governance, sales and service efficiency, business strategy and business analytics/intelligence To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption
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Evolution of Information Management in the Digital Era

Evolution of Information Management in the Digital Era The Digital Revolution For over two decades Information Management (IM) professionals have developed techniques, methodologies and best practices in multiple disciplines of IM such as – Data Profiling, Quality, Data Integration (DI), Data Architecture and Management, Metadata, Master Data Management (MDM), Data Migration, Data Archival, Data Security, etc. As the digital wave sweeps the business world, traditional approaches towards managing data are impacted significantly such that methodologies and techniques require an overhaul to support this new digital age data. The digital transformation of enterprises across the globe has opened-up new challenges, possibilities and opportunities in the IM space. Digital is all about re-imagining certain aspects if not entire business processes, services and interactions with customers, partners and vendors by leveraging consumer oriented digital technologies to deliver a superior experience. Enterprises have chartered Chief Digital Officers to partner with businesses to identify, develop and implement these new "digital apps". Enterprises always had applications to support business known as Systems of Records like ERP, CRM, SCM, Risk, DWH, etc. These applications are transaction-driven and designed to initiate, record, execute, monitor and report on business transactions. These are the "core" applications of any business. Fig 1: Enterprise IT – Core and Edge – SYSTEMS OF Digital apps have carved out a new set of IT applications that are created with deep emphasis on engagement with the end-user. These are the "Edge" applications of any business, known as Systems of Engagement. They are created for a specific type of customer engagement and share different characteristics in the applications lifecycle. E.g. experience-driven customer on-boarding in a bank as a part of digital banking initiative or mobile-driven digital claims process using mobile. Most of them are born in the cloud, built with mobile-first philosophy and designed for a frictionless experience to the end-users. The proportion of "Edge" apps will grow significantly as digital initiatives gain more prominence within enterprises. Given the state of digitization and nature of these applications, many of them will be experimental in nature, leading to a faster rate of change than that for the core applications. Additionally, an Edge application can also retire fast, if it has outlived its utility or needs replacement due to an evolving business need. Fig 2: Enterprise IT – Core and Edge – SYSTEMS OF Systems of Engagement The digital apps though built differently can't work in isolation. For instance, a customer on-boarding or digital payments app has to still go through the customer id creation process in the operational MDM at the core, credit decision making system for risk evaluation and validation against eligible customer segments. Fig 3: Enterprise IT Layers Enabling Multi-channel In

case of a social media-based payment app, it has to go through AML processes at the core for fraud prevention and validation against suspicious transactions. This means that the data exchange and process hand-off between the experience and execution layer needs to be orchestrated to deliver the seamless experience that the digital application promises to offer. Customer Journey starts with an interaction at the experience layer. Every customer journey in the experience layer can be through a different channel and will interact with the execution layer to complete the process and transaction enabled by the "integration layer". Opportunities for IM Given the necessity of the interaction between the Edge and Core layer, to deliver a unified experience, IM practitioners need to look at three areas in order to build on new capabilities: Implementing these new capabilities will also require new architectural approaches such as Lambda and Data Lakes to augment the existing data warehouses. At the Intersection – Interface Layers between Core and Edge Data Gravity Shift to the Cloud - Proliferation of cloud applications and data platforms drive the need for an integrated approach to manage new integration patterns. Also, SaaS data model changes happen at a much faster rate pushing new data elements to the warehouse faster Many enterprises are rapidly migrating some of their applications into the cloud i.e. Salesforce, Marketo, Infor and Workday, etc. to These workloads are not just batch, but consist of a mix of batch, real-time and streaming. These capabilities are addressed via newer technology platforms such as Integration Platform as a Service (IPaaS) that provides for better leverage the operational expenses model and reduce TCO. Additionally, some EDW workloads (i.e. investigative analytics) are also migrating to cloud through provisioning of analytical databases like HP Vertica and Amazon Redshift. This demands a new set of cloud DI patterns such as the foundational platform to integrate not just on-premise and cloud but also Core and Edge applications in the enterprise. Technology vendors like Snap Logic, Informatica, Actian, Kapow and Jitter Bit enable these new capabilities. At the Edge: Data Management Functionalities for the Intelligent Edge Apps Fast Data - The Real-time Enterprise Data ingestion rates are continuous and need to be processed either as streams or complex events as digital apps are real-time based The rate of data flow has increased manifolds due to social media, Machine data (CDRs), IoT, etc. A new class of applications i.e. Listening Platforms are being deployed in enterprises that allow the organizations to read streams of social interactions and glean insights from them. This means, reading from wirehose of social data providers such as Gnip and DataSift for a specific digital app around a specific conversation or topic. Also, the real-time decision making is in need of an enterprise to necessitate the creation of new patterns of DI pipelines inside the enterprise that handle: a. Collection, reading, aggregation and repor ting of KPIs and metrics for data stream monitoring (e.g. machine health monitoring, social object monitoring, network operations monitoring). Pattern focused on fast ingestion of data and repor ting b. Data transformation of streaming data, based on business rules and ingestion into data lakes or data warehouses (e.g.Telecom CDR sessions) pattern focused on maintaining the state of incoming data and transform data for complete state and if required deliver a new stream of data c. Real-time data processing for critical events based on model scoring and interfaced with decision management applications to provide real-time responses (e.g. Next best offers based on in-store location data received

from iBeacon, personalized micro-campaign launch for top 10% customers whose calls were dropped more than normal in the last 'n' minutes etc.) Pattern focused on interfacing with operational applications to support high request-response pipelines d. Complex event processing across multiple data streams - monitoring for pre-defined complex events over multiple streams of data and by querying the streams continuously to build high-level metrics and detect anomaly events (e.g. fraud detection based on a defined complex event pattern derived from multiple streams of data, machine failure threshold identification based machine data streams) pattern focused on monitoring complex events across streams that individual streams alone can't compute There are many technologies that can address these fast data requirements and they are not restricted to open source realm of Esper, Storm and Kafka, etc. Technologies such as Stream Base, SQLStream, IBM Info Sphere Streams, WSO2, Oracle CEP, Microsoft Stream Insight, Amazon Kinesis, Informatica Rule Point, VoltDB can provide the foundational components required to build these fast data pipeline processing capabilities. Digital Applications - Age of Polyglot Storage Data that comes for analysis doesn't come in rows and columns anymore. Log Files, JSON, and XML etc., stress the existing IM capabilities In the past, enterprise data for all the applications it neatly into relational tables. Digital apps are built using new set of data management technologies decided upon the factors such as availability, requirements and ease/rapidness of development i.e. NOSQL database such as Aero Spike, MongoDB, Cassandra, etc. Digital Applications - Age of Polyglot Storage on a multi-model storage engine like Foundation DB, Arango DB. A hypothetical digital app may store its application data in more than one database like customer information on a relational DB, catalogue information on document database, click-stream and mobile session information data in Cassandra, etc. Once these digital apps are deployed, rich interaction around a certain context and business process is now available to be integrated with information in the data warehouse for completely new set of insights. From an IM perspective the data supply chain has to be re-configured with new capabilities to manage this integration   At the Core: Bringing Business Speed to Selected Core Layers Big Data Integration – Leveraging Hadoop for Batch Data Processing Processing data through the engine of an ETL server is reaching its limits and even the ELT approach of database push-down introduces contention in the databases. A parallel processing framework with distributed file system to push-down heavy workloads is the solution. As enterprises grapple with Big Data and continue exploring Hadoop, for low-end use cases such as enterprise landing area, data provisioning platform etc., the traditional model of processing data through the memory of an ETL engine will crack, to pave way for a select set of workloads to move into Hadoop-based platforms. However, enterprises will want to leverage the existing DI tools that offer unmatched productivity and code management capabilities while undertaking the migration. In the world of Hadoop 1.0, all processing was directed via the map-reduce framework to access, read, processes and write files in to HDFS. Traditional DI vendors built connectors to extract data out of Hadoop and process it in the ETL server and delivere it to target systems. In some cases, the tools leveraged the usage of HIVE/PIG to convert the mappings into these high-level processing languages and executed their jobs in Hadoop, popularly known as push down optimization. With the advent of YARN in Hadoop 2.0, many traditional DI vendors are preparing a roadmap

for their products that can sit natively on Hadoop as another processing engine. This will provide the ability to develop mappings using the same set of mapping development tools and deploy for execution directly in Hadoop through MapReduce/Tez/custom engines (depending on the workload), that sit on YARN and access HDFS files natively. This way, data that is ingested into Hadoop staging stays in Hadoop till the processing is performed and the final data-sets are created for export into the data warehouse. This avoids movement of data from Hadoop to an ETL server and back. By using the same developer tools and mapping tools, data pipelines can be created faster using the familiar enterprise tools and Hadoop can be leveraged for what it is good – distributed processing and storage. The ETL server concept will still hold good for random I/O dependent (updates, upserts, lookups involving changing data etc.) data pipelines and for faster processing of small payload of data.   Conclusion Digital has thrown open a plethora of opportunities for IM professionals to experiment and build new capabilities at the core, edge as well as the intersections layers to help enterprises organize, process, manage and deliver data to the business. It is imperative that we create next generation architectural capabilities that are required for enterprises to succeed and not get trapped in technology led conversations. In the long run, technology will keep evolving but architectural capabilities will stay as the foundation on which data is managed. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Rethinking Data Discovery

----- Arcticle source ----- https://www.wipro.com/analytics/rethinking-data-discovery/ ----- About The Author Contact Wipro Please fill the required details to access the content Rethinking Data Discovery The New Research and Experimentation Paradigm for Analytics and Discovery Most enterprises across industries are realizing the growing importance of harvesting their data and drawing meaningful analysis for driving business growth and building competitive advantage. Many of them have already invested in building enterprise data warehouses to generate analytical insights, but it limits them to only structured data within the enterprise. In today's digital and Big Data era, data can be structured or unstructured and most of it resides outside the enterprise. It has, thus, become crucial to have a platform that can be used to integrate all kind of information, perform a lot of discovery-based analysis (to separate noise from real signals), perform analytics on top of it and fi nally consume it through an intuitive visualization interface. This avenue is now being explored in the form of data discovery platform in many enterprises. This paper discusses data discovery as the new Research and Experimentation platform for an

analytics-driven discovery. It also throws light on why enterprises should go ahead with the shift to build a competitive edge for their businesses. Introduction Every day, huge volume of data is being generated in various forms and from different sources. For instance, the retail giant, Wal-Mart, handles 1 million customer transactions every day, thereby adding 2.5 petabytes of information to the database1. The telescope installed at New Mexico, under the project Sloan Digital Sky Survey, collected more than 140 terabytes of information in a decade. Its successor, the Large Synoptic Survey Telescope scheduled to come online in 2016, in Chile, will gather that much of data every week2. Such enormous volume of digital information is the storehouse of meaningful insights such as valuable business trends, shifting consumer behavior, onset of an epidemic, changing weather patterns and rising crime rate, to mention a few. When managed well, this data can provide business houses and governments an opportunity to unlock new business avenues and solutions for better governance. For quite some time, only large data-centric enterprises such as Facebook and Google or e-commerce fi rms were using Big Data to analyze trends and derive insights for developing new products and services. They engaged specialized quantitative analysts called data scientists for this. Soon, these analysts began to realize the potential of analytics for every other industry and business. Enterprises, too, in other industries, began to recognize the latent potential of analytics. However, the biggest challenge for these enterprises was assimilating such volumes of data, segregating the irrelevant information from the relevant one and classifying them into meaningful categories. Enterprises had been using traditional Business Intelligence (BI) systems that use historical data to test a hypothesis. This approach is not only lengthy and comes with its own processing time, but also carries the risk of, "what if the question is wrong?" If the initial question asked is wrong, instead of throwing away the entire output, the report is tweaked to align the analysis with the question asked. This is not prudent for making crucial customer and market-relevant decisions at the frontline of a business operation. At the same time, the decision to migrate to a new data discovery platform is marred by the lack of proper knowledge and a number of associated concerns related to security, ROI, ease of use, etc. That apart, new data sources keep on adding to the enterprise data input. The question here is whether the latest data discovery platform will be able to create placeholder signals dynamically for the new kind of data that is coming in or not. Data Discovery Platform Today, enterprises need a comprehensive discovery platform that can process huge volumes of data in real time to provide meaningful insights. This discovery or decision-making platform is able to assimilate data, structure, refi ne, provide exploratory capability, identify and evaluate various patterns, and help make insight-based decisions faster. It offers layers that allow one to explore data, project trends and draw valuable insights using the known methods of analysis such as customer path analysis, social network analysis, mathematical analysis and more. The results/insights are readily visible on the dashboard. They are visual and easy to understand for the intended audience/decision maker. A data discovery platform is agile. It allows more types of data (as shown in Figure 1. – location data, market research data, customer data) to be considered for the analysis, more number of variables/cases to be used in models. Also, data with short shelf life can be analyzed fast, thus enabling enterprises to make swift decisions with respect to launching new products

and services faster. A potential data discovery platform can be visualized in a simplistic manner (see Figure 1). Figure 1: A Data Discovery Framework Understanding the Data Discovery Framework A data discovery platform is business user-friendly: Typically, the data scientists work in the back offi ce assessing and monitoring volumes of data and produce reports, based on a hypothesis, such as, the success or failure of a product launch, customer satisfaction, campaign effectiveness, etc. for the benefi t of the key decision makers in an enterprise. With data discovery, this is changing. An intuitive interface enables users to explore data without much training or expertise in any analytics tool. The proprietary platform is structured to store and model datagathered from disparate sources (like customer, production, supplier, location, market research data, etc.) while the built-in layers (as shown in Figure 1. – data collection, event hub, event correlation and syndication engine and visual front-end) obviate the need for aggregates, summaries and pre-calculations. A visual dashboard provides an interactive interface that empowers the frontline users to make important decisions related to a business operation much faster than usual. This greatly improves an enterprise's ability to perform analytics and engage in rapid decision making. A data discovery platform creates a foundation for data security and protocols: Every enterprise has a set of enterprise security standards that are very rigid in terms of their data usage, data access by employees, types of data that shouldûbe accessible and more. However, as the new paradigm of decision-making evolves, components of data security and control, such as data governance, in an enterprise need to evolve as well. The primary and most important requirement for building a strong foundation for enterprise data security is knowing and understanding the enterprise data and setting up data governance rules. This helps classify data and create data identity, which is the missing link for creating actionable data security and control policies. Defi ning data within an enterprise (both internal and external) is crucial. It is important to know what kind of data an enterprise has, where it is stored, how and why is it stored there. This helps application of appropriate policies and controls for data protection. Data discovery tools and software for visualization, integration, data migration, etc. help enterprises identify and locate sensitive structured and unstructured information and classify them. The entire process is automated, thus preventing anomalies. BI Vendors Need Rethink Current vendors who offer traditional BI systems, which comprise structured data warehouses and databases, time-consuming and expensive delivery models, will have to re-think about continuing to offer these products only as these are primarily IT driven and restrict deployment by specialised consultants. The latest data and analytics tools are expected to provide opportunities to analyze data for the benefi t of customers and the market. It is not only about making changes in internal processes, but also about evolving the products and services model in a positive manner. In short, data discovery tools are affecting business directly at decisionmaking levels unlike their predecessors that involved processing huge quantum of data, both structured and unstructured, to enable data specialists in making recommendations to business leaders. Conclusion: Early Adopters A few enterprises that recognized the importance of customer and market-facing analytics, pioneered the march into adopting data discovery tools. This helped in better understanding the relationships among various types of data as an essential core of a business process. The two key roles that data

discovery tools play are: Early adopters of discovery tools, while launching products and services, aided by data-driven insights, are also experimenting and learning to make more complex and data-driven decisions at speed and scale. Before implementing a new decision-making process at the production level, enterprises need to run pilots to check the feasibility of the process. This will help them acquaint themselves with an effective discovery environment that would enable them to make rapid decisions and implement new offerings quickly in the longer run. Nitesh Jain is General Manager and Vertical Head - Consumer Goods (Europe & Emerging Markets) at Wipro. Nitesh has more than 17 years of experience in spearheading different areas of technology led transformations. He has been leading the practice and business portfolios in the areas of analytics, BI, Trade promotions, Foreign exchange trading solutions and corporate performance management practices at Wipro and other leading organizations. He is actively engaged in the fi eld of consulting, business analytics, performance management, data warehousing and implementing strategic analytical solutions for Retail, CPG, Manufacturing, Healthcare, Medical devices and Banking/Financial Services domains. In his career spanning 17 years, he has helped various leading retailers, Manufacturing Companies and Banks implement strategic analytics driven initiatives. Nitesh holds a Master's in Business Administration from Pune University and has a Bachelor's degree in Mathematics =====================

Is it a Tough Time for Energy Retailers?

----- Arcticle source ----- https://www.wipro.com/analytics/is-it-a-tough-time-for-energy-retailers-/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content . In today's connected world, with rising living standards and with the proliferation of digital gadgets, consumption and demand for electricity should ideally be growing steadily. However, reality offers a different picture. A quick look at the statistics from some of the developed countries shows us some quite surprising trends. Residential Energy consumption in Australia has actually declined over the last 3 years. Growth in electricity in US households is forecasted to rise by only 0.6% till 2040, a far cry from the 8% growth seen in the last few decades. Europe has seen modest increase in consumption but a lot of it can be attributed to severe cold winters over the last few years. So why do we see this flat growth in energy consumption globally? Is it the rising electricity prices that have forced consumers to cut consumption? Are all the home solar installations eating into the energy requirements from the grid? These concerns coupled with rampant consumer churn figures in markets like Ireland and Australia have left most retailers scratching their heads. Utilities are used to little competition and follow the - 'build it and they will come' mode of operations. And this requires a sea of change, specifically from a supply side perspective, which indeed is underway. We have seen a few of our own customers re-orienting both their business structures and IT systems focusing on the retail

operations within the organization. But this is not enough. The new business model entails taking a leaf out of the traditional retail practices and completely re-orienting your business from a customer centric perspective. For an industry that is used to worrying more about meters than customers, Utilities, surprisingly are very well placed to better understand and know their customers. A McKinsey paper highlights Utilities as being placed the best amongst organizations in terms of data availability and ease to capture data. Where traditional retail firms spend a lot of time and effort in identifying the customer and linking it back to demographics, Utilities have always had a rich set of household, credit and demographic history for all their customers. In fact, adding the consumption patterns from smart grid data is also providing a whole new view on the customer base. Clustering techniques can also provide a better view of the customers and enable Utilities to target them better with only the relevant offers. These techniques can also help identify which prospects are more likely to respond to certain campaigns, thus reducing the customer acquisition costs and enhancing the campaign ROI. Identification of the most profitable customers / plans or early view of the potential churn is something that most Utilities will need to know and manage to operate profitably in this new market. With the prevalence of social media, they also need to know and manage their online 'reputation'. Employing social media analytics and building a response strategy around the same is also going to be critical to improve customer satisfaction. On a related note, it is not just the customers' side of things; there are a number of other ways to improve profitability; for example, being able to predict the potential revenues based on weather forecasts or identifying potential defaulters' thus improving credit collection or better management of peak time demand requirements. The bottom line is that the Utilities that will prosper are those that will quickly adapt their processes to this fast changing competitive landscape and make the best use of the vast amounts of data they already capture. The era of constantly growing demand with economic growth seems to be coming to an end and the quicker they adapt to it - the better! To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Analytics to the Utilities Rescue

----- Arcticle source ----- https://www.wipro.com/analytics/analytics-to-the-utilities-rescue/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Organizations in every industry, when faced with challenges, leverage them to innovate and differentiate; and those who do not capitalize on them, get trapped and tip off the profitability curve. The utilities industry is no different. Today, the

utilities industry faces a number of challenges due to numerous disruptive changes and uncertainties primarily triggered by the economic, regulatory, technological and customer-centric factors. The question that poses utilities now is whether they can turn these challenges into opportunities instead of terming them as hurdles against growth. Let us explore some of the challenges and understand how utilities can leverage them: Can these above examples be understood as challenges or can they be considered as opportunities to differentiate? Why do utilities find it difficult to outpace these challenges or rather turn them into opportunities? Most of these utilities suffer from delayed decision making that often proves to be expensive. For instance, spending on maintenance or upgrading the power plants after a breakdown or frequent outages may be a costlier affair than if scheduled maintenances are performed. For this, the key decision makers should have a real time insight into what is happening or might happen to facilitate a timely intervention or action. Using the right technology to gather real-time data from internal and external data sources and applying advanced analytics to derive real-time meaningful insights can help decision makers to shift to a more predictive mode of functioning than a reactive one. This will help these utilities to reap benefits in the long-term. They will be able to improve product quality, boost customer satisfaction levels, run targeted campaigns to promote environment-friendly usage, predict outages or threats and ensure timely submission of compliance information. Nitesh Kumar Jain- General Manager & Vertical Head - Consumer Goods, Wipro Limited Nitesh Jain is General Manager & Vertical Head - Consumer goods (Europe & Emerging markets) at Wipro. Nitesh has more than 17 years of experience in spearheading different areas of technology led transformations. He has been leading the practice and business portfolios in the areas of analytics, BI, Trade promotions, Foreign exchange trading solutions and corporate performance management practices at Wipro and other leading organizations. He is actively engaged in the field of consulting, business analytics, performance management, data warehousing and implementing strategic analytical solutions for Retail, CPG, Manufacturing, Healthcare, Medical devices and Banking/Financial Services domains. In his career spanning 17 years, he has helped various leading retailers, Manufacturing Companies and Banks implement strategic analytics driven initiatives. Nitesh holds a Master's in Business Administration from Pune University and has a Bachelor's degree in Mathematics. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The CFO-CRO Partnership: Answering the Call of Convergence

The CFO-CRO Partnership: Answering the Call of Convergence Greater the risk, greater the reward holds as true for the BFSI domain as any other. Playing the balancing game between profitability and risk has become all the more challenging with the rise in economic uncertainty, increased defaults, volatile markets, riskier products being launched, unpredictable consumer behavior and increasing regulatory oversight. What this has culminated into is a call for more collaboration and co-ordination between the offices of Chief Financial Officer (CFO) - who is charged with assessing the profitability and the Chief Risk Officer (CRO) - who is charged with assessing the risks. With regulators seeking a unified view of financial and risk data using common and consistent templates, the convergence of data, market and industry research, analytical and modeling tools, and reports across the two functions is inevitable and unquestionably important. This partnership results in giving a boost to efficiencies and reducing costs. Can there be better reasons for the urgency to integrate the two roles? CFOs and CROs are fighting the same battle and the good news is that leaders in BFSI have acknowledged the need for bringing the two roles closer. This convergence makes it simpler to balance operational and strategic decisions and to protect capital in order to meet the looming threat of business disruption and continuity. On the other hand, there is a larger pretext of organizations holding on to the staunch belief in the disparity of the two roles: the more independent they are, the better it is for businesses. This school of thought emanates from the fact that these organizational structures and managerial hierarchies were meant to minimize friction between roles. But over the years operational niceties and diverse IT needs have pushed the two away into silo mode of operation. Today, the evolution in the roles of CFO-CRO as well as the evolution of IT technology at their disposal, has brought us to contemplate the rationalization, unification of systems and workflows. The end result of the exercise should be aimed at improving the quality and consistency of information and reducing the cost to manage and process it. The re-engineering and unification of data and analytical systems are worth the pain. The impact in doing so is felt across the enterprise. In a sense, the concept of shared services and platforms needs to be extended to areas on either side of the CFO-CRO wall. Many roles and functions within the organization will benefit when the data and analytics being shared is cross-leveraged for operations, risk-management, reporting and strategic decision-making, across all levels. When the CFO-CRO relationship is strengthened, we can expect to reap the benefits of

operational stability, predictability of returns, enhanced reporting, increased compliance and improved profitability. Narrowing the information, communication, process, workflows and systems gap between the two functions go beyond protecting value and, in fact, add tangible business value to organizations. Sriram Kannan- Practice Partner - CXO Services, Wipro Analytics, Wipro Ltd. Sriram Kannan is a senior fin-tech and analytics consulting leader with almost 17 years of extensive and progressive experience in a suite of areas - BI, Analytics, EPM/BPM, Management controllership, Finance-technology, Risk & Compliance - with proven ability to manage large-scale, multi-discipline programs effectively and exceed expectations in delivery of results. At Wipro, he seamlessly collaborates with sales-force and GTM teams in defining and crystallizing strategy, building target operating models, ROI driven road maps and business cases and contributes to crafting and shaping opportunities through "CxO level" engagements. Additionally, his role entails leading Finance, Risk transformation and Performance improvement engagements globally while encouraging the adoption of BI/Analytics solutions for clients - enabling customers gain sustainable competitive advantage through increasing speed and accuracy in reporting, analytics and decision making. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Self-Service BI and Data Governance - A Perfect Match

----- Arcticle source ----- https://www.wipro.com/analytics/self-service-bi-and-data-governance---a-perfect-match/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Self-Service BI and Data Governance - A Perfect Match Self-Service BI provides businesses easy access to critical information for quick decision-making. It eliminates the redundant and often constraining IT processes, as well as the involvement of technology experts, which is the downside in traditional BI. The agility thus rendered to Self-Service BI platform allows end-users to customize what they want to see. But all that glitters is not gold. Such independence from technology layer comes at its own cost. Reliability of the insights generated is the first to bear the brunt with multiple users manipulating data according to their own needs, often taking inputs from unreliable sources. The data generated in a Self-Service BI environment may further complicate the problem without robust frameworks for its organization and storage. Such freedom to use also exposes data to risks of inconsistency and poor quality. However, there always exists a silver lining,

which in this case is the concept of data governance. Data governance fits right into the voids created by Self-Service BI. With ever increasing volumes of data, relying on data processes without a governance layer is equivalent to sitting on a bomb waiting to explode. The risk of carrying unreliable data snowballs into risk of rendering unreliable information and insights which itself can spiral the organization into a series of flawed decisions - causing irreparable damage to the firm. The benefits of data quality and integrity management in terms of reliability and security alone are reasons compelling enough for organizations to embrace data governance. However if we look at the value add that a conjunction of self-service business intelligence and data governance practices bring to the table, the prospect transcends from a 'business want' to a 'business need'. Ability to discover data and insights with the speed and diversity that Self-Service BI offers coupled with the reliability leveraged as a result of data governance policies and processes can truly enhance the efficacy with which the business users sift through the data volumes to get to actionable insights. Organizations who can leverage capabilities of drawing insights in real-time to near real-time have the best chance of sustaining their edge in the foreseeable future. It is in this space where the combination of Self-Service BI and data governance converge to create an imperative business solution. With Self-Service BI, the role of IT as a gate keeper for data gets eliminated, yet with a governance framework in place, business user can be rest assured about the authenticity of the data they are operating on. With well-structured data policies to keep tabs on reliability of data, organizations can reduce the data to insight cycle time significantly and continue to derive a synergies of sorts from this meant-to-be partnership of data governance & Self-Service BI. Vaibhav Suresh - Senior Executive, Strategic Marketing, Wipro Analytics Vaibhav Suresh is a senior executive in the Strategic Marketing team for Wipro Analytics. Vaibhav holds a Bachelors of Technology in Petroleum Engineering from University of Petroleum & Energy Studies, Dehradun and a post graduate diploma in management from K J Somaiya Institute of Management Studies & Research, Mumbai. In his current role, he is managing the marketing for Business Intelligence & CXO service lines at Wipro Analytics To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Capitalizing on Machine Data

----- Arcticle source ----- https://www.wipro.com/analytics/capitalizing-on-machine-data/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Capitalizing on Machine Data Lowering Cost of Quality, Getting Closer to the Customer The Cost of Quality Increasingly, large parts of manufacturing are outsourced in an effort to

lower costs and reduce time-to-market. Boeing typifies this new manufacturing model. It uses its expertise to assemble aircraft in its factories but the quality of the aircraft that rolls out depends on a large number of suppliers around the world. Boeing's latest 787 Dreamliner aircraft appeared to benefit from such global collaboration. The 787, its most fuel efficient aircraft, used lithium-ion batteries to power its electrical systems and became the fastest selling aircraft in history. But trouble began soon after. The batteries began overheating, leading to fires on board the aircraft; the US, Japan, India and Chile grounded their 787 fleets.1 Boeing is not the only one in this unfortunate predicament. When maps failed to work on the Apple 5C mobile phone, stocks dropped. The market is unforgiving when a company breaches product quality, especially when expectations are high as per the brand promise. What went wrong at these companies? How can the risk of reputational damage be mitigated? It is indeed apparent that there is a significant cost to ignoring quality (see Figure 1: Cost of Quality). Cost of Quality Data and analytics can help reduce the cost of not attaining quality by reporting trends, providing alerts, determining priorities, spelling out trade-offs and accurately indicating ROI for each decision.   Figure 1: Cost of Quality Also, the cost of poor quality is rising as legislative bodies and society become increasingly unforgiving. For example, General Motors has said it will spend USD1.2 billion to fix the 25.68 million cars it has recalled2 – among which are the 2.6 million switch-related recalls. This is in addition to the base USD 1- USD 5 million that GM is expected to pay by way of compensation to each of the families of the 13 who died in accidents3 caused due to the defective switch (additionally, GM will pay each surviving dependent USD300,000 to cover the cost of emotional damages). Large corporations with modern production processes have begun to comprehend the potential of machine data and rightly believe that data and analytics can help meet their elevated quality objectives. In fact, there is more that the data can deliver by way of a competitive edge. Manufacturing can use data to predict failure and reduce downtime, refine inventory management for spares, provide maintenance forecasts, provide feedback into product design and usage, define skills requirements and reduce the cost of fixing problems. The real value in this is a greatly improved experience – for the customers who use such products – due to improved reliability and reduced downtime. Meeting Today's Quality Norms There are three stages that must be considered to meet quality norms. Manufacturers can capitalize on machine data and analytics to shape their quality curve at each stage: Components: Every lot manufactured in-house or by outsourced partners must be inspected and examined, using relevant quality measurements, testing or sampling methods, to determine if the components meet quality expectations Assembly Process: Multiple test stations must be established to ensure quality at each step of the assembly/production process. This is especially important for new products where failure can be high. The metric that captures quality at this stage is First Pass Yield (FPY) Shipped Product: Failure at this stage can be due to a number of reasons ranging from poor quality in shipment and installation processes, unsuitable product usage, poor integration in the product ecosystem, weather, etc. The impact is on brand reputation, litigation costs, customer compensation, recall and repair costs. The first two stages depend The first two stages depend on factory data while the third depends on Machine2Machine Data (collected from networked machines). Manufacturers have by and large focused their efforts

on quality management in the factory using statistical process control methods. However, in the field, they have found themselves to be reactive to quality problems. A 2014 study, Manufacturing and the Data Conundrum – Too much? Too little? Or just right?6, commissioned by Wipro and conducted by the Economist Intelligence Unit (EIU) suggests that the news on data usage is only partially positive. Conducted with C-suite and factory executives across North America and Europe, the research shows that 86% of those surveyed had increased the amount of production and quality control data for analysis over the last two years. This is offset by the fact that only 14% reported that they had no problems managing data. The obvious conclusion is that while manufacturing is well on its way to capturing and acquiring data, it also lags in its ability to leverage this data Figure 2: Source: Manufacturing and the Data Conun The study exposed extreme polarization in the intensity of capture and use of data. For example, while some companies like GE were forging ahead with heightened attention to quality at 400 of their factories – GE refers to these factories as "brilliant factories" – with one battery plant capturing 10,000 variables, some as frequently as every 250 milliseconds, only twothirds of the study respondents said that they were capturing sensor generated data (see Figure 2: Manifold Data Sources). The study observes that despite decades of quality improvement programs after World War II, tens of thousands of factories in North America and Europe are light years removed from advanced, cutting edge digital processes to ensure product quality. Bigger Drivers of Machine Data on their way Examine Figure 2 in the light of the Internet of Things – where billions of devices will be connected with products having to work quite differently – and you can see the pre-eminent role of data and analytics in quality management. We are transitioning into a world where intelligent machines will be used a lot more to manage life, and humans will work in tandem with them distributing work based on strengths. Telematics in vehicles, smart grids, connected wearable medical devices etc. are already creating an overwhelming amount of data. We now need a model to manage big data – or, put another way – we need models that can translate big data into meaningful and useful insights. In effect, there are two main challenges to be overcome: 1. To have a strategy to extract signals from the data, and then separate noise from the valuable signals that contain insights. The questions to ask here are: 2. To arrive at a data structure that can overcome the challenge. The questions to ask here are: The Road Ahead Today, manufacturing is no longer de-coupled from its customer. There is just one degree of separation between the two. Soon enough the manufacturing industry will be leveraging the Internet of Things to collect product and usage data directly and regularly rather than depend on dealers and surveyors to collect and send in the data after a machine or device has broken down. This will give them visibility to product and customer issues in near real time and enable them to fix such problems remotely in a semi-automated fashion, even before customers come to know about their malfunctioning machines. A powerful example of this is Vehicle Telematics. In-vehicle systems are capable of exporting vehicle performance, location, drive conditions and usage values to a central server, analyse the data and alert the owner about driving behaviour improvements, suggest fuel optimization strategies, service needs, when to expect failure, where to find the nearest dealer, and how to avoid the disruption. By ensuring that the right spares and skills are available at the right time, data can also help

the dealer in reducing service time. Vehicle Telematics is not only helping automobile manufacturers and dealers in getting closer to their customers but is also creating whole new products and services ranging from the Autonomous (driver-less) vehicles such as the Google Car to new services such as Uber and Lyft that offer low cost rides to people who do not own cars. It is further helping communities with creative solutions to address traffic congestion and pollution thereby helping move more cars per hour without having to incur large amounts of capital in widening roads or building new ones. The focus of business is shifting. From being a one-time sales transaction with customers, businesses now want to have a lasting customer relationship. Manufacturing organizations that bring this focus to their data strategy are already headed for earning more impactful customer experiences that translate into profitable long-term growth. This is indeed validated by the EIU survey results which indicate that the most data-adept companies are also the most profitable. Nitesh Jain Nitesh Jain is General Manager and Global Practice Head for the MyViews practice, Advanced Technologies & Solutions (ATS) at Wipro. He is responsible for the P&L, providing vision, business direction and strategy to the practice. He is a proven Business Analytics & IT professional with expertise in leadership roles in advanced analytics & performance management practice, BI & data warehousing projects and program management. He is responsible for solutions, services, thought leadership and growth in analytics and performance management across Industry verticals globally He has more than 17 years of Industry experience ranging from managing Advanced Analytics practice, leading Data warehousing and analytics projects for Retail, CPG, Manufacturing & Banking sectors, architecture design and development of various operational and analytical solutions for Retail, Medical devices and Banking/Financial Services domain. He holds a Master's in Business Administration from Pune University and has a Bachelor's degree in Mathematics. Dr. Kandathil Jacob Dr. Kandathil Jacob is a General Manager within the Advanced Technologies and Solutions (ATS) service line and focuses on defining and implementing solutions that provide Analytics based Insights to major corporations across the world. His engagements span the entire customer value chain and include trade and marketing spend optimization, customer life cycle analytics, manufacturing quality management, supply chain analytics and most recently machine learning analytics using Big Data platforms. His personal expertise is in providing thought leadership on how predictive analytics can enhance the profitability of manufacturing and hi tech companies. In the past, he has held Director and Sr. Manager positions at Apple, HSBC, Del Monte, FICO and several analytics oriented start-ups. Dr. Jacob has taught MBA courses at the Haas School of Business and at the School of Management, IIT Bombay. He is a Doctor of Engineering in Industrial Engineering, and an MBA in Marketing, both from the University of California, Berkeley. His undergraduate degree is in Mechanical Engineering with Honors from IIT Bombay. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners.

Hyper Personalization Using Attribute Analysis and Event Sequencing

----- Arcticle source ----- https://www.wipro.com/analytics/hyper-personalization-using-attribute-analysis-and-event-sequenc/ ----- About The Authors Related Articles Contact Wipro Please fill the required details to access the content Hyper Personalization Using Attribute Analysis and Event Sequencing The Newest Development in Customer Engagement Introduction Personalization is Passe Personalization, at the moment, appears to be the name of the game. Digital technologies, Omni channel growth and rising consumer expectations are driving retailers, bankers, travel and hospitality specialists, healthcare organizations, media, telecom providers and just about everybody else to put personalization at the top of their priority list. But look under the hood and what do you find? Most organizations are using a weak substitute for real and effective personalization. Today's digital technologies and data sciences make it possible to go beyond the "Hi, [put your first name here]" emails and product suggestions based on earlier purchases or trends set by other shoppers. Advanced concepts and frameworks such as Attribute Analysis and Event Sequencing are now able to create one-on-one marketing strategies. It is hyper personalization - and not personalization - that should be on your priority list. Here is what passes for personalization. You go online and buy a sports shoe for your workout and the website makes suggestions for you to buy even more shoes. This comes as a recommendation from the seller and looks something like this, "Customers who bought this item also bought... Fig 1: Product recommendations for cross/up sellin " You FInd there 5 to 6 pages of additional shoes. Why would you want another shoe when you just bought an eye-popping dream pair made from a single strand of micro-engineered yarn and polymer blades for bounce back? Some sites are trying to make wider suggestions. They look into what other customers had in their basket along with the shoes you just purchased to make their recommendations. This is based on the technique of Market Basket Analysis. Fig 2: Product recommendations for cross/up sellin These could also include running gear such as jackets and socks, skipping ropes, shoe deodorizers, energy drinks and weather resistant waist packs. Doubtless, these are sensible suggestions. These suggestions can be FIltered a level higher by looking into the customer's purchase history, transaction records (what the customer placed in a cart or in a wish list), channel activity and clickstream data, the promotional emails opened, loyalty card records and even the customer's CRM interactions. With data from each one of these sources, the seller gets closer to the customer. Hyper personalize or bust Is this enough or do we want hyper personalization that

lets you get down to a cozy, single-person level conversation across email, on your website, during a call center interaction or via chat? Your universe of customers doesn't have to be categorized into broad segments any longer. You can now create communication and campaigns that are Customer Specific, persuasive and produce winning results. Hyper personalization relies on additional dimensions about thecustomer. These dimensions relate to their: This information can be gleaned from sources such as social media (Facebook, Twitter, Instagram, LinkedIn, Tumblr, Wikipedia, Flickr, etc.), and surveys. The really smart sellers go even deeper, making suggestions based on the customer's circle of friends on social media. It is an ingenious way to target customers, and it works. Fig 3: The new age customer interaction approach Traits and techniques of hyper personalization Hyper personalization is substantially different from personalization. Let's go back to our hypothetical purchase of running shoes. Hyper personalization techniques are not limited to recommending adjacent products alone. Let's take an instance. Hyper personalization will look at your gender (female), age (between 25 and 35), interests (health freak), social network (talks about health foods) and make a recommendation that includes low fat organic strawberries and blueberries or FIber rich complex carbs such as quinoa and black rice. In essence, a deeper and richer proFIle of the customer is mapped against a broader set of products to meet the needs of customers. Social streams create a vital addition to boost the results of hyper personalization. It is social data that makes the content and recommendations relevant. Two computational techniques are used to achieve this – Attribute Analysis and Event Sequence Analysis. Both help bring the customer to the center of communications based on rich and reliable profiles. 1. ATTRIBUTE ANALYSIS: This technique breaks down a customer into a map. The map describes every attribute of the person (example: female, between 25 and 35, educated, married, has a child, due for a promotion at work, prefers to use Uber, reads Daniel D'Silva on an e-reader, meets mother on weekends, makes it a point to visit art museums on vacations, prefers to use neutral language, etc.).   Fig 4: Attribute Mapping for customers Attributes can be captured and organized by type – demographic, physical, psychological, functional, professional, aspirational, etc. Each attribute then can be mapped on to a product, service, or piece of communication related to the original query/interaction. Attribute Analysis has become simpler and more reliable with the growth in social listening technologies. This means when a customer today says she is 'eco-friendly', retailers can translate that interest into energy efficient products or a bias towards stores that don't use plastic bags or proactively look towards reducing their personal carbon footprint by shopping online. 2. EVENT SEQUENCE ANALYSIS: This technique observes the sequence of events a customer goes through until the buy (or don't buy) decision is reached. The objective of event sequence analysis is to understand the lead indicators for certain positive action (for example buy) or negative action (attrite). For an e-tailer, the relevant events could be: 1. Method used for login (if it is via a Facebook ID or a Google ID, reasonably rich details about the customer become available) 2. Search terms used (example: refrigerator, power bank, LED lamps) 3. Adding items to basket or the wish list 4. Liking the Facebook page of the product 5. Crowdsourcing opinion by posting on Facebook (i.e. Apple vs Samsung) 6. Buying Every event offers an opportunity for hyper personalization. These can be done by email, a chat bot, an immediate offer

on the web page, providing discount coupons for select products and displaying items of interest. This is achieved through a combination of Attribute Analysis and Event Sequence Analysis. Fundamentally, the goal is to make the right offer at the right time to ensure three things: 1. Making the shopping cycle easier and faster 2. Not losing upsell opportunities 3. Ensuring that the customer does not drop away at any stage Attribute Analysis and Event Sequence Analysis make a powerful combination in businesses other than retail as well. A bank can, for instance, use them to make sure a loan repayment does not lapse or a loan does not get cancelled by a customer. The bank can observe late credit card payments or an 'unlike' for the bank on a Facebook page to signal a customer's lapse in loan repayment. Early intervention, at each event, can ensure the customer doesn't lapse or move away. Fig 5: Event sequence analysis for a bank to under Sundarababu Vasudevan Vasu has over 19 years of experience as a Data Scientist and Analytics consultant. He has played various roles in the past including business development, consulting for some of the leading Fortune 500 companies, and leading complex product development initiatives. In his current role within Wipro Analytics, he is leading the Analytics Consulting group and heading the 'Data Discovery Platform' initiative. Srinath Sridhar Srinath has over 8 years of experience as an Analytics Consultant post his MBA in Marketing. Other than leading various prestigious Analytics engagements, he has played roles of Thought Leadership, Presales and solution definition in the analytics space. In his current role, he is a Lead Consultant in the Analytics Consulting group within Wipro Analytics. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

The Forecast for Cloud is Sunny

----- Arcticle source ----- https://www.wipro.com/analytics/the-forecast-for-cloud-is-sunny/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content The Forecast for Cloud is Sunny When you begin to see advertising for a technology everywhere, you know it is mainstreaming. Today, you can find ads for Cloud computing at technology shows and events, at the major airports of the world, in subway stations and on expressways. Businesses are using Cloud infrastructure and traditional barriers in Cloud usage have come crashing down. Cloud infrastructure is penetrating fast, and the forecast for the industry looks really sunny. In fact, industries known for stricter regulations on data confidentiality have embraced Cloud for a variety of processes. These include Health and Life Sciences (HLS) and Banking, Financial Services and Insurance (BFSI). Also, what hasn't received wide press coverage is the fact

that even Government agencies – who presumably want to keep their information away from public gaze – have moved to Cloud. Cloud providers are making it easy for businesses of every size to leverage Cloud infrastructure. Some providers let businesses use their Cloud data warehouse for as little as 25 cents an hour, going up to US$1,000 per terabyte per year, helping businesses reduce costs and work without having to build expensive internal IT skills or foot exorbitant AMC bills. Modern businesses, low on asset acquisition, go to Cloud providers, spin out a cluster of servers within minutes, use it, shut it, pay for it and forget it. This means Cloud infra can be conveniently used when businesses expect spikes in usage (festival time, periods of peak collaboration over projects or product releases, short-term requirement to analyze massive quantities of data, annual tax filing, etc.) Clearly, the misconceptions around Cloud are starting to wear away. Some years ago, the very mention of Cloud computing conjured images of security and privacy breaches, loss of control over data, latency and governances / regulatory challenges related to the location of the Cloud infra and the data. Data Security Looked at logically, it can be assumed that vendors of Cloud technology are among the very best in the security business. All big to mid-sized vendors have highly skilled and dedicated teams working around data security. These vendors manage thousands of servers and data security is the very core of their business. Of the more famous and recent data security breaches (barring one), all of the cases are involved on premise enterprise systems. Data Privacy A typical Cloud infrastructure delivers cost effectiveness from the fact that different businesses share the same infrastructure. Steps are taken by vendors to ensure data privacy is intact in a multi-tenant model. Authorization access is set and controlled for each user within the virtual server environment. However, there are industries with special needs such as the HLS industry that mandates HIPAA (Health Insurance Portability and Accountability Act) compliant infrastructure to ensure confidentiality and security of healthcare information. There are a number of HIPAA compliant vendors that these industries can leverage, putting to rest their anxieties around data privacy. Loss of Control IT teams are often heard complaining that Cloud services imply loss of control over hardware. But Cloud essentially means a fully managed service – and in such a service you do hand over management to the vendor. The truth is that a managed cloud data warehouse service releases precious IT resources from the mundane task of provisioning and maintaining hardware and instead allows them to spend more time with business users and focus more on understanding the business requirements, designing of systems and their ability to address business concerns. Latency Cloud technology has made considerable progress in the last two to three years. Thanks to Massively Parallel Processing Technology (MPP), Cloud infrastructure can crunch petabytes of data in seconds. The response times of Cloud systems have been brought down to microseconds, which cover most enterprise requirements. However, there are businesses that require nanosecond responses. These would include organizations such as stock exchanges. In these cases, it is recommended that servers be located close to the business location (or on premise). Location The geographical location of Cloud infrastructure does have an impact on some businesses. Regulatory and legal norms of certain countries may dictate that data not be sent or stored outside the physical boundaries of the nation. This could have special implications especially on certain types of hybrid cloud environments.

Enterprises should simply look for a Cloud provider with a global footprint so that legal and compliance issues related to geography don't place limitations on infrastructure decisions. When to think of Cloud Thanks to the Internet of Things (IoT), data storage and data management, analytical needs of enterprises are bound to grow – often unpredictably. When data volumes grow, the most natural tendency is to enhance current Data Warehouses. However, this may also be the right time to stop a moment and consider migrating to Cloud (for more Cloud adoption triggers, see Table1: On Cloud vs. On Premise) On Premise Existing application with considerable investment in infrastructure requiring no capacity changes in the near future Data with high compliance and security requirements Low Latency needs requiring micro seconds of response time On Cloud Suitable for Small & Mid Size Companies due to low H/W costs Businesses requiring seasonal analysis can better utilize elastic storage on cloud Predictive Analysis is suitable for cloud due to zero set up time and flexibility to scale up and down to run analytical models Modernization of existing DW to leverage on wide range of data sources New DW can range from pure play cloud to a hybrid model; in hybrid models development and testing environments are on cloud. Think of the days without email and mobile phones. Businesses managed to function without these tools. But technology is improving our connections with customers and partners. Those who adopted the new tools found themselves becoming more agile and flexible. Some businesses have not adapted to the cloud yet, but it is only a matter of time before everyone begins to use it to gain agility and flexibility. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Do More with Less: BI Transformation - Market Trends & Implications

----- Arcticle source ----- https://www.wipro.com/analytics/do-more-with-less--bi-transformation---market-trends---implicati/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Do More with Less: BI Transformation - Market Trends & Implications It is hard to believe the staggering pace at which the dynamic wave-front of business intelligence (BI) continues to advance. Companies moving from BI standardization to experimentation with cloud-based, real-time and big-data platforms are on the rise. Stakeholders that adapt to this evolving

environment faster have better chances of sustaining the competitive edge. Rapid integration leveraging simple interfaces is going to become the standard in the future. According to a 2015 survey conducted by InformationWeek, 28% of respondent firms said that they are standardizing BI products. The past decade has seen a massive innovation across the BI space, which has resulted in a mixed and variable environments across the data value chain. More organizations are now adopting systems that render applications that are welterweight in operation. By deploying a leaner BI infrastructure that lends more homogeneity to the BI landscape, companies are now realizing the benefits of lowered costs, decreased time for information access and improved decision making ability. We also see that companies are evolving from an organizational and cultural perspective with focused effort towards consolidating silos to a more integrated setup. The comprehensiveness and capability of BI platforms available now can traverse the length and breadth of core functions across the business domains of finance, marketing, human resources, etc. Thus, enterprises are moving in order to make sense of their multiple-tool infrastructure with an actionable strategy to determining the right tools that add significant business value. The real value in movement to newer technology and advanced platforms can be derived only when organizations take stock of the applications that already exist and then rationalize to retire the redundancies. Frameworks that identify and then eliminate the duplicate reports and capabilities are increasingly taking center stage in the BI transformation journey. With the companies looking for newer avenues to spend lesser & lesser, enterprises can benefit reduced overheads and volume discounts which can be achieved by transformation to standardized platforms. However, mere reduction of the number of BI applications is far from being a one-stop shop solution to the problem. Management of the multi-tool environment with a long term BI governance strategy that ensures a semantic approach for introduction of tools lays the premise for the alignment between BI and business initiatives. A holistic view of the strategy for BI transformation can be obtained by mapping the functional as well as technical value add to the business of each tool in the operating premise. With a road map for transformation and rationalization that entails an unbiased understanding of the BI Inventory stack, enterprises can unlock the benefits of a cost-effective, agile and intelligent BI platform to stay ahead of the curve. Vaibhav Suresh Vaibhav Suresh is a senior executive in the Strategic Marketing team for Wipro Analytics. Vaibhav holds a Bachelors of Technology in Petroleum Engineering from University of Petroleum & Energy Studies, Dehradun and a post graduate diploma in management from K J Somaiya Institute of Management Studies & Research, Mumbai. In his current role, he is managing the marketing for Business Intelligence & CXO service lines at Wipro Analytics To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Enriching In-Store Experience with Analytics

Enriching In-Store Experience with Analytics Fighting to Stay Relevant The proliferation of online shopping has significantly altered the retail landscape. While the physical store continues to exist - and even thrive in many cases - the risk of turning irrelevant remains. Millennials - who will constitute a significant percentage of the consumer population in the future - prefer the convenience of online and mobile shopping. When they occasionally do step into the store, it is more likely to experience the product than complete a purchase. Smart retailers know that the only way to survive the onslaught of multiple channels is to reinvent the store by offering a personalized experience that extends beyond what a consumer gets online. This calls for collection and analysis of consumer and transactional data. It is not just online retailers who are sitting on huge data mounds. Physical stores operating in digitized environments have access to rich shopper data too: POS systems, loyalty programs, surveillance cameras, and facial recognition systems. They must leverage this data by performing analytics and use the insights gained to improve the store experience in terms of ease of shopping, stock availability and meeting consumer preferences. Making Shopping a Pleasure Retailers must leverage the POS data in a more granular manner than before. Item sales patterns by day of the week and hour of the day can provide rich insight into hourly and daily trends. In an industry like retail grocery for example where shelf life is paramount, these trends at a store level can directly influence item assortment and quantities within a (distribution-center to store) replenishment run. Stores can also overlay POS and syndicated data. For example, store scans from POS can be studied alongside data on consumer demographics. This would help identify in-demand products and create better instore assortments. It can also be used for optimizing the planogram by deciding the number of facings a product should have and its right inventory level. Analytics can enable stores to not only stock the right products, but also to effectively place, price and promote them. Retailers can work towards delighting the consumer by enhancing the quality of the shopping experience. When a store shopper voluntarily identifies herself, the store associate should be able to pull up past purchase history and aid her with the shopping process, helping locate products, familiarizing her with new variations, and suggesting new products. In a study of consumers in the US, 66% of consumers said that they are more likely to shop in a store where they receive personal suggestions while shopping. One of the biggest challenges faced by retailers today is the limited understanding of consumer behavior while she walks along the store aisles. Is she really stopping by the new promotional display that just came up the previous day? What attributes of the product catch her eye as she touches it for the first time? Does she seek information from

other sources while in the store? Technology today, within the realm of maintaining consumer privacy, can aid in providing aggregated consumer behavior and help identify weak points in the shopping experience. Retailers can tackle showrooming by using tracking and analytics to determine vulnerable products and staff more store associates in these aisles to personally cater to consumers. These associates can point out the advantages of buying from the store such as the ability to pick products off the shelf and the absence of shipping costs. Retailers can thus work towards making the store tailored for an individual consumer experience. The Store of the Future As new technological innovations hit the market, retailers can further enhance the in-store shopping experience. Advanced video analytics providing aggregate analyses of store footfalls, parking lot information and physical characteristics of store visitors can optimize product assortments. Current challenges with the use of GPS and Wi-Fi may trigger a wider adoption of new Bluetooth Low Energy (BLE) protocol (Apple's iBeacon, the intelligent micro location platform, uses this new protocol. With a range of about 84,000 sq feet, the iBeacon is ideal for retail and can be used to offer personalized shopping experiences to in-store visitors.) Smart mannequins with inbuilt cameras can help analyze consumers' physical characteristics that could be used to build visitor profiles. It is worth reinforcing that the retailers must not go overboard in their data collection quest. They must be mindful of privacy concerns that consumers have and must collect data only after receiving explicit consumer approval. To Click or To Brick? There are hardly any widespread signs of the demise of the physicalstore. 8 out of 10 Americans are more likely to shop in a store that offered a customized shopping experience overall. The key to remaining relevant therefore is to provide a unique shopping experience tailored for an individual consumer. And technology, especially one that converges data from multiple sources, has a significant role to play. Arun Kumar, General Manager & Global Head of Retail Consulting Practice, Wipro, Ltd. Arun Kumar is a General Manager & Global Head of Retail Consulting Practice at Wipro. He is responsible for shaping Wipro's retail solution strategy and expanding Thought Leadership across customer experience, omni-channel retailing, supply chain management, merchandising and storeoperations. Arun has over 18 years of experience in retail and logistics and has led consulting-driven engagements, managed global transformationprograms and aligned technology solutions to business outcomes. He can be reached at arun.kumar129@wipro.com. Balakrishna Parankusam Venkata, Principal Consultant, Retail Consulting Practice, Wipro, Ltd. Balakrishna Parankusam Venkata is a Principal Consultant, Retail Consulting Practice at Wipro. Bala is currently engaged in managing a large program responsible for developing a global ecommerce fulfillment application for a leading American grocery retailer. Bala has 13 plus years of IT Retail consulting experience. Bala has comprehensive experience on inventory management, price and promotions optimization, category management, and point of sale management. Bala has worked on implementation of Oracle Retail and JDA suite of products. Bala has authored thought papers on retail topics including Framework for Achieving Single View of Customers, Holiday Readiness Assessment and Strategies for online retailers, and on Point of Sale Best Practices. Bala can be reached at balakrishna.venkata@wipro.com. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey

moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

The Retail Data Overload – Through the Clutter

----- Arcticle source ----- https://www.wipro.com/analytics/the-retail-data-overload/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content The Retail Data Overload – Sifting Through the Clutter Retail data – Boon or bane? Retail organizations are experiencing a phenomenal growth in data. Staying on top of the volume, variety and velocity of the data, and being able to analyze it and deploy the intelligence, is enabling organizations to create a sharp competitive edge. How retail organizations handle this avalanche of data will determine if they rise above competition or get buried. Data – Big Data as it is popularly called -- is providing retailers new insights into improving customer intimacy and bringing about innovations in PLM, sourcing and supply chains, leading to improved bottom lines. So powerful is the ability of Big Data to infl uence business that a recent McKinsey Global Institute (MGI) report suggested that the use of Big Data and analytics in the US could increase annual GDP in retail and manufacturing by up to US$ 325 billion in 2020i. One recent IDC prediction suggests that "retailers will narrow and enable big data and analytics (BDA) projects in 2014 as 20%-30% of projects fell short in 2013"ii. It is evident that there is an urgent focus on data management. In reality, how are retail organizations doing? Are they capitalizing on data? What data are they able to capture? How many are able to derive timely and usable insights from the data? Which data brings them the highest ROI? How can retail organizations ensure they invest in only relevant data? To fi nd the answers to these vexing questions, Wipro commissioned the Economist Intelligence Unit (EIU) to examine how retailers are responding to the emerging data-rich landscape, its role in shaping customer experience, the benefi ts derived in delivering omni-channel commerce, enhancing corporate strategy and meeting regulatory challenges. The study, called The Data Storm – Retail and the Big Data Revolutioniii, was based on C-suite responses from retailers based in North America, Europe and Asia. Among the key fi ndings of the study was the fact that many retailers are still fl oundering at the very early stages of using Big Data. Only 46% of retail CXOs said they were confi dent that their fi rm's analytical abilities were keeping up with data volumes. Signifi cantly – and this is where we need to stop and ponder a while -- just 36% believed that they had a well-defi ned policy for analyzing the most valuable information. As many as 30 percent admitted that they are not consistently obtaining value from it. Clearly, while

data is fl ooding every business function – from production to sales and marketing, store operations, e-commerce/ m-commerce, human resource management, back offi ce and logistics -- retailers are stumbling when it comes to leveraging the opportunities it offers What to do with all this data? What's good, what's not? There are two key questions facing retailers: What should Big Data be used for? Or, what are the priorities to be set with regard to securing Big Data and leveraging it? How can technology be used to reduce and manage data overload without compromising outcomes? Even before those questions can be answered, many retailers need to understand that their current data management strategies will not be able to scale to meet the velocity and variety of Big Data. An IDC report in 2012 said that the digital universe will double every two years – largely thanks to the availability of cheap sensors and the propensity of the "always on" generation to record, share and store every moment in great detail. Data, said the report, will grow from levels of 130 exabytes in 2005 to 40 trillion gigabytes by 2020 – or what is otherwise by a factor of 300iv. Is it worth sifting through all the available data? Which data is good for business? Which data is required today in real time? Growing Data Sources in Retail The retail industry has seen a surge in the collection of customer information, operations data and sales/ marketing data. Estimates suggest that about half this data is unstructured. Structured Data for retail: Unstructured Data for retail: Which data is required for strategic growth? These are the questions that the retail industry needs to ponder. The EIU study digs into these questions to provide early pointers into the business functions that can be impacted using Big Data (see Table 1). However, according to the study, retailers are itching to build corporate strategy using Big Data (60% over the next two years as opposed to 40% in the past two years). Changing Priorities Which of the following business functions and processes have been the highest priority for investment in data analysis over the past two years and will be the focus for the next two? There is a good reason why retailers want to use Big Data to defi ne and shape corporate strategy -- investments in this area are already showing results. About 78% of respondents in the study claimed positive economic return from investment in data analysis for strategy, the highest fi gure for any function or process. We believe that Big Data can assist retail businesses answer strategic questions such as: Racing ahead with data This brings us to the second question that retailers must inevitable attempt to answer: How can technology be used to reduce and manage data overload without compromising outcomes? Most retailers quickly discover that they don't have the right IT systems to gather or manage the fl ow of such vast amounts of data. The technology to store the data is rapidly evolving. Businesses are being offered a variety of solutions ranging from object storage, clustered, scalable NAS, block-level SANs and even Big Data appliances with integrated storage, depending on their needs. But the challenges go beyond storage. The biggest challenge is to stream the data (with the intelligence, post analysis) in real time to executives that need the information, where they are. The retail industry doesn't have systems designed to meet these real-time needs. They have to begin by reinventing their systems. In the anxiety to do what is right, retailers take the risk of over inventing and over investing. This is where a technology partner with domain experience and data and analytical expertise comes in. An experienced partner can ensure that the business identifi es the data

required to be captured based on business goals and vision. Such a partner can then optimize the use of this data, ensuring it is analyzed and effectively deployed within the organization. Finally, the technology partner can be mandated to set up metrics and systems that measure the ROI of using data. Without this, most retailers would be lost in the data maze. Hari Shetty Vice President & Global Head of Retail Hari Shetty is part of the senior leadership team at Wipro and heads the Retail vertical across the globe. As head of Retail, he is responsible for strategy and execution of Wipro's business plan within the industry segment. Hari has been part of the Retail vertical since its inception and today Wipro is among the top 7 Retail technology service providers across the globe and provides services to 10 out of the top 20 retailers. Hari has over 20 years of consulting experience in the industry. His experience spans across multiple functions in retail and he has worked with some of the best-in-class retailers on cross channel strategy, business transformation, simplifi cation, predictive analytics, and technology transformation. Prior to his current role, he was responsible for technology and architecture in Retail and Consumer Goods industry groups. Hari has multi-disciplinary background in technology, management, fi nance and law. He is an evangelist on multi-channel retailing and strongly believes social media and a connected customer experience will change the face of retail. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =======================

Comparative Analysis of Machine Learning Techniques for Detecting Insurance Claims Fraud

----- Arcticle source ----- https://www.wipro.com/analytics/comparative-analysis-of-machine-learning-techniques-for-detectin/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Comparative Analysis of Machine Learning Techniques for Detecting Insurance Claims Fraud Insurance fraud detection is a challenging problem, given the variety of fraud patterns and relatively small ratio of known frauds in typical samples. While building detection models, the savings from loss prevention needs to be balanced with cost of false alerts. Machine learning techniques allow for improving predictive accuracy, enabling loss control units to achieve higher coverage with low false positive rates. In this paper, multiple machine learning techniques for fraud detection are presented and their performance on various data sets examined. The impact of feature

engineering, feature selection and parameter tweaking are explored with the objective of achieving superior predictive performance. 1.0 Introduction Insurance frauds cover the range of improper activities which an individual may commit in order to achieve a favorable outcome from the insurance company. This could range from staging the incident, misrepresenting the situation including the relevant actors and the cause of incident and finally the extent of damage caused. Potential situations could include: The insurance industry has grappled with the challenge of insurance claim fraud from the very start. On one hand, there is the challenge of impact to customer satisfaction through delayed payouts or prolonged investigation during a period of stress. Additionally, there are costs of investigation and pressure from insurance industry regulators. On the other hand, improper payouts cause a hit to profitability and encourage similar delinquent behavior from other policy holders. According to FBI, the insurance industry in the USA consists of over 7000 companies that collectively received over $1 trillion annually in premiums. FBI also estimates the total cost of insurance fraud (non-health insurance) to be more than $40 billion annually . It must be noted that insurance fraud is not a victimless crime – the losses due to frauds, impact all the involved parties through increased premium costs, trust deficit during the claims process and impacts to process efficiency and innovation. Hence the insurance industry has an urgent need to develop capability that can help identify potential frauds with a high degree of accuracy, so that other claims can be cleared rapidly while identified cases can be scrutinized in detail. 2.0 Why Machine Learning in Fraud Detection? The traditional approach for fraud detection is based on developing heuristics around fraud indicators. Based on these heuristics, a decision on fraud would be made in one of two ways. In certain scenarios rules would be framed that would define if the case needs to be sent for investigation. In other cases, a checklist would be prepared with scores for the various indicators of fraud. An aggregation of these scores along with the value of the claim would determine if the case needs to be sent for investigation. The criteria for determining indicators and the thresholds will be tested statistically and periodically recalibrated. The challenge with the above approaches is that they rely very heavily on manual intervention which will lead to the following limitations These are challenging from a traditional statistics perspective. Hence, insurers have started looking at leveraging machine learning capability. The intent is to present a variety of data to the algorithm without judgement around the relevance of the data elements. Based on identified frauds, the intent is for the machine to develop a model that can be tested on these known frauds through a variety of algorithmic techniques. 3.0 Exercise Objectives Explore various machine learning techniques to improve accuracy of detection in imbalanced samples. The impact of feature engineering, feature selection and parameter tweaking are explored with objective of achieving superior predictive performance. As a procedure, the data will be split into three different segments – training, testing and cross-validation. The algorithm will be trained on a partial set of data and parameters tweaked on a testing set. This will be examined for performance on the cross-validation set. The high-performing models will be then tested for various random splits of data to ensure consistency in results. The exercise was conducted on ApolloTM – Wipro's Anomaly Detection Platform, which applies a combination of pre-defined rules and predictive machine learning algorithms

to identify outliers in data. It is built on Open Source with a library of pre-built algorithms that enable rapid deployment, and can be customized and managed. This Big Data Platform is comprised of three layers as indicated below. Three layers of Apollo's architecture Data Handling: Detection Layer Outcomes The exercise described above was performed on four different insurance datasets. The names cannot be declared, given reasons of confidentiality. Data descriptions for the datasets are given below. 4.0 Data Set Description 4.I Introduction to Datasets   Table 1: Features of various datasets 4.2 Detailed Description of Datasets Overall Features: The insurance dataset can be classified into different categories of details like policy details, claim details, party details, vehicle details, repair details, risk details. Some attributes that are listed in the datasets are: categorical attributes with names: Vehicle Style, Gender, Marital Status, License Type, and Injury Type etc. Date attributes with names: Loss Date, Claim Date, and Police Notified Date etc. Numerical attributes with names: Repair Amount, Sum Insured, Market Value etc. For better data exploration, the data is divided and explored based on the perspectives of both the insured party and the third party. After doing some Exploratory Data Analysis (EDA) on all the datasets, some key insights are listed below Dataset – 1: Dataset – 2: For Insured: For Third Party: Dataset – 3: Dataset – 4: 4.3 Challenges Faced in Detection Fraud detection in insurance has always been challenging, primarily because of the skew that data scientists would call class imbalance, i.e. the incidence of frauds is far less than the total number of claims, and also each fraud is unique in its own way. Some heuristics can always be applied to improve the quality of prediction, but due to the ever evolving nature of fraudulent claims intuitive scorecards and checklist-based approaches have performance constraints. Another challenge encountered in the process of machine learning is handling of missing values and handling categorical values. Missing data arises in almost all serious statistical analyses. The most useful strategy to handle the missing values is using multiple imputations i.e. instead of filling in a single value for each missing value, Rubin's (1987) multiple imputations procedure replaces each missing value with a set of plausible values that represent the uncertainty about the right value to impute. The other challenge is handling categorical attributes. This occurs in the case of statistical models as they can handle only numerical attributes. So, all the categorical attributes are transposed into multiple attributes with a numerical value imputed. For example – the gender variable is transposed into two different columns say male (with value 1 for yes and 0 for no) and female. This is only if the model involves calculation of distances (Euclidean, Mahalanobis or other measures) and not if the model involves trees. A specific challenge with Dataset – 4 is that it is not feature rich and suffers from multiple quality issues. The attributes that are given in the dataset are summarized in nature and hence it is not very useful to engineer additional features from them. Predicting on that dataset is challenging and all the models failed to perform on it. Similar to the CoIL Challenge [4] insurance data set, the incident rate is so low that with a statistical view of prediction, the given fraudulent training samples are too few to learn with confidence. Fraud detection platforms usually process millions of training samples. Besides that, the other fraud detection datasets increase the credibility of the paper results. 4.4 Data Errors Partial set of data errors found in the datasets are: 5.0 Feature Engineering and Selection 5.1 Feature Engineering Success in

machine learning algorithms is dependent on how the data is represented. Feature engineering is a process of transforming raw data into features that better represent the underlying problem to the predictive models, resulting in improved model performance on unseen data. Domain knowledge is critical in identifying which features might be relevant and the exercise calls for close interaction between a loss claims specialist and a data scientist. The process of feature engineering is iterative as indicated in the figure below   Fig 1:Feature engineering process Importance of Feature Engineering: Some Engineered Features: 5.2 Feature Selection: Out of all the attributes listed in the dataset, the attributes that are relevant to the domain and result in the boosting of model performance are picked and used. i.e. the attributes that result in the degradation of model performance are removed. This entire process is called Feature Selection or Feature Elimination. Feature selection generally acts as filtering by opting out features that reduce model performance. Wrapper methods are a feature selection process in which different feature combinations are elected and evaluated using a predictive model. The combination of features selected is sent as input to the machine learning model and trained as the final model. Forward Selection: Beginning with zero (0) features, the model adds one feature at each iteration and checks the model performance. The set of features that result in the highest performance is selected. The evaluation process is repeated until we get the best set of features that result in the improvement of model performance. In the machine learning models discussed, greedy forward search is used. Backward Elimination: Beginning with all features, the model removes one feature at each iteration and checks the model performance. Similar to the forward selection, the set which results in the highest model performance are selected. This is proven as the better method while working with trees. Dimensionality Reduction (PCA): PCA (Principle Component Analysis) is used to translate the given higher dimensional data into lower dimensional data. PCA is used to reduce the number of dimensions and selecting the dimensions which explain most of the datasets variance. (In this case it is 99% of variance). The best way to see the number of dimensions that explains the maximum variance is by plotting a two-dimensional scatter plot. 5.3 Impact of Feature Selection: Forward Selection: Based on experience adding-up a feature may increase or decrease the model score. So, using forward selection data scientists can be sure that the features that tend to degrade the model performance (noisy feature) is not considered. Also it is useful to select the best features that lift the model performance by a great extent. Backward Elimination: In general backward elimination takes more time than the forward selection because it starts with all features and starts eliminating the feature that compromises the model performance. This type of technique performs better when the model built is based on trees because more the features, more the nodes, Hence more accurate. Dimensionality Reduction (PCA): I t is of ten helpful to use a dimensionality-reduction technique such as PCA prior to performing machine learning because: 6.0 Model Building and Comparison The model building activity involves construction of machine learning algorithms that can learn from a dataset and make predictions on unseen data. Such algorithms operate by building a model from historical data in order to make predictions or decisions on the new unseen data. Once the models are built, they are tested on various datasets and the results that are considered as performance criterion are calculated and compared. 6.1 Modelling

Fig2:Model Building and Testing Architecture   The following steps are listed to summarize the process of the model development: Separate models generated for each fraud type which self-calibrate over time - using feedback, so that they adapt to new data and user behavior changes. Multiple models are built and tested on the above datasets. Some of them are: Logistic Regression: Logistic regression measures the relationship between a dependent variable and one or more independent variables by estimating probabilities using a logit function. Instead of regression in generalized linear model (glm), a binomial prediction is performed. The model of logistic regression, however, is based on assumptions that are quite different from those of linear regression. In particular the key differences of these two models can be seen in the following two features of logistic regression. The predicted values are probabilities and are therefore restricted to [0, 1] through the logit function as the glm predicts the probability of particular outcomes which tends to be binary. Fig3: Modified MVG   Boosting: Boosting is a machine learning ensemble learning classifier used to convert weak learners to strong ones. General boosting doesn't work well with imbalanced datasets. So, two new hybrid implementations were implemented. Fig4. Functionality of Boosting Bagging using Adjusted Random Forest: Unlike single decision trees which are likely to suffer from high variance or high bias (depending on how they are tuned), in this case the model classifier is tweaked to a great extent in order to work well with imbalanced datasets. Unlike the normal random forest, this Adjusted or Balanced Random Forest is capable of handling class imbalance. The Adjusted Random Forest algorithm is shown below: The advantage of Adjusted Random Forest is that it doesn't overfit as it performs tenfold cross-validations at every level of iteration. The functionality of ARF is represented in the form of a diagram below Fig5. Functionality of Bagging using Random Forest 6.2 Model Performance Criterion The Model performance can be evaluated using different measures. Some of them used in this paper are: 6.2.1 Using Contingency Matrix or Error Matrix   The error matrix is a specific table layout that allows tabular view of the performance of an algorithm The two important measures Recall and Precision can be derived using the error matrix. Recall: Fraction of positive instances that are retrieved, i.e. the coverage of the positives. Precision: Fraction of retrieved instances that are positives.   Both should be in concert to get a unified view of the model and balance the inherent trade-off. To get control over these measures, a cost function has been used which is discussed after the next section. 6.2.2 Using ROC Curves Another way of representing the model performance is through Receiver Operating Characteristics (ROC curves). These curves are based on the value of an output variable. The frequencies of positive and negative results of the model test are plotted on X-axis and Y-axis. It will vary if one changes the cut-off based on their Output requirement. Given a dataset with low TPR (True Positive Rate) at a high cost of FPR (False Positive Rate), the cut-off may be chosen at higher value to maximize specificity (True Negative Rate) and vice versa. The representation used in this is a plot and the measure used here is called Area under the Curve (AUC). This generally gives the area under the plotted ROC curve. 6.2.3 Additional Measure In modelling, there is a cost function used to increase the precision (which results in a drop in recall) or increase in the recall (which results drop in precision), i.e. to have control over recall and precision. This measure is used in feature

selection process. The Beta (ß) value is set to 5. Then start iterating feature process (either forward or backward) involving calculation of performance measures at each step. This cost function is used as a comparative measure for the feature selection (i.e. whether the involvement of feature results in improvement or not). The cost function increases the beta value, with increase in recall. 6.3 Model Comparison 6.3.1 Using Contingency Matrix The performance of the models is given below: Table 2: Performance of models on Dataset 2   Key note: All the models performed better on this dataset (with nearly ninety times improvement over the incident rate). Relatively, MMVG has better recall and the other models have better precision.   Key note: The ensemble models performed better with high values of recall and precision. Comparatively ARF has high precision and high recall(i.e. 1666 times better than the incident rate) and MMVG has better recall but poor precision.   Key note: MRU (with four hundred and sixty times improvement over random guess) and MMVG (with hundred and thirty three times improvement over the incident rate and reasonably good recall) are better performers and logistic regression is a poor performer. For Dataset - 4   Table 3: Performance of models on Dataset 4   Key note: Overall issues with the dataset make the prediction challenging. All the models performance is very similar, with the issue of inability to achieve higher precision keeping the coverage high. 6.3.1.1 Receiver Operating Characteristic (ROC) Curves   Adjusted Random Forest out-performed other models and Modified MVG is the poor performer All the models performed equally.   Boosting as well as Adjusted Random Forest performed well and Logistic Regression is the poor performer. All the models performed reasonably well except Modified MVG. Area under Curve (AUC) for the above ROC Charts   Table 4: Area under Curve (AUC) for the above ROC 6.3.2 Model Performances for Different Values in Cost Function Fß   Fig6. Model Performances for Different Beta Values   To display the effective usage of the cost function measure, a graph of results is shown for different ß values (1, 5, and 10) and modelled on dataset-1. As evident from the results, there is a correlation between ß value and recall percentage. Typically this also results in static or decrease in precision (given implied trade-off). This is manifested across models, except for AMO at aß value of 10. 7.0 Model Verdict In this analysis, many factors were identified which allows for an accurate distinction between fraudulent and honest claimants i.e. predict the existence of fraud in the given claims. The machine learning models performed at varying performance levels for the different input datasets. By considering the average F5 score, model rankings are obtained- i.e. a higher average F5 score is indicative of a better performing model. Table 5: Performance of Various Models The analysis indicates that the modified random under Sampling and Adjusted Random Forest algorithms perform best. However, it cannot be assumed that the order of predictive quality would be replicated for other datasets. As observed in the dataset samples, for feature rich datasets, most models perform well (ex: Dataset - 1). Likewise, in cases with significant quality issues and limited feature richness the model performance gets degraded (ex: Dataset - 4). Key Takeaways: Predictive quality depends more on data than on algorithm: Many researches indicate quality and quantity of available data has a greater impact on predictive accuracy than quality of algorithm. In the analysis, given data quality issues most algorithms performed poorly on dataset-4. In the better datasets, the range of performance was relatively

better. Poor performance from logistic regression and relatively poor performance by odified MVG: Logistic regression is more of a statistical model rather than a machine learning model. It fails to handle the dataset if it is highly skewed. This is a challenge in predicting insurance frauds, as the datasets will typically be highly skewed given that incidents will be low. MMVG is built with an assumption that the input data supplied is of Gaussian distribution which might not be the case. It also fails to handle categorical variables which in turn are converted to binary equivalents which leads to creation of dependent variables. Research also indicates that there is a bias induced by categorical variables with multiple potential values (which leads to large number of binary variables.) Outperformance by Ensemble Classifiers: Both the boosting and bagging being ensemble techniques, instead of learning on a single classifier, several are trained and their predictions are aggregated. Research indicates that an aggregation of weak classifiers can out-perform predictions from a single strong performer. Loss of Intuition with Ensemble Techniques A key challenge is the loss of interpretability because the final combined classifier is not a single tree (but a weighed collection of multiple trees), and so people generally lose visual clarity of a single classification tree. However, this issue is common with other classifiers like SVM (support vector machines) and NN (neural networks) where the model complexity inhibits intuition. A relatively minor issue is that while working on large datasets, there is significant computational complexity while building the classifier given the iterative approach with regard to feature selection and parameter tweaking. Anyhow given model development is not a frequent activity this issue will not be a major concern. 8.0 Conclusion The machine learning models that are discussed and applied on the datasets were able to identify most of the fraudulent cases with a low false positive rate i.e. with a reasonable precision. This enables loss control units to focus on new fraud scenarios and ensuring that the models are adapting to identify them. Certain datasets had severe challenges around data quality, resulting in relatively poor levels of prediction. Given inherent characteristics of various datasets, it would be impractical to a' priori define optimal algorithmic techniques or recommended feature engineering for best performance. However, it would be reasonable to suggest that based on the model performance on back-testing and ability to identify new frauds, the set of models offer a reasonable suite to apply in the area of insurance claims fraud. The models would then be tailored for the specific business context and user priorities. R Guha Head - Corporate Business Development He drives strategic initiatives at Wipro with focus around building productized capability in Big Data and Machine Learning. He leads the Apollo product development and its deployment globally. He can be reached at: guha.r@wipro.com Shreya Manjunath Product Manager, Apollo Platforms Group She leads the product management for Apollo and liaises with customer stakeholders and across Data Scientists, Business domain specialists and Technology to ensure smooth deployment and stable operations. She can be reached at: shreya.manjunath@wipro.com Kartheek Palepu Associate Data Scientist, Apollo Platforms Group He researches in Data Science space and its applications in solving multiple business challenges. His areas of interest include emerging machine learning techniques and reading data science articles and blogs. He can be reached at: kartheek.palepu@wipro.com To gain the advantages of new technology, organizations are getting ready to

undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =======================

Data Discovery-The Way Ahead

----- Arcticle source ----- https://www.wipro.com/analytics/data-discovery---the-way-ahead/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Data Discovery - The Way Ahead Have you ever imagined the amount of data that is churned out every day? Well, the answer is it runs into quintillion bytes every single day. This data is generated across industries whether it is from retail, banking, insurance, healthcare, power, oil and gas, telecom and the list can go on. The question here is do we have a robust system in place to extract meaningful insights out of this huge storehouse of data. If used correctly, this can not only help businesses to generate insights which can help them unlock new business avenues but also help them provide solution for better governance. There was a time when only data-centric companies such as Facebook, Google or any e-commerce firm would use this data to generate insights and analyze trends. Data scientists, who were hired for this job soon realized the potential that analytics had in every other business and industry. And while enterprises started to shift their focus to analytics, they faced challenges starting from compiling such huge volumes of data to cleaning them up and extracting relevant information from it. Traditional Business Intelligence (BI) systems in place would no longer be enough to cope with this challenge and hence companies are looking to migrate to new data discovery platform. With traditional BI systems, a data scientist would spend most of his time in the back-end slicing and dicing data and generating reports which can be tested against some hypothesis. Thanks to Analytics Data Discovery Platform which helps a business user to explore this data and generate insights without much training and expertise in any analytics tool. It provides a visual dashboard which enables a business user to perform analytics and engage in rapid decision making. Analytics Data Discovery Platform spreads across the entire data-information-insights supply chain starting right from data ingestion to extracting meaningful insights and thus enabling businesses to reach their goals in lesser time. There are companies who have realized the benefits that such data discovery platform can bring and are marching ahead in the competition by implementing the same. Determining new products and services to be launched coupled with leveraging data and analytics for decision making has helped organizations in making rapid decisions and implementing new offerings quickly. Having said that, there is always a caveat of checking the feasibility of the process which enterprises must exercise before going ahead with the implementation. Srinath Sridhar- Principal Consultant, Analytics Consulting Group, Wipro Limited Srinath has over 8 years of

experience as an Analytics Consultant post his MBA in Marketing. Other than leading various prestigious Analytics engagements, he has played roles of Thought Leadership, Presales and solution definition in the analytics space. In his current role, he is a Principal Consultant in the Analytics Consulting group within Analytics at Wipro Limited. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Evaluating relative efficiency of retail stores – a Data Envelopment Analysis approach

----- Arcticle source ----- https://www.wipro.com/analytics/evaluating-relative-efficiency-of-retail-stores-a-data-envelopment-analysis-approach/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content Evaluating relative efficiency of retail stores - a Data Envelopment Analysis approach I n today's highly competitive retail industry, it is crucial to recognize the factors which help retailers to thrive in the long run. One of the major factors which distinguishes a successful retailer from others is information regarding the efficiency of its stores. Like Charles Darwin's 'survival of the fittest' theory, the efficiency of a store enables the retailer to function effictively in the market, with minimum inputs and maximum output, to be the fittest amongst all the rest. A retail store is a critical asset in the retail industry. Customers interact directly with the retail store and most of the revenue in the retail industry comes from stores. Hence, efficient management of store operations is essential, to achieve and sustain customer satisfaction, as well as cost-effectiveness. Techniques to evaluate a store's productivity and its relative efficiency involves evaluating many factors-such as inventory turnover, sales per selling space, employee productivity, customer traffic, effectivity (retail conversion rate), average sales, gross margin (sales profit before costs), among other factors. The current industry practice generally involves a simple, logical, efficiency-based approach which is not mature in terms of leveraging solid analytical techniques. Thus, generally, store efficiency is evaluated by considering only sales density, that is, sales per square foot or number of employees. This involves only two metrics at a time, ignoring other factors. These standalone factors contribute individually and independently towards the evaluation of a store's performance. This leads to information throw in various random directions, while business leaders are

attempting store performance evaluation and goal setting. Various store performance dashboards showcase different charts as these can't be clubbed together to get one performance index for a store. Combining them into one, to get the overall performance in terms of an efficiency score, which can then be used to compare various stores, is possible through a non-parametric approach from data mining and analytics called Data Envelopment Analysis (DEA). DEA uses a linear programming procedure to evaluate store efficiency by considering parameters-such as staff information (employee count and payroll), operating expenses, fuel consumption and space as inputs and sales, EBITDA, gross margin as outputs for a store. Advantage DEA DEA is a very powerful technique to evaluate the relative efficiency of business units when multiple inputs and outputs are involved. This framework has been adapted from multi-input, multi-output production functions and applied in many industries. In general, DEA minimizes inputs and maximizes outputs: In other words, lower levels of the former and higher levels of the latter represent better performance or efficiency. Instead of central inclinations, DEA focuses on boundaries. It doesn't try to fit a regression plane through the center of the data as in statistical regressions; rather, DEA proves particularly proficient at detecting relationships that would remain unseen with other evaluation approaches. DEA benchmarks units against their best peer groups. It can be applied to explore production data as well as cost data. Based on the business problem, one must be able to differentiate the various factors into inputs and outputs to apply DEA analysis efficiently. Some benefits of this technique are: DEA impact: A retail case study About 750 stores of a top US retailer had to be compared in terms of features such as area, sales, gross margin, payroll and incentives, operating expenses, EBITDA, revenue etc. To get the best and most significant factors influencing the efficiencies of the stores, correlations among the inputs and the outputs were checked. Among all the variables, number of employees working in the store and the area of the store, represented the best inputs, whereas sales and EBITDA represented the best outputs. DEA algorithm was leveraged to analyze data and get relative efficiencies across stores. Key insights were derived from the results (given as findings 1, 2, 3, 4 and 5) which helped store managers and operation leaders undertake critical business action plans to improve store performance. Findings 1: Insights based on relative efficiencies across stores Findings 3: Sales and area vs. relative efficiencies across stores Findings 4: Sales and number of employees vs. relative efficiencies across stores Findings 5: US states where top ranked stores are located From data to insights DEA solution framework is a powerful tool that enables identification of production frontiers and efficiency of firms in various sectors. It has been recognized as a valuable approach, useful in uncovering relationships that remain hidden with other methodologies. DEA provides relative efficiencies, that is, efficiencies relative to the data considered rather than absolute efficiencies. After applying the DEA algorithm, one can begin to tackle, with a clear degree of insight, issues such as identification of best and poor practices, target setting, resource allocation and monitoring efficiency changes over time. Sandipan Bhattacharyya - Lead Consultant - Analytics, Wipro Sandipan is part of Data Discovery Platform team and leads an initiative which involves creation of industry-specific applications across verticals. With over 12 years of advanced analytics experience, he has worked in multiple domains including Banking, Financial

Services and Insurance, Manufacturing and Technology, Retail, Energy and Utilities. Sandipan has a Ph.D. in Statistics from the Indian Agricultural Statistics Research Institute, New Delhi. Shivanjali Garg - Data Scientist - Analytics, Wipro Shivanjali is part of the Data Discovery Platform team. An expert in multiple analytical tools and data mining methodologies, she has worked on various analytics projects in Manufacturing and Technology, Retail, Energy and Utilities domains. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Targeted Campaign
by Uplift Model

----- Arcticle source ----- https://www.wipro.com/analytics/targeted-campaign-by-uplift-model/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content Targeted Campaign by Uplift Model Introduction In today's age of consumerism, marketing plays an important role of creating awareness, driving consumer engagement and growing businesses. Leveraging the right targeting techniques has become the most crucial factor for building and sustaining sales. From a retailer's perspective, one of the key challenges is to identify market segments that hold potential customers for their products. Consider this: Over the past decade, retailers have increased their marketing expenditure by more than 15 percent. However, this has not translated into proportional increase in business in terms of new customer acquisition or sales. For example, Mc Donald's – one of world's leading food service retailers – has increased their marketing expense by more than 15 percent in the last six years; however, the overall revenue grew merely by about 12 percent. One of the key reasons for this is that marketing campaigns are not targeted to the right set of audience, taking into account their buying behavior – which in turn leads to lower than expected response rates. An efficient audience targeting will enable retailers to identify various segments with their influential decision parameters and design the right strategy to maximize response rate for a given a campaign budget. But how do we analyze millions of behaviors and their billions of transactions distributed across multiple channels, to figure out the audience base who are most likely to respond to a campaign? This is the biggest task when it comes to targeted marketing. An advance in computing has swept away media distribution barriers, releasing a Pandora's box of new content. The resulting fragmentation has shattered the notion of the mass-media consumer, forcing marketers to use hard quantitative data and analytical techniques to find and reach their audience.

Targeted Campaign by Uplift Model The benefits of targeted marketing are two-fold: one, the total cost of marketing and acquisition decreases, and two, a well targeted campaign increases the likelihood amongst target audience to respond. This leads to enhanced response rates and Return on Marketing Investment (ROMI). To effectively target the right set of audience, it is imperative to know the different segments. Broadly, on the basis of campaign response behavior, target audience can be segmented into four exclusive segments: Analytically, there are different techniques available to target customers in a campaign scenario, but the Uplift Model is one of the most efficient and graceful ways to target customers by addressing the needs of different segments. Uplift Model approach: Following Uplift Modelling may be a more suitable approach for campaign design. The base population (includes all four segments of customers) is divided into two groups: Test (who are administered the targeted campaign) and Control (who are not). 1. The propensity of each customer is calculated using the algorithm below, separately for test and control Where 2. Linear regression is used using the same set of variables to predict expected revenue/profit (separately for test and control) 4. Selection: Customers are rank-ordered on incremental revenue/profit and top demi-deciles are selected for model performance and subsequent targeting. The incremental effect of the campaign is calculated for each demi-decile (in intervals of 5% of customers each) and an illustrative schematic is demonstrated below. Benefit of the model: A normal targeting on buyer propensity usually targets the top decile and measures the performance with test control scenario. Following scenario explains the incremental benefits of the current technique. Let us assume the following three scenarios: Uplift Model can identify all these similar profitable, non-profitable and neutral segments within the customer base, which normal targeting model will fail to distinguish effectively. Uplift Model-based targeting framework is a powerful tool that enables retailers to identify profitable target segments for customer-centric activities, integrating and analyzing various customer data to realize better return on investment for marketing expenditure. Targeting strategy Following are the guidelines that can be useful to capture some of the business applicability for response and Uplift Modeling: To summarize the benefit estimation framework for Uplift Model-based targeting in simple 4-5 steps. Start with dividing the base population in two sets of data – Test and Control – with their buyers in the campaign advertised division. Step 1 - Build a propensity model for Test and Control, separately Step 2 - Build a sales/margin model for Test and Control, separately Step 3 - Score the population based on these four models Step 4 - Define incremental benefit as: (Test Propensity model Probability * Test Sales Model Expected) - (Control Propensity model Probability * Control Sales Model Expected) Based on the magnitude of this value, we can decile the people and see the incremental effect. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Cloud service brokerage - The lynchpin in cloud management platforms

----- Arcticle source ----- https://www.wipro.com/analytics/cloud-service-brokerage-the-lynchpin-in-cloud-management-platforms/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Cloud service brokerage – The lynchpin in cloud management platforms As cloud computing continues to become the "new normal," multi-cloud has emerged as a best practice, as enterprises want to consume the best-of-breed technologies from cloud providers to build internet-scale services and data platforms rapidly. Unlike traditional data center and warehouse infrastructure, where customers were happy to follow a managed services model, today's businesses want unrestricted access to API-enabled cloud services. Traditional IT operations tools designed by MSPs are no longer sufficient to maintain the modern cloud services. This is challenging for MSPs as the rate of cloud provider's service innovation is much faster, leading to a gap in services adoption and their management. In the private cloud space, enterprise focus is mostly on IaaS with deployment, management and monitoring capabilities being enhanced continuously. However, sparing a few vendors, PaaS in private cloud is still in its nascent stage with limited options and adoption. The growing number of public cloud service providers and a lack of standards to manage IaaS, PaaS and SaaS services, especially through a single system of record, is fueling the concern on governance. The life cycle management of these different services is not consistent across cloud providers as they are being brought to action using the provider's secret recipe to deploy, manage and monitor these services. All of this is making way for unified consoles that can not only provide integration, aggregation, and customization of cloud services in a self-service environment, but also keep pace with the rapidly evolving services from cloud service providers. Enterprise cloud adoption strategies Most businesses today operate with a combination of Private and Public Clouds, i.e., a multi-cloud model, and are leveraging different strategies for cloud adoption keeping agility and cost optimization of IT procurement and management as the cornerstones. As a natural progression, some of the enterprises have moved or are in the process of moving from physical or virtual infrastructure to a private cloud model, while others have directly jumped onto the public cloud for faster time-to-market and to benefit from the on-demand nature of public cloud without having to make significant CAPEX investments. While the myth around public cloud security has started to diminish, regulatory bodies are yet to give a complete go-ahead, limiting adoption of public cloud by enterprises under their domain and forcing them to innovate in the private cloud environment. We have seen a few customers who are successfully driving innovations on a private cloud. However, many continue to leverage it like traditional infrastructure. We are

now seeing a unique opportunity for enterprise IT to once again become the spear of innovation and trusted partners of businesses by redefining the way companies manage their hybrid IT environments. By 2020, 90 percent of organisations will adopt hybrid infrastructure management capabilities.1 Thus, it becomes critical to assess the role of Cloud Service Broker and integrate it into the overall IT strategy. Enterprise IT can not only define and achieve the milestones of successful cloud utilization, but also progressively achieve the desired outcomes and business results in enterprise digital transformation journey. By 2020, 90 percent of organisations will adopt hybrid infrastructure management capabilities.1 Implications & possibilities: The visible and the invisible With many enterprises taking a multi-cloud approach, a new set of challenges is emerging, which needs to be managed quickly and efficiently for successful cloud-led transformation. Enterprise IT is realizing that businesses want cloud services in self-service, subscription-based models, instead of the traditional request-based model. This creates an additional burden of managing subscriptions with the different cloud providers that may lead to a further rise of shadow IT. This is creating a quick-to-seize opportunity for the enterprise IT to take on the role of a service integrator and start providing Cloud Brokerage service to businesses and once more, become a trusted partner as well as a catalyst for enterprise growth and success. This would require enterprise IT to deliver Cloud Brokerage service with a diverse set of capabilities while leveraging the existing investments in ITSM tool sets. Multi-tenancy & access management Enterprise IT should provide a single gateway for enterprise users, developers and administrators to access multi-cloud services in a subscription-based model providing end-to-end subscriber, identity and access management capabilities to enable individual business units to consume the services relevant to them within administrator-defined quotas. Application-centric operations Marking a shift from Server/Service to Application Life Cycle Management, IT needs to focus on building an application-centric perspective to envision, design, orchestrate, manage and operate applications as-a-whole, instead of individual services constituting the application. Service management & optimization Enterprise IT should be able to manage the SLAs of cloud services keeping pace with advancements in the public cloud space, especially PaaS and SaaS. This includes a service catalogue for the end-users to pick and choose services and the ability for the operational aspects of the same to be managed from the same end-point. Integrated chargeback & financial management With the rising adoption of cloud, the procurement model has changed from CAPEX to OPEX across enterprises. Enterprise IT needs to answer the growing need for budget control and consumption tracking to find opportunities for cost optimization, for metering the usage of cloud consumption resulting in recovery and license & asset management in the hybrid environment. Operational intelligence The pervasive nature of analytics coupled with a shift from discrete monitoring to an integrated full stack monitoring must be leveraged by enterprise IT to extract meaningful insights into the application performance. The more real-time these insights, the better would be the optimization of resource utilization. AI/ML-led predictive and preventive maintenance are becoming the new trend. Policy-driven governance & compliance Enterprise IT needs to tame the challenge of enforcing enterprise security policies in a multi-cloud environment created by consumption of disparate cloud services and the diversity to deploy, manage

and monitor these services. As the scope of security widens from LAN to WAN, on-premise data security to the safety of data in public cloud, the simplest way forward is to deliver a secure and governed hybrid cloud. To conclude, we see the rising need of a Unified Cloud Brokerage Governance Console - a services hub - to facilitate consumption of an increasing diversity of cloud services from best-of-breed technology providers. All this, while centrally managing the provisioning, compliance, security, metering, chargeback and monitoring of such services. Reference 1 Gartner Press Release "Gartner Says a Massive Shift to Hybrid Infrastructure Services Is Underway" April 5, 2017 http://www.gartner.com/newsroom/id/3666917 Abhijeet Kumar Sinha, Principal Consultant Principal Consultant in Cloud and Data Platform practice, within Analytics. He has over nine years of work experience in cloud native data platforms and solutions with subject matter expertise on Amazon Web Services offerings. He has extensive hands-on experience in virtualization, public cloud services and setting up end-to-end consumption ecosystem for enterprises. Balwant Singh, Senior Member DMTS and Practice Head CDP Senior Member DMTS and Practice Head Cloud & Data Platform Engineering with more than 19 years of experience in Software Products and Platform Engineering of highly available, scalable and secure systems leveraging open source & disruptive technologies such as Cloud, Big Data/Hadoop, Analytics, HPC and Distributed Computing & Storage Systems. Proven track record of Consulting, Solution Architecture and Engineering of Internet Scale Systems and Data Platforms on AWS & Azure across verticals. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Why you need analytics for optimized Smart Meter rollouts

----- Arcticle source ----- https://www.wipro.com/analytics/why-you-need-analytics-for-optimized-smart-meter-rollouts/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Why you need analytics for optimized Smart Meter rollouts Utilities in the United Kingdom are going through a transformational phase with Smart Meter implementation. Ofgem, the government regulator for the electricity and downstream natural gas markets in Great Britain, mandates that energy suppliers install smart metering systems in Great Britain by the end of 20201. About 53 million smart meters must be deployed across Great Britain by the end of 20202. For a supplier, the ramp up of volumes to be installed, or exchanged annually during smart rollout, is about 5 to 10 times their

current deployment numbers. They face significant challenges like high cost of deployment, lack of business process and field activities efficiency, uncertainty around customer churn and customer acceptance, resource and technology limitations, among others. Business case estimates that smart meter deployment will deliver benefits of £18.6 Billion, at an estimated total cost of £11 Billion across Great Britain. Costs include meter installation, operations, IT systems, governance, administration etc. and benefits can be attributed to the consumer (savings from reduced consumption), supplier (unnecessary site visits, reduced complaints, queries) etc. Not all of these costs and benefits are relevant to suppliers, as costs and benefits are distributed unevenly among the major stakeholders of the smart metering implementation plan. What is critical to a supplier is a smart strategy with a single business objective of minimizing the cost of deployment while maximizing the benefits achievable. The rollout objectives As a part of deployment planning, suppliers need to address the different costs associated with field technician resources, non-deployment time, other urgent field work, multiple visits to finish each install, meter removal costs, resource spread, regulatory penalty, etc., and seek benefits like customer satisfaction, lessen churn likelihood, debt propensity, etc., to name a few (figure 1). Figure 1: Business objectives of the deployment 'Smart' deployment strategy Considering the complexities and large investments involved in smart meter rollout programs, suppliers needs to be 'smart' in how they plan the rollout, monitor progress, select customers, manage communications, and forecast resources. The challenge is in completing the rollout within the given time and cost while achieving acceptance from customers. To eliminate the risk of cost and time overruns suppliers should leverage analytics to guide smart meter rollouts, from planning through implementation. They should use advanced analytics techniques to produce the deployment plan while applying resource limitations, technological constraints, business rules and other assumptions that drive productivity. Use of analytics will help target the right geographies, identify the right customers, maximize utilization, optimize routes and workforce allocation, and plan and monitor rollouts to bolster the success rates of smart meter installations. Analytics: The efficiency enabler Analytics-led solution enables production and delivery of a continually optimized plan to maximize productivity and utilization of resources while minimizing the risk of non-delivery. The solution overview depicted (figure 2) illustrates two planning aspects: Figure 2: Solution overview for smart meter deployment planning Geography-based clustering, which is driven by the proximity of customers, reduces the average distance to cover within an area, helping reduce the average travel time between deployment jobs. Based on its attributes, a selected area can have different productivity levels. To drive utilization accurately, it is important to simulate events of the daily installation process and estimate its efficiency. Considerations like access rates, job success rates, constraints applicable, availability of resources etc., can be accounted. Event simulations enable 'what-if' analyses on changes in resource levels to determine impact on the number of visits and resultant installations. Operations research techniques will prescribe where and how much of smart meter deployment to plan for the given deployment deadline. For the selected area, deployment profile with the right operatives to be assigned and resulting number of visits and installs across time periods can be understood to achieve the goal while respecting limitations. Business can

produce multiple installation plans by varying factors such as resource levels, eligibility rules, access rates, etc., to enable comparison and scenario analysis. It can select an ideal deployment plan to follow by performing cost benefit analysis. Operational deployment planning is essential to plan and manage work by selecting the most appropriate customers and sites to engage with, to support the delivery plan. This highlights the ability to implement a deployment plan based on a set customer journey through high and low level planning, to trigger communications and achieve installations. Further, the factors required to produce the strategic deployment plan can be updated based on the operational experience. Rolling out benefits As the deployment numbers go up for suppliers, applying advanced analytics to implementation becomes relevant in solving logistical, technical, business and commercial challenges. It will help tackle the complexities involved in rollouts while maximizing the business impact. Scenario analysis and a proactive approach to deployment planning will help achieve the targets amidst stringent time and cost limitations. End note 1 & 2 – https://www.gov.uk/government/publications/sm art-meter-roll-out-gb-cost-benefit-analysis Tarkik Patel - Lead Consultant, Big Data Analytics, Wipro Tarkik has over eight years experience in analytics consulting and implementations. He is a management graduate, immensely passionate about driving business impact through advanced analytics and decision science. He has well-established experience working in multiple projects and solutions in the area of big data analytics and business intelligence across industries like utilities, healthcare and automobiles in the UK and US markets. Presently, he is into delivering use cases around smart meter deployment analytics and customer analytics. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Fraud detection and prevention

----- Arcticle source ----- https://www.wipro.com/analytics/fraud-detection-and-prevention/ ----- About the Author Contact Wipro Please fill the required details to access the content Fraud detection and prevention The regulatory compliance of financial institutions is growing at a faster pace than before. Moreover, technology firms are reciprocating with solutions at an even higher pace. Of late, emerging technologies like artificial intelligence and machine learning have seen practical applications, which were earlier restricted to theory. Multiple specialized and boutique firms are now offering domain specific solutions and use cases against the big players who use artificial intelligence and machine learning as a platform. Institutions facing losses from financial crimes are growing at a similar pace. Fraudsters keep innovating and beating the system. This calls for a solution where technological advancements have to be leveraged to beat the fraudster and

allow early identification of their modus operandi.   The next decade will experience a transformational shift in the areas of fraud detection and prevention as institutions look out for solutions which provide transformational benefits and ROI. Benefits and ROI Getting applied to Financial crime detection and prevention is critical in any organization. Augmenting it with Artificial Intelligence and Machine Learning goes to show how far the industry has come in both theory and implementation. Sharad Kumar Ragam - Practice Manager for Financial Risk & Compliance Wipro Ltd. He has 11+ years of implementation, consulting and solutions experience, addressing the banking customers' needs across Fraud Risk Management, Basel & Regulatory Guidelines and Integrated Risk Management. ======================

What would it take for enterprises to

become truly intelligent ?

----- Arcticle source ----- https://www.wipro.com/analytics/what-would-it-take-for-enterprises-to-become-truly-intelligent/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content What would it take for enterprises to become truly intelligent ? Intelligent enterprises are being shaped by the rapidly expanding footprint of Artificial Intelligence (AI). In the years to come, organizations will be forced to dovetail technology with sophisticated human sensory perception, thought processes, judgment, choices and responses, to differentiate and gain an advantage over their rivals. But, how do you start? What is the best way to implement AI in your enterprise? Which are the essential building blocks? How do you strategize the transition to AI-powered infrastructure? How can you make AI real, productive and transformational? We intend to answer some of these questions – to proactively define a value-creating AI strategy for enterprises. To start with, harness the potential of intelligent data Don't fall into the trap of believing that robots and machines are ready to run businesses. The investments needed to scale up AI systems to deliver results are still limited to board-room discussions for many organizations. Speed to solution leads to great proof of concepts, but pop culture has conditioned us to Tony Stark's Jarvis-like AI, which is far from reality. In real world enterprise scenarios, data still matters: to teach and test systems which include human training and interactions, as well as for validation of models, and transparency of recommendations. Enterprises today serve millions of users, generating billions of transactions, which involves processing trillions of data records. Add to that connected devices, security and surveillance, worldwide research activities, scientific experiments, government outreach and initiatives, and other untraceable activities which are information driven. Imagine the amount of data being generated every single moment; and organizations will have to integrate, manage and secure all this information. For such data-intensive scenarios, the Cloud is emerging as a quintessential resource. The kind of storage capability an organization

needs depends on multiple factors viz. the industry use case being addressed and the need to make real-time decisions. For example, a credit card company that uses AI systems to detect fraud needs extremely low latency storage architectures and high-value neural network ecosystems. Enterprises can deploy and manage massively scalable and reliable services using Cloud to address unprecedented growth in the volume of data. AI in its true sense is only as good as the data behind it, and hence organizations also need to worry about the source of their data and how do they make it intelligent for use in AI applications. Ensuring data quality is a critical activity for AI. Inaccurate, incomplete or redundant data fed to an AI system, leads to incorrect, biased and irrelevant outputs. Automated data quality tools, that assess data for errors using rules or algorithms, are in demand among organizations, particularly those in data-driven industries. Data accessibility through a variety of touchpoints viz. mobile devices via wireless networks, raises several privacy and security concerns. Enterprises must look at authorization and data encryption tools as part of their data management and governance strategies. Therafter, leverage intelligent network Leveraging networks is key to AI's success. The human brain is a network of connections, and similarly, an intelligent enterprise needs to create knowledge from its data and meta-data. Businesses can easily rely on intelligent agents for specific individual activities, thereby reducing costs and avoiding human errors and biases. However, companies will need data scientists, data engineers, cybersecurity SMEs, network professionals and developers with a gamut of skills, coupled with business acumen, to handle their infrastructure to use AI technologies - such as computer vision, machine learning, natural language processing and deep learning. Thus creating an intelligent enterprise network. Hence, training and building a skilled workforce of versatilists (professionals capable of holding business, as well as technology-related roles) will also remain vital for enterprise success. Large enterprises also need to enhance their infrastructure to support the AI overhaul. The success of AI, and the value it can generate, has a direct correlation with how amenable the enterprise technology ecosystem is to handle such powerful applications. AI needs abundant computing power. Deep learning involves massive data sets, and deploying scalable, neural network algorithms for which traditional computing resources are insufficient. Organizations need to turn to Graphics Processing Units (GPUs), Tensor Processing Units (TPUs) and Deep-Neural-Networks Processing Units (DPUs) which can drive rich and sophisticated self-learning algorithms to process massive amounts of data, much faster and more accurately, on a massive scale. For smaller enterprises, much of AI is being done through APIs – with the infrastructure and hardware residing with the cloud service provider. However, irrespective of the size of business, the digital transformation of enterprise systems is a non-negotiable imperative for the success of AI. Lastly, take intelligent business decisions Enterprises need to pick their battles intelligently by identifying the specific problems they want AI to solve, thereby making existing processes, products and services smarter. Essentially, target use-cases, where Natural Language Processing (NLP), Image Recognition, Machine Learning (ML) and other such technologies within the arsenal of AI could deliver measurable business benefits. For example, if an enterprise is into BPO, an NLP based chabot adds a lot of value by solving basic problems without human intervention; classifying customer issues in predefined

buckets for faster identification and resolution - thereby improving BPO productivity. To prioritize on these use-cases, businesses should drive ownership of initiatives by establishing KPIs for the entire line of business - for the success of AI, and along with it focus on the value potential of the use-case and its implementation viability. Exponential business value is the most important measurement litmus test for a successful AI initiative. This may not be an exhaustive list of activities which can guarantee the success of an AI initiative for businesses, because a lot remains to be explored on this front. As Larry Tesler puts it, "AI is whatever hasn't been done yet." However, we intend to break some (A)Ice and help enterprises look at AI, not as a threat but as an efficient and effective way of becoming more and more intelligent. Juby Jose - Senior Engineering Manager, Wipro Ltd. Juby currently leads the Artificial Intelligence Research Group for Wipro's Data, Analytics & Artificial Intelligence Business. He has extensive experience in driving enterprise digital transformation and product management in artificial intelligence and machine learning. Juby has done a Masters in Computer Science, and holds a double major in Mathematics & Statistics from BITS Pilani. Palash Acharya - Senior Consultant (Strategy & Planning), Wipro Ltd. Palash is currently responsible for building value propositions and driving cohesive strategies for Wipro's Data, Analytics & Artificial Intelligence Business. He has significant experience in strategy consulting and has been instrumental in driving business strategies for India & Middle East geographies at Wipro. Palash is an Information Technology Engineer, and holds an MBA degree from Pandit Deendayal Petroleum University (Gandhinagar). To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Data: The magic pill for the healthcare industry

----- Arcticle source ----- https://www.wipro.com/analytics/data-the-magic-pill-for-the-healthcare-industry/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Data: The magic pill for the healthcare industry Like all other disciplines, the healthcare industry is overwhelmed with the explosion of data and the ever-growing need to deliver insights. Increased focus on pay for performance, patient-centric care, and the limitations of Randomized Clinical Trials (RCT) to predict the real world performance of drugs are driving this industry to harness observational data to provide compelling arguments for drug effectiveness. However, the unique nature of such data poses its own challenges. First, data is available in diverse forms including patients'

narrations, electronic health records, adverse event data, and claims records. Secondly, different terminologies are used to describe the concepts. In order to process this multi-modal data, traditional approaches are not adequate. This paper explores an approach to effectively manage and integrate clinical data to assess real world performance. A day in the life of a patient Jane, a middle-aged law enforcement officer, visits a clinic complaining of a headache. The physician prescribes appropriate medication after basic health assessments. Jane then visits a different physician to report symptoms of urinary incontinence. Pelvic exercises to strengthen the bladder are recommended. While the patient's symptoms have been efficiently treated, the two incidents put together tell a story that places Jane in considerable danger. These symptoms, in alignment with other conditions, could indicate Jane might be suffering from diabetes. This scenario highlights the risk of the prevalent approach to symptomatic treatment without accounting for the 'whole' health of patients. If the physicians could have looked at Jane's historical records of symptoms, diagnosis, prescriptions and the results of tests conducted across hospitals, they would have arrived at the conclusion that Jane needed treatment for Type 2 Diabetes. This is where technology can help improve patient care with a more holistic approach for consistent outcomes. Real world evidence Real world evidence is the clinical evidence regarding the usage and potential benefits or risks of a medical product derived from analysis of the data relating to patient health status and/or the delivery of healthcare routinely collected from a variety of sources. Real world evidence data can also be used for designing more efficient clinical trials, understanding a drug's benefit/risk profile, helping market access teams in economic model building and value demonstration, and understanding the market for launch planning. Furthermore, it could be used to understand adverse events alerts and drug compounding effects to help pharma companies reduce product cycle time and investment. In other words, data being captured can help pharma companies answer questions like which molecules treat patients of a certain disease better? What are its side-effects? Which combination of drugs could have a negative impact? Besides, after the drug enters the market, continuous real world evidence plays a critical role. As data keeps filtering in, pharma companies can change drug molecules, issue warnings or even withdraw the drug. From a pharma company's perspective In order to understand the effectiveness of drugs for patients like Jane, pharma companies are looking at an integrated view of patients' journeys across treatment regimens. With the help of comprehensive analysis of real world data, it would have been easier to understand Jane's case better. Another area of interest for pharma companies and regulators is drug safety. While clinical trials do help identify any side effects of a drug, it is hard to determine adverse side effects of concomitant drug usage for all possible combinations of drugs in such controlled trials. Additional channels of information such as adverse events and social listening for patients' comments are useful. A Real World Evidence (RWE) platform would help collect and process all observational data, develop tools and technologies to help analyze and take interventional measures as soon as such events are detected. Moreover, pharma companies may be drawn more strongly—and more immediately—to use the data to gain a competitive advantage. For example, patients may require a 21-day course of a certain drug, costing (say) 100 USD. A competitor may claim to provide treatment for the same

condition at half the price, but RWE could show that the course of treatment with the competitor's drug takes twice the time and has several side effects. On the commercial side, the market access team could use the data to understand competitive intelligence and which type of drug would work better in a certain geographical location. Brand managers can deepen their understanding of customer sentiments and strengthen brand loyalty. On the research and development end, the medical affairs team could use real world data to find out more about the ways to meet regulatory requirements by linking clinical and scientific results to real world data. This is also invaluable to biostatisticians and scientists in optimizing their research. From a payer's perspective The steep rise in drug costs coupled with finite healthcare budgets is a major challenge. New medicines—some for life-threatening diseases—cost tens of thousands of dollars a month. Many of these medicines prolong lives but in many cases, the data from conventional trials is ambiguous, and it is hard to determine if the medicines are providing real value relative to their costs. RWE about the drug's effectiveness can justify this for both the pharma company and the patient. Integrated RWE and RCT models also help generate meaningful evidence of a drug's risk/benefit and cost/benefit profile, which is in line with payers' expectations. Need of the hour Fortunately, there is no dearth of data in the world of medicine and pharma, just waiting to be leveraged. Physicians create electronic medical and health records, noting symptoms and recording their diagnoses using natural language. There are cross-sectional and longitudinal databases, which increasingly offer prospective 'add-ins' such as on quality of life. The use of health registries is growing and data of registered patients treated at a particular center for a particular condition can be easily analyzed. The FDA has an adverse events database, coded using the Medical Dictionary for Regulatory Activities for drug and therapeutic products. Academic literature has information about special characteristics of different medications and drug-drug interactions. Such data has been in existence for quite some time now. What is really required is the ability to link this data together through a common vocabulary so that analysts can use it for actionable insights. The solution is to translate records into a common language and tag ontologies for drugs (generic names, indications, contra-indications, formulations) and medical conditions (symptoms, diagnosis, treatments, outcomes) so that the right meaning is captured across disparate records. Real world data involves a lot of unstructured information like lab and imaging data, and this requires a specially designed platform to store and give actionable insights.   What it takes to create a RWE platform The core component would be a powerful data platform to build and host clinical ontologies and link data to them. Researchers will need to find ways to standardize collection of data from more than 1 million volunteers from hospitals and clinics nationwide and find efficient ways to store large amounts of data. Privacy and the confidentiality of patients' health information is another challenge. There is also a need to support ingestion of a variety of data types like documents, images, electronic medical records and other observational data from various sources like care providers, patients and third-party data providers. The ability to extract information from these data sources and link it to the clinical vocabulary is key. Real World Evidence platform capabilities: We need a cloud agnostic platform that enables customers to focus on their drug efficacy and drug safety study rather than managing and maintaining a

complex data platform. "As the breadth and reliability of RWE increases, so do the opportunities for FDA to also make use of this information." —Scott Gottlieb, M.D., Commissioner, FDA Beverly Chen Principal Consultant, Wipro Ltd Beverly is a thought leader in real world evidence. As part of the Health Business Unit strategy group, she is helping clients transform their business through outcomes-based models. A recent graduate of Wipro's Global 100 leadership program, she has worked across functions and business units globally with rotations in consulting, delivery, and sales. She holds a Master of Science degree in Biomedical Sciences from UC San Diego and an MBA from INSEAD. Vivek Wandile Practice Head, Wipro Ltd With 25 years of experience, Vivek is currently part of Cloud computing team supporting deep learning research. He also supports solution development team that trains large scale neural networks. His areas of interest includes large-scale distributed systems, GPU accelerated computing, performance monitoring, information retrieval, knowledge construction and Machine Learning application. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The Machine Learning approach to data

quality

----- Arcticle source ----- https://www.wipro.com/analytics/the-machine-learning-approach-to-data-quality/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content The Machine Learning approach to data quality The world of data is expanding at an unimaginable pace. Researchers estimate that by 2020, every human would create 1.7MB of information each second. The true power of data can be unlocked when it is refined and transformed into a high quality state where we can realize its true potential. Many businesses and researchers believe that data quality is one of the primary concerns for data-driven enterprises and associated processes considering the pace of data growth. Repeatedly, bad data is sighted as one of the root causes for failure of data-dependent initiatives. Most of the operational processes and analytics rely on good quality data for being efficient and consistent in output. Data preparation tasks take up more than half of the data managers' and data scientists' time. Data quality is not new, but has undergone constant makeover with time. Manual data quality assessment, cleansing and deduplication processes have gradually passed on the baton to rule-based

automation, which uses data quality tools. This has relieved, to some extent, data preparation tasks but a huge scope of improvement still exists. One question that stands tall is "What saves cost emanating from poor data quality, is scalable to match up with unprecedented data growth and solves the time conundrum too?" The answer is "Multifaceted, insights-driven and new age solutions like Artificial Intelligence (AI)/Machine Learning(ML) that learn from situations and condense the efforts spent towards data quality management and also reduce the process time by leveraging distributed enhanced computations." Data quality - The Machine Learning way Data quality process has evolved in its capacity but the demand for pace and efficiency has been proliferating extensively. Data management experts believe that data quality remains a bottleneck that creeps repeatedly to bother the data management and business fraternity due to proliferating data volumes and the complexity involved to derive quality insights. Innovative technologies such as Big Data, AI, ML etc. have made the application of large scale advanced data analytics more tangible than before. A transition in data quality process is noticeable from static rule-based approach to a dynamic, self-adapting, learning-based ML approach in various domains. ML has the potential to assess the quality of data assets, predict missing values, and provide cleansing recommendations, thereby reducing the complexity and efforts spent by data quality experts and scientists. Some businesses already use ML models to identify and eliminate fake customer records to target their marketing at genuine customers through reliable data. Also, ML partially substitutes the role of data stewards by flagging the data points based on probabilistic ratings as per learning from training set of past data steward decisions and categorizing duplicate, vacant, incorrect or suspicious entries. This reduces manual effort and governance activities. It is always beneficial for the organization to have a good hold of what data is being procured and consumed, and the business purpose it would solve. ML provides assistance in deriving a data quality index score to assess data sets' quality and reliability in real time based on deviation from predicted parameter values. It also has a marked ability to predict trends and identify outliers if trained properly and can make suggestions or take actions on the go. ML algorithms can learn from human decision labels in the training datasets and replicate the scenarios in real-time. However, ML algorithms are also prone to biases that may reflect in these data sets and are learnt through fresh data sets. These biases could lead to erosion of data quality. External validity testing and audits on a regular basis will help in avoiding such situations. The road ahead Most businesses look for fast analytics with high quality insights to deliver real time benefits based on quick decisions. They consider this a top priority and means of competitive advantage. To enable this, there is an opportunity for the organizations to fine-tune and enhance current data quality approach using ML techniques. Most leading data quality tools and solution providers have ventured out into ML territory in anticipation of increasing the effectiveness of their solutions. Thus, it has the propensity of being a game changer for the businesses in pursuit of improved data quality. ML can complement the contemporary rule-based solutions, and synergistically and gradually lead to process evolution around data quality. Although the current maturity level of the use of ML for data quality assessment and enhancement is low, it has promising future prospects to churn large data sets and enhance data quality. Endnote 1 https://www.forbes.com/sites/

bernardmarr/2015/09/30/big-data-20-mind-boggling-facts-everyone-must-read/#66c2095e17b1 Mohan Mahankali Practice Leader and Principal Architect - Information Management, Data, Analytics & Artificial Intelligence, Wipro Mohan has 20+ years of business and IT experience in the areas of information management and analytics solutions for global organizations. In his current role, he is responsible for practice vision and strategy, solution definition, customer advisory, consulting, competency development, and nurturing of emerging trends and partner ecosystem in the areas of data and information management. Mohan is the co-owner of a patent in data management and governance awarded by USPTO (United States Patent and Trademark Office). To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Humanized AI for analytics that matter

----- Arcticle source ----- https://www.wipro.com/analytics/humanized-ai-for-analytics-that-matter/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Humanized AI for Analytics that Matter Imagination, ideation and the ability to create world-changing innovations are a result of human cognitive abilities. Human beings have the innate gift of sensing their environment, interpreting what they see, hear and feel, responding to stimuli, and empathizing with the environment and with other fellow human beings. Empathy allows us to take complex life-altering decisions with as little harm to other people as possible. It allows us to say the right words to cheer someone up. It helps us prioritize the needs of a helpless child. It teaches us to detect pain in other human beings and provide prompt aid. Most importantly, it teaches the cost and value of life. The capacity of humans is, however, limited in case of high number of computations and in repetitive tasks. Humans inherently develop bias towards certain people or environments, which impairs their judgement. Artificial intelligence has risen to the fore today to extend the skills of humans by learning to perform and automate tasks in manners designed by humans. In healthcare, a manual diagnostic error or inconsistency can spell doom in a person's life. However, with AI improving the accuracy to near 99.999%, the diagnostics will be far more robust. Hence, human medical experts, who front-end the service delivery machinery, will have more confidence in sharing the results and ensuing treatment plans. Similarly, AI-based assessment will likely be far more fair and free from human bias, likes, and dislikes (for e.g. teachers to different

students). Therefore, the assessments will be far more acceptable. At the same time, when students need a teacher's emotional support, in such scenarios, AI equations should be smart enough to step back and let the human empathy take precedence. What does AI lack? A Human Touch. While AI has come a long way in providing massive computational powers, it has not yet quite grasped the concept of emotions. AI still performs tasks in a robotic fashion – delivering fixed responses irrespective of context, or providing insights for business decisions without truly understanding the end user's emotions and needs. This prompted, a few years ago and more so today, the need to design AI that adds the human touch to tasks and can recognize times when it needs to take a step back. The widely popular Alexa, too, wants to understand human emotions and feelings and captures this information every day. By letting it know that you are happy or sad on a particular day, you help it build your emotional profile so that it can detect your mood in the future without the need to ask about your mood. This prompts longer conversations with the AI, enabling better responses to your behavior – ranging from simple conversations to contacting your family in case of interventions. AI, with the understanding of human emotions, can not only recommend you movies and shows to watch based on your browsing history, but also can detect the presence of early stages of depression and recommend you self-help tips for overall well-being based on your viewership. Woebot, a start-up specializing in natural language processing, assesses the mood of the user through questions. Having been trained in Cognitive Behavioral Therapy, a chatbot prepares an emotional profile of the user and based on the assessment, provides tips to manage anxiety. This is an example of Behavioral Analytics that matters. These kinds of insights are possible only when an AI has been taught to recognize the signs of a psychological problem by allowing it to study human behavior in real time and by teaching it to associate the usage of certain words by the end user to particular behaviors through Text Analytics and Natural Language Understanding. So what exactly is Humanized AI? Anything that affects humans, as opposed to just other machines, requires a humanized approach. AI is no different. Humanized AI is that which understands human emotions like happiness, stress, urgency, anger and pain when humans display them through speech, facial and physical expressions, and has considerable empathy to respond to the end user in a human-like or natural manner. This is different from traditional Behavioral Analytics. Humanized AI not only derives insight from the user data but also responds to the user in a manner and language best suited to his/her emotional profile. True Humanized AI, for instance, is able to understand the criticality of the tasks scheduled in your calendar and prioritize them based on importance and urgency. It responds to you in natural language very much like a human friend. The three sectors in which analytics and Humanized AI is currently seen as highly relevant and prevalent are Education, Healthcare, and Banking & Financial Services because each one of these affect certain aspects of human life directly and very closely. For any individual, these sectors and the corresponding services influence their social, physical and economic well-being. Different touchpoints of these services to different customer and user personas show how AI affects it. Healthcare - Researchers in MIT say that they have developed an algorithm that can predict depression in a person based on subtle cues in voice. Using neural network, the algorithm can identify and categorize the level of depression through a study of

characteristics of speech such as pitch, amount of breath, word choice etc. that are symptomatic of depression. Taking into account that depression is one of the most widely suffered and undiagnosed conditions in the world, this is an AI solution that must be considered for further development. Another emotion measurement technology company is able to detect emotions like laughter, anger and arousal, through the tone of voice. It serves Fortune 1000 companies. This is particularly helpful in interventions enabled through AI in cases of untold situations of child abuse or domestic violence. Voice Analytics is also used in the military forces to detect post trauma stress disorder (PTSD) in its personnel. Banking - AI algorithms can detect urgency and stress through the tone of your voice and through the choice of words you use. By assessing the level of stress, they can allow you to bypass the automatic IVR or chatbots and connect you to a human counterpart. The AI algorithm has developed the understanding that in a stressful situation, the end user might want to speak to a human rather than hassle with the algorithm. The algorithm also helps the customer service personnel quickly assess the customer profile and provide solutions most suited to the particular customer. This is especially seen in the case of wealth management where a human expert, rather than an AI counterpart, is received well by the customer. The benefits of emotion detection in customer problem resolution is another area where AI's ability to understand when to step back and let the human take over matters. Many financial multi-national companies are experimenting with AI in finance to bring more benefits to customers. Education – Personalized learning through analytics and artificial intelligence has been enabled for several classrooms by pioneers. When students use their touchpads or mobiles to go through study material, by performing simple analytics, it is possible to understand the subjects that the child is most comfortable in and those where he/she is stressed. AI can be used to engage with the child in solving difficulties with a question or a material. In addition, AI can be taught to understand when it is time to let the teacher know that the student might need a little more attention and compassion than the rest of the class based on the time spent on a question or stress expressed through facial expressions. Text Analytics also assists teachers in grading and evaluation, leaving them with enough time to provide personal care to children who will value the human interaction more. Carnegie Learning's Mika is one such AI solutions that provides real-time insights to teachers about the student's ability to comprehend and apply concepts learnt in class. How can we humanize AI to deliver analytics that matter? Artificial Intelligence needs a lot of intimate information about an individual that includes but is not limited to gestures, facial expressions and browsing data, to be able to truly understand the person's physical or mental limitations and design optimal responses accordingly. This information includes every touchpoint of the individual with the world through personal devices and physical movement. Half the people in the world consider AI intrusive when collecting such information. It makes them feel vulnerable of being under constant scrutiny. Algorithms, too, develop inherent one-sided decision-making when overly trained with particular data sets. However, AI improves its ability to empathize or humanize only with the availability of data. This puts a unique responsibility on research and business organizations to be responsible with the data collected and the algorithms built to provide life-improving analytics. Organizations must employ a 'human-first' methodology in building and

running artificial intelligence solutions. This methodology ensures that the human employing the AI services has the ultimate control over the algorithm. The algorithm, without the exclusive permission of the end user, cannot trigger automated actions after decision-making. This ensures that the human end-user can exercise caution where the machine's empathetic intelligence ceases and the human can supersede the artificial intelligence with his reliable human intelligence. Such a model where the human is always ahead of the machine and where the machine simply extends his capabilities and not replaces it, will see better success. This also ensures in building a trustworthy AI solution that receives buy-in from people and reduces the fear around data gathering. Organizations and people of the world are dealing with difficult conversations around data privacy and security today, but to build trustworthy and dependable artificial intelligence, these conversations are surely worthwhile. Tapati Bandopadhyay General Manager and Global Practice Head, Wipro HOLMES AI & Automation   Tapati is responsible for defining roadmap for the Wipro HOLMES AI platform and solutions. A Ph.D. in AI, Tapati brings to the table over two decades of experience on ITSM and expertise in AI and automation-related consulting, training and global advisory services. Sravya Bharani M Consultant for Strategy & Planning, Data, Analytics and AI, Wipro Sravya provides advisory and thought leadership strategies with an understanding of the digital and analytics industry including market view, competition landscape and related ecosystems. She holds a Master's in Business Administration from Indian Institute of Technology (Madras) and B.E. in Electronics & Communication Engineering. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Revolutionizing Enterprise Planning

with AI

----- Arcticle source ----- https://www.wipro.com/analytics/revolutionizing-enterprise-planning-with-ai/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Revolutionizing Enterprise Planning with AI Traditional enterprise planning approaches, software and technologies such as spreadsheets, legacy software systems, and in-house applications, seldom meet the complex needs of modern enterprises. It is easy to see why. They collect information in silos and require significant manual effort to consolidate, increasing the possibility of

data errors and inconsistencies. The need to understand business performance in real time in order to manage the modern enterprise makes it important to overcome existing planning systems bottlenecks. There is, therefore, a shift towards an intelligent enterprise, where systems augment management decisions with an accurate real-time view of business performance, creating a connected value chain. Planning for the intelligent enterprise requires an integrated platform that can acquire and assimilate data from any source, analyze it at a detailed level, and provide output in the form of actionable plans for the right people, at the right time. Such a cloud-enabled platform can help users across business functions, including finance, HR, sales, supply chain and marketing, collaborate with each other in real time to develop strategic plans and drive business success. The role of connected EPM in a modern enterprise Connected Enterprise Performance Management (EPM) is cloud-based, enabling advanced analytics using sophisticated models and integration across platforms and functions. The objective is to automate the management of enterprise performance across a multitude of functions to augment human capability. Figure 1: Evolution of EPM What is the impact of EPM across the enterprise? From a financial viewpoint: One central view of pipeline, order book, revenue, cost, and profits. From an HR perspective: A unified view of average time for recruitment, retention of talent, compliance, star performer promotions and so on. For supply chain: Single view of performance, and demand and supply alignment. For sales: Comprehensive view of sales performance across geographies and accurate forecasts. For marketing: A holistic view of marketing performance for leads, cost per lead, and resources per lead. Connected EPM systems provide businesses with the ability to integrate data, create hierarchies, develop formulas, deliver dashboards, and include complex time dimensions. Together, these components can be defined and adapted as the business evolves. Connected EPM systems enable several benefits such as enabling real-time capture of all data that a legacy EPM system captures and fostering quick analysis of the captured data to generate actionable insights that lead to business outcomes like improved efficiency. They also enable significant up-front cost savings through faster time to value as compared to on-premise solutions. Most importantly, they eliminate redundant workflows, yield faster response times and provide enhanced data governance. Figure 2: Connected EPM AI-based EPM for the Intelligent Enterprise The intelligent enterprise promises to bring automation and augmentation to activities and decision making across an organization. Activities such as detecting patterns, performing predictions, analyzing enormous amounts of market intelligence are useful in creating operational scenarios and identifying groundbreaking paths. Today, EPM vendors are working with several ML techniques to produce pilot studies and proof of concepts (POC) to understand the true application of augmented intelligence in planning use cases. The POCs are designed to improve planning for specific areas such as supply planning, revenue forecasting, sales predictions, workforce optimization, and demand sensing. They are run in 'supervised' learning mode and can draw on internal data such as transaction records or promotion information, as well as tap into a range of external data sources such as weather or demographic information. ML algorithms iterate multiple times through the data sets with the goal of improving the accuracy of predicted outcomes. The result: deep insights for creating informed planning models. Figure 3: Benefits of AI/ML The AI/ML

techniques help address three critical issues faced by business users across business functions – complexity, quantity and accessibility issues that make transactions time-consuming. Complexity: As data grows in volume, it becomes increasingly complex for varied reasons. EPM systems must be upgraded to acquire information from multiple data sources coupled with unique protocols - an expensive and time-consuming process. With AI/ML, systems acquire the ability to adapt themselves, as needed. Quantity: IoT and Big Data technologies are here to stay and it is clear that the volume of data will grow exponentially as usage of these technologies accelerates. Addressing this diversity of data to extract meaningful insights in a cost-effective way will require automation. AI/ML guarantees elimination of mundane, repetitive, manual, task-based, non-value-added work required in connected EPM systems. Accessibility: AI/ML addresses data-accessibility challenges in two ways: by making it easier to search and use information in the system, and making the information more accessible to users across the organization. The EPM market is witnessing the rise of many entrants who are adding AI/ML capabilities to their EPM platforms. This is creating competitive distinction between incumbents and entrants. Despite the growing capabilities across market players, major challenges exist: • Companies need to ensure their most important asset - their people - are given enough time and resources to adapt and become equipped with requisite skills for the new opportunities that AI will create in connected planning. • Moving into a fact-based decision-making mode changes the nature of an organization. Organizational changes are tough to manage and the intelligent enterprise will be able to absorb the changes by deploying a structured approach for workforce augmentation. • Data quality forms the crux of successful use of AI. This means organizations will need to have better control on their data. Data mining, cleansing, integration, and management will become more important than ever. Leveraging EPM revolution to create an intelligent enterprise Organizations that are in the process of transforming need the support of a new EPM solution that is responsive to the needs of business users. At the same time, the EPM must keep an eye on emerging technologies like artificial intelligence, machine learning, integrated analytics and business intelligence, to accelerate data understanding and augment decision-making. Organizations in need of reliable, accurate and adaptive planning and performance management systems should proactively assess connected EPM solutions underpinned by AI to power their enterprise growth strategies. The current revolution in the EPM marketplace addresses the ways organizations want to minimize and rationalize IT footprints and infrastructure while delivering greater value and insights. Cloud adoption, investments in emerging technologies, TCO reduction, and securing data and systems to ensure compliance must therefore become key management priorities for IT leaders looking to enable an intelligent enterprise for business leadership. Shishir Saxena Global Head of EPM Analytics, Wipro Shishir with over 18 years of consulting experience helps enterprise customers across areas such as business forecasting, planning and budgeting process strategy, and its optimization. Shishir has deep domain expertise in finance and sales. Ajinkya Pawar Consultant - Strategy & Planning function, Data, Analytics, and AI, Wipro Ajinkya with a deep understanding of the digital and analytics industry, including market insights, competitive landscape and related ecosystems, provides advisory services and thought leadership for building

value propositions and driving cohesive strategies. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Accelerating time to insight with automation and cloud

----- Arcticle source ----- https://www.wipro.com/analytics/accelerating-time-to-insight-with-automation-and-cloud/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Accelerating time to insight with automation and cloud In the digital age, digital data lakes have replaced file cabinets, and every organization is sitting on an astounding amount of data. With this increase in generation of data, businesses are reeling under pressure to reduce time to garner insights from this data for a definite competitive edge. There is 2.7 Zettabytes of data existing in the digital universe today1. At any given minute, US alone generates more than 2,657,700 gigabytes of data2. This is the golden age for data scientists and engineers, as there are a host of things to accomplish and an overwhelming amount of data at disposal. One might think this to be an ideal situation where organizations have what they want and know what to do with it. But it's far easier said than done. For starters, there is a huge dearth of qualified professionals in the business to deal with the data. Mckinsey believes there will be shortage of 250,000 data scientists by 20243, and Forbes opines that it takes 51 days on average to fill a position of data scientist or advanced analyst in professional services4. The demand-supply mismatch remains a pivotal challenge for business leaders everywhere. To add to this challenge, analytical teams are unable to build and test big analytics projects as fast as they would like. This can be attributed to the fact that the data with any enterprise is both complex and unique. The exploratory data queries by data scientists tend to include advanced statistical methods, which are repetitive and time-intensive. Having a meaningful impact with data involves innovation, thorough experimentation and time. Whereas majority of the time is consumed in tasks that serve as a precursor to actual data analysis such as making the data fit for analysis, identifying important variables etc. These two aspects of demand-supply mismatch and time-consuming tasks need to be addressed to unravel the full potential of big data. There is now, more than ever, the need to accelerate. The primary focus is to accelerate productivity of data scientists by providing them a user-friendly data platform that can help analyze datasets quickly. Speeding up the data-to-insight journey The start can be with automating and simplifying all repetitive tasks such as data

ingestion, schema recognition, automated variable selection, model creation and validation. The automation of above processes provides more time to the data scientists for application of their thought to reach actionable insights. The models created can be stored and reused by citizen data scientists as and when the need arises. Combined with the power of the Cloud to easily scale based on the amount of data, models can be trained effortlessly, and deployment can be automated. This will dramatically accelerate the time needed to build, scale and deploy a data analytics project. These steps are not exhaustive by any means; innovation knows no bounds but starts with a simple step. For the world of data science, things have started to move in the correct direction, it is now upon the big data fraternity to accelerate the processes to be future-proof. References 1 https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#9ceee2560ba9 2 https://www.iflscience.com/technology/how-much-data-does-the-world-generate-every-minute/ 3 MGI – The Age of Analytics – Executive Summary 4 https://www.forbes.com/sites/louiscolumbus/2017/05/13/ibm-predicts-demand-for-data-scientists-will-soar-28-by-2020/#27b440e37e3b Samir Bansal Consultant - Data, Analytics and Artificial Intelligence, Wipro Samir, a technology enthusiast, likes all things new about technology. He has been actively involved with various analytics-based projects essentially finding actionable insights from Big Data. His area of work includes social media analysis, text mining and natural language processing. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

The power of three

----- Arcticle source ----- https://www.wipro.com/analytics/the-power-of-three/ ----- About the Authors Contact Wipro Please fill the required details to access the content The power of three Harnessing advanced analytics and AI to optimize the value from IoT The Internet of Things (IoT) is enabling businesses to evolve into a data-driven enterprise. The value of IoT lies in making operational processes more agile and efficient by utilizing data to enable decision-making through advanced analytics. However, with analysts expecting around 50 billion connected devices by 2020i, how can enterprises tap the humongous reservoir of IoT data to generate value? The answer lies in leveraging Artificial Intelligence (AI) to unlock value from IoT. While it is critical for an enterprise to sense and act, it must think and learn too like an intelligent enterprise. AI is the basis for this cognitive ability and this is the reason many startups and established companies are investing in building a cognitive future. This transformation requires apt architectures, applications, data, and tools. Enterprise Cognition: The fulcrum of the IoT

revolution The IoT ecosystem comprises a separate layer of devices (or 'things') that needs new architecture that includes communication protocols as well as information management and governance for building trust in data and Insights. The defining aspect is the generation of insights, as analytics is a key driver of success in IoT initiatives. Advanced analytics and AI together breathe life into a network of connected devices. They enhance operational value, driving business outcomes such as enhanced customer experience, improved operations and productivity, real time decision making, and recommendations for the next best action (NBA). This is made possible by harnessing the Big Data that becomes available from sensors and devices such as drones, autonomous vehicles, and traffic signals that record transactions, movements, environmental conditions, and other situational events. Consumption of such data to generate actionable insights is essential to providing more meaning to a network of connected things. With organizations around the world realizing the need to deliver exceptional customer experiences, Analytics and AI must become the focal point of the IoT strategy in the quest to become a customer-centric intelligent enterprise. The ability of an organization to collect, store, analyze and squeeze actionable insights out of data from various disparate systems/ things will be the deciding factor in obtaining the high value of cognition that is necessary for an intelligent enterprise. Enablers of an Intelligent Enterprise While there is no one-size-fits-all solution to enabling enterprise cognition, some common components are (See Figure 1): Figure 1: Enablers of Intelligent Enterprise Stream processing: Data is generated continuously and an efficient stream processing system or platform is essential to effectively leverage the data for better decision making. It is imperative that the streams of data are consumed to generate real-time insights using sophisticated analytical algorithms as the value of these insights is short-lived. Predominantly, as data from an IoT ecosystem is in the form of time-series data, pattern detection and anomaly (events) detection algorithms are employed in conjunction with other models. Complex event processing (CEP): An emerging network technology called CEP is triggered when an 'event' occurs and is used to translate incoming events data to provide timely insights into what is happening and recommends the NBA. An event could be a rise in share price, drop in heart rate, blood pressure, sensitive social media posts, customer activity on websites and so on. CEP is used in applications that require real time monitoring, and managing and predicting events. This provides any company with the ability to react quickly to critical situations to influence business outcomes and potentially save thousands of dollars - or impact patient outcomes and save lives. IoT orchestration: The key to scaling a successful IoT solution is a full-stack dispatch and orchestration layer. An orchestration layer ensures interoperability, data management and coordinated communication between different 'things' within the IoT infrastructure. It involves integrating different applications with IT systems, cloud platforms and other entities to enable seamless real-time data synchronization. Addressing a business need generally requires multiple IoT solutions to work together, and significant value lies in such cross-vertical integrations. Advanced analytics and AI: Analytics on IoT data produces actionable insights about customers, assets and business operations. Organizations are increasingly leveraging analytics and Robotic Process Automation (RPA) to build automated systems that improve productivity and ensure seamless business operations. Machine Learning

algorithms are used to make sense of the vast data that is available as well as to build algorithms for control systems. Advancements in research on AI techniques like deep learning, cognitive learning, natural language processing and computer vision have made interactions between things meaningful, while enabling task automation and work augmentation. With the increasing adoption of such emerging technologies, every industry is going through disruption faster than ever before. In the manufacturing industry, preventive asset maintenance and fleet management have delivered transformational business outcomes. Insights into when a particular asset might reach the end of its lifecycle and when maintenance has to be scheduled are resulting in cost savings in maintenance and downtime that significantly increase the profitability of organizations. Similarly in the healthcare sector, AI is revolutionizing healthcare delivery by enabling faster diagnoses, drug administration, case management and even remote healthcare service delivery. Such transformational outcomes lead to product and service innovation, in turn leading to the emergence of newer business models across industries. However, certain challenges stand in the way of organizations trying to harness the power of IoT fully. Roadblocks to realizing value from IoT Key challenges that prevent organizations from realizing complete value from IoT implementations include: Moving Ahead: Appreciating the potential and the complexity of IoT   IoT is more than a next-gen technology. It has become a strategic priority for businesses today. It is becoming increasingly clear that analytics at the edge of connected devices and AI applications will be a major future success driver. To succeed in the new environment, organizations must have a clear vision on how an IoT ecosystem is likely to transform their organization into an intelligent enterprise. This requires taking stock of the current maturity of end-to-end technology systems. Sufficient importance must also be given to aspects that will enable real time actionable insight generation – a critical factor in powering an organization's journey to becoming an intelligent enterprise. While there are major challenges for organizations in building an end-to-end IoT ecosystem, the potential gains far outweigh the roadblocks as IoT holds tremendous opportunities for sustainable business success. Kunal Ojha Principal Consultant – Data, Analytics & AI, Wipro Kunal has 15 years of experience in AI Thought Leadership, Advanced Business Analytics, Decision Systems and Data Science. He has been actively involved in building products, creating solutions, formulating strategy and executing analytics program in-house and for customers. He has worked on creating analytics content strategy for world's first industrial internet platform. He helps customers build/enhance/modernize their AI platform and governance strategies. Area of work includes: Text Mining, Predictive Modeling, Machine Learning, Deep Learning, Algorithms, IOT, AI and Blockchain Praveen Kumar Strategy Consultant – Data, Analytics and AI, Wipro Praveen has a deep understanding of the analytics industry and the digital ecosystem. He has extensive experience in designing solutions and offerings in the advanced analytics space. He provides advisory services and thought leadership for building value propositions and driving cohesive strategies.
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Leveraging predictive maintenance for

higher profitability

Leveraging Predictive Maintenance for Higher Profitability Predictive maintenance is a popular application of predictive analytics that can help businesses in several industries achieve high asset utilization and operational cost reduction. It is designed to help determine the condition of in-service equipment in order to predict when maintenance should be performed. This approach promises cost savings over routine or time-based preventive maintenance, since tasks are performed only when warranted. Unscheduled equipment downtime can be detrimental for any business. It is critical to keep field equipment running to maximize utilization and minimize expensive, unscheduled downtime as well as health, safety and environmental risks. The goal of a predictive maintenance strategy is to extend the useful service life of equipment and prevent failures. Anomaly detection is a common approach because it identifies when a device is behaving differently than expected. Predictive maintenance leverages data from an individual asset to predict failure. This way, repairs can be done when needed (and avoided when not). Business case for predictive maintenance Businesses require critical equipment to be running at peak efficiency and utilization to realize their return on capital investments. These assets could range from aircraft engines, turbines, elevators, or industrial chillers—which cost millions—down to everyday appliances like photocopiers, coffee machines, or water coolers. Predictive maintenance in business areas This was implemented in the electromechanical shovels industry to monitor and predict the failures upfront, so as to estimate and eradicate failures for smooth machine flow. Challenges Traditionally, it has been difficult to apply condition monitoring and predictive techniques to these electromechanical shovels due to inadequate analysis algorithms and equipment, as well as the harsh environment. Traditional vibration analysis (the main tool for predictive maintenance on rotating machines) performed by conventional equipment is based on the Fourier transform, which assumes constant rotational speed. This is not adequate for the shovel, and hence, a different approach is needed. Solution Predictive maintenance as a process flow with 3 steps, as illustrated below: Collect: First, you'll need to gather relevant data that can help you predict time-to-failure. This is often done by adding vibration IoT sensors to get "indirect" data, for example. However, a far more direct method is to tap into the run-time data the machine uses to operate. All vehicles—and most industrial machinery — operate using a combination of transducers (sensors and actuators) and control units. The control units implement algorithms that determine the behavior of the machine. The run-time data is continuously transported,

often using wires and communication protocols. A popular transportation method is "CAN bus" (Controller Area Network) that is used in automotive to allow communication between ECUs and sensors, which is standard in all vehicles. If a vehicle or machine uses CAN bus wires for data transportation, it's often possible to safely tap directly into the run-time data stream. This can be done using an IoT CAN bus data logger, which opens up the full scope of your asset operational data. Your CAN logger can then transfer this data to the cloud via a WiFi hotspot (WLAN, 3G, 4G) in near real time. Predict: The collected data is processed in the cloud. For CAN bus data, this includes transforming the data to scaled engineering values. Once ready, the data can be used in a predictive model. These range from simplistic single-variable thresholds to advanced machine-learning algorithms. React: The model provides estimates of the time-to-failure for an asset and its components. From here, it's 'simply' reacting on the insight: Auto-schedule maintenance, send push notifications to warn staff of potential breakdowns and optimize your spare part inventory. Conclusion Machine learning is a natural fit for predictive maintenance, which involves failure classification using huge amounts of sensor data. To build a failure model, we require enough historical data that allows us to capture information about events leading to failure. In addition, general "static" features of the system can also provide valuable information, such as mechanical properties, average usage and operating conditions. However, more data is not always better. When collecting data to support a failure model, it is good to ask questions like: a) What are the types of failure that can occur? Which ones will we try to predict? b) What does the "failure process" look like? Is it a slow degradation process or an acute one? c) Which parts of the machine/system could be related to each type of failure? Kalyani Vuppalapati Technical Lead, Data Analytics & AI, Wipro Limited. Kalyani is an expert in multiple analytical tools and data mining methodologies. She has also worked on various analytics projects in Manufacturing and Technology, Energy and Utilities and Healthcare domains. Her experience includes data analysis, proposing analytical solutions, generating dynamic reports and other data preparation components like data pre-processing, profiling, cleansing, validation and transformation. =======================

Serverless data integration:

The next big thing

----- Arcticle source ----- https://www.wipro.com/analytics/serverless-data-integration-the-next-big-thing/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Serverless data integration: The next big thing With the growing client expectation of faster time to market, most of workforce efforts in the IT industry are spent in maintaining the infrastructure of the project instead of focusing on the actual work items. Managing the servers round-the-clock not only has an economic impact on the entire project but also introduces several issues of security vulnerability. Serverless concepts help to increase the performance, reduce operational cost, and implement auto scale-up

based on the workload without any manual intervention. More often than not, conventional practices are preferred because of their vast acceptability and reliability but best practice and conventional practice are two different things. The term serverless is in actuality a deceptive and misleading term. The servers still exist in some shape or form with the code being deployed and executed on the server but the responsibility shifts from the developer to third party vendor and in turn, the developer focuses more on the code and less on the servers, hence the significance of the term 'serverless'. Advantages of serverless computing in data processing The realization of the Extract, Transform, Load (ETL) process often requires uninterrupted use of virtual machines. The servers still need to be up and running even if the code is not being executed. Any slight interruption or shut down in servers especially production servers can wreak havoc on the entire process. Such persistent use of servers also increases total cost incurred and the additional hassles of infrastructure management. These unwanted outcomes can be easily dispensed by migrating to serverless technology and integrating data integration tools with the cloud services. Outsourcing servers to third party vendors not only reduces the existing complications of the project but also comes with added benefits. With the shared responsibility of the servers, the service is stationed in dedicated hands who handle the tasks of receiving requests from clients, responding to clients, capacity planning, monitoring of operations, and scheduling tasks. It also provides the benefit of scaling down the cost of the project since the charge is on the execution time and the resource used, and the payment is based on per second. Integrating data with serverless also adds agility to the system. How serverless works   Instead of having physical server to execute process, serverless is events-based. When a file is uploaded, and it requires the execution of a certain job to perform the intended function, serverless architecture comes into play. The trigger can vary from an HTTP request to API trigger or Files based trigger. Various sources provide different definitions of serverless. The key tenets required to define a serverless platform are: It is not necessary to have an integration server to perform data integration jobs. In serverless data integration, a function is triggered for job execution via HTTP/SOAP request. However, all cloud services support a number of programming languages to write the function code, and the compatibility varies significantly. While the full-fledged shift towards serverless may take time, a significant movement towards it has already begun. With serverless, you manage your apps (not your servers), which in turn simplifies your dev-ops and provides faster time to market. Ganesh A Senior Architect - Data, Analytics & AI, Wipro Ganesh has over 19 years of data warehouse experience. He is currently focusing on open source integration technologies and has successfully executed large engagements for global companies. He is a TOGAF certified Enterprise Architect. He is also certified in different database technologies and supports the practice in managing cloud native ETL tools. Sujata Yadav Project Engineer - Data, Analytics & AI, Wipro Sujata graduated from the National Institute of Technology, Jalandhar. She focuses on various data integration tools and is currently working for a client leveraging a new age technology embedded with big data solutions. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk

Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption
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Data Science Accelerator:

Empowering citizen data scientists

----- Arcticle source ----- https://www.wipro.com/analytics/data-science-accelerator-empowering-citizen-data-scientists/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Data Science Accelerator: Empowering citizen data scientists Organizations are rapidly adopting advanced analytics to enable data-driven business decisions. As a result, the demand for data science experts is growing. However, there is a huge gap between the demand and supply of data science talent. McKinsey confirms that 12% annual growth in demand for data scientists outpaces the supply of 7% data science graduates per year, which would lead to a shortfall of some 250,000 data scientists by 2024[1]. Hence, there is a need to fill the current skills gap by enabling citizen data scientists in the organization. Citizen data scientists, though not experts in the field of data science, can leverage analytics and statistics while delving into the data to derive additional insights. Citizen data scientists complement expert data scientists by bringing in their own expertise and unique skills to the process. Technology is a key enabler of these non-specialists (citizen data scientists). Data Science Accelerator empowers the citizen data scientists to extend their reach to data and analytics via approaches that automate data science stages for insight discovery. This paper explores an approach to accelerate data science by providing automated predictions on dataset via automation workbench and reusable modules. Data science acceleration platform Data Science Accelerator (DSA) powers automated predictions on dataset via automation workbench to empower citizen data scientists and reuse modules that make data scientists more productive. It leverages open-source technologies in a cloud environment to create a user friendly workflow. Figure 1 highlights the key features essential to a data science acceleration platform. Figure 1: Key features of data science acceleration platform Figure 2: Workflow of data science accelerator Features and functionalities The key features and functionalities of DSA across different data science phases are: 1. Data analysis: Provides a quick summary of the dataset and highlights the underlying data patterns and relationships. a. Univariate analysis: DSA has additional features viz. Automatic schema recognition for smart detection of data type and ID variable, which enables creation of right univariate distribution based on the variate type detected. b. Bivariate analysis: Distinctive techniques such as Weight of Evidence (WoE) at decile level, chi-

squared test, cross tabulation and tukey test are used to explain association or disassociation between a pair of target and explanatory variable at pre-defined significance level. 2. Feature engineering: DSA provides a user-friendly environment to: a. Drop column(s) via single click button b. Impute missing values c. Cap outliers based on position and influential value in the range scale d. Provide data transformation options such as split variables, standardize or normalize data, flag creation e. Auto-discard variables basis Strength of Association (SOA) and Variance Inflation Factor (VIF) Thus, it reduces process time for transmutation, screening and ensembling data features, leading to significant effort and cycle time reduction in model development stage. 3. Model creation: Allows user to build a model as per requirements using the provided options: a. Test-control sampling - User creates development and validation data from the modelling data using user-defined algorithm by choosing sampling method and train ratio b. Expression split - Helps create hold-out samples based on chosen partition option 4. Model selection: Recommends the most suitable model for solving the problem viz. classification or regression for the chosen target variable. This feature provides guided assistance throughout the journey of model development. Further, model performance is validated via confusion matrix, Mean Squared Error (MSE), concordance value, etc. 5. User control options: Provides the following additional options to scrutinize the model generated: a. Download scored data b. Download transformed train and test data c. Score model with new data d. Download validation charts e. Rebuild and save model 6. Model catalogue: Stores and enlists all the models created by the user. This provides a quick glimpse of the various models created using diverse set of variables for the same dataset, thereby enabling user to compare performance of different models via accuracy, precision, R squared value, F1 score etc. Thus, DSA not only helps improve productivity of data scientists by reducing process time through automation of repetitive tasks, but also empowers citizen data scientists via code-free analytics. It provides guided assistance through a series of statistically robust steps with minimal supervision from specialists. The future roadmap Unlike other automated data science tools, which are essentially "black boxes", wherein most of the intermediate techniques are hidden and beyond the control of the analyst, DSA provides transparency and control to experienced data scientists to understand under-the-hood rationale at every analytical process and override recommendations, if any. Further, based on the data and the semantics, it auto-suggests the most suitable model for solving the problem viz. classification or regression for the chosen target variable. This feature is pivotal for citizen data scientists, as there is a guided assistance provided by the platform. In addition, it has an in-built ability to scale and process large data volumes through distributed execution on Spark clusters which enables easy implementation. DSA capabilities can be further enhanced by: Reference [1] https://mck.co/2KKhr3s Bavya Venkateswaran Consultant, Wipro Limited. Bavya is currently responsible for solution design and implementation of advanced analytics and artificial intelligence-based use cases on Data Discovery Platform (DDP), Wipro's proprietary Insights-as-a-Service offering. She has been instrumental in delivering turnkey solutions in Energy & Utilities, Human Resources, and Healthcare domains. Harish Kumar Chauhan Project Lead, Wipro Limited. Harish leads Engineering division of Platform and Solutions in the Analytics group at Wipro. He is responsible for creating, developing and implementing various analytics

solutions. He has experience in designing big data architecture in cloud environment and ideating for automation in the industry. Dipojjwal Ghosh Principal Consultant, Wipro Limited. Dipojjwal is currently involved in the development of analytical apps for Consumer and Utility domains on DDP, Wipro's proprietary Insights-as-a-Service offering. He has around 10 years of research and analytical experience in Manufacturing, Energy, Natural Resources, and Retail domain. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption

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How to address shortcomings in AI to build trust

----- Arcticle source ----- https://www.wipro.com/analytics/how-to-address-shortcomings-in-ai-to-build-trust/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content How to address shortcomings in AI to build trust Amazon successfully used automation and artificial intelligence for order recommendations and fulfillment in their ecommerce platform and warehouses, but when it came to evaluating job candidates, the scoring engine failed[1]. Built-in biases in the real world were amplified in the machine world with recruiters realizing that scoring results for technical positions like software development were not gender-neutral and qualified women candidates were not being recommended. Amazon scrapped the project. Facebook shut down its AI system meant to learn negotiation skills, after bots created their own language that was nonsensical and difficult to debug2. Microsoft had false starts with a chatbot that learned racist and profane terms in interactions with consumers[3]. Artificial Intelligence holds great promise, but the challenges in implementing this technology has far-reaching implications. It has blind spots that are obvious when bot behavior is part of the solution (profanity) but more difficult to address when processes and cultural behavior influence the technology (racial, gender, socio-economic variables). Lack of trust in AI In spite of all the technological advances, people still lack complete confidence in automation and predictive insights, and the underlying relationships organizations have with consumers. A large part of this relationship is built on the data organizations collect from consumers. Is the data accurate? Is the data private? Is there recourse to correct data? Google was in the headlines when it shutdown Google+ after a software glitch in the social site holding personal consumer data was found to be susceptible to hacking4. There is no evidence that this data was improperly accessed but it caused some PR issues. Bias is a societal issue and because

humans program systems, those systems are susceptible to existing bias. And since the data to teach and test systems comes from human action, the bias can be built into the data.The decisions that AI makes is sometimes highly intuitive. Since it undergoes a host of calculations with the data along with variables, it gets difficult for a human to understand the basis of the decision. This is the 'black box' problem with AI. With the lack of transparency, humans are not able to understand what goes on inside AI, which causes anxiety and ultimately distrust. It is clear that organizations embarking on a data-driven journey must understand the basis of trust in systems and data that consumers expect. Creating transparency Research suggests that using AI to augment human decision-making will allow the AI system to learn from human experience and improve trust. Assembling stakeholders from diverse backgrounds can address the challenge of human bias through governance and other research to understand how algorithms make choices. An effective data governance strategy is essential in order to address error and bias in a data model. This is a key component of an AI system framework since it not only offers a simple way to use the right data but also flags the errors in the data. A framework for evaluating data fit for AI: The core of data governance is not only about high quality data but also about the legal requirements of handling consumer and personal data combined with an organization's digital ethics. Regulations like GDPR allow consumers to keep a tab on their personal identifiable information (PII), rather than it being floated around without their consent. Digital ethics is the foundation for how algorithms are created, tested, and deployed. Furthermore, well-organized data will increase consumer confidence in a company's brand when consumers understand who owns their data and why. Making AI more insightful AI is the 'black box' that crunches a vast amount of data to identify hidden patterns and underlying signals through its complex system, whereas human trust is often based on how people think. It is pertinent to open the black box of machine learning and be translucent if not completely transparent to the user on its working. Some of the analysis performed by AI will inevitably be probabilistic based on incomplete information. It is therefore important that an organization recognize the limitations and explain this to its customers through a compelling user experience. References: 1https://www.theguardian.com/technology/2018/oct/10/amazon-hiring-ai-gender-bias-recruiting-engine 2https://techcrunch.com/2017/09/06/the-secret-language-of-chatbots/ 3https://techcrunch.com/2016/03/24/microsoft-silences-its-new-a-i-bot-tay-after-twitter-users-teach-it-racism/ 4https://www.wsj.com/articles/google-exposed-user-data-feared-repercussions-of-disclosing-to-public-1539017194 Alex Soejarto Head of Strategy – Data, Analytics & AI, Wipro Limited. Alex is a thought leader in IT services disruption and innovation. He has worked with solution providers in their investment strategies and competitive positioning. He leads the strategy, planning, and marketing teams of the DAAI service line at Wipro. Roshan Wilson Consultant, Strategy & Planning – Data, Analytics & AI, Wipro Limited. Roshan is currently responsible for building value propositions and driving cohesive strategies for Wipro's Data, Analytics & Artificial Intelligence business. He has significant experience in strategy, thought leadership and marketing. Roshan is a Computer Science Engineer and holds an MBA degree from FORE School of Management, New Delhi. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to

planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The future of integration From ETL to API-based EAI

----- Arcticle source ----- https://www.wipro.com/analytics/the-future-of-integration-from-etl-to-api-based-eai/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content The future of integration From ETL to API-based EAI The Web API or API in short, is not a new technology. It has been there for more than a decade and today Programmable- Web directory lists more than 20,000 public APIs available for consumption. Transactions over billions of dollars are executed successfully in this technology every day and the volume is growing every passing quarter. Though initially developed with system integration over HTTP protocol in mind, the recent developments have spilled over to various other peripheral areas. The growth of API and related technologies are influencing the established market players in these areas to modify their strategy to incorporate API in their product offerings, if not completely re-doing their product strategy around API driven architecture. In this article, we will explore how the traditional on premise data integration approach is changing towards API based integration of both on-premise and cloud based systems. The integration battleground System integration is not a new concept. Humankind have discovered the power of collaboration in prehistoric ages and utilized the concept in every domain since, only constrained by the available technology of that point in time. Divide and conquer strategy ensured that the systems continued to be developed independent of each other, while business survival compulsions forced them to get connected more and more. In the process two broad categories of high-level integration emerged—application integration and data integration. Applications started talking to each, mostly driven by the usage requirement—either asynchronously via messaging or synchronously via HTTP and other online protocols. The availability of bandwidth and processing power constrained them to use minimum amount of data for processing. The predecessors of current day web APIs trace their root in this type of Enterprise Application Integration strategy. Figure 1 gives the relative advantages of each strategy - ETL vs EAI. Figure 1: Relative advantages of ETL and EAI Development drivers for API based integration There are six major drivers pushing towards the convergence of application and data integration via API. Cheap bandwidth: Advances in fiber optics are enabling wires to carry terabytes of data at the speed of light, whereas 4G (and imminent arrival of 5G) are sending gigabytes over ether to mobile devices. The abundant supply is driving down the effective cost of bandwidth

to the point of insignificance. Sensors, systems and data explosion: Increasingly, we are living in a connected world, filled with various sensors and systems, generating enormous amounts of machine data. The maturity of a global IT manufacturing supply chain has lowered the cost of IT Hardware significantly, allowing collecting, collating, processing and making sense out of this humongous data load via artificial intelligence, completely removing the human bottlenecks in the process. Privacy and security: Deployment of cheap biometric devices for identification by various government organizations worldwide have necessitated foolproof data protection legal framework. The advent of social network has sensitized the masses about the danger in lack and/or loss of privacy. Cloud—private, public and hybrid: While on-premise systems are not going away anytime soon, every organization worth its name are spending significant amounts of effort on their hybrid cloud strategy to cut down their operational costs. Other than optimizing idle capacity, the 'pay as you go' model of cloud is inherently more suitable for the business, driving towards its adoption. Handheld devices everywhere: Cheap bandwidth combined with significant processing power available in handheld devices have increased the appetite for real time data of the data consumers. The information latency of traditional batch processes is no longer acceptable. Enriched data must appear for user consumption as soon as the event occurs and tracked till the logical closure in all four space-time dimensions. Everything has an app for it: The data consumer is ready to pay for the on-demand service, giving rise to the 'subscription' model of instant revenue generation for the data. Taking advantage of this, an ecosystem of connected apps has come up, providing every kind of service at every corner of the world. The data they use are not always their own. The interaction patterns and the data generated by them changes rapidly. This necessitates a different kind of agile tool that is lightweight, fault tolerant and horizontally scalable. IPaaS: The wholesome integration In the last few years, Integration Platform as a Service has gained significant traction. Taking advantage of increased security over public networks, cheaper cost of connectivity and larger on-demand capacity of cloud, they are steadily gaining ground over traditional on-premise ETL tools. The current global revenue has already crossed a billion1 and can only go up since all the traditional ETL vendors are increasingly focusing on this space. Using their existing customer base, existing vendors have either retained strong presence or regained the initial lost ground. Simultaneously new players have come up with their own niche. There is still entropy in the market and it will go through a consolidation phase in future but today's business can ill afford to wait it out. A. The first advantage the IPaaS tools have is their dual capability of API connectivity and data processing. Today's SaaS offerings are not simple. Take for example ServiceNow, SalesForce, Ariba or Office365; each provides significant capability at the cost of a very complex and complicated API. They also need to transfer huge amount of data back and forth. With the deep inroads by them in every domain, an organization has a serious business disadvantage if it is not ready to consume the relevant ones in its own business process. However, the design and development of an API, its gateway or even the development of a public or B2B API client in bespoke manner is not simple and can quickly turn into an expensive and time-consuming proposition completely outweighing its benefit. Another consideration is the adaptation of own API by the outside world. In case of

no or low adaptation, the entire expense goes out of the window without any return. Given the diverse nature of the public and B2B APIs, the tools already have significant capability of transforming data. Traditionally there has been three patterns of data transform which every ETL tool excel in: a. Movement with enrichment from one system to another b. Synchronization of data in multiple systems - either uni or bidirectionally and c. Aggregation from many systems into one B. The second advantage of IPaaS tools are their tight integration with high performing messaging platforms. While the traditional ETL tools have developed connectors for them, the cloud native IPaaS tools have distinct advantage in streaming mode for better near real time asynchronous performance. The combination of high throughput and low latency allows creation and deployment of new architectures like hybrid transactional analytical platform. C. Typically, the on premise ETL tools have a perpetual license model with upfront payments connected to number of CPUs. The IPaaS, on the other hand, typically uses a subscription model tied to actual usage. This gives optimized cost of capability and business prefers this model more. Conclusion The days of ETL are far from over. The current customer base is still an order of magnitude more than the nearest IPaaS offering. Nevertheless, there is no denying that IPaaS is steadily gaining ground and is the way to the future. Given such a scenario, the prudent approach would be to retain the existing ETL solutions but simultaneously prepare a 'to-be' state involving an IPaaS tool. For any new development, a due diligence should be done based on the following key considerations: Reference 1 https://www.gartner.com/doc/3885665/market-share-analysis-integration-platform Swagata De Khan Senior Architect - Data, Analytics & AI, Wipro Limited. Swagata has over 19 years of data warehouse experience, and has successfully executed large engagements for global MNCs. He is an AWS certified Solution Architect and currently focuses on solutions involving Cloud, Integration Technologies, Artificial Intelligence and Machine Learning. Prasanna Raghavendran Head of Data Integration - Data, Analytics & AI, Wipro Limited. Prasanna has over 18 years of experience in the IT industry and is currently leading the enterprise data integration practice in Wipro globally. He has performed several leadership roles in the area of data & analytics including sales, pre-sales, consulting and portfolio management To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Empowering retail through customized, role-based insights

Empowering retail through customized, role-based insights March | 2019 The retail industry, now, has access to a wealth of data across a customer's lifecycle. The data helps predict customer behavior, assesses needs for new products, and triggers buying decisions. But the data is scattered and in different functional silos. What the industry needs is visibility into insights across the stages of a customer's lifecycle. This can be enabled by a suite of connected applications that extract actionable insights and share them across stakeholders at speed and scale. For instance, the Chief Marketing Officer should be able to monitor and measure marketing campaign effectiveness/ROI and ensure tight cost controls. The Marketing Manager should be able to track specific campaigns from lead T generation through to revenue won, analyze conversions, and identify gaps within campaigns. The Category Manager should be able to track category performance, understand the success of promotions, identify trends in market basket, compare changes in buying patterns over time, and get alerts for problem areas. The data-information-insights-outcomes process is different for each role in the retail organization. Most retail organizations face hurdles in delivering these role-based insights. In other words, there is a requirement for applications tailored to specific retail roles. Based on the needs of the role, the applications must generate insights that are descriptive, diagnostic, predictive and prescriptive in nature. Designed for personas A Customer Insights Platform (CIP) addresses the rising challenge around generating role-based insights. The CIP connects data and insights across the customer lifecycle enabling a multi-channel experience. The CIP has ready-to-use data ingestion engines, data transformation components, analytical models, predictive indicators, accelerators, machine learning algorithms, stream computing and natural language processing capabilities. These are bundled with industry-specific data models and frameworks. The models and frameworks give the CIP an extraordinary ability to generate advanced, highly intelligent and role-specific insights and visualizations. While it sounds complex, the CIP is relatively simple to roll out. The CIP helps retail executives eliminate complex time-consuming analytical processes and bolster their business acumen with data-driven insights. Additionally, the CIP doesn't require extensive or specialized user training to become useful. It has an intuitive interface that anyone can begin to use in hours, without the need for intervention from IT. The CIP goes a step further. It places a variety of levers in the hands of each role, putting people in control of actionable outcomes. An additional reason the CIP finds easy traction within

the enterprise is its ability to monitor and provide insights aligned with the KPIs of a role. Making retail better The CIP addresses five clear themes that are critical to retail: Know your customer: Understand purchase behavior, analyze current spend and basket, understand preferences and needs, understand purchase frequency and affinity, analyze social behavior and signals Effective engagement: Understand customer preferences for products and channels to build SKUs/ bundles/ cross-sell/ up-sell, determine path to purchase and engagement, assist in store layout optimization, determine visual displays and their effectiveness, and improve product placement and uptake Target results: Analyze online purchase intent using clickstream data to improve campaign response, personalize and optimize offers, enable Next Best Offers and increase conversion, identify new market segments for potential customers Right product, channel and price: Analyze historical performance of campaigns, develop new campaigns, increase customer awareness of products, surface new opportunities for sales, build brand loyalty, show product availability and allocation, enable price elasticity, provide single view of inventory across channels, personalize bundles Drive retention: Analyze social behavior and signals to improve customer retention, analyze feedback to improve products and create post sales engagement to improve experience, understand drop outs and target them for retention, build high-value relationships and reputation management, improve Customer Lifetime Value The CIP is highly effective because it provides interwoven insights, is simple to use, and is aligned with the KPIs each role visits to understand how the business is doing. The key benefits of the CIP include: Smart decision-making: Each stage of a customer's lifecycle is mapped and delivers role-specific visualizations of the output. This means executives don't have to rely on gut feel or experimentation. Instead they can confidently and quickly take outcome-based decisions that improve organizational agility and competitiveness. Acquire 3600 view across customer lifecycle: The CIP takes siloed organizational data and unifies it. This gives a complete and reliable view of customers so that no opportunities are lost. It then allows the organization to share those insights. For example, insights from campaign management can be used by other functions to improve customer loyalty or identify unproductive market segments. Worry-free access to decision science: The organization can focus on its core competency and use the CIP to take decisions confidently. For example, data science can be used to accurately measure customer sentiment (something that researchers can take ages to determine) and offer appropriate interventions where required; it can be used to analyze customer lifetime value and recommend the level of investment to be made in retaining specific customers. Data science is a mature practice that is proving to be a critical aid in decision-making across industries and retailers must learn to leverage it. Fully integrated with enterprise systems via APIs: The CIP offers the ability to use a wide variety of data to simulate complex scenarios around decisions. This places unprecedented capabilities in the hands of managers to weigh options, determine optimal outcomes and take decisions. Leading retail organizations that want to leverage data are examining systems that deliver customized, roles-based insights. It is the logical path to take for shifting heavy lifting out of analytics and placing more power in the hands of executives to take fast and accurate decisions. Dipojjwal Ghosh Principal Consultant, Wipro Limited. Dipojjwal currently develops analytical apps for consumer and

utility domains on Data Discovery Platform (DDP), Wipro's proprietary Insights-as-a-Service offering. He has 10 years of research and analytical experience in domains such as manufacturing, energy, natural resources, and retail. He has an MTech degree in Quality, Reliability and Operations Research from Indian Statistical Institute, Kolkata. S.Jayaraman Consultant, Wipro Limited. Jayaraman is a business analyst for consumer apps on Data Discovery Platform (DDP), Wipro's proprietary Insights-as-a-Service offering. He has 9 years of retail domain experience in merchandise planning, assortment planning, segmentation strategies, in-stock management, supply chain optimization, video analytics, JDA forecast & replenishment, and allocation strategies. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Bringing together Six Sigma and analytics for process excellence

----- Arcticle source ----- https://www.wipro.com/analytics/bringing-together-six-sigma-and-analytics-for-process-excellence/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Bringing together Six Sigma and analytics for process excellence The Six Sigma methodology is not new - it has been around since the 80s. What is interesting is its long shelf life. It continues to be relevant to modern day operations despite rapid technological advancements. A data-driven approach, it helps reduce defects in products and services, while increasing customer satisfaction through continuous process improvement1 2. As the key focus of Six Sigma is process improvement, organizations can apply Six Sigma principles across various initiatives and activities, including data science, business intelligence (BI) systems and data quality. Every process has one or more independent input factors f(Xs) that are transformed by a function to produce an output. Six Sigma is calculated as $Y = f(x) + \mathcal{E}$ where 'Y' is the desired outcome or the result of the process which depends on the f(Xs). Here $\mathcal{E}$ represents the error factor or how accurately the f(Xs) are transformed, to create the outcome. To ensure accurate results using the Six Sigma formula, it is important to focus on the causes, i.e. the f(Xs) and not on the result 'Y'. By identifying causes and negating them, users can automatically improve the result as the objective of Six Sigma is to improve process performance by reducing variance. The more variation a process has, the lower will be the quality of the output. However, to achieve process improvement breakthroughs, it is critical to minimize the input variable variance in order to minimize the output variable variance. Marrying Six

Sigma and analytics for optimal process performance Let's take a deep dive into how Six Sigma and analytics work together to improve quality outcomes in the age of Machine Learning (ML) and Artificial Intelligence (AI). Measuring phase: The first step is to determine data quality for accuracy and precision, and clean it for further use. In a typical scenario, governed data quality initiatives are conducted at a global or regional level, as opposed to specific analytics projects.3 The next step involves descriptive analytics that answers the question "What happened?" This step explores the data to visualize and understand what the data is saying. To do this, we use the $Y = f(X) + \mathcal{E}$ equation. Analyzing phase: Once users understand the variables and features, it is easy to diagnose factors and root causes that affect the problem outcome. The variables are represented as the Xs in the $Y = f(X) + \mathcal{E}$. equation. Often, in ML, the number of features can be reduced without affecting the result through the analyzing phase of Six Sigma. The next step in the process involves using predictive and prescriptive analytics to answer questions such as "What could happen?" and "What should we do?" For successful results, it is important to select the right models and conduct several experiments to determine which model produces the best results. When applied to ML, Six Sigma ensures that a process reaches its target with accuracy (centering), and precision (spread) for optimal and sustainable process performance. For example, in the game of archery, if a target is reached without variance control (the spread around the target), there is no guarantee that the shots will be centered. However, if variance is reduced, it will result in a much tighter cluster (see figure.1). Figure 1: Using the example of archery to understand how SS contributes to Machine Learning It is only by consistently hitting the center and keeping the variance small that one can improve performance. In archery, the wrong stance, an inconsistent anchor point or lack of sight adjustment, can result in poor performance. Similarly, in an ML model, reduction in Six Sigma variance can improve the accuracy of supervised and unsupervised ML models. Processes contain variance because of bias and normal randomness. So it follows that if input variables or factors have variance, the output will also have variance. The result: inaccurate ML models. It is important to note here that ML data cleansing is not the same as Six Sigma variance reduction. In Six Sigma, users analyze the business process to find the source of variance in the input variables and reduce the variance or eliminate the bias. In ML, users do not analyze the business process. Instead, they only correct the data or eliminate the data that does not make sense. But data cleansing does not actually reduce variance. This means that if variance is not well understood, the ML model will not perform well. For example, in Figure 2 the chart on the left represents data after it is cleaned while the chart on the right represents data after variance reduction. It is clear that after variance reduction, the ML model results are much more accurate. Figure 2: The process of Six Sigma variance reduction In essence, data cleaning needs to include variance reduction of Six Sigma for an accurate, reliable, and effective ML model, be it a supervised or an unsupervised learning model. Leveraging the power of Six Sigma and analytics in healthcare Six Sigma is especially beneficial for processes that manage, collect and analyze massive sets of data. For instance, in healthcare, the massive sets of data include patient records, doctor's visits, medications prescribed, and other treatment procedures.4 5 The data also includes information on patient wait time, down time of diagnostic

equipment, and the time spent by staff on medical procedures and paperwork. Organizations can collect data at every step of a process, and through analytics, find the root causes that impede the delivery of a product or service and determine variance, or eliminate unnecessary steps in the process. Predictive analytics can also be used to search for hidden trends in historical data, and relationships between dependent and independent variables. For example, an ML model can analyze and predict when surgical equipment need replacement, how many people visit a healthcare clinic each day, the type of treatment prescribed, and the average wait time. The Winship Cancer Institute, for instance, used Six Sigma and predictive modeling, to reduce wait time from about one hour to less than 15 minutes.6 By looking at the predictive model in 15-minute increments, they are able to staff the Institute with the required number of healthcare professionals, at the right time. Six Sigma and analytics join forces to boost business predictability Even with constant technological advancements, the core principles of Six Sigma continue to make an impact on businesses across industries. Analytics coupled with Six Sigma helps build a process-focused business that can rapidly meet changing market demands. It is only by gaining predictability that an organization can maintain processes that achieve real and measurable results, that meet and exceed customer demands. Reference 1 https://businessjargons.com/six-sigma.html 2 https://www.sixsigma-institute.org/What_Is_The_Focus_Of_Six_Sigma.php 3 https://www.linkedin.com/pulse/data-science-next-step-along-six-sigmacontinuous-maybe-mark-cichonski/ 4 https://www.linkedin.com/pulse/data-science-next-step-along-six-sigmacontinuous-maybe-mark-cichonski/ 5 https://www.sixsigmadaily.com/combining-lean-six-sigma-big-data-healthcare/ 6 https://www.sixsigmadaily.com/combining-lean-six-sigma-big-data-healthcare/ Stephen C. Folkerts Consulting Partner, Data, Analytics and AI, Wipro Ltd. Stephen is an Information Management and Governance leader with over 30 years of experience in Business, Application, and Information Architecture. Included are Metadata Management, Data Quality Management, Data Integration, Master Data Management, Business Intelligence and Analytics. His experience spans the following verticals – Pharma and Life Sciences, Hospitality, Media, Tax, Audit and Advisory. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

How to ensure privacy protection?

----- Arcticle source ----- https://www.wipro.com/analytics/how-to-ensure-privacy-protection/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content How to ensure privacy protection? Anonymization of data at rest and in transit As data volume and

transactions continue to grow, every organization is concerned about data management and security. In the digital world, data is moving from on-premise to cloud at a faster pace to reduce operational cost and to increase scalability. The biggest concern is around personal data protection. There are regulations that exist for data protection like GDPR, PCI, HIPAA, etc. In addition to these, we need to protect/mask personal data in non-validated environments like training, development and testing. There are multiple tools and technologies available in the market for data masking/ anonymization to avoid misuse and to be statutory compliant. Effective data protection process: A data protection process encrypts the data and removes personally identifiable information from data sets, so that the actual people whom the data reflects remain masked. Every organization sets its own methods to mask the data, based on the data types and data sources. Below are the best practices to follow for data in transit and data at rest. When data in transit: For data which is in movement from point to point either on premise or cloud, the original is replaced with dummy values. This is also called as dynamic data masking so that the end user can't view the original data. Follow the process below for data in transit: Figure 1: High level data-masking ETL flow of data in move When data in rest: PII data which are in rest either on-premise or cloud which are mostly used for analytics or training purpose, can be protected through proper data access governance process or by masking the data when user sends any requests through Reports or SQLs. Follow the process below when data is in rest: Figure 2: High level data masking of data in rest Purushottam Joshi Senior Architect Data, Analytics & AI, Wipro Purushottam has over 20+ years of data warehouse and ETL experience. He is currently focused on open source integration technologies and has successfully executed large engagements for global companies. He is a TOGAF certified Enterprise Architect. He is also certified in different database and ETL technologies and supports the practice in managing both, cloud and on premise native ETL tools. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The promise and reality of AI

----- Arcticle source ----- https://www.wipro.com/analytics/the-promise-and-reality-of-ai/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content The promise and reality of AI Competencies needed to execute the AI magic Today, AI to most businesses is a technology that aids in the automation of tasks and augments decision

making by providing insights to key leaders and decision takers. There has been a rise in the use of AI technologies for data-driven decision making for numerous business goals revolving around customer experience and operational efficiency. For instance, profiling of customers for personalized marketing campaigns, faster and accurate detection of tumors in millions of EMRs, efficient maintenance of inventory and manufacturing plants, early detection of defaulters of loans, and development of smart cities and smarter infrastructures. In all of these use cases, the role that insights play is crucial; be it in better campaign designs, quicker and timely detection of tumors to prevent late-stage complexities, huge amount of savings due to smart plants, or connected citizens for better citizen services. Companies are trying to become insights-driven organizations that can think better and act faster. Two technologies – Cloud and AI have risen to the fore as the go-to technologies for such organizational transformation. Insights-driven organizations 'Sense' data from disparate data sources and assimilate that data into valuable data sets. They 'Think' and contextualize the problem statement to derive an understanding of the environment. They then 'Respond' to the business problem with reports, actionable insights and recommendations, automatic interventions and finally, 'Learn' to optimize the entire journey based on feedback from the various units along the journey and the end-user reactions to the response provided. Consequently, by preparing the right kind of data and then driving insights through technology, these organizations are transformed into intelligent enterprises that can function autonomously or semi-autonomously for better benefits to key tracks such as customer experience, operational efficiency, governance and trust. While for many people, AI is playing the role of an enigma that creates magic with everything it touches and promises an intelligent insights-driven solution, it is important to note that companies must work on certain pre-requisites and competencies for AI to fulfil this promise. The reality is that AI is one foundational element of the enterprise transformation journey apart from other elements such as data, talent, or ecosystem. It is imperative to address many of these elements, pre-requisites or competencies for successful AI implementations. Barriers for successful AI The adoption of AI has seen growth largely due to its ability to automate repeatable tasks and to process information of massive volumes in a matter of seconds but organizations have not quite grasped how to implement AI successfully for enterprise-wide effects. AI is comparable to a machine that needs maintenance at certain time intervals and has every reason to fail. The reasons for slow or unsuccessful AI implementations range from obvious to the ignored. Four key reasons are -   Understanding these reasons for failure, and bringing together several components of Data and Model Management requires a well-thought AI Strategy and Journey blueprint. The AI Journey blueprint will provide a high-level view of steps that an organization experimenting with AI can follow as a checklist to ensure all competencies needed for AI to fulfil the enterprise transformation promise. What steps must an organization follow for successful AI implementation? Organizations must develop an AI Journey blueprint that will call out the approach that they would follow for solution development. The journey blueprint could include a variant of the below steps that is best suited to that particular organization. Succeeding with an AI Journey blueprint The challenge for business leaders is to ensure that the business has the right strategy to enable and support AI capabilities along with the

right infrastructure to support AI implementation. Both AI innovators and adopters need to develop and use AI technologies in their business processes, as it will enable businesses to work smarter and faster. AI blueprint is a template for businesses that allows them to systematically create the right infrastructure and ecosystem to build, train, and deploy machine-learning models for use cases while minimizing side effects on existing processes. While data is one of the most valuable assets for a business, when coupled with the power of AI, it can offer organizations a unique competitive advantage via AI-driven analytics. The approach AI blueprint advocates is to observe, learn and experiment with AI, evaluate benefits and build core processes to scale up and drive efficiency – fuel AI engine with innovative pipeline, measure the impact, and, extend the scope as and when organizations mature for further transformation and thus, enable new offerings and change landscape. Saurabh Aggarwal Managing Consultant, Data Analytics & AI Consulting, Wipro Saurabh is a data scientist involved in driving business value by using AI/ML techniques in diverse industry use cases. He is passionate about solving real business problems using data science and AI/ML techniques. Saurabh holds Professional Doctorate in Engineering from TU/e, Netherlands and Masters of Technology from IIT Kanpur, India. Sravya Bharani M Senior Consultant for Strategy & Planning, Data, Analytics & AI, Wipro Sravya provides advisory and thought leadership strategies with an understanding of the digital and analytics industry including market view, competition landscape and related ecosystems. She holds a Master's in Business Administration from Indian Institute of Technology (Madras) and B.E. in Electronics & Communication Engineering. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption

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Cloud and the connected economy

----- Arcticle source ----- https://www.wipro.com/analytics/cloud-and-the-connected-economy/ ----- About The Authors Related Articles Contact Wipro Please fill the required details to access the content Cloud and the connected economy Customer-centered digital transformation through connected and always-on cloud services Businesses have stepped up their pursuit of transformation in the age of industry 4.0, digital disruption and connected economy. Cloud has been a great enabler in this race towards digital, building a connected ecosystem that is essential to not only satiate the need of customers but also partners, vendors, employees and things. Cloud has made connecting with consumers and businesses, at the speed of thought, possible by enabling real time insights via the complex landscape of 'big data' processing and computing. Today's consumer mindset is not a

reflection of any isolated event: our generation observes a network effects pattern and our behavior is influenced by the actions of others. Every second, there are billions of events triggered by individuals from multiple devices and locations, producing a chain of events. Understanding of behavioral events, correlating them and extracting insights involves managing and mining massive scale datasets. Cloud, with its unparalleled compute and other data and analytics tools, has made behavioral economy a reality through network effects at scale, and introduced game-changing platform business models. No organization today can say no to this disruptive force that will potentially alter the course of business and economics. Cloud has had far-reaching impact across industries Cloud-based ecosystem for a customer-centered, connected economy Speed of business transformation is the new metric for cloud. Cloud is more of a business transformation accelerator than a technology transformation driver (See Figure 1) that enhances: Cost efficiency: Smaller companies having limited IT budget and resources use cloud-based technologies, which provide them cost-effectiveness in operations. Large scale firms often offload non-mission critical and non-complaint workloads. Time to market: DevOps, coupled with cloud on technologies such as IoT, Big Data, AI and ML, brings forward improved speed of innovation by faster access to development environments and thorough developer processes. Automated processes enhance security and eliminate possible errors and elimination of downtime that enable the building of stateless applications, ultimately leading to business reliability and customer satisfaction. Business model: Cloud ecosystem allows firms to adopt platforms or become a platform business itself, in the age of platform economy. There is improvement in the economics of integration and delivery of services which ultimately enable new platform based models and sources of value creation. Planet-scale compute: Data on cloud models, trained through feature engineering and clubbed with AI, simplifies collaboration and enhances customer experience. Some AI applications leverage boosted models and deep neural networks, which are extremely compute intensive, requiring long feedback loop and training time. Machine learning (ML) IaaS platforms, purpose-built compute instances, and high performing AI capable chipsets, are affordable latest generation compute acceleration technologies. Cloud platform has made finding 'Neverland' a magical reality. Figure 1: Cloud as the business-transforming agent The cloud strategy To deliver the connected economy, the cloud ecosystem needs to be ingrained into the technology of the organization. The transition to the ecosystem can start with low-level workloads being transferred to cloud followed by the customer-facing applications. To deliver the cloud ecosystem effectively, an organization needs to look into: Fitting cloud into the vision and curating future strategy Understand the future business needs and liaise with stakeholders to chalk out the cloud ecosystem strategy by exposing them to cloud platforms. It requires a systemic thinking where the cloud services are cogs in the larger enterprise machine, which optimizes the machine to provide competitive advantage. This will show the bigger picture and consequently remove qualms about transforming existing processes using new age technology. Opting for public, private or hybrid cloud Cloud strategy needs to consider aspects such as compute power, fast scalability, changing app/tooling, robust security. Eg. Public cloud provides potential for innovation and collaboration where an app can be developed and the code can be shared with other partners seamlessly. But this requires a better

understanding of target state commercial software and app usage. Using a multi-cloud approach entails using the right database tools that can move the workload to cloud without abandoning reliable and familiar on-premise solutions. The ultimate motive should be that businesses and stakeholders are able to access data with equal efficiency, reliability and speed. Data sovereignty and governance With Privacy First being ingrained among organizations, it is imperative to use cloud services with clarity on data sovereignty and residency without compromising data security and customer trust. Choose the right cloud tools that enable data governance proactively. Implementation of policies is important so that they help every employee understand which type of data can be shared. This ultimately gives builds confidence among employees that their data is secure and encourages a culture of sharing. Investing in next generation skills that cater to platform engineering support Cloud savvy architects, developers, designers, analysts, data scientists and engineers are the skills that need to be invested upon either through reskilling or partners providing the relevant talent. This talent pool would cater to platform engineering and development teams to implement and run critical elements of the cloud ecosystem. At the same time, DevOps, DataOps and agile approaches to managing data reduces data friction, accelerates insights and results in innovation. Personifying business with Cloud In the age of digital disruption, business models need to cater to customers' ever changing needs. Anything-as-a-service (XaaS) has emerged as the enabler for the next-gen business models. With the right cloud strategy and technology portfolio – that employs artificial intelligence and machine learning – to support gigantic volumes of data at the speed of thought, along with a pool of talented spectrum of skills, organization have the advantage to stay relevant and grow with new business models. Soumen Chatterjee Partner - Analytics and AI Consulting, Data, Analytics & AI, Wipro Ltd. Soumen is a data adviser for a data-driven business journey. He helps organizations become data-centric and adopt the right technologies like cloud, advanced analytics, ML, AI, and the IoT to improve their business performance. Roshan Wilson Consultant-Strategy & Planning, Data, Analytics & AI, Wipro Ltd. Roshan is currently responsible for building value propositions and driving cohesive strategies for Wipro's Data, Analytics & Artificial Intelligence Business. Roshan is a Computer Science Engineer and holds an MBA degree from FORE School of Management, New Delhi. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption
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The need for AI to sense, think, respond and learn without bias

The need for AI to sense, think, respond and learn without bias Growing adoption of Artificial Intelligence (AI) in systems that assist, rate, and offer advice on how people are treated and what opportunities they are offered is resulting in broad discussions on how to build objective systems. Advanced analytics and AI are being increasingly used to recommend products to consumers, offer pricing tiers to shoppers, manage supply chains and operations, and approve customers to financial products and even automate driving. Therefore, it is essential that the recommendations of machine learning (ML) algorithms are not compromised in any way. The need for objective AI Intelligent enterprises leverage AI and analytics to sense, think, respond and learn (Illustrated in Figure 1). It is essential that the ML algorithms that enable this capability are devoid of anomalies. Figure 1: The sense-think-respond-learn paradigm for an intelligent enterprise Hence, to ensure objectivity and accuracy in data-driven and AI-led insights and decisions, it is essential that ML algorithms are tested multiple times prior to deployment. Here are a few techniques to do this effectively: Despite the availability of mechanisms to measure and tune the accuracy based on historic training data, the uncertainty of how an algorithm would behave under real-world conditions is a critical unknown, especially given its interaction with other predictive algorithms that can make it even more complex. Moreover, some of the ML algorithms such as neural networks are akin to black boxes that are impossible to test exhaustively. Ashby's law sounds a clear note of warning here - "If you have complete knowledge of a system, only then it is possible to control it"1. How can one control the solution if the system has some hidden properties or your information is incomplete or inaccurate, or if uncertainty abounds about the system's behavior? The business impact, and costs of inaccurate algorithms on human life are too high and hence an ethical framework needs to be setup to remove bias, improve algorithm accuracy, and minimize risks. Dealing with misuse of AI The emerging trend of AI and ML algorithms aimed at harming or tarnishing a brand's or a person's image is turning out to be a big social threat. The World Economic Forum considers the viral spread of digital misinformation to be among the biggest threats to human society today2 - especially with algorithms such as the Generative Adversarial Network (GAN), an image and data generation AI system that performs face and object generation and can even manipulate faces in videos, increasing the scope of misuse. Widespread adoption of machine learning models requires a clear understanding of the reasons behind predictions. ROC curves,

confusion matrices, and error measures are the de-facto industry norms before a ML model is deployed. The Local, Interpretable, Model- Agnostic, Explanations (LIME) is one such framework that explains the predictions of any classifier. LIME works by modifying a single feature and observing its impact on the model output3. This helps answer the typical questions a decision-maker might have, such as why was this prediction made or which variables caused the prediction. For instance, in the case of cognitive software and algorithms that assist doctors in the detection of cancer or other life-threatening illnesses in early stages, the understanding afforded by the LIME framework further provides insights into the model, thereby turning a black box model or prediction into a more traceable and reliable one. This provides the decision maker added confidence when he/she takes a decision based on the algorithm's output. Tackling machine bias Bias in a system can lead to a high level of false positives, in turn resulting in low levels of customer satisfaction and acceptance. Algorithms often exhibit the bias of their creators or the input data fed into them. This machine bias happens when certain hypotheses get eliminated from the hypothesis space or certain hypotheses are preferred over others. For instance, COMPAS, an ML software used to determine criminal defendants' likelihood to recommit crimes, was biased in how it made predictions. ProPublica found that the algorithm (used by judges extensively in over a dozen US states to make decisions on pre-trial conditions, and sometimes, in actual sentencing) was two times more likely to incorrectly predict that defendants belonging to a particular race were high risk candidates for recommitting a crime4. New machine learning techniques called ensemble learning such as bagging, forests etc. make use of the concept of averaging of models and as a result can significantly reduce bias. They are also designed to increase the stability and accuracy of the classification and regression results. Community groups such as the Algorithmic Justice League, founded by Joy Buolamwini, help promote crowd-sourced reporting and the study of bias in ML and other technologies5. Ensuring the involvement of diverse populations in the ethical creation and consumption of ML predictions will lead to further progress in ethics. These developments clearly indicate a distributed, autonomous means of achieving the goals of de-biasing algorithms. The future of AI There are ethical and legal consequences of bias in decision making. Machine learning, based on past unfair decisions to a particular race, gender, or sexual orientation, deliver similar biased decisions. Some researchers have gone on to develop a framework for modeling fairness6. Then, there are aspects of ethics and even empathy that must be considered by all vendors and users of AI. This could perhaps be addressed by something on the lines of GDPR, perhaps an AIMR - Artificial Intelligence and ML Regulation7. AI systems due to their inherent nature may have a trust deficit8 and this will need to be addressed soon to allay unintended harmful consequences and fears. Beyond specific evaluation techniques for measuring the accuracy of ML algorithms, what we need is hardware acceleration, structured analytics frameworks, and concerted efforts to root out unintended bias and establish objective AI and ML systems. Reference [1]https://bit.ly/2FhZBDS [2]https://bit.ly/2Oh4ot4 [3]https://github.com/marcotcr/lime [4]https://bit.ly/1XMKh5R [5]https://www.ajlunited.org/ [6]https://arxiv.org/abs/1703.06856 [7]https://bit.ly/2CvwPyO [8]https://go.nature.com/2QvBrt6 Shamit Bagchi Managing Consultant, Data, Analytics & AI, Wipro Limited. Shamit works as a data scientist specializing in predictive and prescriptive

analytics, machine/deep learning and AI consulting. He brings to the table both technical acumen and business consulting expertise based on over 15 years of experience in the big data and software industry, building value propositions for clients in Europe, US and India. He holds a Master of Science degree in Complex Adaptive Systems from Chalmers University, Sweden and an MBA in Marketing & Strategy from the Indian Institute of Management, Bangalore. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption

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Analytical model selection framework for asset failure prediction

----- Arcticle source ----- https://www.wipro.com/analytics/analytical-model-selection-framework-for-asset-failure-prediction/ ----- About The Authors Related Articles Contact Wipro Please fill the required details to access the content Analytical model selection framework for asset failure prediction Over the years, asset-intensive industries like energy, utilities and manufacturing have witnessed several service failures and safety incidents around machines and structures - without warning. Consultants estimate that typically manufacturers miss 5% to 20% of their productive capacity due to downtime[1]. Even though organizations understand the cost implications of downtime, fewer than 24% of operators use a predictive maintenance approach based on data and analytics to handle asset failure proactively[2]. Shifting from calendar-based maintenance to data-driven asset management can help anticipate problems based on asset health condition, enabling optimal usage of asset life and increased reliability. Rigid physical laws govern assets that make inherent patterns, which are repetitive in nature and easy to decipher using machine learning algorithms. However, the patterns and failure behaviors are specific to asset type. Hence, a single predictive model cannot solve the issues of multiple devices used in these industries, which will own completely different characteristics and would demand exclusive treatment. The proliferation of failure detection systems for thousands of assets in large organizations has imposed an increasing burden in terms of cost and effort. Lack of availability of a generic framework is thus a major shortcoming in the current state-of-the-art failure prediction systems in large enterprises. This paper will judiciously provide the business with an expansive guideline to select an appropriate analytical

framework to predict asset failure based on the component type, failure modes and asset failure information. Asset types and failure modes It is critical to understand the similarities and distinctions of failure patterns and their sources across asset types. Firstly, we would begin with asset classification followed by analysis of key failure causing parameters across different asset types. Further, we drill down to component level failure modes to comprehend the pattern of the root cause. Lastly, we would arrive at a logical methodology to choose an appropriate analytical framework to build a model for asset failure prediction. Figure 1: Asset classification basis energy type Asset-specific failure parameters To create a robust technique applicable to multiple asset failure scenarios, it is critical to understand the component failure modes in different asset types and corresponding parameters viz. pressure, temperature, moisture etc. Figure 2 highlights some of the key parameters causing major failures in transformers and pumps. Figure 2: Asset specific failure parameter Asset-specific component-level failure modes To understand the impact of failure parameters, we performed a detailed sample analysis of the different types of component failures in Transformers, Centrifugal Pumps and Progressive Cavity Pump (PCP) systems. It was noted that while causes of failure is a function of operational parameters in case of static assets, it is a function of time in case of rotary assets. Hence, a failure-time distribution model is more relevant than a cross-sectional event prediction model for the rotary class. Thus, mechanical behavior plays a significant role in defining the model framework. Table 1 enunciates the systematic procedure of the analysis performed. Table 1: Major component failures in transformers, centrifugal pumps and PCP pumps Framework for analytical model selection According to Jerald F. Lawless, two sets of choices in analytical models are whether to use discrete or continuous-time models, and whether to use parametric or nonparametric assumptions[3]. The model should effectively capture features of the lifetime distribution that are seen from empirical data. Large samples are often required to substantiate the superiority of one model over another in terms of goodness of fit. Censoring schemes are extensively used for comparison of models and their usability. This leads to use models that are computationally useful, and to an extensive use of Weibull, log-logistic, and log-normal models. As the number and complexity of fixed covariates increases, the emphasis on distributional shape reduces, the primary focus being on location and dispersion aspects. Nonparametric and semiparametric methods are more robust with respect to assumptions than fully parametric methods. It allows more information to pass from the current set of data to the model at the current state, to be able to predict any future data. Several models may provide a description of the observed data. However, use case objective and actionable insights help explain characteristics of data much better. Thus, the generic framework for asset failure modeling takes into consideration the asset type and failures as a function of time or operational parameters. Environmental parameters have a snowballing impact over time, which helps determine the probability of occurrence of failure by analyzing how particular circumstances or characteristics increase or decrease the probability of survival. However, on the other hand, numerous other operational parameters could trigger asset failure. For these scenarios, causal modeling is required for the identification of lead indicators instigating failures. Figure 3 illuminates the comprehensive approach to choose an analytical framework in case of asset

failure modeling. Figure 3: Generalized approach to choose analytical framework for asset failure prediction modeling Real-life application of analytical framework A leading Oil & Gas major based out of Australia enabled PCP pump failure prediction by leveraging this analytical framework. The challenges the organization faced included inconsistent view of assets and their operational status. Also, manual intervention was slowing down preventive maintenance and leading to inaccuracy. The analytical framework enabled the prediction of the expected time for pump failure through the insights gathered by identifying influential parameters with survival analysis. Table 2 showcases additional issues that were addressed using the analytical framework. Table 2 – Framework application in resolving real-life business challenges Use of Bayesian methods as future trend With the advent of sophisticated computational capability and integration of analytics in key business processes, Bayesian models are going to be the need of the hour for the future of reliability analysis. They have a very important advantage of using information from different studies, prior information based on previous experience and engineering knowledge alongside the appealing Machine Learning (ML) characteristics of versatility and statistical properties. Advancements in the implementation of Bayesian paradigm and computer hardware have opened the doors of a new horizon in front of analysts to marry the engineer's knowledge with statistician's theory. References 1. https://www.isa.org/standards-and-publications/isa-publications/intech-magazine/2006/January/channel-chat-when-true-cost-of-downtime-is-unknown-bad-decisions-ensue/ 2. Study by Kimberlite, an international oil and gas market research and analytics company (http://phdsoft.com/category/phdc4d/) 3. Lawless, Jerald F (2011). "Statistical Models and Methods for Lifetime Data", John Wiley & Sons, ISBN 978-0471372158 Dipojjwal Ghosh Principal Consultant, Wipro Ltd. Dipojjwal is currently involved in the development of analytical apps for consumer and utility domains on Data Discovery Platform (DDP), Wipro's proprietary Insights-as-a-Service offering. He has around 10 years of research and analytical experience in manufacturing, energy, natural resources, and retail domains. He received his M.Tech in Quality, Reliability and Operations Research, from Indian Statistical Institute, Kolkata. Bavya Venkateswaran Consultant, Wipro Ltd. Bavya is currently responsible for solution design and implementation of advanced analytics & Artificial Intelligence-based use cases on Wipro's DDP. She has been instrumental in handling go-to-market initiatives and delivering turnkey solutions in Energy & Utilities, Human Resources, and Healthcare domains. Bavya holds an MBA degree from Goa Institute of Management, Goa and B.Tech in Electronics and Communications Engineering from SASTRA University, Thanjavur. Anindito De Lead Architect, Wipro Ltd. Anindito has 19 years of experience as Data Analytics professional. He is currently leading technology implementation of large scale automation programs for Wipro's global clients leveraging AI, ML and Cognitive technologies on Wipro HOLMES artificial intelligence platform. He received his M.Tech in Quality, Reliability and Operations Research, from Indian Statistical Institute, Calcutta and BE in Mechanical Engineering from Jadavpur University, Calcutta. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies

leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Five best practices to keep your data lake healthy

Five best practices to keep your data lake healthy The volume and variety of data available to organizations in the digital age is enormous, giving rise to the need of expanding their data-management infrastructures considerably and rapidly. Data lake, a new class of data-management system, holds a strong potential to achieve success in this area. The humongous growth in computer processing power, increase in cloud storage capacity, its usage and advanced network connectivity are transforming the existing data flood into an infinite stream of comprehensive information about customers' preferences and buying habits, product attributes, sales and e-commerce data, email and web analytics, survey and feedback. These datasets are acquired from a range of sources and across all formats, including Internet-of-Things (IoT) devices, social-media sites, sales and CRM systems, etc. Today, with the increased growth in number of data sources and the pervasive nature of analytics, a huge demand for strong analytics capabilities is surfacing, just to keep pace. To gain maximum value out of data in this extremely competitive environment, organizations are emphasizing not just on using analytics, but are transforming themselves to build an insights-powered enterprise. Growing relevance of data lakes In industry parlance, data lake refers to a repository of data that brings together variety of data available, such as structured (relational), semi-structured (XML, JSON, etc.) and unstructured (Images, audio and video). It provides a way to store all the raw data together in a single place at a low cost. Distributed file systems such as Hadoop file system (HDFS) often serves this purpose. The adoption of Hadoop as the platform created the first version of data lake. The use of cloud based data lake i.e. the latest version of data lake, gained momentum in the market because of the challenges in storage flexibility, resource management, data protection deep-rooted in Hadoop-based data lakes. Industry experts anticipate that in the coming years, majority of large organizations will experience more data flowing from data lakes to data warehouses. This prediction shows the change in the mindset of organizations which were typically driven by enterprise data warehouse as the de facto standard for their data need. As the popularity of data lakes grows, organizations face a bigger challenge of maintaining an infinite data lake. If the data in a lake is not well curated, then this data lake may turn into a data swamp, flooding an organization with information that is difficult to locate and consume. How to keep data

lakes relevant Digital transformation requires identifying authentic and accurate data sources in an organization to truly capitalize on increasing volumes of data and generate new insights that propel growth while maintaining a single version of truth. Following are some of the ways to keep data lakes dynamic, immaculate and viable: 1. Identify and define organization's data goal: One of the most important preemptive steps in avoiding an organizational data swamp is to set clear boundaries for the type of information organizations are trying to collect, and their intent of what they want to do with it. Amassing a lot of data should not be the sole aim of organizations. They need to have a clarity on what they want to attain from the data they are collecting. An enterprise with a clear data strategy shall reap benefits in terms of avoiding data silos, incorporating a data driven culture to maintain customer centricity, scale up and meet demands of the modern day data environment. 2. Incorporate modern data architecture: The old data architecture models are not sufficient and may not satisfy the needs of today's data - driven businesses in a cost effective manner. These workflows give a primer to ensure modern data architecture: 3. Build sound data governance, privacy and security: Data governance and metadata management is a critical step to keep a healthy and effective data lake strategy. A well-curated data lake contains data that's clean, easily accessible, trusted and secure. As a result, this high-quality data can be easily consumed with confidence by the business users. It is of utmost importance to establish responsibility for data. 4. Leverage automation and AI: Due to the variety and velocity of data coming into data lake, it is important to automate the data acquisition and transformation processes. Organizations can leverage next generation data integration and enterprise data warehousing (EDW) tools along with artificial intelligence (AI) and machine learning that can help them classify, analyze and learn from the data at a high-speed with better accuracy. 5. Integrate dev/ops: DevOps processes will go hand on hand with building and maintaining a healthy data lake. Ensure clear guidelines are established on where and how data is collected to prevent "data wildness," and make sure those standards are always followed. Take time to evaluate sources as "trustworthy," and take preventive steps to ensure it stays that way. A little work on the front end will prove highly valuable when it comes to putting data to use. Figure 1: Reference architecture to avoid data lake failure The reference data architecture, given in Figure 1, represents an efficient process that includes data zones starting from the data foundation layer to providing insights in conjunction with the essential measures viz. data governance, security, data archival and backup, automation and DevOps to keep a data lake pristine and clean. A large medical device manufacturing company, struggling to garner value from its data, leveraged a data lake solution based on this architecture. Over a short span of a year, the new data lake became a potent digital transformation tool for the company and is being used across the organization for building more than 40 analytics use cases. Conclusion The use of big data has no boundaries. It can help businesses create new growth opportunities, outperform existing competitors and provide seamless customer experience. However, to get the best out of data and thrive in this digital world, enterprises should possess well-curated, good quality data lakes. A clear data strategy, modern data architecture, proper data governance combined with automation, security and privacy measures, and DevOps integration will not only prevent any data lake from becoming a data

swamp but also transform it from simply being a data repository to a dynamic tool that will empower digital transformation across an enterprise. Neeraj Verma Managing Consultant, Data, Analytics & AI, Wipro Limited. Neeraj brings over 13 years of experience in envisioning and building large scale enterprise data warehouse solutions for fortune 100 Retail, CPG and Pharma clients across the globe. He has deep domain and analytics expertise in CPG and Retail. Ajinkya Pawar Consultant -Strategy & Planning, Data, Analytics & AI, Wipro Limited. Ajinkya with a deep understanding of the digital and analytics industry, including market insights, competitive landscape and related ecosystems, provides advisory services and thought leadership for building value propositions and driving cohesive strategies. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The smarter water utility

----- Arcticle source ----- https://www.wipro.com/analytics/the-smarter-water-utility/ ----- About the Author Contact Wipro Please fill the required details to access the content The smarter water utility The acute need to become an insights-driven enterprise Water utilities are at a difficult juncture in business. In the UK, they have invested over $170 billion in the last10 years in a bid to maintain and improve assets. In the US, capital expenditure on clean and waste water infrastructure will exceed $683billion over the next decade. These costs are unsustainable. To add to the cost challenges, traditional solutions have begun to fall short of the expectations. The situation calls for the adoption of next generation solutions that go above and beyond traditional solutions. Situation on the ground The problem that water utilities find most frustrating is with their ageing below-ground assets. There is a lack of visibility into their performance due to opaque operating conditions. Failure to fix problems related to assets can result in non-compliance and hefty penalties. In addition, water utilities are under tremendous pressure from growing customer expectations. Customers are used to services like Amazon and Uber, where everything happens in real time and they have complete control over the service. Utilities have to match the experience. Finally, the unforeseen impact of climate shifts and the ineffective management of a distributed field workforce are sending costs spiraling. These are monstrous challenges. But they also present the perfect opportunity to examine technological advances and solutions that can transform the face of water utilities. Some water utilities have already made remarkable progress in their efforts to leverage technology. For example, the water utility inJapan's Fukuoka city uses an unsupervised class of Artificial Neural Networks (ANN) named self-organizing maps (SOM). Sensors attached to distribution pipes are continuously monitored, helping

regulate pressure through remote motor valve operations. These sensors also help reduce the dependence on operators with experience in managing distribution. Utilities like the one in Fukuoka are discovering just how useful these systems can be in the event of leaks and damage to pipes that require immediate and precise responses. The systems also help determine precise flow to consumers based on real-time demand. An US-based water company replaced primary in-pipe inspection method that uses manual CCTV analysis with artificial intelligence (AI) and neural networking to monitor below-ground assets. The water utility leveraged open source neural networks and a code framework to hone its AI and Machine Learning (ML) applications in the field of pipe inspection for automated cracks, structural deformations, blockages, debris etc. This enabled proactive maintenance, wherein more pipes could be inspected in a shorter span of time, maximizing budgeting allocation, and ensuring overall system stability. The number of utilities that deploy technologies like ML and AI, to forge a path into a real-time insights-driven future, are bound to grow. Groundbreaking technologies Traditional systems have major gaps in addressing asset management KPIs. Fortunately, the proliferation of sensors, real-time monitoring devices and video/image feeds is changing this. Advanced asset-centric technologies, aimed at generating water insights, are taking the guesswork out of leak detection, pressure management, work order distribution, etc. Technologies like the Internet of Things (IoT), ML, AI, Deep Learning, data and analytics make a difference by targeting asset management KPIs. The question before smart water utilities is: Should they invest the next few million dollars in identifying and servicing leaks after they have impacted consumers or in insights and predictive systems that help minimize leaks, flooding and incidents before they impact customers? The answer is self-evident. Smart utility built on the right technology A predictive system/insights tool, specifically built for water utilities, will allow utilities to stay one turn ahead of issues at each stage of clean and waste water supply, distribution and management. The tool will use data leveraged using extraction and analytical processes, algorithms, models and best practices that are specific to water utilities. The insights, decisions and recommendations will be provided to business users and applications across a variety of devices. (See Figure 1 for the reference architecture of the insights tool) Figure 1: The building blocks of the insights tool The insights developed by the predictive system, in the form of support for decision-making and action, will be crafted for different personas and roles. For example, water quality analysts, asset maintenance engineers, heads of HSE, compliance management, billing and customer service executives will be able to quickly access information and support on interactive dashboards relevant to their roles. In effect, the tool will be a one-stop solution for comprehensive water insights aimed at improving business outcomes across clean and waste water operations. The business outcomes addressed by the insights tool for clean water will include: Abstraction: Treatment: Distribution: Supply: The business outcomes addressed by the insights tool for waste water will include: Collection: Transfer: Treatment: Discharge: The insights tool will be more effective when it works jointly with the IT team of the utility. The IT team will be able to provide a nuanced understanding of the critical business, operational and technological factors typical to the utility. These should then be leveraged to create sharper and deeper contextual insights. Making everything smart A few select use cases will help understand the

relevance of the insights tool. For instance, data from sensors will be pulled in to monitor various stages of water treatment processes. IoT analytics will be used to deliver automated dashboards with insights related to asset and network performance. Co-relating data from different external and internal sources will provide alerts about supply disruptions or demand spikes. Similarly, AI can be applied to waste water sensor data to analyze effluent parameters and drive decisions on treatment. ML and domain-specific algorithms can be applied to predict sewer flooding and to design/optimize management processes. The overall benefits of the insights tool will include increased asset availability, work order planning, cost optimization, product quality improvement, and increased customer satisfaction. These are the fundamental challenges that water utilities have been trying to address for decades. Water utilities stand to benefit most when they are able to access the insights based on their needs. Such insights create a smarter, intelligent and future-ready water utility. References ihttps://www.bv.com/insights/expert-perspectives/capital-maintenance-comes-forefront-uk iihttps://www.bluefieldresearch.com/ns/capex-forecast-us-water-infrastructure-improvements-683b-2027/ iiihttps://www.researchgate.net/publication/242284046_ANALYSIS_OF_FLOW_METERS_READING_IN_FUKUOKA_CITY_WATER_SU ORGANIZING_MAP http://www.machinemonitor.com/condition-monitoring-critical-motors-results-real-dollar-savings-100k-per-annum/ Amruthraj Arogyadas Global Digital & Domain Head – Water Utilities, Wipro Limited Amruth heads the Water Utilities - Centre of Excellence for Wipro and leads development of innovative and differentiated digital solutions for the Water Industry. He is passionate about leveraging latest digital technologies like Artificial Intelligence, Machine Learning, Blockchain, IOT and Advance analytics to solve critical industry problems. He actively works with various partner ecosystems and customers spread across the globe to co-innovate. He can be reached at Amruthraj.arogyadas@wipro.com Nagaraj Kanniganti Sr. Domain & AI Consultant, Water Utilities COE, Wipro Limited Nagaraj is a senior Domain Consultant with over 25 years of IT & OT experience. His key subject matter expertise includes Treatment Plant Operations, Network Operations, SCADA Systems, and Work & Asset Management. He is currently involved in building digital transformation solutions in the area of Descriptive Analytics, Predictive & Prescriptive Analytics, Deep Learning, Machine Learning Models, Computer Vision Modelling – Supervised and Unsupervised and IoT based Analytics Solutions. He can be reached at nagaraj.kanniganti@wipro.com ======================

The right AI strategy to deliver superior customer experience

----- Arcticle source ----- https://www.wipro.com/analytics/the-right-ai-strategy-to-deliver-superior-customer-experience/ ----- About the Authors Contact Wipro Please fill the required details to access the content The right AI strategy to deliver superior customer experience Technology is changing

the way any industry operates today with organizations investing heavily on digital transformation to stay relevant. Companies realize the importance of maximizing the value drawn from data to make informed decisions. Industry leaders are looking towards Analytics and Artificial Intelligence (AI) as engines that would transform them from a digital enterprise into an intelligent enterprise. The potential of analytics and AI to add business value cuts across the value chain. In many instances, it is transforming the functions of procurement, operations and logistics, marketing and sales and customer service. However, it is customer experience (CX) where the opportunities are huge for AI. Unfortunately, customer service is traditionally looked at as a cost-driver, not as a revenue-generator. The truth is that companies globally lose more than $75 billion each year due to poor customer experience1. Customer engagement includes various touchpoints with customers, right from the Zero Moment of Truth to the Ultimate Moment of Truth. It is imperative that enterprises are able to engage with customers with the right message at the right time through the right channel at each touchpoint. With technological advances in AI, companies are revolutionizing the way customers engage with them. Advanced analytics, AI-driven content personalization and conversational systems like chat-bots provide value through revenue generation and cost optimization. How enterprises should approach AI for CX Enterprises should adopt a three-pronged approach to deliver on the business outcomes that AI and advanced analytics promise – right process, right technology and right capability (See Figure 1). Right process: Need for imbibing a Sense-Think-Respond-Learn (STRL) process in solutions that convert raw data into actionable intelligence Right technology: Technology landscape driven by AI, automation and cloud adoption with right skillsets Right capability: Engineering customized solutions built through a research-based approach to deliver innovative solutions at scale   Having the right set of processes ensures consistency in delivering promised business outcomes through intelligent systems powered by the right technology and right capability. Businesses will have to invest in the right technology across the data value chain from data engineering to data consumption. Right capabilities with focus on business outcomes and in building innovative solutions at scale will prove to be a differentiator for businesses. The focus of this paper is on the right processes that will ensure organizations obtain maximum value out of their AI initiatives for building great customer experience. Enterprises should adopt a Sense, Think, Respond and Learn (STRL) Framework to tackle business challenges through AI. On identifying the customer experience-related business problem that the enterprise would like to address through advanced analytics and AI use cases, it should Sense: As a first step, it is imperative for organizations to take stock of the current situation by acquiring and assimilating relevant data and by preparing accurate and efficient datasets that could feed predictive models. This step generally leverages techniques for data preparation, descriptive analytics, text and speech analytics, video and image analytics to provide a view into what is happening currently. For instance, in the CPG or Retail industry, organizations could gather complete customer information by analyzing web metrics, social media profile updates, customer purchase patterns, cart abandonment and category spend analysis. Think: As a next step, organizations should identify the appropriate analytical models and the statistical/machine learning algorithms that drive these models to facilitate

insight generation and cognitive intelligence. This step involves making use of advanced analytics and AI techniques to explain and predict customer behavior, and provide recommendations for next-best-action scenarios. For example, organizations need to apply AI/ML techniques to analyze search patterns and customer behavior to predict when a customer is going to churn out; how much a customer is likely to spend and which product is a customer most likely to buy etc. AI techniques like image recognition and computer vision help in revolutionizing product discovery through AR-enabled visual product searches. This enhances the experience of an online shopper and provides an offline experience online. Respond: Based on the actionable intelligence obtained, businesses should strategize their plan of action to deliver business outcomes. This step involves delivering personalized customer engagement leveraging new digital capabilities. For example, organizations need to design personalized campaigns based on the insights to engage with customers and enhance customer experience and loyalty. Organizations must leverage AI techniques like Natural Language Processing, and Generation, Speech and Text Analytics to build intelligent chat-bots and virtual assistants to deliver high impact business outcomes in customer service through voice-based shopping and product discovery. Learn: The key to making this framework actually work is ensuring the system continually learns through feedback systems during the Sense, Think and Respond stages. The network effect applies perfectly here as with more and more usage of intelligent systems, the systems become more intelligent. AI challenges and the way around Fundamental: Given the possibilities of leveraging AI to deliver excellent CX, organizations are contemplating ways to tackle one major barrier – Gaining user trust on technologies like AI. AI gone wrong can have huge repercussions. Design plays an important role here. Organizations must have a design-thinking led approach, which places the user at the center of it all, while engineering the CX. Key principles that enable trust in the end-user should be incorporated. These include transparency and explainability aspects of the recommendations thrown by the AI system, testing of extreme cases, and availability of holistic training data sets to avoid ingrained biases. Organizational: With data-driven customer experience taking the driver's seat and being seen as a critical differentiator in gaining online market share; the CMO and CIO organizations need to work hand-in-hand to sync market requirements with organizational technology maturity. Technology: Legacy and latency issues could impede new rollouts. Back-office systems need to be upgraded before charting a roadmap for the future. Stakeholders need to be careful of leaving latency loopholes within existing systems. Conclusion Today, CIOs are being measured on the impact they bring to the business. CX improvements across the ecosystem (supply chain partners, marketing value chain and back office systems) will now be more closely measured on improvements to benchmarked bottom-line levels. The times ahead are exciting for enterprises that leverage AI to create meaningful experiences for the customer. The coming together of data, algorithms and design will catapult CX, which is geared for disruption. References https://www.forbes.com/sites/shephyken/2018 /05/17/businesses-lose-75-billion-due-to-poorcustomer-service/#59321d8716f9 Praveen Kumar Strategy Consultant – Data, Analytics and AI, Wipro Limited. Praveen has extensive experience in designing solutions and offerings in the advanced analytics space. He has a deep understanding of the analytics industry and the digital

ecosystem. He provides advisory services and thought leadership for building value propositions and driving cohesive strategies. Arjun Pandalai Senior Consultant Consumer Business Unit, Wipro Limited. Arjun has over 7 years of experience across the Consumer industry, in consulting, business analysis, agile development, solution definition and alliance management. He has a strong understanding of marketing, supply chain and customer experience (UI/UX development) and has worked in developing CRM and ecommerce web applications in consumer and telecom space.
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Key considerations for ETL modernization

----- Arcticle source ----- https://www.wipro.com/analytics/key-considerations-for-etl-modernization/ ----- About the Author Contact Wipro Please fill the required details to access the content Key considerations for ETL modernization Efficiency and agility in business processes drive the growth of any successful organization. ETL (Extract, Transform and Load) tools plays a critical role in delivering the speed an organization requires to access its data efficiently. In the digital age, ETL modernization is becoming a must to keep pace with the growing data and data sources. The need for modernization of ETL platforms As the data landscape of enterprises increase exponentially, traditional ETL tools do not work best to handle the complexity of the data from various sources: today, data could be stored on cloud or on premise; it could be static or stream data, and may be stored in repositories sitting in different countries with different data protection laws. Traditional tools were created at a time when the requirement was to manage lower volumes of data and processes. These tools do not meet the modern data landscape requirement. Traditional ETL product licences cost millions to organizations and hence they seek to employ open source frameworks to perform ETL operations, which enable similar and better functionalities as traditional ETL products. Legacy ETL tools also face issues while handling real-time data processing from various social media channels. Scalable, faster and flexible environments for new age digital applications ensure data processing is done in real-time. Existing ETL data pipelines need to be modernized to support real-time data in addition to transactional and analytical data workloads conversion. Existing ETL tools have challenges in providing efficient and flexible metadata management and lineage across systems for robust regulatory and governance needs. Embarking on the modernization journey Many large enterprises have been exploring ways to transform traditional ETL platform data pipelines and workflows leveraging open source processing frameworks. Traditional ETL data processing pipelines, predominantly meant and built over decades for batch processing, are under pressure while open source processing frameworks are catching up with the momentum. Also, these frameworks are well aligned with the Big Data applications for processing and managing huge amounts of structured/semi-structured/unstructured data being generated from several new age and existing enterprise systems. Open source processing frameworks predominantly supported by Scala/Java/

Python programming languages and equipped with out-of-box libraries and utilities, and scalable for huge volumes of data processing on cloud, on-premise and hybrid environments, are taking the centre stage for catering to the digital and innovative re-imagined business scenarios. The right approach to ETL modernization There is no easy path or way to convert and migrate thousands of legacy ETL jobs developed over decades in the organization's landscape to modern approaches such as Spark and microservices based processing frameworks. Some of the key considerations while embarking on the ETL modernization journey are: To conclude ETL modernization with its cost-saving approaches to transactional and analytical data processing is becoming a key strategy for organizations' IT estate rationalization. ETL modernization help businesses reimagine their business processes and integrate their enterprise applications data with external systems such as merchants and channels in real-time in a more flexible and scalable manner. Open Source ETL frameworks helps in building numerous business use cases such as developing customer knowledge graphs for better understanding of the prospects/customers, payment processing of billions of transactions, real-time fraud analytics, compliance and regulatory related data processing pipelines, among others. A right ETL modernization strategy aligned to the enterprise's digital strategy and the IT estate rationalization roadmap, and an implementation framework and execution approach with the aptly-skilled resources are the key success factors of the ETL modernization journey. Mohan Mahankali Practice Leader and Principal Architect - Information Management, Data Analytics & Artificial Intelligence, Wipro Ltd. Mohan has 20+ years of business and IT experience in the areas of information management and analytics solutions for global organizations. In his current role, he is responsible for practice vision and strategy, solution definition, customer advisory, consulting, competency development, and nurturing of emerging trends and partner ecosystem in the areas of data and information management. Mohan is the co-owner of a patent in data management and governance awarded by USPTO (United States Patent and Trademark Office). =====================

The 3 tenets of an intelligent enterprise in the financial services industry

----- Arcticle source ----- https://www.wipro.com/analytics/the-3-tenets-of-an-intelligent-enterprise-in-the-financial-services-industry/ ----- About the authors Contact Wipro Please fill the required details to access the content The 3 tenets of an intelligent enterprise in the financial services industry The financial services industry, mature in terms of digital transformation due to strict regulations and compliance requirements, is now geared for AI disruption. The top players in the industry are working towards transforming themselves into Intelligent Enterprises. An Intelligent enterprise is one that is nimble enough to make quick data and insights-driven decisions to deliver superior customer experience, become

operationally efficient, and manage risks well. AI plays a crucial role in this regard. The insight-driven transformation will make the core of the organization stronger with data-driven perspectives and technological innovations already facilitated by digital age. If the organization is not agile enough to adapt to disruptive technologies, it starts losing competitive edge over top three important levers (See Figure 1) in the organization: Customer experience More customers are demanding personalized and curated experience. Risk and compliance With stringent compliance and increasing competition, balancing portfolio risk vs return is challenging. Internal process efficiency Smart and efficient processes with intelligent automation provide the much needed productivity boost over competitors. Organizations need to invest in innovation-led data and insights transformation through applied AI in their quest to become an Intelligent enterprise. Siloed one-off customer-facing analytics implementations will not provide adequate business value; a roadmap for an end-to-end transformation is the key. Figure 1: Three tenets of an intelligent enterprise in the financial services industry AI for customer experience Customers now expect all brands, including banks, to provide meaningful and empowering experiences throughout the entire customer and employee journey. Experiences are core to any best-in-class brand as it is a leading driver of brand perception. Bank's customers want to experience the brand seamlessly across all online and offline touchpoints, be it while using their app, their products, experience with the contact center or in one of their branches (See Figure 2). Brands are now defined by experiences, which require marketers to shift from a product-centric marketing to creating resonant brand experiences. In order to do this, banks need to use the right marketing technology and processes to drive marketing success. In addition, with an unprecedented amount of data in banks, marketers need to be equipped to use insights to drive superior brand experiences and demonstrate the value that they create.   Figure 2: Enabling simplified experience for banks' customers Brands are now defined by experiences, which require marketers to shift from a product-centric marketing to creating resonant brand experiences. In order to do this, banks need to use the right marketing technology and processes to drive marketing success. In addition, with an unprecedented amount of data in banks, marketers need to be equipped to use insights to drive superior brand experiences and demonstrate the value that they create. There is a need for Customer 360 intelligence (See Figure 3) at an individual level using customers'risk profile, net worth value, usage behavior, price sensitivity, brand sentiment and propensity outcomes. This enables individual pricing capability to overcome delayed time to market for any price change opportunity. Enterprises are realizing the value in integration of external data to drive more effective and competitively priced products. Lack of advanced propensity models – those based on siloed product data with long lead times for deployment don't add significant value. Most acquisition offers are used for both retention as well as acquisition purposes and the lack of specific retention offers also lead to loss of business. Figure 3: Connected ecosystem for a singular customer view throughout the lifecycle AI for operational efficiency One of the major priorities for leading banks that have invested in AI has been to drive operational efficiencies. Intelligent automation will replace labor-intensive repetitive manual tasks and augment human decision-making. The enterprises of the future will comprise of a hybrid workforce where humans

and bots work together. AI has the potential to drive sustainable growth in top-line and bottom-line. The use of advanced analytics and AI to generate insights, automate and manage various backend processes will result in achieving operational excellence and superior customer experience. Some examples of how AI is used to improve business operations are: Insights generation Contract intelligence – Supervised and unsupervised machine learning (ML) algorithms can be used to parse and summarize commercial agreements like contract and loan documents, and interpret financial and legal details that would have otherwise required huge manual effort and time. It uses unsupervised ML techniques like topic modeling to identify the key points. It can also summarize a document based on specific keywords using supervised ML techniques. Intelligent automation Cognitive assistants – ML algorithms like NLP and NLG enable cognitive assistants to help customer-facing employees find answers to customer questions. This results in improved TAT and reduced count of employees leading to huge cost savings. KYC – AI is making the end-to-end KYC and customer onboarding process faster and more efficient. Technologies like NLP and facial recognition enable intelligent bots to process various documents and validate the same removing the need for a manual backend processing team. AI for risk and compliance management Banks and other financial service providers, as guardians of financial assets, are liable to put risk control as the foremost priority to foster trust among customers. If responsibly applied, AI can be leveraged to ease up adherence to compliance regulations, reduce costs and free up teams to focus on more valuable tasks within their organizations (See Figure 4). The key applications of AI in the risk and compliance domain are: Operational risk analysis AI enables financial institutions to control fraudulent behavior and delinquency using scoring techniques and real time alerts across different steps of customer lifecycle. These cognitive fraud detection systems focus on customer's features driving fraudulent behavior to detect and prevent fraud. The ML based system continues to learn, and gets stronger with time to detect more complex fraud. The appropriate usage of ML algorithm could result in the reduction of false positives that improves the efficiency of the acquisition quality, fraud prevention and collection effectiveness. Credit risk assessment Data driven credit scoring models help portfolio experts to take conscious decision on credit risk exposure powered by ML algorithms. A credit scoring model, based on information about the potential customer (e.g. credit history, payment defaults, age, number of previous loans, etc.), would be able to distinguish potential defaulters with fair bit of accuracy and estimate of the propensity of default. It also helps to come up with optimized pricing strategy differentiated by risk behavior to control overall portfolio risk exposure. Analytics can further improve regulatory compliance process of credit risk evaluation using assessment methods like default risk models, loss given default, and exposure at default. These models help to assess the overall risk exposure and take the required measures to mitigate liquidity risk. Figure 4: Advanced analytics and AI use cases for risk management Conclusion It is vital that the leadership understands the potential impact of AI across the value chain and drives the AI adoption initiative. Intelligent automation of specific business and IT processes coupled with quick data-driven insights are some of the low-hanging fruits that enterprises can target as they keep an eye on an end-to-end roadmap for AI transformation. The key to intelligent transformation is to look beyond short-term efficiency

and identify visionary and innovative business models delivering superior customer experience and driving revenue growth using AI. Shamit Bagchi Managing Consultant Data, Analytics & AI, Wipro Shamit is a data scientist specializing in predictive and prescriptive analytics, machine/deep learning and AI consulting. He brings to the table both technical acumen and business consulting expertise based on over 15 years of experience in the big data and software industry, building value propositions for clients in Europe, US and India. He holds an MS degree in Complex Adaptive Systems from Chalmers University, Sweden, and an MBA in Marketing & Strategy from the Indian Institute of Management, Bangalore. Praveen Kumar Strategy Consultant Data, Analytics & AI, Wipro Praveen has a deep understanding of the analytics industry and the digital ecosystem. He has extensive experience in designing solutions and offerings in the advanced analytics space. He provides advisory services and thought leadership for building value propositions and driving cohesive strategies. He holds an MBA in Operations and Strategy from the Indian Institute of Technology, Madras. Satavisha Mukherjee Practice Partner Data, Analytics & AI Consulting, Wipro Satavisha drives analytics consulting practice in the Middle East region. She is a consultant with 14 years of experience in advanced analytics domain. She specializes in use cases consulting, data consumption strategy, and data science use cases delivery across domains. She has worked extensively on B2C analytics with a focus on financial services and retail, as well as in supply chain analytics across industries. ======================

Why we need Unified Data Management

----- Arcticle source ----- https://www.wipro.com/analytics/why-we-need-unified-data-management/ ----- About the Authors Contact Wipro Please fill the required details to access the content Why we need Unified Data Management Most organizations today follow a data-silo model with disparate systems catering to specific business segments with nil or very less correlation between them. These individual systems often engage different data integration and management frameworks and toolsets to cater to its segment-specific data interface and transportation requirement, which results in Under these circumstances, Unified Data Management(UDM) framework lays down a process to consolidate data from disparate data sources of an organization by identifying the integration factors among those and storing the unified data in a common data repository within a data warehouse. This in turn, initiates rationalization of system-specific data integration and management framework into a single organization-wide framework and optimization of multiple Data Integration (DI) teams into a single Data Center of Excellence (CoE) using an optimized DI tool landscape. UDM drives interdepartmental cooperation by providing a common storage-base where data across different applications of an organization is cleansed, parsed and transformed using unified data dictionary. In a UDM platform, different data governance processes (Data Quality, Transformation, Metadata Ingestion, Data Lineage mapping, Data

Discovery etc.) work in cohesion to retrieve the maximum business insights and to drive organizational transformation and regulatory compliance through enterprise wide data assets (See Figure 1). Figure 1: Unified Data Management platform What are the business drivers of UDM? UDM includes both strategic and technical aspects. The success of UDM is determined by its ability to effectively align the upgradation of the organizational data management framework with the agreed business goals. UDM should cater to these two requirements: 1) Enable coordination of disparate data management principles: This revolves around collaboration and integration of development efforts among different data management teams and interoperability of the corresponding server, network and code artifacts. It also enables sharing of data management architecture and infrastructure components among different teams. The final product will require the amalgamation of the individual data management team for each of the disparate source systems/applications into a single lean one that can perform the data quality, integration, management and governance activity on the resultant unified centralized data repository. 2) Support strategic business objectives: UDM should enable an organization to utilize its corporate datasets for extracting business insights and channeling the information obtained to support business goals. A business should first identify and prioritize the goals and communicate to the technical data management team the data-driven requirement for targeting those goals. Thus, UDM has evolved from being the technical data integration framework for organization-wide data to the alignment framework between data management and information-driven business goals. UDM stands vindicated and holistic only when the unified data framework caters to the strategic business goals of the enterprise. What does an efficient UDM framework look like? 1) UDM is a best practice framework for data integration of enterprise wide data 2) UDM is a solution framework, not a specific tool 3) Adoption of UDM framework is benefit driven 4) UDM can be a discreet program in the data consolidation part of a company or it can be included as a subprogram for a larger program of IT landscape centralization, application rationalization, enterprise data catalogue building, and IT-to-business alignment 5) UDM integrates data as well as teams What does UDM enable? Conclusion UDM is the driver of success for the organization that wishes to benefit from the enormous dataset (master and transactional) being hosted in any of its larger application landscape. UDM brings to the table business insights of the enterprise data by consolidating, integrating and standardizing the data across disparate and sometimes, siloed systems. It also drives business goals and contributes in the success of data-driven business initiatives (including BI, CRM, legal and regulatory compliance). It also lays down the platform for people optimization by consolidating multiple data management teams into a single and leaner data competency team, thus saving the OpEx of the company. Sugata Saha Lead Consultant - Data, Analytics & AI, Wipro Ltd. Sugata has 14 years of experience in the field of data warehouse, data modeling, data integration and business intelligence architecture. He is currently working as a Data Architect and Automation Consultant for a leading client. From IM Practice perspective, he is also involved in solutions focusing on data integration and cloud data warehouse. Krishnakumar Aravamudhan Practice Director - Information Management, Data, Analytics & Artificial Intelligence, Wipro Ltd. Krishna has over 19 years of business and IT experience in the areas of information

management and analytics solutions for global organizations. In his current role, he is responsible for practice vision and strategy, solution definition, customer advisory, consulting, competency development, and nurturing of emerging trends and partner ecosystem in the areas of data and information management. =====================

Product Information Management – The core of great digital customer experience

----- Arcticle source ----- https://www.wipro.com/analytics/product-information-management-the-core-of-great-digital-customer-experience/ ----- About the Author Contact Wipro Please fill the required details to access the content Product Information Management – The core of great digital customer experience September | 2019 Relevant text and multimedia content is a key expectation of customers irrespective of the touchpoint. Organizations understand the need to meet this expectation of their digital customers. Product Information Management is where digital experience originates. It helps enterprises to become faster, consistent, compliant by enabling easy and efficient circulation of product information. In the digital age, businesses must re-analyze their product information management processes and capabilities and adjust to the changing reality to stay relevant. Today's product information management (PIM) solution must provide good governance of product information, offer contentthat is consumer friendly (both internal and external), and support automation of dissemination of data and assets to all channels of marketing and sales. It should be well integrated with other enterprise systems to provide best digital experience to both, internal as well as external stakeholders. Why is PIM important? Engineering and manufacturing organizations responsible for creation of new equipment, machines or devices have multiple product lifecycle stages (Concept to Shelf) before the final product is created. These product lifecycle stages are typically handled by different functions/groups and different systems in a large organization. The PIM system provides a platform to store and manage all product related information across business functions and multiple channels from a single unified dashboard. A product manager, who is typically responsible for managing marketing and sales of multiple products, has a big challenge in tracking the product in its lifecycle stages, as most of the tracking may need to be done manually. A PIM solution provides an ideal platform that will have a unified view of this process across all systems and help track the stages in the product lifecycle. The data model of PIM can easily capture status of each of these stages. Integration with the systems maintaining this information can bring in status data to PIM whenever the step related to that system is complete. A dashboard created on top of the data will easily represent the step pending in the overall process. This can greatly reduce the manual efforts needed by the product manager and his/her team. Marketing content added for a particular product may be applicable for other products as well. A good PIM solution allows easy availability of this information across multiple business

functions and product lines and therefore, allows for better collaboration and reuse of content. A workflow-enabled mechanism will allow the marketing content to be added and reviewed by other groups including the product manager before it is approved for publishing. The PIM data can be used to create an Augmented Reality (AR)-based interface for a mobile or web page. For example, Wayfair helps customers project a piece of furniture in 3D in their rooms to get a better feel of how it may suit his/her home. L'Oréal also uses AR to help customers interact with their skin products on a smartphone based app. A PIM solution also maintains relationship between multiple products. These relationships may be like alternate product, accessory, additional component in a configurable product, etc. This information can greatly enhance the digital experience for a buyer as well as reduce the time required to list various possible configurable options. Alternate product suggestions can come in handy when a particular product is unavailable or goes out of production; this can potentially reduce downtime for an assembly line. This information can initially be fed to the system and later a machine learning-based bot can be used to improve on these relationships based on buying patterns of users. For instance, consider a laptop manufacturer who sells laptops online. While the manufacturer can come up with certain base models with variants based on the type of display, processor speed, type and size of RAM etc., it will be difficult to list all the possible configurations and prices for all possible combinations. While it is time-consuming for the seller, the buyer experience also gets cumbersome, as he/she has to carefully search for the exact required combination. A more optimal experience for the buyer will be to provide a limited number of models, which can be further configured based on the list of supported upgrades. The relationships established between products in the PIM ensures only the right workable combination is available for a change in configuration. The core product information, combined with the pricing information gives the buyer an instant update on the overall cost impact of a configuration change and therefore helps her decide the optimum configuration based on her needs and budget. PIM solution can also help enhance the digital experience in the retail industry and can potentially increase the cross-sell and upsell opportunities for the retailer. Most retailers collect the digital footprints and profiles of the customers and can combine this information with the product information stored in their PIM solution to target the right product to the right customer. Integrating the PIM solution with a web-behavior analytics solution can greatly improve cross-selling opportunities. Consider a customer looking for a dress. If the retailer has the right set of accessories linked to this dress in the PIM solution, which may include a matching pair of shoes or a pair of earrings etc. and can present this as a combination, there is a high probability that the customer may end up buying all of them. Also, machine learning can be used to make better product recommendations based on user behavior. A bot may be fed with the data of user journeys and future product relationships can be fine-tuned based on this input. Similarly, there is a great opportunity to combine the online and the offline experience for the customer. Let's consider the instance of a customer who searches for a particular product online and then goes to the store to get a physical feel of the product. The online store can process the online browsing history from the cookie, add that to the details of the customer and when he/she visits the store, present interesting offer on the browsed product using a beacon. A

Chat bot can be used to deliver real time customer support. A PIM solution automates the categorization of products into different segments. While a product should belong to one primary hierarchy, it can also be part of multiple hierarchies. Depending on the usage, an organization may have multiple hierarchies like product line hierarchy, financial hierarchy, product category hierarchy, project hierarchy etc. Creating a business rule engine to automatically classify a product to multiple hierarchies and thereby representing them in appropriate nodes of the hierarchy and showing relationships across these hierarchies can greatly help product owners and end customers. As an example, a retailer may classify a product like antiseptic liquid as part of multiple hierarchies. It may be personal care, health, disinfectant etc. An end customer must be able to see these products as a part of each of these categories. This is also relevant in case of manufacturing customers that are required to maintain multiple hierarchies and undergo multiple changes in the hierarchy structures because of organization changes or product realignment or in a merger and acquisition scenario. Market researches show that a customer is more likely to buy a product with good user reviews. PIM can allow digital feedbacks and comments of a product to be displayed alongside a product. These positive reviews and feedbacks when posted on social media can also help build better brand awareness. Since these feedbacks are coming from customers' known circles, it can drive other users to buy the same product thus improving product sales. Vendor catalog management is a complex process. Using Blockchain in PIM helps authenticate product changes made to product sheets and master data. It helps by allowing smart contracts to authenticate changes made to master product data sheets. Blockchain helps PIM with an additional layer of security In summary Product Information Management solution delivers to organizations strategic advantages that greatly enhance the digital experience of both, its internal as well as external stakeholders. Integrating the PIM solution to other enterprise software packages helps in realization of multiple digital goals in terms of efficiency, better collaboration and reuse, enhanced cross-selling and upselling opportunities, and significantly-improved customer satisfaction. Combining it with some of the latest technology trends like AI, ML, Blockchain, AR etc. can greatly enhance the experience of the end users. Images and videos have a greater impact in conveying product features and people expect to see how a particular product will suit them. Managing these content, and making them available to the right channel will surely enhance customer experience and conversion rates. Chandan Roy Architect – MDM and Data Governance Practice of Data, Analytics & AI, Wipro Chandan has about 15 years of experience in Information Management. He has worked with customers across geographies and industry verticals to help them realize business benefit from their Master Data Management and other Information Management solution implementations.
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The importance of DataOps:

Why it matters and how to get started

----- Arcticle source ----- https://www.wipro.com/analytics/the-importance-of-dataops-why-it-matters-and-how-to-get-started/ ----- About the Authors Contact Wipro Please fill the required details to access the content The importance of DataOps: Why it matters and how to get started September | 2019 Data management has been facing challenges since the early days of web development and IT. The nature of the challenges has been changing from procurement to storage, to high volume storage, and from transaction to deriving insights, to making the whole process fast and efficient. Gaining agility to imagine real-time insights from fast burgeoning data in an automated manner is the need of the hour and the focus of many experts in the field of data today. This focus has resulted in the emanation of DataOps. DataOps draws parallel with a similar yet different practice in software delivery and SDLC management practice called DevOps, which uses large scale automation to quicken the software release cycles and improve the quality of output. DataOps is the amalgamation of various processes and practices supported by relevant technology that uses automation to boost agility with respect to data and insights. It thus augments the speed and quality of data, information and insights, and supports continuous improvement culture of businesses. Data challenges and the DataOps code DataOps as a practice tries to address some of the data management challenges to ensure quick and quality analytics for the end users. Data and related insights tend to lose the value that they possess with each tick of the clock. The requirements in the data and analytics space fluctuate: sudden changes in requirements are common. Also, the constant quest to ask more questions and counter questions from data keeps the analytics process on its toes. The number of data pipelines have grown with requirements from data analysts, scientists, and data-hungry applications resulting in data silos with no connect to other pipelines, data sets and data producers. The data resides in different systems and platforms; gaining access and control over different systems and identifying the right data becomes a daunting challenge. Bad data quality causes lost credibility in the entire analytics setup and leaves the whole program in jeopardy. The data formats may be different in different systems depending on the datatypes and schemas. Data errors can creep in due to numerous events like duplicate entries, schema change and feed failures. These errors can be difficult to trace and deal with. Also, there are constant updates in the data pipeline in terms of say, schema changes, added fields new/updated data source etc. Making and validating these changes is a constant and time-consuming task. Manual processes in the data pipeline from integration to testing and analytics are overbearing and time consuming. Some teams work long hours to make sense out of the data analytics efforts, some commit less and take more time to be watchful in their approach, while others try to be quick by

compromising on parameters. So, overcoming the data-related challenges requires not just tools but also changes in the underlying processes that handle analytics. DataOps helps overcome the hurdles and complexities and deliver analytics with speed and agility, without compromising on data quality. It derives inspiration from the practices of Lean Manufacturing, Agile and DevOps. It emphasizes on integration, cooperation, collaboration, communication, measurement and automation between data engineers/ETL engineers, IT, data analysts, data scientists, IT and quality assurance. Thus, it focuses on getting fast insights by leveraging the interdependence of every chain of the analytics process by focusing on people, process and technology. Implementing DataOps DataOps can be accomplished by accommodating a few changes to the as-is process being used in the data setup. Automated testing can help save a lot of time and curb manual efforts. The data should be constantly monitored for quality issues and test cases should be added incrementally for every added feature or change to the input data records. The corresponding errors in the statistical process control should be projected as alerts to the appropriate stakeholders to keep the quality of data high. Use of Version Control Systems wherever possible will help keep artefacts in a structured manner, enhance reusability and support multi-developer environments. Essentially, each step of the data analytics pipeline is accomplished by tools which are nothing but code i.e they produce underlying scripts, config files, parameter files etc. which if versioned in version control systems like GIT, SVN, customized version control tools/systems etc. will enhance reusability and reproduce a state in the pipeline when required. Also, multiple developers like ETL developers or analysts creating models can work on the same piece of code in parallel through branching the trunk and merging it back by testing and incorporating the changes. This will save development time and speed up analytics. Isolated environments will prevent chaos in the production database systems and Cloud environment can fulfill the separate data needs of developers. A data engineer making changes to data can cause issues if done in production directly or an analyst creating new model can be puzzled with constantly-changing dataset. Thus, isolated environments can be provisioned on the go. Code, configurations, parameters, tools or environments in the data analytics pipeline can be reused by effectively utilizing containerization technologies like Docker containers. Also, certain complex operations/steps in the pipeline can be enabled through containers (calling custom tools/API, downloading files, running a script e.g. python/ shell script execution, FTP file to another system). This will enable the teams to execute the container wherever required instead of performing them from scratch and deploy it easily without understanding the underlying tools and configurations. Flexibility is an important characteristic that must be present in the data analytics pipeline. The changes in approach or control of the process must be with the data engineers/analysts to make minimal changes/tweaks and get desired results. E.g. which version of datasets to use, which environment to consider, what condition to use for processing and so on. This can be effectively realized through use of parameters, by which the changes can be adjusted and incorporated on a case-to-case basis with minimal manual changes. DataOps in action A DataOps streamlined process encompasses tool chain and workflow automation when data enters the systems from sources and keeps on changing with time to feed the downstream systems for transformation, models, visualizations and reports.

This can be taken as the production environment that directly exploits existing workflows, tests and logics to derive value and keep the quality of data in check at all times. So, the code or toolset remains constant and data keeps on changing and updating the downstream, keeping the insights live and active. This can be done with a good orchestration tool with automation as its credo. Another activity that happens simultaneously is the generation of new code, tests, models and features to the existing code/tools that play with the data. This can be well handled by using fixed datasets and containerized environments with parameters and versioning to enable developers, testers and other stakeholders speed up the changes to production. Thus, it speeds up analytics and strengthens the feedback mechanism of the pipeline (See Figure 1). Figure 1: A unified approach to analytics with DataOps Conclusion Imbibing promising changes is a cultural phenomenon. A culture of reduction in timelines and improvement in quality that scaffolds constant improvement in metrics is a must-have for bringing about tangible gains out of a practice like DataOps. Every task/step in the process needs to be evaluated in terms of how automation and intelligence could sink in to make it better. The culture of constant improvement in both data and insights in terms of quality, agility and collaboration could be a right step in the direction of DataOps. Continuity in efforts is required as there is no one thing that could make an organization DataOps-compliant. An understanding and sense of collaboration between the stakeholders (data engineers, analysts, scientists or stewards) involved in every step is required to ensure a streamlined process. Constant promotion, transformation, release of data should be coupled with constant application of models to derive insights and simultaneously improve analytics on a regular basis. Also, the analysts and developers should get a constant feedback on the quality and profile of data and insights which would quicken the process of taking corrective measures to ensure a robust process. This will be the direct implication of getting in DataOps in the scheme of things. Pratyaksh Arora Consultant, Information Management – Data, Analytics & AI, Wipro Limited. Pratyaksh has experience in the field of DevOps, Information Management and Analytics. He holds an MBA from the Department of Management Studies, Indian Institute of Technology, Delhi and finds keen interest in new age practices like DevOps, DataOps and Data Management in general. Mohan Mahankali Principal Architect, Information Management - Data, Analytics & AI, Wipro Limited. Mohan has 20 years of business and IT experience in the areas of Information Management and Analytics. He is the co-owner of a patent in Data Management & Governance awarded by USPTO (United States Patent and Trademark Office).
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Data governance organization

----- Arcticle source ----- https://www.wipro.com/analytics/data-governance-organization/ ----- About the author Contact Wipro Please fill the required details to access the content Data governance organization The foundation for high performance analytics September | 2019 Data Governance is a crucial agenda in organizations that want data-driven business decisions and operations. Data-driven enterprises offer excellent digital experiences to

their audience groups, and increase CSAT, employee satisfaction, revenues, productivity, and profitability. The crucial question is how to implement effective enterprise-wide Data Governance (DG) and what benefits to expect from it in the medium to long-term. DG, as most practitioners would readily agree, is a complex long-term program encompassing people, new roles and responsibilities, virtual organization, organizational policies, data standards (global, regional and local), operating processes, procedures and last but not the least, the implementation and adoption of multiple platforms, systems and tools. To rollout a new DG program or optimize an existing DG program across all its dimensions, following questions need to be deliberated. 1. What can an organization expect to gain from the rollout of a DG program? DG initiatives can combine with analytics modernization initiatives to offer integrated high-quality data discovery. This will lend capabilities to data scientists, data analysts, business analysts to ask questions, formulate hypothesis and get answers that can be trusted as a single version of the truth. This evolution will enable efficiencies like: 1.1 What are the steps to rollout a DG organization? The above set of activities need to be plotted on a Gantt chart showing parallel activities, dependencies and estimated timelines leading to go-live of the enterprise DG program. 1.2 When can the expected benefits from the DG program accrue? Stabilization Phase: lasts 9-12 months after the go-live 3 months after the go-live following benefits can start accruing (based upon the 4hr/week time allocation mentioned) 2. How to incentivize the DG organization members? Upon go-live, considerations of additional remuneration should come into effect. These considerations can work at two levels - BUs and individuals. 2.1 At the level of BUs 2.2 At the level of Individuals DG roles should be calibrated based on the extent of their engagements in slabs of 50-100%, 25-50%, and less than 25% of their available time for DG work. The slab of 50-100% will need new head count, who will need to be assigned with additional work by the respective BU, slab of 25-50% will also need new head count with more diversified work, and individuals in the lowest slab should be offered a package that includes a premium on top of current CTC. To conclude For any analytics program implementation to succeed and yield business value, optimum data quality is a pre-requisite. Enabling data quality at enterprise scale requires multi-faceted approaches, enablement and technologies that make up the enterprise-wide Data Governance program. Therefore, well conceptualized and executed DG organization and program are essential to enable high-performance analytics to deliver insights that will be trusted as single version of the truth and will support business decisions and actions across the enterprise. Rahul K. Srivastava Lead Consultant- Information Management Data, Analytics & AI Wipro Limited. Rahul has over 19 years of work experience including Enterprise Data Strategy & Governance, Master Data Management, Business Intelligence & Analytics, and Cloud platforms. He has built and run successful business transformation programs in these domains for diverse sectors. He holds a B.Tech degree from Indian Institute of Technology Varanasi (IIT BHU), India and MBA in Marketing (Research). =====================

Art and science of model size optimization

----- Arcticle source ----- https://www.wipro.com/analytics/art-and-science-of-model-size-optimization/ ----- About the author Contact Wipro Please fill the required details to access the content Art and science of model size optimization Best practices for managing Anaplan model space November | 2019 Every business needs to have a scalable, reliable model in place that addresses all business functionalities and enables understanding of business performance in real time. With business processes going agile, and the exact ask being seldom clear, it is difficult for the solution architect to size the business model accurately for addressing the requirements. Anaplan connected planning platform, a Cloud-native solution that supports detailed models, delivers the potential to achieve success in this area. Anaplan models offer desirable levels of module capacity and flexibility to address business needs. Though Anaplan allows high levels of capacity, it is crucial to ensure optimized size while designing models. Excessive model size costs more and involves overheads like data duplication. Anaplan flexibility can enhance the model, but at the same time, can give a tough time to the architect or model builder in terms of controlling the right size for the model. Hence, it is imperative to follow certain methods meticulously to bring model to the right size that meets the requirements. Points discussed below, followed in chronological order, will drastically reduce the model size and ensure that model builders have followed the most optimized approach to designing and building models. 1. Check on the time settings Native time dimension settings works best in most of the cases, except for a few. For instance, if the business would like to view data weekly but compute the month totals based on days and not on weeks, Anaplan has no time settings to address this scenario. Hence, either a custom or a fake time scale has to be created with custom mapping of days to month separately in module to use model calendar settings. Another possible solution is to use Week General Settings but this would not allow certain functions such as Month Value. Best approach in this scenario is to use 4-4-5, 4-5-4 or 5-4-4 time distribution. 2. Take the POC approach Proof of Concept approach should be followed as part of design or initial model building to cover the basic functionalities. For e.g. to prove which time dimension settings would work fine, best approach is to do it. Certain pertinent questions that should be answered are: 3. Evaluate usage of custom lists for versions Use native versions wherever possible. However, you cannot create subsets against them. There can be certain modules whose dimensionality depends on What-if versions and not actual version. Idea is to create a subset against the custom list of versions. In Figure 1, a subset named s-simulation is created to limit the weekly module size to 151,792,040 Cells (1.43 GB). Actual version being included would increase model size. 4. Go for hierarchy pruning There are many instances wherein unnecessary transactional level details are brought into Anaplan. Business should be challenged with questions regarding the relevant list members to be included in Anaplan. If there is a requirement to drill back to the transaction data from the model,

then there is a valid reason to hold transactional data. For instance, a company reduced the number of service business units from 19 to 5, leading to 70% space reduction. They were pruned as they were not needed in the Anaplan model. In Anaplan, all the modules will not contain all the lists, it is a careful selection of the lists that would determine the size of the module. The intent should be to bring data that is absolutely relevant and useful rather than copying from the source. 5. Do not cross big lists – Manage dimensionality There can be instances where numbered lists which have 200K+ members are required to be built. Anaplan is capable of handling such huge lists, but there could be an issue when the lists crosses other bigger lists for e.g. weekly view for two years (53*2 = 106 Members). This can cause module size to increase. The approach should be to use numbered list with limited line items. This will bring in control. Identify independent numbered lists to use in separate module to reduce the model size. 6. Use numbered lists Usage of normal lists should be encouraged as maintenance issues are less and providing selective access is easier. In many cases, performance and maintenance is much better if you allow sparsity. However, there are situations where user needs control in terms of adding members to the lists. Numbered lists are one of the ways to control sparsity. It also provides flexibility to roll up against the different parents and create virtually a shared instance of the members. Creating multiple levels within numbered lists will help reduce sparsity. For e.g. Country->#Territory->#Sales Rep can help to map the right sales rep against right territory. Maintenance around numbered list should also be developed to provide foolproof system to the users. 7. Use numbered lists in combination Above example states that not all sales reps belong to all territories. A combination list created between #Territory and #Sales Rep that is dynamically maintained using Actions will reduce sparsity. Dynamic hierarchy management of two numbered lists as combination of lists can be time consuming to implement in some cases but worth implementing in addressing changing needs. 8. Use subsidiary views in a controlled manner Ideally, modules with same dimensionality should be kept separate but there are such scenarios in any engagement where not all the line items in a module follow the same dimensionality, but you are bound to keep them in the same module due to functional reasons. Subsidiary views should be created by changing any one of the following:- Generally, if the module is a weekly module, monthly level of data has to be captured in line item leading to change in the Time scale for a line item and hence subsidiary view. Imagine the impact of reducing the cell count to 12 from 53 (Month to Week) leading to close to 80% cell count reduction. If the relevant lists are kept against relevant line items, this can create wonders in terms of size reduction. Careful visit to all the modules should be made at the development stage itself. 9. Quick check online items Few quick checks on writing complex formula in single line item should be encouraged when working with larger modules. More line items = More cell count. Check the following:- 10. Use time range as much as possible Modules that hold history can be separate from the modules that do not. It would be effective to use time range in such cases. Cut down the module size by using only past years for history module and current year for the planning module and future years for AOP and Forecasting modules. Not all the modules need all the time range and hence this feature is always the easiest to enable model optimization. Conclusion Model space optimization is not just a science but

also an art that requires careful consideration and execution. Optimization should not be an exercise post implementation but should go hand in hand with implementation. Proper check on time settings, evaluating usage of custom lists for different versions, POC approach, hierarchy 4pruning, managing dimensionality, controlled use of subsidiary view, quality check on line items, maximum usage of time range are the best practices that deserve incorporation in the model to bring it to its optimum size. Business consultancy and customer convincing skills of architect also play an important role in this process. In short, keep it simple! Mahesh Damani Manager - Anaplan Practice,Wipro Mahesh has close to 14 years of experience in EPM suite of products. He is PMP® and TOGAF® certified and has sound knowledge on requirement gathering, architecture, system design and green field implementations. ======================

Data monetization opportunities with IoT, 5G and AI

----- Arcticle source ----- https://www.wipro.com/analytics/data-monetization-opportunities-with-iot-5g-and-ai/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Data monetization opportunities with IoT, 5G and AI January | 2020 How Telcos can rise to the occasion IoT, 5G and AI are ushering in a new era of customer and citizen engagement. This is a monumental data revolution that is driven by the smartest of solutions to make consumer lives better, improve people-to-people connect and enable enterprises to grow. According to Gartner, 66% of organizations plan to deploy 5G by 20201. Meanwhile, 59% say they will include IoT communications in the use case for 5G1. IHS Markit estimates that the number of IoT devices will rise from 27 billion in 2017 to 73 billion in 20251. All of this will result in a massive increase in data volume. IoT is pervasive and controllable, which has added a new dimension to information collection. The application of IoT data is virtually limitless. Combined with AI, IoT data will help uncover new avenues for revenue and increase the net value for Telcos, banks, and other enterprises. IoT with AI will also help government agencies to engage better with citizens. Globally, IoT monetization is expected to reach USD $542.92 billion by 2023, at a CAGR of 52.95%2 5G is up to 100 times faster than 4G speed3 and this enables improved IoT connectivity and usage. The introduction of 5G will cause the Telco data volume to increase manifold. This presents a tremendous opportunity to derive insights out of data for enterprise collaboration and monetization. Telcos: At the helm of the connected insights space 5G investments by Telecommunications carriers will power the IoT revolution. With the predictive capabilities of AI, Telcos will now be able to connect, monitor and monetize in real time - personal devices, autonomous cars, static sensors, cameras, kiosks and more - to give a unified positive customer experience to subscribers. Telcos can now be the focal points of campaigns, not just to offer better Telco services but also to become the hub to offer products and services across industries. Some use case options include: Conventional Telco customer experience drivers - network experience, device experience, product experience and location,

will be augmented by a digital touchpoint experience including App experience, and IoT-enabled multi-touchpoint experience. This means that not only will the customer engage the Telco on the Telco products, but Telco will be central to the subscriber's lifestyle including smart personal devices. Monetization of smart data will benefit subscribers, (by getting better home or health insurance, vouchers from Telcos), Industry (banks, insurance, retail) and of course the Telco itself. Hurdles in the data monetization journey Winning with a solution built on IoT data pipeline and AI-driven decision engine Telcos can leverage Wipro's Data Discovery Platform (DDP) to unlock greater potential across the IoT value chain. DDP's High Performance Event Processing and Deep Learning platforms come with pre-built Data Science applications. The Data Science Framework in DDP allows Data Scientists to leverage rich IoT data to generate potential revenue generating insights (See Figure 1 & 2). Figure 1 - Data Discovery Platform – Building analytics apps Figure 2 - Data Discovery Platform - IoT with 5G analytics reference architecture Wipro has partnered with leading institutes of excellence in India - Indian Institute of Science, Bengaluru – for Advanced Research and Innovation in autonomous systems and robotics in 5G; and Indian Institute of Technology, Kharagpur – for Advanced Research on 5G and AI. Telcos can leverage their expertise to build innovative capabilities to enable better monetization of 5G data and offer greater customer experiences. Conclusion 5G networks powered by AI will revolutionize the revenue-making opportunities for Telcos. If operators pursue new business models to improve data monetization and unlock business opportunities, global revenues will grow at a CAGR of 2.5% during the 5G era to $1.3 Trillion in 2025.4 Majority of monetization opportunities will be in the B2B space, and Telcos can market and campaign on behalf of other enterprises (B2B2X) using the insights generated from data. Current data analytics and AI capabilities of Telcos will be put to severe strain due to the extremely high volume of data involved, and the need for real time insights and capability to generate deep insights from the data. It is crucial for Telcos to reinvent themselves by building apt capabilities to maximize value from 5G. References Mahesh Swaminathan Regional Practice Director – Data, Analytics and AI – ASEAN, Wipro Mahesh is responsible for delivering analytics solutions and consulting to businesses, managing solution sales and partner relationships, and analytics skills development for teams in ASEAN. Wipro has transformed the analytics landscape for large clients in the region, delivering desired business outcomes. Mahesh brings in over 17 years of experience in Sales, Consulting and Program Management. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Solving the ERP data migration puzzle

----- Arcticle source ----- https://www.wipro.com/analytics/solving-the-erp-data-migration-puzzle/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Solving the ERP data migration puzzle February | 2020 The ERP data migration conundrum The key challenges and confusions in the ERP data migration journey are: Resolving data migration challenges The key to addressing ERP data migration challenges is building the right focus from the beginning by establishing a dedicated migration team involving like Source, Business, Application and Technical SMEs. The apt approach and best practices are: Conclusion Here is a summary of the Dos and Don'ts for data migration to ensure a seamless transformation journey: Ravi Shekhar Data Migration Practice - Global Head, Wipro Ravi has an overall industry experience of over 25 years. He has worked across the Data Management space for 17 Years and handled many large-scale migration projects across ERP, Telco CoTS product and CRM Applications. You can reach Ravi at ravi.shekhar@wipro.com To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

The Edge AI factor

----- Arcticle source ----- https://www.wipro.com/analytics/the-edge-ai-factor/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content The Edge AI factor Building smart cities and smart healthcare with edge analytics and 5G February | 2020 Edge Analytics with 5G holds a transformative potential for humanity, impacting human health and safety and enabling smarter cities. The transformative potential The disruptive potential of 5G with Edge Computing (EC) and Edge Analytics (EA) may be more impactful than the Internet and Mobile combined (See Figure 1). The internet changed the way we discovered and utilized data, the mobile phone changed the way we interacted with each other and the data. 5G with EC and EA, will combine both of these changes and with an exponential speed and accuracy. Figure 1: At the intersection of industries, transformative initiatives and 5G capabilities lies the true transformative potential of Edge Analytics The race for smart cities is as much a business opportunity, as it is a humanity challenge. Technology has always shown most impact when addressing

humanity challenges at scale. With the advent of 5G+EC+EA, exponential benefits could be derived for smart cities across the globe, which could address not only the economic divide but also enable solutions dealing with safety (pedestrian and traffic), and human health (proactive and reactive services). Tech foundation for transformation 5G edge analytics will drive revenue and lead to newer business models. 5G networks offer increased cell density, higher data speed and lower network latency. In 5G, more processing is being pushed to the edge of the network, enabling the implementation of low latency applications. In addition, cell site densification provides increased network capacity, more data bandwidth and higher mobile data speeds to the consumers. This network densification will enable advanced analytics for real time decision-making. The idea is to reduce performance bottlenecks on network bandwidth by storing and processing the data near the data-generating, end-user devices or the edge. This can enable innovative new applications and business models, uniquely powered by mobile edge computing. Gartner predicts that there will steady increase in the embedding of sensor, storage, compute and advanced AI capabilities in edge devices. Edge Computing Edge computing removes the dependency on a centralized data centre. Instead the applications, data, and services are decentralized and at the edge of a network. With edge computing, it is feasible to push flavours of AI and functions that formerly required big data centres into micro data centres (µDC) and AI processors closer to the user—at the originating device, at the enterprise or in an operator's local access network. Related read: Edge computing in a 5G network Edge AI Edge analytics and Edge AI adds analytics processing and AI to the edge. It utilizes the data on the edge including historic data for predictive scenarios and use cases and for optimizing end-services. Edge analytics application use-case spectrum is very broad including wearables, smart home, smart cities, autonomous cars and industry automation. The health industry stands to benefit greatly by using EA with wearables to monitor, identify issues and prescribe remedies affecting human health as early as possible. Some unique application areas include: Audio Analytics Audio Event Detection: Detecting sounds such as that of a blast, a baby crying, or glass breaking will trigger an alert. Recognizing specific sounds from within overlapping sound sources is a critical ask that AI can fulfil. Hands-free read and write facilities can be enabled by means of AI at the edge. Inertial Sensor/Environmental Sensor Analytics Inertial and environmental sensors in smartwatches and fitness bands with deep-learning-on-the-edge trigger faster response to local circumstances. Wearable devices collect data on human activity, location, pulse etc. and alert their wearers. Video analytics Video Analytics within automobiles help in detecting and alerting distracted and drowsy drivers through the eye position and the state of the eye. Smart Cities The advent of 5G means that cities will be able to use artificial intelligence to analyse the massive amounts of data being collected in a city; and then use that data for • Utilities and Infrastructure Edge analytics can enable a smart city municipality to better manage and conserve precious resources like energy, water and fresh air. Analytics on top of IoT sensors in water systems and waste management systems will enable better monitoring and management. Innovative electric grids will increase energy efficiency for businesses and consumers alike. Edge analytics will also help in the monitoring and controlling of building operations like HVAC, lighting, and security to enable

best possible living environment to the building occupants. • Economic Development and Civic Management Traffic flow, parking space availability, utility usage and public streetlight management can be monitored by using IoT sensors on 5G network. Authorities can leverage edge analytics to find practical solutions to conserve energy, optimize water and power resources, and reduce environmental impact. Gradually, minimum traffic congestions and improved waste management will entice new residents and hence increase economic opportunities within the community. • Public Safety and Crime Control Edge analytics and Edge AI enable advanced and secure video, sensor and communication systems to proactively monitor public spaces and law & order. Using Edge AI, crimes or other disastrous events can be prevented or de-escalated before they jeopardize public safety. Sensors embedded in critical infrastructure such as bridges and power plants can monitor structural data to identify potential dangers, protecting citizens and the economic well-being of the city. Sensor-equipped drones can monitor vehicular traffic, crowds, construction sites and disaster areas to help monitor conditions continuously and support first responders. Overall, communities benefit from increased trust in law enforcement and disaster management. • Intelligent Transport and Autonomous Intelligent Vehicles Edge analytics will be the key enabler for the connected Autonomous Driving (AD) vehicles revolution using the Internet of Vehicles. Road vehicles will communicate with each other and with road infrastructures, improving overall road safety. It will also lead to reduced traffic congestions and enhanced driver comfort. Edge computing based Vehicle-to-Cloud solutions enable edge cloud capabilities for different levels of autonomous driving through different services (e.g., high definition real-time maps, real-time traffic monitoring and alerts). Distributed AI application in car will send video data over 5G radio to an edge computing site inside the Telco network. Video data will be processed in near real-time by Machine Learning algorithms at the edge cloud. Results of real-time image processing will be sent to the car, where comparison to local analysis will be done, leading to the final decision: i.e. instruction to the driver or the autonomous car. Smart Healthcare Healthcare is seeing a huge surge in the number of connected devices. EC and EA can reduce this burden to a great extent. A clinician's mobile device can capture patient data into a connected analytics platform at the edge in real-time. Patients will no longer need to wait for analysed results, which would significantly reduce their number of visits. The concept of the collaborative edge will be another enabler wherein geographically dispersed data is fused into a combined and edge device consumable view. For example, deep learning has recently gained relevance in ophthalmology due to its ability to detect clinically significant features for diagnosis and prognosis. This has resulted in various deep learning systems to be embedded within ophthalmic imaging devices, allowing automated image acquisition. The same can be performed at a smartphone-based device level, for instance by using a hi-resolution fundus imaging system attached to a smartphone. Conclusion The transformative potential of edge analytics will be realized. The speed of 5G networks coupled with the fact that local processing can be offloaded to the edge nodes/network makes the proposition of edge analytics very strong. Reduced latency, and connected, intelligent devices speaking to each other make for an invaluable leap from the current paradigm that requires sending large chunks of data back to the cloud for analytical processing and insights. Autonomous decision-making

and cognitive intelligence at the devices or the edge network cut down both, processing and decision-making latency. Edge analytics in 5G will not be restricted to traditional descriptive analytics and basic BI reports but will evolve to an extent that it will learn from the context, predict what will happen next, prescribe the next best action or decision, and learn from the past behavioural patterns for taking the most optimal decision. For fully autonomous applications, edge analytics will automate the next action in real-time. With the speed of 5G, more information will be collected and processed, and edge analytics generated insights will increasingly drive decision-making, leading to cognitive intelligence applications (See Figure 2). Manish Sood Consulting Partner, Analytics & AI Consulting, Wipro Manish has more than 21 years of industry experience in Business Strategy, Business Consulting, Business Transformation and Digital Transformation. In the last decade, he has primarily consulted with clients on new digital payments product launches as well as digital transformation programs. Manish did his MBA in International Strategy and Brand Management from Goizueta Business School, Emory University, Atlanta and BE in Electronics & Telecommunication from University of Pune, India. Shamit Bagchi Data Scientist and AI Consultant, Analytics & AI Consulting, Wipro Shamit works as a data scientist specializing in predictive and prescriptive analytics, machine/deep learning and AI consulting. He brings to the table both technical acumen and business consulting expertise based on over 15 years of experience in the Big Data and software industry, building value propositions for clients in Europe, US and India. He holds a Master of Science degree in Complex Adaptive Systems from Chalmers University, Sweden and an MBA in Marketing & Strategy from the Indian Institute of Management, Bangalore. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption
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Data consumption naturally

----- Arcticle source ----- https://www.wipro.com/analytics/data-consumption-naturally/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Data consumption naturally March | 2020 The world of data and analytics strives to deliver data to the consumer in the right form at the right time. While analytics has enabled the data consumer with various capabilities like Standard Report with KPIs, Dashboards, Reports delivered through Alerts & subscriptions, Self Service Analytics – users still need to understand the tool, get familiar with the report names and learn which report will help them find answers. The KPI definition and reports need to be designed as per the user profile - otherwise the user will have to run the report, put the right filter and find answers to

questions. The artificial intelligence (AI) maturity and capability to learn about the consumer sets the future in the right direction – Voice Digital Assistant brings the entire AI capability into action, where it answers questions and conveys what it can process along with its thoughts in simple Natural Language conversation. Voice Digital Assistant can learn about the enterprise user while it picks up new capabilities (like setting meetings, sending emails, status of various business processes, read KPIs). The art of possibilities with Enterprise Voice Assistant is endless as we get introduced to Voice User Interface (VUI). With Digital Voice Assistant at the forefront of AI, let's fast forward few years from now and look at some real-life examples given in Table 1. Use Case Example Morning brief Sales is up in USA and North Europe. France & Italy are down compared to last month. Revenue realization report is ready for review... shall I bring it up? Setting up meeting Voice, setup meeting with France & Italy Region Managers. Show me the Revenue Report and send a copy to my team Send mail with message and link Send a mail to the contracting company saying, tomorrow schedule is cancelled and share the new schedule. Review the schedule of individual or store or depot 2 deliveries scheduled for today. First at 8am and another for 6pm Answer specific question Store Manager: Voice, how's the inventory levels compared to last month? Voice Assistant: Stock on Hand is 10% less when compared with last month Bring up specific content on the device or screen Senior Executive: Show me the revenue report Voice Assistant: Showing the revenue report Make calls Voice bring up the stock report and call the Inventory Manager Table 1: Voice Digital Assistant use cases & examples Voice: Reshaping data consumption and user experience Typically, users are forced to learn or change when any new application or user interface is launched. User needs to learn how to login, the menu structure, how to deal with the messages, the different clicks and status, etc. Voice User Experience (UX) implementation is the other way around -- the designers should build a voice product for the humans that can interact naturally. There is always a collection of data sets and large number of use cases per role. Traditional reports and dashboards try to generalize these use cases and deliver them periodically. Here the user must define the problem statement, find the right data set and derive the answer for the business question. This is time consuming - the effectiveness of data and decision mostly depends on the user skill level. The Digital Voice Assistant will learn over a period and will truly be an assistant who understands the user needs. From checking if the data is available to printing the required charts will be just a question away. For eg. Voice (Voice assistant), print the sales forecast once the data is ready. (as simple as saying "Voice, set a reminder for 5 minutes") Future-ready Enterprise Voice Assistant Voice Skill will evolve over time. The voice assistant will run Business Intelligence (BI) reports and query the database. It will happen as the developer enhances the skill to add more Intents and Utterances, and each role is defined better. This needs to be seamless to the data consumer. Development and Deployment models of Voice Skills will mature rapidly. Going beyond the Voice Skill, BI & Visualization tools will continue to serve the data consumer and will need better integration with Voice Skills. Most of the tools are already talking about Natural Language Processing (NLP) within their tool capability, which is a good sign. Data needs to expand beyond tables and charts - Industry is moving towards specialized storage for every type of data like Files, Images, XML, NoSQL and any other unstructured data. Data

Virtualization, aptly called "Information Fabric", is going to take center stage in delivering the data across enterprise. BI tools fail when the user needs anything that is unstructured - that need will be served by the Data Virtualization technology. This will serve data in any form, from any part of the enterprise, from any location - where the user just consumes without connecting to multiple systems. Coming back to Voice Skill - If Cloud platform adoption is complete, the capability to build a server-less function in any Cloud and integrating this with any BI tool and Data platform is already available (See Figure 1). This high-level architecture for any enterprise brings all the capabilities together and delivers a seamless experience to the user through the Digital Voice Assistant. Developing Voice Skill to access various capabilities across the enterprise can be classified as 2 categories – Access the BI tools in the enterprise, Access the Data in the enterprise. In the architecture, Voice Skills can directly access all the BI components and similarly access all forms of data through the Data Virtualization Layer - so it only needs to understand the data (Not where it is coming from or how to access). Adaption and implementation of a Data Virtualization Layer will enable the Voice Skill to deliver the experience even if the underlying source system changes. This simplification of access and focus on Voice Skill will deliver the most effective consumer experience and answer the questions in the right time. Figure 1: High-level architecture of enterprise voice assistants To demonstrate the approach to implement a simple skill like Total sales – a simple query like below can be attached to the Sales intent & utterance. This will deliver the most important KPI just like telling 'Today's weather'. Future of Voice and natural conversation Speech Synthesis Markup Language (SSML) Version 1.1 is already in action and is emerging as the standard XML based language for Voice User Interface. Few years back, cloud was looked as being locked in with a vendor and now it's considered as only Internet - accessible to everyone from everywhere. The same evolution will happen for Voice Assistant as well. In the next few years, integration across voice assistants is inevitable. Recent developments from the voice assistant providers are in-line to the above expectation: How to drive enterprise Voice strategy and adaption User interfaces have evolved from Command line interface, Graphical, Touch and now more humane Voice Interface. Enterprises needs to define a User-focused Voice Strategy with clear objectives and strong organization structure to deliver it. Following are the aspects that should construct the Enterprise Voice Strategy Voice product should deliver most of the common features that are commercially available in the market to excite enterprise consumer and drive adaption. Below are the most important features and this is not the exhaustive list. With improvement of cloud, processing power, 5G and power of Data & AI – Voice is set to take the human-machine interaction to the next level very soon. References Karthikeyan Subramaniam Managing Consultant, Analytics and AI Consulting, Wipro Karthikeyan has 16 years' experience in designing, developing, and delivering innovative data solutions across merchandising, supply chain, vendor management and store operations. He helps large enterprises embrace data and transform into business outcome-driven organizations. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with

technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The man-machine paradigm in AI

----- Arcticle source ----- https://www.wipro.com/analytics/the-man-machine-paradigm-in-ai/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content The man-machine paradigm in AI Creating value by combining the best of the two May | 2020 You may have read about 'Dark AI', 'Light AI' or even 'Strong AI' and 'Weak AI'. There is another way to lay down the complexities of AI use cases. Table 1 shows categorization of Analytics & AI use cases in terms of three levels of human intelligence: Let us look at one use case, say a self-driving car along the three levels mentioned above: Iconic: The odometer displays the speed. This is an accepted normal. Indexic: The car is driving itself in traffic on a freeway. The new normal, but will work only in a given set of circumstances (for instance, the car cannot drive on dirt roads or spaces without clear demarcations). Symbolic: On a snowy day, if there is an old person shivering at the side of the freeway, waiving his hands frantically, what would / should the self-driving car do? This scenario would open up so many questions around morality / ethics, civility, safety and so on, which in my opinion, will take a very long time for the machines to learn and implement. Synergy of man and machine On May 11, 1997, IBM Deep Blue beat chess grandmaster Garry Kasparov. In 2016, Alphago beat Lee Sedol, the world champion of Go, a game many times more complex than Chess. There has been considerable improvement in use cases ranging from facial / voice / image recognition. One reason could be the abundance of labeled input data sets. We have as many photographs of human beings, cats, or dogs as we can. The more the machine can play and learn, the better it gets. The same as what happened with chess or Go. The more players signed up to play with the machine, the more practice it got, the better it became. AI is becoming stronger and better at learning and decision making, a process known as reinforcement learning. The keyword is "perfect information". Rules, boundaries, inputs and expected outputs are given. Let us say, a player cheats in Chess. How would a machine realize and respond to that? These are the complex and unanticipated scenarios where it becomes extremely complicated to train machines. To appreciate the wide chasm between man and machine, one would need to appreciate the jaw dropping evolution of the human brain over hundreds of thousands of years. Most of us cannot even fathom the way we think, learn, communicate, improve and adapt. Language is but one big differentiator, for it enables human beings to relate to one another and understand emotions, and creates infinite possibilities of thought and expression. So, what does all this mean for organizations today? Getting AI right By combining the machine's superior "Indexic" skills with a human's "Symbolic" skills, organizations could create significant value. This is the "Man-Machine" paradigm. How to identify these scenarios? Instead of academic debates around whether one should use deep learning or neural

networks, addressing the two fundamental issues could help: If there are lot of documents with different formats but with the same or similar information or there are high volume of transactions / complex processes / incomplete or incorrect information, these are good candidates for the "Man-Machine" paradigm. The machine can do the grunt work of going through hundreds and thousands of documents, images, audio files, identifying patterns, outliers while the Human can focus on the seemingly unconventional issues, making sense of the machine output and connecting the dots. Some examples could be: Solving these use cases could create value in terms of improving customer experience, saving costs, building new revenue models or creating new products and services. Good Luck! References To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

4 Ways Artificial Intelligence Powers

the Fight against Pandemics

----- Arcticle source ----- https://www.wipro.com/analytics/4-ways-artificial-intelligence-powers-the-fight-against-pandemics/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content 4 Ways Artificial Intelligence Powers the Fight against Pandemics May | 2020 The rapid spread of COVID-19 poses a global threat in an increasingly interconnected world. It has already disrupted the supply chains of 94% of Fortune 1000 companies1. As the virus continues to have significant human and economic impact, it is crucial to rapidly combat its spread through tracking and preventive measures, even as researchers work on discovering a possible vaccination or cure. Underpinned by data science and genetic applied science, Artificial Intelligence (AI) can help understand the cause of the disease while enabling better management and prevention. Here are 4 ways in which AI technologies can help fight Coronavirus. An AI model can leverage data from health organizations, commercial flights, livestock health reports, climate and news reports to correlate data points, focusing on the movement patterns of people affected by the virus. Combined with human expertise in analyzing and interpreting the data, AI can predict the start of an epidemic as well its spread. For instance, natural language processing (NLP) and machine learning (ML) algorithms can help scan data for early signs of the COVID-19 pandemic. As more and more medical information becomes digitized, it can be leveraged to make accurate predictions while ensuring data privacy and cost

optimization. However, predicting patterns and potential outbreak in non-human host carriers can be a challenge. The Cary Institute of Ecosystem Studies2 classifies species that are reservoirs of human diseases and uses AI in animal surveillance to predict likely outbreak sites in future. Infections such as the Coronavirus can be detected in large scale through computer vision algorithms. This enables frontline healthcare workers to detect and monitor the disease while efficiently managing patient volumes. For instance, an AI system using cameras equipped with computer vision and infrared sensors can measure people's temperatures in public areas. Such a system can screen up to 200 people per minute and flag anyone who has a temperature above 37.3 degrees. Similarly,AI systems that take advantage of a deep learning algorithm based on 45,000 anonymized CT scans3 can differentiate between COVID-19 and ordinary viral pneumonia. Right now, the only way to prevent the spread of the novel Coronavirus is to reduce contact with infected patients. Automating interactions and procedures with medical staff will help perform contactless diagnosis while minimizing the risk of cross-infection. Robots can check people for fever and deliver food and medicines to patients, and even disinfect rooms, reducing the need for nurses' presence. For instance, AI can assist ambulances to speed through traffic while reducing time to provide medical assistance. In fact, doctors can take advantage of robots to communicate with patients remotely to minimize exposure with infected people. AI can also help analyze sewage and help map the pandemic through an early indicator of disease spread before people seek care. AI can also tackle the spread of inaccurate and fake news by moderating information and increasing accuracy. Developing a vaccine against the Coronavirus is critical to contain its spread. But developing new drugs and medicine is a lengthy and costly process. Deep learning is the key in finding new information about the structure of proteins associated with Coronavirus for developing the vaccine formula. ML can be leveraged to determine the protein structures that can probably mask the virus from seeking healthy human cells4. Similarly, predictive ML capabilities can identify compounds that can effectively block the cellular pathway that allow the virus to find its way into the cells5. AI systems can also successfully identify thousands of molecules for potential medications and use simplified chemical sequences to predict the strength of a molecule to bind to a target protein. In a similar manner, AI can accelerate drug discovery. A resilient future with AI AI and data-driven approaches can help track and contain the spread of the Coronavirus faster and also provide deep insights on the epidemic, helping in the process of finding a cure. These truly herald the advent of contact-less diagnostics in healthcare sector. Organizations that use AI to their advantage will not only be able to accelerate the drug discovery process but also be resilient to face any such future outbreak. References   Anand Krishnan Head of Artificial Intelligence at Wipro Anand is an AI evangelist who is passionate about applying technology to solve enterprise problems and assisting Wipro's global customers to scale their AI adoption for transforming their products & services. He works closely with startups, alliance partners & academia building an overarching AI ecosystem. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies

leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Machine Learning for B2B Pricing

----- Arcticle source ----- https://www.wipro.com/analytics/machine-learning-for-b2b-pricing/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content Machine Learning for B2B Pricing The strategy for optimizing pricing and maximizing profits May | 2020 The article discusses   The adoption of machine learning started in the consumer space almost a decade ago, but B2B organizations have been rather slow in embracing machine learning algorithms for their pricing. However, the scene is changing. Trends driving AI/ML adoption in B2B Pricing B2B companies are realizing the potential of machine learning (ML) in making right business decisions including pricing. There are several trends driving adoption of ML in B2B Pricing (See Figure 1). Figure 1: Trends driving AI/ML adoption in B2B Pricing Data & modelling challenges in the B2B space and their solutions Reluctance to adopt ML-based pricing originates from two main sources i.e. data related challenges and the complexity surrounding the pricing as a business process (See Figure: 2). In this section, we have tried to address some of these. Solution - This stems from the common perception is that ML models need a large data set. While it is true that some of the more sophisticated models like deep learning cannot be trained without large volumes of data, there are multiple algorithms in ML e.g. Decision Tree or Generalized Linear Models (GLM) that do not really need huge data sets. In fact, the first few areas of applications of statistical modelling were clinical trial and agriculture where data volume is even less compared to some of the B2B organizations. Solution - We advocate ML models to be a supplement to human decisioning and not a substitution of the same. The human amendments to the model's recommendation should be sent as a feedback to the model. It should be captured as an insight that can be leveraged in subsequent pricing decisions. Solution - Over the years, most organizations have made significant investments in their applications like ERP, CRM as well as enterprise data warehouse. Additional checks like multi-level reconciliations across systems, investing in a master data management systems will just not help pricing but the overall organization. Ultimately a good model needs good data. It is strongly recommended to treat data enrichment as a continuous process to reap benefits from any analytics initiative.   Solution - Techniques like Bayesian Hierarchical Models or Decisions Trees can be leveraged to model such scenarios. Let's say, you are selling a product in a territory and you don't have any past history of selling the same product in the same territory, hierarchical models intelligently roll up the data to the next level in hierarchy where you have available historical data and generalize those insights. Solution - The focus of the modelling should be to

compute the Bid Price vs. Win Probability and not estimation of price elasticity i.e. demand as a function of price. The outcome in a B2B sales cycle consists of multiple phases but the advantage here is the seller has the option to revise the quote according to the response from the buyer. The different stages in the B2B sales life cycle can be modelled as state transitions that can be factored as an input to the model so that accurate prices can be determined earlier in the flow. One advantage while modelling pricing in B2B is the buyers and sellers in a B2B environment are expected to behave rationally compared to their consumer counterparts, and models need not really factor in the behavioral pricing that are frequent in the consumer space. Figure 2: Data & modelling challenges in B2B pricing ML framework for B2B pricing recommendation Pricing can have several objectives beyond winning the bid. One of the most important being profit maximization. In addition, based on the strategy, an organization would like to maximize the revenue through cross-sell or up-sell. Elsewhere, increasing the customer trust to maintain long-term relationship with the customer may be the priority (See Figure 3). Figure 3: Objectives of pricing Figure 4: B2B Pricing Modelling framework Figure 5: Bid Response vs. Price Ratio. Bid Response is depicted by 1(Win) or 0(Loss). Price ratio in Figure 5 indicates the net price the customer will pay to the actual listed price. A price ratio of 0.2 indicates 80% discount i.e. customer pays only 20% of the listed price. Bid response of 1 indicates the win while bid response of 0 indicates a loss. It is suggested to use probabilistic algorithms e.g. logit, power etc. while estimating the bid response function. Unlike algorithms that give a binary outcome, probabilistic models produce the probability of winning the deal at each price point. Also, they are more interpretable and the influence of price and other variables can be illustrated to the field sales force. Complex black box models which produce a binary outcome of win and loss (not probability) and not interpretable should be avoided. Modelling process should follow the model development lifecycle comprising of exploratory data analysis, model training and performance evaluation in a holdout data. The performance of various algorithms across a set of parameters like accuracy, precision, recall, AUC, ROC etc. should be compared to choose the best performing model. Once the Bid Response function is estimated i.e. the relative importance of the variables on the deal outcome (win/loss) is determined, it can be used to simulate the probability of win at different price points (See Figure 6). Figure 6: Win Probability vs. Price Ratio at different price points Bid response functions should be estimated for each pricing segment separately if estimating individual functions gives performance advantages compared to a single model across pricing segments. However, due consideration should be given to the availability of data in a particular pricing segment. If the number of records are significantly less for a given pricing segment to effectively train/test the model, a single model across pricing tiers may prove to be a better option. Figure 7: Profitability % vs. price ratio to depict the profitability % at different price points. Once the probability of win and profitability, both are determined, the profit can be estimated at different price points. Estimated Profit = Probability of winning the deal * profit The price point that generates the highest estimated profit will be recommended to the field sales persons. Bringing together people, process and technology In order to reap the benefits from the implementation of an ML-driven pricing program, organizations should ensure they have the people, process and technology

policies aligned to: People Process Technology If you are starting your ML-enabled pricing journey, creating the pricing analytics platform is the first and the most important step. The pricing analytics platform will have the following four components. References To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

How to Get Infrastructure Requirements for

Artificial Intelligence Right

----- Arcticle source ----- https://www.wipro.com/analytics/how-to-get-infrastructure-requirements-for-artificial-intelligence-right/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content How to Get Infrastructure Requirements for Artificial Intelligence Right First, take control of your data May | 2020 With advancements in Artificial Intelligence and Machine Learning techniques, organizations across the globe have realized the potential of AI in enabling quick and informed decisions. They are moving towards rapid adoption of these technologies for survival and subsequent favorable outcomes. Due to this growing demand for AI across industries, infrastructure decisions are increasingly being based on this workload. However, before deciding the infrastructure solution for AI platforms, enterprises should gain insight into the data lifecycle from an AI model's perspective. Data can be the key challenge for implementation of AI and ML. Here are some key pointers that enterprises need to know about data before defining infrastructure for AI: Efficient management of data for enabling AI Data is crucial for modern AI and ML algorithms. Collection of data in raw format, managing these big chunks of datasets, and labeling them with related information to help train an AI model are the major data challenges. A data architecture that describes how data is collected, stored, transformed, distributed and consumed is essential to implement AI solutions. Datasets have to go through multiple processing stages before being used to train the AI model. Let's see what happens to data at each of these stages. Data Collection and Ingestion - This step involves storing data from multiple sources into a data lake. The data here is a mix of structured and unstructured data. The data lake needs to be scalable and agile to handle every type of data. The datasets will have Inferences, which must be saved to be processed in the further steps. Data Preparation (Clean and Transform) - Data stored in data lake post ingestion isn't suitable for utilization in training AI models as it

needs cleansing and required transformations. Thus, transformations are performed in data lakes. Explore - Next step is to feed these processed datasets from data lake to the AI/ML tools in the AI based platform, which possesses high storage with GPU and CPU servers. Initially this platform conducts testing with a smaller set of data and then full-scale model training is enabled through multiple iterations. Training & Evaluation - At this stage, random data sets are taken from data lake and fed into the AI platform for training and updating the model. Infrastructure requirement at this stage is to have high performance storage to compete with high processing speed of GPUs. Scoring or Prediction - After training and evaluation of AI models, they are circulated in production as PMML (Java) file, model objects (Python flask, RServer, R modelObj) for prediction (scoring). The business application needing prediction invokes the objects in accordance with the algorithm. After completion of data processing and training of models, the data becomes redundant or cold and is no longer needed. But sometimes, the cold data may be needed to refer back for problem-solving. Hence, cold data is mostly stored in a low-cost storage area. Infrastructure selection criteria for AI To make the right choices about compute and storage, it is vital to understand the requirements of storage and compute at multiple stages of the data lifecycle.Figure 1 maps the storage and compute requirements with the phases of data lifespan. However, this might vary on a case-to-case basis. Figure 1: Infrastructure storage and compute requirements during data lifespan phases Storage selection criteria In case of standardized and small scale ML requirements, one can go ahead with scaled out shared storage across all phases. For large scale ML requirements which also involves deep learning, throughput differs radically throughout different stages and hence separate fit for storage becomes a better and cheaper solution as compared to having a solitary shared storage. Compute selection criteria The requirements for compute performance depends on the phase of data lifespan and inclusion of deep learning. Depending on the usage and storage advances, the data lake deployment can be on discrete servers or servers with storage. In discrete servers, single server provides storage plus computation, while in the latter, a committed storage box offers storage and servers provide compute. Public cloud selection Public cloud acts as an alternative to on-premise structures as they offer key features that are quicker and easier to leverage. These include scalability, agility and hybrid usage of infrastructure. Moreover, public cloud offers readily accessible data lakes, thereby reducing overhead costs. However, the choice between public cloud and on-premise structure is dependent on additional factors like setup size, business needs, landscape of applications etc. Container platform Container platform helps on-premise structures to achieve the functionalities of public cloud. With the help of containers and server-less computing (quickly scalable), ML models are able to act independently, hence being more cost-effective with less overheads. On-premise containers can be deployed as a platform. But, the methodology, compatibility, and AI platform and ML tools used need to be confirmed. Various AI applications / use cases like language translation, face detection, financial risk stratification, route planning and optimization, dynamic pricing and autonomous driving have come up but there is one common feature that drives them all – their dependence on hardware. All these applications have different compute requirements that result in varied chip compatibility. Factors like processing speed, hardware interfaces, flexibility, backward

compatibility, need for technical capabilities decide the type of chip that is needed per application. For e.g. for a face detection use case, the possible AI chips for training phase could be a GPU or FPGA (Field-programmable Gate Array), whereas inferences can be achieved with the help of CPU or an ASIC (Application specific integrated Circuits) chip. Right infrastructure matters AI is the next wave of digital disruption - the global business value derived from AI would be huge with its impact felt across the value chain. Enterprises need to figure out the infrastructure that facilitates AI and ML to leverage its potential. The high performance workload in today's era requires modern infrastructure that can provide better performance, scalability and agility at a lesser cost. Raju Singh Mahala Raju Singh Mahala is a Sr. Architect at Data Center & Cloud Practice in Cloud and Infrastructure Services at Wipro. He has more than 20 years of experience in the IT industry across IT Infrastructure Solution Design, Consulting, Support & Services, IT Strategy & Management and Pre-Sales. Siddharth Rawat Siddharth is a Consultant for Strategy & Planning function in Data, Analytics, and AI service line at Wipro. His areas of expertise include analytics and AI, and helps drive cohesive strategies with market insights, competitive landscape and related ecosystems. Anil Kumar Damara Anil Kumar Damara heads the Data, Analytics, and AI Strategy group at Wipro. He has over 16 years of experience, most of it in Data, Analytics and AI ecosystem. His core skills include strategic consulting, strategy execution, and digital strategy and operations. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Refine Demand Prediction, Personalize and

Optimize Offerings in a post COVID-19 World

----- Arcticle source ----- https://www.wipro.com/analytics/refine-demand-prediction-personalize-and-optimize-offerings-in-a-post-covid-19-world/ ----- About the authors Related Articles Contact Wipro Please fill the required details to access the content Refine Demand Prediction, Personalize and Optimize Offerings in a post COVID-19 World June | 2020 Executive Summary As COVID-19 transforms the way consumers behave, it will affect demand estimation, customer targeting, and product and service fulfilment strategies. Executives that refine demand predictions with search trends,

personalize targeting by continuously sensing customer responses and optimize product fulfilment by injecting local market intelligence will emerge stronger in the post-crisis world. This paper looks at how Analytics & AI can help companies transform into Intelligent Enterprises by adjusting demand and supply strategies in response to changing customer habits and sentiments. A Three-Part Action Plan to Demystify Demand Forecasting As COVID-19 becomes the new normal, companies are facing unprecedented challenges to rapidly forecast demand based on new customer needs and preferences. Consumers are shifting the way they purchase, what and how. The traditional inside-out view of customer needs and anecdotal outside-in view of the market is no longer enough to improve business performance post the crisis. As an immediate response to this crisis, companies should refine demand predictions, improve targeting and optimize product fulfilment based on area demand. Here is a three-part action plan that can help get it right: Combining continuous feed of outside-in intelligence into the existing inside-out view of the customer helps create a holistic view of the demand for enhanced business decision-making (see figure.1). Figure 1: Outside-in and Inside-out views unite to form a holistic view Figure 2: [Asset 1] Market Impact Monitor to flag changing preferences Fine-tune targeting by continuously sensing customer response Once companies have refined search trends, they should shift focus to fine-tuning the brand messaging based on today's fluid geo-political-social situation. Online forums and group communications are emerging as viable ways to understand the right consumer attitudes, services and brand positioning that companies need to adopt. The classic sender-receiver approach (test and learn) helps position the brand based on the ground reality that considers consumers' fear, uncertainty and doubts. In addition, a survey based approach combined with real-time monitoring of the Web and social media-verse helps personalize services and products by monitoring sales performance and customer preferences. For instance, Wipro's Return on Spend Studio leverages modular AI based accelerators to help companies sense consumer preferences through a lab setup.The studio uses Google trends data for understanding demand and service requests such as Google, Apple Mobility and COVID-19 case time series. This helps get insight into the affected areas with enhanced ability to understand the possibility of stabilization (see figure 3 and 4). Figure 3: [Asset 2] Return on Spend Studio - Performance View Figure 4: [Asset 2] Return on Spend Studio - Customer View At the same time, companies should plan to rapidly utilize financial indicators and stock markets data for competitive trending. Marketing spend should be allocated to sentiment and brand analysis for improved customer targeting through social media. It is also crucial to analyze Google trends for revamping the brand. Companies can use Google trends analysis Natural Language Processing (NLP) to categorize tweets and their emotional variance for improved targeting across brand categories. Similarly, advanced technologies such as Mobility Exploratory Data Analysis, Google BERT based conversational AI system, Facebook Prophet and predictive monitoring can help companies to better understand the geographic impact, query articles and papers, and forecast COVID-19 infections. All these actions can help companies optimize their spend, continuously monitor return on their marketing and advertising spend, and refine messaging to customers to boost traction. Optimize product fulfilment by injecting local market intelligence As most countries shift their attention to reopening

economies post lockdown, companies will need to take a strategic approach to business recovery based on industry-specific demand-supply drivers (see Figure 5). This will equip companies to re-target their customers with the right products, at the right time, in the right location, and through the right channel. A market recovery monitor that considers Figure 5: Unique data sets for uncovering local market intelligence Figure 6: Market Recovery Monitor to assess market strength Figure 7: [Asset 3] Market Recovery Monitor to understand success of social distancing Figure 8: [Asset 3] Market Recovery Monitor to assess mobility levels Figure 9: [Asset 3] Market Recovery Monitor to assess consumption per local market Redefining demand prediction, personalization and product optimization in the post-pandemic normal Companies that systematically integrate local market intelligence based on an organic open data ecosystem will gain access to a much better view of demand. They can then target better and optimize fulfilment. Companies that fail to do this will miss the boat as far as understanding where the demand lies is concerned, in the uncertain post COVID-19 world. Tanusree Saha is a Partner with Analytics and AI Consulting. She brings more than 15 years of experience in designing and leading advanced analytics programs to the table. She leads the Marketing Sciences Lab (MSL) proposition for DAAI. Her areas of expertise include data science, translating business challenges into data science problems, defining AI strategies, and running innovation labs for clients in marketing and customer management, supply chain, and operations. Her domain experience spans travel & transportation, media & telecommunication, retail and financial services. Tanusree can be reached by writing to tanusree.saha2@wipro.com.   Shamit Bagchi works as a data scientist specializing in predictive and prescriptive analytics, machine and deep learning, and AI consulting. He brings to the table both technical acumen and business consulting expertise based on over 16 years of experience in the big data and software industry, building value propositions for clients in Europe, US and India. He holds a Master of Science degree in Complex Adaptive Systems from Chalmers University, Sweden and an MBA in Marketing & Strategy from the Indian Institute of Management, Bangalore. Shamit can be reached by writing to shamit.bagchi@wipro.com.   Kiran Singh is a Partner with Analytics and AI Consulting. He works out of Wipro's New Jersey office. Kiran leads the Analytics Consulting charter for Consumer Goods and Retail clients in the North America region. His primary areas of interest are consumer sentiments and marketing channel analytics, along with retail labor operations. He has also authored US patent in labor demand forecasting and optimization. Kiran can be reached by writing to kiran.singh@wipro.com.   The authors wish to thank Jayapriya Dey, Jayaraman Srinivasan, Vinodhini Gunasekaran and Anish Prakash for their contribution to this paper. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption
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Smart Farming powered by Analytics

Smart Farming powered by Analytics The future of agriculture in India June | 2020 1. Indian Agricultural Sector On the face of it, the Indian agricultural sector presents some staggering numbers. It provides livelihood to 58% of India's population with a Gross Value Addition of 265.51 billion USD(agriculture, forestry & fishing combined)1. At 283.37 tons, India had a record production of food grains in 2018-191. While these numbers may seem impressive on an absolute basis, they fail to promise if we delve a little deeper. Although this sector employs(directly/indirectly) about 58% of the population, it contributes only about 15.87% to the country'sGDP2. This brings us to a key parameter, that is, agricultural productivity. The most popular metric to measure agricultural productivity is agricultural Value Added per Worker. A comparison of the top 20 economies on this metric reveals that India's agricultural productivity has great scope of improvement(Illustrated in Figure 1). All the countries with the lowest agricultural value-added per worker are mostly developing/underdeveloped economies with high population densities viz. India, Indonesia, China, etc. India fares the lowest amongst the top 20economies (by GDP) in terms of agricultural value-added per worker. Clearly, there are certain problems that need to be addressed. Now, let us look at the key problems faced by the Indian agricultural sector. Figure 1: Agricultural Value Added Per Worker* (2018) 1.1 Key problems faced by the Indian Agricultural Sector A number of factors curtails India's agricultural output – while some of them are systemic or historical in nature, the others are environmental or technological (See Figure 2). The systemic factors have evolved over centuries of agricultural activity dating back to ancient times while the geographical features of agrarian land and weather patterns primarily dictate the environmental factors. The technological factors have emerged primarily due to lack of advancement of agricultural techniques, and affordability of machinery and equipment. Let us look at all these factors one by one: Systemic factors a. Cropping pattern: In many areas, continued application of obsolete cropping patterns inhibits agricultural productivity. Practices like mono-cropping not only lead to lesser output but also lead to soil degradation. b. Land ownership/ Fragmented land holdings: The average size of landholding in India is less than 2 hectares. This makes it difficult to achieve economies of scale and introduce new technologies and machinery c. Land tenure: Due to absentee landlordism (despite the abolished zamindari system), the tenure of land holdings for farmers is not secure. This makes it an adverse environment for the application of modern farming techniques, crop rotation, etc. d. Agricultural credit: There is lack of systematic financing provisioning for farmers. Co-operatives and other financial institutions have not been able to eliminate village money lenders who lend money at exorbitant interest rates, thereby making finance unaffordable for farmers. Environmental factors a.

Erratic Monsoon: One of the key factors influencing agricultural productivity in India is the unpredictable behavior of monsoons. This problem is aggravated due to the lack of irrigation facilities across India. b. Soil infertility: Increasing pressure on agricultural land in India has led to overuse of fertilizers, increase in tillage, abandonment of traditional organic soil revival techniques, and insufficient rotation of crops. This has resulted in soil degradation and loss of fertility. c. Water sources: Water sources are not effectively linked to fulfill demand for irrigation to all farming areas. d. Topography: The diverse topography of India's land makes it essential to identify the right crops for the various soil variants and climatic conditions. Technological Factors a. Lack of farm equipment: Farm mechanization in India is low despite growth over the decades. A good measure to gauge mechanization is power availability per hectare, which is low in India. b. Lack of new farming techniques: Due to lack of awareness regarding new farming techniques and over-adherence to old traditional ways of agriculture, farmers in India have not been successful in widely adopting new farming techniques. c. Lack of water supply: There is lack of efficient ways of water supply for irrigation. Groundwater supplies more than half of India's demand for irrigation mostly by flooding through open channels. This, however, is an inefficient means of water supply as it leads to depletion of the water table. 39% of wells in India are already showing decrease in groundwater levels. d. Lack of storage facilities: Even if production factors are enhanced, lack of storage facilities inhibits production. Estimates suggest that about 1.35 billion USD worth of food grains are wasted in India every year due to lack of storage facilities. Other factors a. Lack of agriculture marketing: A number of factors lead to the unorganized nature of the agricultural industry, for example, the small scale of operations managed by small households, over-dependence on monsoon and other natural water sources, etc. This makes proper marketing of Indian agricultural products difficult. b. Agriculture pricing: Unlike other industries, here, the farmer is more often a price taker rather than being the price maker. This is because of the ownership contracts, people involved in logistics as well as other intermediaries. Illiteracy among farmers is also a key factor that makes it difficult for farmers to get a fair value for their produce. Figure 2: Factors curtailing India's agriculture Typically, in the Indian context, a single rural household with all its members are dependent on farming as their single source of livelihood. In such a scenario, it becomes even more necessary to tackle the above-mentioned problems with a comprehensive strategy. While addressing most of these factors need policy interventions, but tackling some of them can be easier through the adoption of Analytics & Smart Farming.In the subsequent sections, we will explore Smart Farming, and how it can alleviate some of the problems discussed above, with the power of analytics in conjunction with IoT & Cloud. 2. Smart Farming Smart Farming refers to the application of modern Information and Communication Technologies (ICT) in agriculture. It promises to revolutionize the world of agriculture through the application of solutions such as Internet of Things(IoT), actuators and sensors, geo-positioning systems, drones or unmanned aerial vehicles(UAVs), precision equipment, robotics, etc. backed and powered by technologies such as Big Data, Analytics, and Cloud. Smart Farming has a real potential to deliver more efficient and sustainable agricultural production, through data-driven insights and decisions, and better resource management. From the farmer's

point of view, Smart Farming will provide the farmer the means for better decision making and more efficient operations and management. Smart farming is associated to three fields of technology, which are inter-related: As is evident from its very definition, SmartFarming is closely interlinked with IoT, cloud &analytics. IoT is one of the pillars of smart farming. Primarily, it's utility lies in generating data from various sources pertaining to environmental conditions, seed quality, and quantity, etc. However, amongst all its use cases, four of them are most prominent (Shown in Figure 3): Figure 3: IoT & Smart Farming Figure 4: High-level architecture of a Smart Farm Edge Analytics and Computing is a promising alternative to cloud as it tackles all of the three above-mentioned challenges by eliminating the need for all the data to be transferred to the cloud and back. This reduces cloud-computing costs, additionally, edge analytics and computing enhances network efficiency, which leads to increase in processing speed. 2.1. Role of Analytics in Smart Farming Analytics has a wide span of use cases and application areas across the agricultural value chain. However, for the sake of simplicity, we will confine our discussion only to crop production and agricultural financing and insurance. Analytics solutions leverage Big data, IoT, Cloud Computing, and GPS technologies to generate relevant data, which in turn is used to derive actionable insights. This helps farmers andfinancial corporations make better data-driven decisions. To unlock the power of analytics, basic information from Management Information Systems should be requisitioned. This will ultimately help in driving precision agriculture and better decision making to realize benefits. The framework given in Figure 5 describesAnalytics-enabled Smart Farming and its benefits. Figure 5: Role of Analytics in Smart Farming Figure 6: Analytics skills relevant for Smart Farming 2.2 Use cases of Analytics in Smart Farming Analytics in smart farming has a number of use cases in conjunction with IoT– some of which are: 3. Putting it all together – 'Smart Farm Operating Model' A highly effective Smart Farm Operating Model is illustrated in Figure 7. The day-to-day monitoring and control of crop and environmental parameters affecting the crop, plus the regular data-driven crop planning is classified into the core SmartFarm operations, while other ancillary activities associated with the farm such as marketing, inbound/outbound logistics, and crop finance and insurance are bucketed into 'other Smart Farm operations'. Together, these two buckets constitute what we perceive as a Smart Farm ecosystem. Typically, there would be sensors and IoT devices placed across the field to collect environmental and crop health parameters which would be relayed to the data cloud via a gateway. The data cloud, is primarily responsible for data storage, processing and analytics. Reporting dashboards allow farmers/ decision-makers view the data and key insights. At an immediate level, this can help them use a User Interface or an app to trigger on-field smart devices like actuators/motors or temperature controllers. At a macro level, analytics helps them use the production data, the environmental data along with demand data to plan for the future. Given the wealth of data that the on-field sensors provide, when demand-related data is added to it,it can help reveal more insights, which are relevant for the marketing function. This data is also relevant for inbound logistics (supply, procurement as well as storage of seeds, fertilizers, manure, etc.) as well as outbound logistics (distribution to the market). Basically, it helps enable decisions on when to store and when to sell. Last but not the least, the plethora of production,

climate, crop health, and demand data and insights can help financial institutions and insurance companies gauge risks better to come up with better propositions for farmers. Figure 7: Smart Farm Operating Model 4. Global implementations of Smart Farming solutions There have been several initiatives across the globe in the implementation of Smart Farming Powered by Analytics. Some of the solutions and their implementation details are listed in Table 1 . Table 1: Global Smart Farming solutions and implementation details 5. Key challenges in Smart Farming adoption 5.1 Commercial viability Figure 8: How to address key hurdles in Smart Farming adoption 7. Conclusion Looking at the various aspects of Smart Farming, we can infer that while Smart Farming powered by analytics can be a boon to agricultural productivity in India, there are, however, areas that need attention. A key area to be worked upon is the strategy to ensure economic feasibility and ease of adoption. Taking cues from implementations across the world, a prudent approach would be to start small– with pilots in small farming districts. Even though every market is unique, there are learnings from every implementation that can be taken forward. Once, a robust framework is developed, the solution can then be scaled across regions. When it comes to affordability, which prima facie, seems like a big challenge, it must be noted that the global implementations mentioned in this paper are spread across both developed and developing economies. So, with the right framework and roadmap in place, it is likely that smart Farming will enable Indian farmers to produce more and better with less, and thereby earn more and enhance their standard of living. References https://www.smart-akis.com/index.php/network/what-is-smart-farming/# https://www.analyticsvidhya.com/blog/2018/05/data-analytics-in-the-indian-agriculture-industry/ https://www.dataversity.net/predictive-analytics-use-cases/iegindia.org/ardl/Farmer_Incomes_Thiagu_Ranganathan.pdf https://www.precisionag.com/digital-farming/digital-farming-keep-it-simple-analytics/ http://www.preservearticles.com/economics/causes-for-low-productivity-of-indian-agriculture/6784 https://www.zigya.com/study/book?class=12&board=cbse&subject=Geography&book=India+People+And+Economy&cha https://easternpeak.com/blog/iot-in-agriculture-5-technology-use-cases-for-smart-farming-and-4-challenges-to-consider/ https://www.ijitee.org/wp-content/uploads/papers/v8i6s/F60160486S19.pdf https://easternpeak.com/blog/3-edge-computing-use-cases-for-smart-farming/ Debojit Biswas Global Business Manager, Analytics & AI Consulting, Wipro Debojit is currently working in areas of strategy, analytics, and AI consulting for a leading banking firm in the Middle East. Prior to his current engagement, as part of Wipro's Global 100Program, he has had a diverse exposure in areas like IT delivery, pre-sales, communications domain consulting, data privacy and analytics & AI consulting. Debojit holds an MBA degree from IIMBangalore, India, and a B.Tech in Electrical &Electronics from NIT Jamshedpur, India. Manish Sood Consulting Partner, Analytics & AI Consulting, Wipro Manish has more than 21 years of industry experience in Business Strategy, BusinessConsulting, Business Transformation, and DigitalTransformation. In the last decade, he has primarily consulted with clients on new digital payments product launches as well as digital transformation programs. Manish did his MBA in International Strategy and Brand Management from Goizueta Business School, Emory University, Atlanta and BE in Electronics &Telecommunication from the University of Pune, India. To gain the advantages of new technology, organizations are getting ready to undertake

a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ===================== ----- Arcticle source ----- https://www.wipro.com/analytics/data-security-the-private-data-privacy-act-wipro/ ----- Contact Wipro Please fill the required details to access the content During recent years, we've seen more and more countries enact legislation to protect citizens and their personal data. In 2018 Europe's General Data Protection Regulation (GDPR) went into effect, and many other countries are right behind them. Now, under the Private Data Privacy Act, country's residents are entitled to the opportunity to consent to - or opt-out - the collection, use, and distribution of their personal data. And in order to give consent, they must do so in writing. To help businesses needing to adapt to these new regulations, we've put together a free download. Our quick guide will cover important facts, including: Don't miss this chance to learn more about not only how the Private Data Privacy Act will affect businesses going forward but also how to comply, protect customers, and thrive. =====================

How Analytics Can Help with Supply Chain Planning

----- Arcticle source ----- https://www.wipro.com/analytics/how-analytics-can-help-with-supply-chain-planning/ ----- About the Author(s) Related Articles Contact Wipro Please fill the required details to access the content How Analytics Can Help with Supply Chain Planning August | 2020 The UK government has mandated that energy suppliers install smart metering systems across Great Britain by the end of 2024. Regulators estimate that energy suppliers will deploy 53 million smart meters during this period — a volume five to ten times higher than a supplier's typical deployment numbers. To achieve this, suppliers will need to ensure high supply planning performance during the SMETS2 (second generation of smart meters) installation ramp-up. This paper explores how energy suppliers can succeed in this effort by bringing together all aspects of their end-to-end supply chain planning, such as demand or deployment, asset ordering and procurement, inventory management, and financial analysis. Supply planning challenges Managing asset procurement and logistics is one of the key challenges in supply planning. The reason: To scale up supply planning operations, energy suppliers need to forecast asset orders across asset types provided to the meter assets providers, manufacturers, and DCCs. At the same time, long lead times for order fulfillment, stocking challenges and policies, storage and delivery frequency limitations, likelihood of late delivery and orders, and the overutilization or underutilization of the warehouse or depot makes calculating the number of required assets difficult. Eliminating the threat of stock outages is, therefore, a significant

operational challenge. These operational aspects translate into financial challenges, such as increased warehouse costs, asset rental costs, working capital utilization, and stock outage costs. Additionally, regulatory penalties, including GSOP (guaranteed standard of performance) liabilities awarded by OFGEM, need to be avoided by ensuring that the supply planning helps meet the targeted ramp-up smoothly. An efficient and effective supply planning function that considers the entire breadth of supply chain operations is of paramount importance. (See Figure 1.) Figure 1: Supply chain operations   Need for advanced analytics-driven supply planning In the smart metering business, the supply chain drives a significant amount of costs for the suppliers. Despite this, 70% of business users still rely on spreadsheets1 and manual intervention for asset order forecasting. However, this approach is error-prone, expensive, and doesn't support any scenario analysis or traceability. Therefore, innovative ways of supply chain planning are needed to minimize cost while achieving possible business benefits. No wonder companies in mature markets invest in asset data management and analytics platforms and capabilities as they generate value-added business insights for asset ordering and increase consolidation and collaboration to achieve end-to-end supply planning. One of the key challenges with this approach is the availability of data with the right granularity. Leveraging advanced analytics in the supply planning function helps in calculating accurate asset order forecasts with the lowest granularity and aids in identifying policy requirements, realizing additional business benefits, and improving the overall efficiency of the asset-planning team. Additionally, strong scenario modelling capabilities or simulations can help the business understand the impact of deployment shifts (demand changes), inventory changes, non-delivery situations, and transportation inefficiencies on asset order forecasts in the run-up to ramp-up. Scenario modelling helps organizations make informed decisions by evaluating operational and financial impacts. Advanced analytics can, therefore, integrate supply chain planning functionalities, such as near real-time planning, by seamlessly bringing together deployment, supply, inventory, and finance, and continuous optimization. (See Figure 2.) Figure 2: Supply chain planning functionality   Supply planning business objectives At a high-level, the objective of supply planning (see Figure 3) is to minimize cost, while ensuring regulatory compliance and avoiding GSOP failure, by producing highly accurate asset order forecasts at the lowest level of granularity. Expenses here can include different aspects, such as warehouse costs (including storage, handling, and transactions), aged asset rental costs, inventory costs, stock outages, and late delivery. Figure 3: Supply planning business objectives   Solution Overview Based on deployment profile or demand forecast, inventory information, and parameters such as stocking levels, contract lead times, non-delivery, transportation inefficiencies, and many more, an advanced analytics solution can generate optimized asset order forecasts for different asset types, fuel types, and MAPs. Advanced statistical analysis capabilities can provide business insights into key variables, such as delivery frequency, buffer stock, pallet size, order forecast flex, and late delivery. Optimization techniques can provide the supply plans by minimizing cost parameters while considering technical, operational, and financial constraints. For instance, while minimizing storage costs (including late delivery penalties), capacity plans and thresholds (related to workforce and logistics) can be considered

possible input constraints. Figure 4: Supply planning solution factors Performing scenario modeling and what-if analysis as part of the planning process can provide businesses supply flexibility over frequently changing deployment plans (created due to shift to the right, sensitivity analysis), and inventory costs. Additionally, estimating the impact of changes in different parameters can inform policy decisions. Multiple scenarios can be compared for operational and financial impacts, and the baseline can be set after a cost-benefit analysis. Similarly, KPI reporting from the analytics platform with a consolidated data view can help identify the root causes for issues and assist with supply planning to generate business insights, visualize trends, and provide specific patterns. Alerts to internal and external stakeholders for certain cases, such as exceptions, late orders, and over- or under-used warehouses, can also be enabled. Thus, integrated supply chain planning functionality (e.g., near real-time planning) can enable unified planning across deployment, supply, inventory, and financial aspects. Business benefits Supply performance issues during deployment peak periods of smart meter deployment can be immensely costly. For instance, stock issues can hamper engineers from installing meters or taking customer appointments, resulting in missed MAP revenues and GSOP failure penalties. Warehouse cost also involves storage, handling, and transactions and is closely tied to buffer stock and delivery frequency. At the same time, the stocking principles applied in logistics operations drive aged asset rental costs. Advanced analytics can help reduce aged assets from 30% to 10% of the available stock, saving millions in cost over the course of a few years. It can also expedite tactical asset planning activities, thereby improving planning efficiency and sparing more time for strategic planning where advanced scenario modeling can drive value-added insights for deployment ambiguities. Driving value through collaboration By investing in advanced analytics and platforms, a business' maturity in supply chain planning can evolve from a "siloed" or "reactive" state to a "collaborative" or "integrated" state by bringing together demand, supply, inventory, and financial aspects of planning on a single platform and driving further value through advanced analytics. Integrated supply planning can help businesses overcome operational and financial challenges while mitigating risks and driving cost savings in millions over the course of the deployment period and associated ramp-up of smart meter volumes. Furthermore, integrated supply planning can help make policy decisions and improve the overall efficiency of the asset-planning process. References Tarkik Patel Principal Consultant, Decision Sciences practice, Wipro Limited. Tarkik has over ten years of experience in Data Analytics and Artificial Intelligence. A management cum engineering graduate, he is immensely passionate about driving business value through advanced analytics and AI. He is well-established in leading advanced analytics & AI engagements for various customers across multiple industry sectors. A large chunk of his experience has been with utility customers across Europe and the US. In his current role, he is a Principal Consultant in the Decision Sciences practice at Wipro Limited. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official

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DataOps – An Antidote for Data Value Chain Challenges

----- Arcticle source ----- https://www.wipro.com/analytics/dataops-an-antidote-for-data-value-chain-challenges/ ----- About the author(s) Related Articles Contact Wipro Please fill the required details to access the content DataOps - An Antidote for Data Value Chain Challenges September | 2020 Abstract Over the past decade, we have witnessed an unprecedented technological disruption in application and data functions. They are now enabling enterprise-wide digital transformation initiatives to empower customers and colleagues. This evolution, coupled with the avalanche of data, creates a wonderful opportunity to establish data-driven enterprises, while simultaneously poses challenges around managing, governing, monitoring, and improving the value of data. Enterprises need to re-imagine how they deliver data and analytics programs, as current processes often fall short of meeting the rapidly evolving demands of business. A DataOps framework acts as an antidote to address data-related challenges, enabling a shift towards agile and reliable delivery of data and analytics programmes. This paper discusses the significance of DataOps and leveraging it to alleviate problems faced in data analytics programs. It also provides a framework to implement DataOps successfully in enterprises. Challenges abound in the data value chain A typical data value chain comprises the following stages: Acquire, Process, Publish, Consume, and Act. Typical challenges in this value chain include (Ref1): Figure 1 illustrates several key statistics on enterprise data value chains (Ref2). Figure 1: Enterprise data value chain statistics Six steps to leveraging DataOps to mitigate challenges DataOps (see Figure 2) brings together the best software engineering and data engineering tools and methodologies, coupled with cultural changes and monitoring controls, to create trust in data and accelerate analytics delivery. It puts analytics at the heart of an enterprise. DataOps acts as a bridge between data providers and consumers by facilitating bidirectional communication flow to improve the quality of the data value chain. DataOps combines Agile, DevOps, and statistical process controls to provide delivery efficiencies and increase the value of the data value chain. Figure 2: DataOps architecture Let's delve into what it takes to implement a successful enterprise-wide DataOps strategy (Ref3). The six key steps are as follows: #1 Establish the DataOps function with a culture of deeper collaboration It's critical to establish the DataOps function with senior stakeholders of the enterprise with representation from both business and IT. Define the operating model, establish KPIs across the data value chain pertinent to the DataOps function and the enterprise as a whole, track through DataOps implementation, and continuously refine the KPIs to further increase the data value. It is important to establish an enterprise-focused strategy. Key stakeholders, such as the Chief Information Officer (CIO), Chief Technology Officer (CTO), Chief Data Officer (CDO), Chief

Digital Officer, Chief Analytics Officer (CAO), Chief Data Architect, Chief Data Scientist and Head of Business Functions and Finance representatives, must be included. #2 Leverage/set up Enterprise-level Agile and DevOps capabilities Most modern enterprises have either built or are in the process of building Agile and DevOps capabilities. Data & Analytics teams should, therefore, join forces and leverage the enterprise's Agile and DevOps capabilities to: #3 Automate the provisioning of data, analytics, and AI infrastructure One critical principle of DataOps is the ability to scale IT infrastructure in an agile manner to meet the rapidly evolving business requirements. Many commercial and open-source tools are available to automate infrastructure. Regardless of the hosting environments (cloud/on-premise/hybrid), enterprises should rely on infrastructure as code to set up, configure, and scale Data & Analytics platform services. Version control the code similar to the application code or analytics code. Ensure automation in security and compliance requirements as well. Examples of data infrastructure automation include: #4 Establish multi-layered data architecture to support a variety of analytical needs Modern-day data platforms are complex with varied needs, so it's important to design your data platform in alignment with business priorities to support myriad data processing and consumption needs. One of the proven design patterns is to set up multi-layered architecture (raw, enriched, reporting, analytics, sandbox, etc.), with each layer serving a different purpose, and increase the value over time. It is also important to establish the owners across different layers. Register data assets across various data layers to support your enterprise data discovery initiatives. Set up data quality controls across various layers to create data assurance and trust. Set up appropriate data access controls so that data providers and consumers can safely share and access data and insights. Containerize and scale these services across various analytical engagements as reusable services. #5 Build data value chain orchestration pipelines Orchestration plays a pivotal role in stitching together the data flows from one layer to another to bring "ideas to operationalization." Leverage containerization capabilities to ensure that the sub-components of these orchestration pipelines are scalable and reusable across the enterprise. Key pipelines supported by DataOps are: #6 Define and implement a holistic monitoring and alerting framework Build a comprehensive monitoring and alerting framework to continuously measure how each stage of your data value chain responds to the changes. Socialize these KPIs with the DataOps function to take the right course of action and build reusable artifacts where possible. Benefits of DataOps DataOps is the future of data management Given the rapid and constant changes in data, enterprises need a comprehensive solution to bring together every part of a business into one pipeline. That's what DataOps enables. It drives companies to use data more efficiently, leveraging the right tools, technologies, and skill-sets.   With better end-to-end data pipeline visibility, automated orchestration, higher quality, and faster cycle times, DataOps enables data analytics groups to better communicate and coordinate their activities. Clearly, DataOps is the antidote that organizations always wanted to address data value chain challenges, and it will become a critical discipline for those who want to thrive in the new age data landscape. References Ravi Varanasi Partner, Data Analytics and AI, Wipro Ravi Varanasi has more than two decades of experience in data, analytics, cloud, architecture, innovation, and thought leadership. Ravi has an impressive mix

of working for some major banks and consultancies, at various capacities across business functions like pensions, investments, IT operations, global standards, commercial banking, wealth management, payments, and anti-money laundering. Dilip Maringanti Partner, Data Analytics and AI, Wipro Dilip Maringanti has worked with global financial institutions and retailers in setting up their data strategies and leading many data transformation engagements. He specializes in providing strategy, advisory, and architecture services in multi-cloud, data, and AI spaces. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

A data-driven decisioning roadmap for retailers in COVID era

----- Arcticle source ----- https://www.wipro.com/analytics/a-data-driven-decisioning-roadmap-for-retailers-in-covid-era/ ----- About the author(s) Related Articles Contact Wipro Please fill the required details to access the content A data-driven decisioning roadmap for retailers in COVID era The questions on everyone's mind September | 2020 While COVID-19 has had a catastrophic impact on health and the economy, it has also fundamentally changed how people live and work in the foreseeable future. Successful retailers often take great pride in their deep understanding of the consumer's psyche and buying behaviour. In the last decade or so, they have leveraged troves of data for successful decision-making. However, such institutional knowledge has lost its relevance in a matter of few weeks. Each part of a retailer's value chain is impacted. Let's first talk about customers and demand. The first major shift is the decline in consumer spending owing to uncertainties in the job. A recent survey by London Business School indicates that household spending has declined by almost 40-50% [1] in the UK, and similar trends are emerging across the globe. This will have a significant impact on the Retail industry overall. Similarly, the 'Work from Home' model will impact the Fashion and Hospitality business. The economies of scale that big-box retailers leveraged have been constrained to a large extent. Retailers would have to learn to optimize their operations in order to maintain their bottom-line. Density or footfall used to be the key measure in brick-and-mortar retailing. Most retailers measure the efficiency of stores by sales per sq. ft. This will change to comply with government guidelines and ensure safety. Customer and Patient safety and compliance related to public health are added to day-to-day operations. Figure: 1 – Impact of COVID on the retail industry These uncertainties have made

demand functions and operations strategies void. Since the past is no longer the best predictor of the future, retailers need to start afresh and learn from the present as if they are starting for the first time. When governments around the world are poised to ease restrictions, retailers have several key questions to answer before they fully operationalize. Figure: 2 – Questions to which retailers are looking for answers Key Challenges that Data & Analytics Organizations Need to Solve for Retailers Data & Analytics have been embedded across the Retail Value chain. The evolving situation has certain constraints and is challenging the solutions built using Data & Analytics. New Normal for Retail Analytics The new normal for Retail Analytics should start WITH identifying relevant use-cases across THE Retail value chain, AND Setting up the appropriate Analytics framework THAT can deliver required insights Using the right data. Re-Imagine the Retail Business Process An Analytics Framework to Deliver The decision of reopening should start with a clear set of objectives. The objective can vary from getting back to your most valuable customers as soon as possible to clearing the stocks before the start of the next season. We advocate granularity as a key trait for successful decisioning at times like these. In a rapidly evolving environment like this, it may not be realistic to set targets for months and quarters ahead. The time horizon for decisioning needs to be daily or weekly. Figure: 3 Decisioning framework Once the objectives are agreed upon and communicated, simulations can be developed for different likely scenarios and the outcomes of the decisions on the objectives. This can be made visible to executives and decision-makers through interactive dashboards to enable efficient decision-making. Each decision should be treated as an experiment. The data related to outcomes should be collated centrally and the insights should be shared with relevant stakeholders. This is indispensable in the context of decentralized decision-making as the learning from the decisions from one area / product category are made available to others in a consumable fashion. Sourcing the Right Data The foremost challenge that the Data & Analytics organization is confronted with is to source the data related to the spread of the pandemic. There are several third parties, government agencies, research organizations, and technology providers that have already collated the data related to COVID, which can be sourced and used. The covid dashboard[2] prepared by Johns Hopkins University contains a wealth of information. The United States government[3] and National Institutes of Health[4] have made several data sources public, which can be leveraged to understand the spread of the pandemic. Figure: 4 - Sources of data that can be leveraged Amazon (AWS) has created a data lake specifically for COVID[5], consolidating information from multiple sources and made it ready for computation. Similarly, Tableau has created multiple COVID dashboards[6], which are accessible to the public. In addition, several organizations are making COVID-specific data available through APIs. In times like these, when historical data alone does not serve the purpose, it is a good idea to reach out to customers directly to seek their opinion. Surveys are a very potent way to sense customer demand and buying preferences. Customer surveys can be conducted to get a sense of their expectations on assortment and price points, and potential disposable spending. Frontline employees often have an intuitive understanding of the customer's pulse for a product category in a region. Employee surveys can be conducted to consolidate this knowledge in a centralized way and present it for the entire organization. Employee surveys

are also a great way to understand the potential health risks because associated with COVID. Data from social media feeds is another channel to understand customer sentiments and product preferences. The response to COVID needs to be dynamic with access to real-time information. Retailers, over the years, have built data platforms e.g. Operational Data Stores for low latency and granular data. Such platforms can be augmented with additional COVID and survey data to make data available in real time. Accelerating Data & Analytics Strategy during COVID The data & analytics organization is critical to the reopening and revival of the retailer. Therefore, it is paramount that the business objectives be aligned with technology objectives. In addition, technology initiatives must deliver outcomes within resource and time constraints. The knowledge contained within the existing resources and teams should be leveraged to find creative solutions to data and technology challenges. While ideas can be sourced from each, separate cross-functional teams can be formed and entrusted to deliver on specific objectives. Securing any additional funding for new technology investments at this stage can be extremely challenging. The team should leverage the existing technology stack to the maximum extent possible. As the longevity of the solutions are not known, the developer's time should be spent on actual development rather than documentation, review, and approvals. As the situation is extremely volatile, with new information coming up every day, all developments must go through an MVP-based iteration. The cost should be moved from capex to opex. It is often said that crisis brings the best out of human beings. So while trying to respond to COVID, data and analytics organizations should not lose sight of the future. In fact, they can use the time to resolve operational silos that prevented sourcing of data, thereby improve the efficiency within the team, and innovate. References Karthikeyan Subramaniam Managing Consultant in Wipro's Data, Analytics & AI (DAAI) Practice. He is currently based out of Wipro's Reading office in the UK. He can be reached at skarthikeyan.subramaniam@wipro.com. Deepak Kumar Dash Managing Consultant in Wipro's Data, Analytics & AI (DAAI) Practice. He currently works out of Wipro's Reading office in the UK. He can be reached at Deepak.dash1@wipro.com. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption
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How Cloud is Disrupting the Financial Services Industry

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How Cloud is Disrupting the Financial Services Industry September | 2020 Financial institutions have been slow at adopting cloud technologies primarily due to concerns around security, regulatory compliance, and governance. As a result, they have been facing business model-related challenges like legacy technology, high running costs, and lack of scalability. Adoption of cloud is becoming the norm now and analysts expect about 75% of the financial institutions' infrastructure and data to be processed in the cloud by 2022. In this paper, we will look at the current needs of Banking, Capital Markets and Insurance industries and how moving to cloud helps them build the foundation for digital transformation. Financial institutions: The changing paradigms and needs Banking Banks have been evolving to business models that are digitally focused. They are having to do so as "digital-only" banks are tapping into their market, offering consumers digital banking tools such as mortgage calculators. Traditionally, customers have gone to the megabanks to obtain access to different banking accounts that offer flexibility in areas such as overdraft fees. This is no longer the case as the digital-only banks now offer checking account services while providing competitive overdraft fees. Megabanks are having to adapt their business models to catch up. Previously, business models relied on the customer looking at the number and location of branches to bank with. As we see now, across all income levels, branch location is not a significant factor. The rise in digital banking and innovation requires banks to offer services to their customers at an affordable unit product cost without impacting operational efficiency. Technology and data platforms that are versatile and instant are paramount. Capital Markets High capital expenditure costs on technology have for long constrained the capital markets industry. A standard use case has been around the buying and selling of trades that can rapidly increase/decrease during peak hours in real-time. The collection of trade data and the need for real-time analytics has traditionally meant expensive technologies deployed in data centers that provide permanent, extensive processing capabilities even though they are only required during peak hours. Besides, large IT teams need to be on standby during these peak hours to ensure platform availability in the event of an issue. Insurance Let us focus on an example within the Property and Casualty (P&C) Insurance industry. Traditionally, claims management has involved customers interacting with call centers over phone calls (single channel) and then completing paper-based forms sent by post/emails. The claims process has been known to take several weeks involving multiple phone calls, leaving the customers with a negative experience. According to the Claims Journal, claims servicing within the P&C industry has the lowest positive experience across all insurance lines of business. Yet, it is the most crucial factor in customer retention. Millennials use multiple channels to communicate. Enabling an omnichannel approach has become the norm for creating an integrated customer experience, leading to their retention. Financial institutions are facing issues with expensive legacy platforms, the growth of digital / omnichannel demands, and the need to process vast volumes of data in real-time. All of this is occurring at a time when they are looking to reduce IT spend to focus on delivering value to their customers. The drivers of cloud adoption Financial institutions are looking for technology and data platforms to support their focus on the customer. We will use the P&C Insurance example cited earlier to illustrate the drivers of cloud adoption in insurance.

The three key drivers are: 1. Move from CapEx to OpEx models Taking the P&C Insurance claims example, traditionally, being able to grow business across geographies has required high upfront CapEx. Moving to cloud-based technologies frees organizations from such constraints. They can adopt flexible OpEx models that can free financial institutions to focus on driving innovation and delivering excellent customer experience. 2. Deliver digital customer experience at minimal cost Digital banks, with their innovative and connected customer experience, are successful in driving customer acquisition, new marketing opportunities, retaining customers, and growing revenues. Therefore, technologies and data platforms need to be digitally scalable in engaging customers without introducing massive cost base. Again, taking the P&C Insurance claims example, the millennials are expecting: Financial institutions need to provide their customers with on-demand technology to meet their demands better. 3. Be elastic to meet changing customer demand Increased number of customers and demand for immersive experience add complexities within the banking infrastructure. It gives rise to the need to address continuous explosive data growth at the same time adhering to higher service level objectives and agreements. Typically, when demand is lower during non-peak hours, the cost of technology usage should also reduce. As in our P&C Insurance claims example, the need of omnichannel approach means that peak hours are becoming more varied (unlike fixed opening and closing times of traditional call center) and require significant compute power at different times throughout the day. Toward digital transformation with cloud Financial institutions' have stepped up their pursuit of transformation in the age of Industry 4.0 and digital disruption. To become an Intelligent Financial Hub, business thinkers are looking for possibilities and changing their existing business models through the vast amount of information integrated across various sources. Cloud ecosystem unlocks financial institutions' capability to manage and mine massive scale datasets of their users involved in billions of transactions. Figure 1 depicts how cloud is disrupting the evolution of the financial institutions. In addition to digital customer experience, financial organizations are disrupting and introducing new products and platforms. Let's consider how cloud is changing the claims business model for insurance. Sophisticated machine learning-based fraud detection models can crunch through large volumes of varied data such as photos of the damage, previous customer claims, social media status etc. to assess fraudulent claims. This allows effective "Auto-Approvals" of claims as well as the identification of ones that need "Manual Investigations". It speeds up the overall claims time, improves accuracy, and results in higher retention rates. Figure 1: Cloud-native financial institutions Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS) are the backbones of cloud offerings. Figure 2 shows how many data services are being deployed using these cloud offerings. Figure 2: Examples of service industry cloud offerings As insurers continue to adopt cloud technologies, their focus will move towards PaaS and SaaS services to deploy such fraud models. This would remove reliance on internal technology resources so that the business can focus on adding value to its customers and evolving business models. Figure 3 summarizes what part of your organization could start moving to the cloud and start reaping the benefits from day 1. Figure 3: Cloud Strategy: Which part of your organization could move to the cloud? Institutions that have started by

moving core systems onto the cloud, plan to carefully follow with a move of their data platforms (including fraud models, reporting and data quality) onto the cloud. The future of "Cloud Only" technology and data platforms is inevitable; it will lead to innovative and efficient ways of solving business problems. Reimagining the future with cloud The success of banking and financial institutions are often constrained by its legacy business models. With the advent of advanced, cutting-edge cloud computing technologies, big data, advanced analytics, social data, IoT, AI, conversational bots, financial institutions have changed. They have become more responsive and at the same time, converting cloud investments into a palatable price and product offering advantage. Smart and virtual banking, digital wallet, mobile payments, P2P lending and investments and many more have raised digital transformation to a new level. Cloud technologies and edge computing, together with geo-location and real-time assets monitoring capabilities have given significant new dimensions. As a result, the entire financial risk and decisions can serve their consumers better at an affordable price. Cloud helps in laying the computation and operating model foundation for the new digital business model. Embracing the evolution of application design, behavioral profiling and significant rise of AI-fused process and products, cloud ecosystem helps to tame the increased demand for specialized ML IaaS and PaaS platforms. Technology and data platforms, founded by a well-defined cloud strategy, that follows innovative platform OpEx models and is digitally scalable and elastic, will reimagine the financial institutions' success in the future. Are you facing issues with expensive legacy platforms, the need to process vast volumes of data in real-time, and meeting customer demand for digital / omni-channel experience? Click here to connect with us and find out how we can empower your journey towards being an intelligent financial hub. Sukhvinder Phalora Director with the Data, Analytics & AI Consulting practice He has more than 18 years' experience within the Financial Services Data domain.   Soumen Chatterjee Partner with Analytics and AI Consulting, Data, Analytics & AI, Wipro. Soumen helps organizations become data-centric and adopt the right technologies like cloud, advanced analytics, ML, AI, and IoT to improve their business performance. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption
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Banks Need to Build Alliances and Supply Open Banking APIs to Drive Strategic Business Outcomes

----- Arcticle source ----- https://www.wipro.com/analytics/banks-need-to-build-alliances-and-supply-open-banking-apis-to-drive-strategic-business-outcomes/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Banks Need to Build Alliances and Supply Open Banking APIs to Drive Strategic Business Outcomes March | 2021 In today's changing environment, banks should prepare for open banking to address the threats of rapidly growing competition, and embrace the innovative technologies and customer insights that will come with this new way of doing business. Banks must focus on building an architecture that is Application Programming Interfaces (APIs) powered and data rich, and allows plugging into the bank's eco-system while managing safety risks. It must reconsider its role and supply APIs as products enabling business outcomes. It is these interfaces or compatible APIs, that will transform the traditional banking model. What is Open Banking? Open banking is an emerging financial technology where regulated financial institutions share some customer financial data to permit competition, innovation, and better financial products. While traditional banking has relied on a private, 1:1 relationship between the bank and the consumer, open banking allows banks to provide 'open access' of its core services to third parties, partners, and key customers. Open access to some customer data challenges the normal model of banking as new players take a bigger role within banking value chains. Benefits of Open Banking The benefits of open banking will be felt by consumers and banks. As financial institutions collaborate with financial technology (FinTech) companies, innovation will drive better products and services for new and existing customers. Benefits to customers include streamlined digital experiences and simple, innovative products. Why should banks address Open Banking Now? In Europe, regulation is driving open banking by requiring banks across the EU to adopt. Some of the bigger EU banks, Lloyds, Rabo bank, HSBC, and Natwest have already made significant investments for open banking. And while international growth of open banking regulation has started, it is not level in every country. This technology is in the early stages. The UK is leading the way in defining a framework, but additional regulation is needed to install multiple layers of tight security as more banks and FinTechs come online. In addition, there is regulatory pressure from Second Payment Services Directives (PSD2), forcing banks to standardized interfaces. In the United States, customer demand is pushing the effort. The escalating call by customers for better digital experiences, easier ways to conduct financial transactions, more personal control over their financial data is moving US financial institutions to adopt open banking. How Open Banking Works Open banking allows a customer's financial data to be shared by regulated financial institutions

through the use of application programming interfaces (APIs). These APIs will shift the paradigm from traditional banking to open banking, gradually leading to the development of strategic ecosystems. Through association of key financial partners, banks will distribute, aggregate, and consume open API services enabling competition, innovation, and better products to be introduced in the market. On a small scale, open banking has already begun. Examples include an agent issuing mortgages or consumer loans on behalf of a bank. The customer must explicitly provide consent for the banks to share their details to the third party and the customer can opt out or withdrawal anytime. Industry Journey to Open Banking As the industry moves toward Marketplace Banking and Coreless Banking, it is critical that agility is infused into the IT and business architecture to be able to address future needs. The decoupling of a bank's systems and services from core banking enables the rapid creation and distribution of new products into the market through collaboration with third parties. Regulatory mandates may require banks to comply sooner rather than later. To prepare for this new trend, there are things to consider that will improve an open banking strategy. Open banking is not as complicated as it sounds. The changes have to be based on two pillars: expanding ecosystems and extending current reach. There is a huge potential in API development and Cloud strategies leveraging open banking opportunities." Anmol Grover, Global Practice head, Open Banking, Wipro As a first step, banks should strategize their overall objectives and decide on the avenues where open banking can fit their model. Some of the pertinent questions that will help banks build a strategy are included in the table below. Don't just blindly adopt open banking. Think about how it fits into a bigger strategy to provide better customer experiences, extend reach and strengthen the brand, whether you build it or partner with FinTech to expand your offerings. Work is underway in many countries to adopt open banking. While each approach may vary in the defining technical standards for implementation, it is increasingly clear that uniform API standards will be a key driver for adoption and quality of available innovative products. Countries that have begun defining their frameworks include the United Kingdom, European Union, Hong Kong, Singapore, and Australia. For countries such as the United States and others that lag behind, market forces like customer demand for streamlined experiences and innovative products will drive adoption. Build an architecture that is API powered and data rich, allowing leading FinTechs to plug into the bank's eco-system while deliberately managing the safety risks. Reconsider the bank's role and supply APIs as products enabling business outcomes. How is Wipro Uniquely Positioned to Offer Advice? Wipro was involved in defining Open Banking Standards in the UK as part of the Open Banking Implementation Entity (OBIE). We are also a member of the Banking Industry Architecture Network (BIAN), a nonprofit industry body aiming to standardize banking. Through these affiliations, Wipro is uniquely positioned to guide financial institutions through the move to Open Banking. In addition, Wipro has invested in an open banking platform, Wipro's Open Banking API, that includes a comprehensive set of offerings across regulatory compliance, data standards, governance, open ecosystems, and co-innovation to enable a seamless transformation journey for banks and financial institutions. This platform helps banks comply faster and create new financial products that will add additional revenue streams. In conclusion Market forces and regulatory mandates will drive open banking.

Through the use of open banking APIs, the paradigm shift from traditional banking to open banking is gradually leading to the development of strategic eco-systems. Through association of key partners, banks are ready to distribute, aggregate and consume open API services. As financial institutions embrace open banking frameworks, they need to realize managing an open banking eco-system is much more than just exposing a set of APIs through associated knowledge-based content and providing some level of developmental support. Banks need to leverage a "development first mind-set" strategy to nurture their eco-system through a comprehensive approach that covers API framework, delivery, support, and innovation. Open banking is part of the digital adoption that is underway worldwide and will pave the way for the next generation of banking for everyone. Karthik Markandan Principal Consultant, Wipro Karthik Markandan is an experienced managing consultant and has anchored various compliance and regulatory assignments for multiple global financial institutions. He specializes in leading diverse range of data, analytics, business intelligence, and cloud transformation programs. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

IP Management in the Landscape of Disruptive Technologies

----- Arcticle source ----- https://www.wipro.com/analytics/ip-management-in-the-landscape-of-disruptive-technologies/ ----- About the Author Contact Wipro Please fill the required details to access the content IP Management in the Landscape of Disruptive Technologies April | 2021 Change is the only constant. And what drives change is continuous innovation. The technologically driven life in the 21st century is the outcome of inventions and discoveries that happened over time. Advancements like access to big data, machine learning applications, and computing hardware improvements are ushering in a new paradigm of technological shift. Consequently, intellectual property (IP) has become a subject of growing importance globally. The economy of a developed nation relies, largely, on the innovative solutions developed by researchers, and lawmakers have since long recognized the need for IP rights to protect the inventive work of individuals and firms alike. IP rights also enable firms to recover their research and development costs. IP protection tools, like patents, encourage businesses to develop new solutions and be assured of protected IP rights. Patents on software-related inventions are no less than a reward for the time, effort, and monetary investments put in by the researchers. With IPs helping generate path-breaking solutions to global challenges and contributing to

the growth of business entities, there is a significant growth in IP applications in the global economy. Around 182,218 patents were granted in FY 2000 in US alone, which increased by 100 percent to 399,055 in FY 2020. Given the importance and value of patents and, more generally, intellectual property, many firms are increasingly realizing the value of IP Management. IP Management is one of the ways to protect IPs. Making sure that IPs are adequately managed is extremely important for a firm or individual success. Innovators feel assured that their investments and returns on the solutions are protected and managed well, which further translates into incentives for their employer firms to increase investments in innovation since most innovations are profit oriented. Modern technology like AI is transforming the way IPs are managed. The use of AI in IP Management is already occurring and is poised for even greater adoption. Disruptive technologies are disrupting innovations Across industries, new age technologies like Artificial Intelligence and Machine learning have taken a leading position in driving innovation that has effectively disrupted various aspects of life. Artificial Intelligence and Machine Learning have given a boost to the demand for new forms of intelligent solutions in IP management. Wipro brings immense value to customers through its AI based solutions with Wipro HOLMESTM, Wipro's artificial intelligence and automation platform. These solutions accelerate digital transformation using contextual and business-focused AI/ML capabilities. Wipro's IDP (Intelligent Document Processing) is also used as an IP management tool that extracts intelligence in real time by comparing, processing, and validating complex contracts like Patents by using artificial intelligence algorithms (E.g. NLP, image processing). Often IP lawyers are engaged in analyzing large IP portfolios and trying to draw an insight from the available contracts. The traditional method of analyzing and reviewing these contracts like Patents, Copyright, and others involves going through hundreds of documents and doing manual research. This is a long and tedious work. But with Intelligent Document Processing all this can be done at a faster pace. It helps in formatting, drafting, and reviewing patent applications with the technologies that are well-established in knowledge management, including text analytics. IDP also helps in risk assessment by identifying the clauses in the documents that are of high-risk or are relevant. It also saves time for lawyers in search by pinpointing and directing them to where specific phrases appear in lengthy contracts. This solution for contract review benefits both the lawyers and the clients by saving both time and money. Hence, it is an efficient way of managing IPs. Wipro is working on more such intelligent solutions with other partners like IBM, AWS, Microsoft, Google. Through such intelligent solutions it is evident that the disruption of traditional approaches is inevitable in the face of increasing demands of innovative solutions across the world. Towards an innovation-led future The ongoing pandemic has accelerated the adoption of emerging technologies and digitization. Towards the close of 2020, the IP landscape witnessed a high magnitude of innovation. There is an increased demand for IP rights enforcement as it also acts as an assurance on the authenticity of the solutions. An effective system of IP management can catalyze economic development and socio-cultural well-being. The future belongs to an effective IP management strategy, which can help steer the global economy towards higher and assured investments in innovations. Wipro's leading edge IP solutions can redefine your IP strategy and outcomes. For details,

connect with our experts at Wipro Products and Platforms Mukund Kalmanker VP & Global Head – AI Solutions Mukund and his team collaborate with leading enterprises across industries to drive revenue growth through competitive business insights, deliver experiences aligned to emerging digital behaviors, and drive efficiencies by leveraging technologies such as Artificial Intelligence, Machine Learning, RPA, and Big Data. He is a well-known industry thought leader with more than 21 years of experience in these areas. =====================

The Four-Pronged Approach to Maximizing Business Value with IT Automation

----- Arcticle source ----- https://www.wipro.com/analytics/the-four-pronged-approach-to-maximizing-business-value-with-it-automation/ ----- About the Author Contact Wipro Please fill the required details to access the content The Four-Pronged Approach to Maximizing Business Value with IT Automation April | 2021 As organizations race towards digitization, it is imperative that the underlying infrastructure keeps pace. The need for 'anywhere, everywhere and always-on' IT infrastructure calls for a paradigm shift in this space. Today's CIOs are faced with a hybrid ecosystem of fragmented technology landscape that comprises legacy as well as emerging technologies with multiple providers and toolsets, siloed functional units with SLAs clearly depicting a watermelon effect, high cost of operations owing to tribal knowledge, inability to map business SLAs to IT SLAs and redundancy. Moreover, social media, which intricately links the world, has elevated 'customer experience' as a top-most driver for digitization. Covid-19 has only increased the need for automation. The recent years promoted 'automation' in various forms as the ultimate solution to digitize IT infrastructure. However, time has shown that organizations are still struggling to extract value from their investments. Now, the big question is, how to sail through these challenges and achieve value from the investments in technology and automation. The right approach to IT automation At Wipro, we believe that automation is not just about tools and technologies and hence we advocate a four-pronged approach to capture maximum value from our investments. Toward a harmonized future We envisage future organizations to employ a hybrid workforce of human and digital colleagues working in harmony in order to promote a cohesive organization where the robots perform repetitive tasks based on learning and humans' ability is amplified to strategic, decision-making roles based on contextualized recommendations provided by automation, as depicted in Figure 1. This will also help in eradicating human errors and judgement-based reasoning. Figure 1: Hybrid Workforce Model in Integrated Infrastructure Operations Wipro's wide experience in infrastructure space, strength in execution and excellence in governance makes us an ideal partner to organizations seeking transformation. We offer technology-agnostic solutions and maximize packaging of readily available tools in the client landscape into our solutions. Our automated analysis of incident and service request data

enables quick deciphering of automation patterns. Our compendium of 1000+ automation use-cases is the secret to our speedy deployment. Wipro's expertise in predictive and proactive sensing, coupled with self-healing automation use-cases have averted many high-priority P1 incidents. We cater to the end-to-end infrastructure management landscape with a comprehensive set of automation touchpoints including various day-to-day operational processes making us a strategic partner.   For more information on how Wipro can help you achieve value from your investments in technology and automation, connect with us here. Priya Bakthisaran Global Head of Automation - Cloud & Infrastructure Services, Wipro Priya has 25 years of experience in IT industry across application and infrastructure space. She has deep acumen in AI and automation space and has contributed to many market-focused automation solution for strategic clients. She provides ideation for engineering of automation solutions for key market problems. Priya believes that superior user experience along with enhanced efficiencies and optimized economies must be considered while designing automation solutions. =======================

Leveraging AI - Predictive Analytics in Healthcare

----- Arcticle source ----- https://www.wipro.com/analytics/leveraging-ai-predictive-analytics-in-healthcare/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Leveraging AI - Predictive Analytics in Healthcare June | 2021 The technology landscape is full of solutions that can parse historical data, but modern businesses increasingly want to predict the future. What are the risks? What are the opportunities? Where will the market – and revenue – be five years from now? Using predictive analytics, organizations can take steps toward answering these future-focused questions. Predictive analytics is a statistical technique that analyzes current and historical data to produce forecasting results. For instance, data analysis can determine associations between various behavior factors. From these associations, a variety of models can then be designed. Using a specific set of conditions for each model, businesses can gain valuable insights that lead to better decision-making. How can predictive analytics be leveraged in healthcare? The healthcare sector has a long history of keeping one eye on the horizon. Considering recent advancements in Artificial Intelligence (AI), many people have wondered how predictive analysis can benefit the medical space. With big-data analytics, AI and machine-learning models can be a key resource to improve healthcare services in high-risk areas. For example, a combination of AI and predictive analytics can help data scientists gain deeper insights into disparate factors affecting human health. Consider just a few areas where AI can improve population healthcare management: Today, health data comes from multiple sources – medical notes, electronic recordings from medical devices, laboratory images, physical examinations, and even smart devices that capture and track a variety of health data. Leveraging AI, these data can be continuously assessed and analyzed to provide healthcare practitioners and researchers boundless resources to improve diagnoses and

treatments. Machine learning has become a mature technology. Combined with AI, it can provide powerful, actionable insights. This advancement in technology, combined with modern data sets, can be utilized in population health management to achieve the ultimate goal – better health outcomes. References: Kalyani Vuppalapati Technical Lead, Data Analytics & AI, Wipro Limited. Kalyani is an expert in multiple analytical tools and data mining methodologies. She has also worked on various analytics projects in Manufacturing, Technology, Energy and Utilities, and Healthcare domains. Her experience includes data analysis, proposing analytical solutions, generating dynamic reports, and other data preparation components like data pre-processing, profiling, cleansing, validation, and transformation. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

Revolutionizing Contact-Center Automation with Conversational AI, Cognitive Search and Machine Learning

----- Arcticle source ----- https://www.wipro.com/analytics/revolutionizing-contact-center-automation-with-conversational-ai-cognitive-search-and-machine-learning/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Revolutionizing Contact-Center Automation with Conversational AI, Cognitive Search and Machine Learning July | 2021 Customers today engage with companies on multiple channels – calls, text, email, chat, and social media – and expect quick responses and fast resolution. In this omni-channel environment, enterprises have turned to chatbots to listen to customers' voices and connect, but these solutions will quickly fall short if not proactively managed and upgraded. Conversational AI bots are one evolved way to address customers' needs quickly and with empathy. More contextual and personalized than simple chatbots, Conversational AI bots are trained to dynamically make decisions and help businesses engage with customers 24/7 using real-time tone and sentiment analytics. This is particularly important in the ever-changing world of contact centers. So how can enterprises begin to leverage this technology to improve their efficiency, productivity, and sales? It begins with a hyper-personalized customer experience. What is Conversational AI? Conversational AI is a set of AI-based technologies that enable systems to simulate human-like conversations. While the technology is similar to chatbots, which have been around for years, Conversational AI extends

chatbot capabilities by including all technology beneath the bot umbrella, like voice bots and voice + text assistants, whereas chatbots have "text-only" functionality. This makes the technology truly conversational, thus providing a more-natural and customized user experience while collecting detailed information that enables the contact center to gain actionable insights. Conversational AI-based virtual agents understand the customer's speech using natural language processing (NLP) to parse and interpret indirect phrases, incomplete sentences, and even context. These virtual agents also use pattern recognition and contextual analysis to make more intuitive perceptions and judgments for a better understanding of human speech. And, although it can handle repeated queries like member authorizations and product details, Conversational AI agents can transfer calls to human agents for more-complicated inquiries, transmitting real-time analytics (including tone) that allow the human agent to respond appropriately with the best-suited product, offer, or solution. Conversational-AI-based-Virtual-Agent-Architecture Take it to the Next Level with Cognitive Search and Predictive ML By layering-in cognitive search, structured and unstructured data can be pulled from various enterprise data sources, helping the chatbots provide faster and smarter responses and elevating the entire customer-service experience. Think of it as an advanced version of enterprise search powered by AI that brings together numerous data sources while providing automated indexing and personalization. The cognitive search solutions currently available use AI capabilities such as natural language understanding (NLU) and ML to ingest, understand, and query digital content from multiple sources. They also use ML to understand and organize data, predict users' search queries, continuously learn, and improve answers based on user feedback. Conversational AI powered by cognitive search makes it possible to derive insights from a consistently growing collection of data that can be used across the company. This gives it the potential to greatly improve how an organization's employees discover and access relevant information. For example, agents can enter a query in natural language, and Conversational AI will understand the context and invoke cognitive search to find more insights. To improve the AI engine, these insights can be presented to the agent, who can visualize the selective options, and give feedback on the retrieved information, which in turn improves adaptive learning. One such Conversational AI-based cognitive-search solution was implemented for a healthcare client's contact center. The solution provided sales agents with access to widespread digital content including enrollment options, medical supplement details, etc., allowing quicker, more-efficient responses and resolutions. As a result, the company saw reduced average call handling, faster information access, improved sales opportunities, and dramatically improved users' call-center experience. Yet to drive business outcomes, companies need customer insights to become more personalized and predictive in nature. Using these insights, businesses can proactively pitch the products that align with each customer's needs. For example, McKinsey reports that as much as 35% of Amazon's revenue is generated by its recommendation engine. Combining predictive ML models and cognitive search with Conversational AI can deliver precisely the type of hyper-personalized customer experience necessary to capture these opportunities. Intelligent product recommendations provide natural and logical upselling and cross-selling opportunities that resonate with the customer. The product-recommendation

tool automatically identifies the customer's interest through historical data and provides the right suggestions. Customers with no purchase intention suddenly find themselves interested in doing so – and small purchases can pave the way to larger ones. Data-driven predictions make customer interactions more meaningful, while helping Conversational AI deliver hyper-personalized, intuitive experiences to customers that also improve the quality and efficiency of operations. The Importance of training the Machine Learning Model Ensuring a contact center's ability to leverage this powerful combination requires a seamless, intelligent system built for the enterprise's specific needs. This, in turn, requires training the models to perform appropriately. The detailed steps to train the model include: Five Key Benefits of Conversational AI Conversational AI powered by cognitive search and predictive ML delivers more personalized, intuitive customer experiences while improving the quality of business operations and workflows. In practical terms, this combination of technologies brings five key benefits: Conversational AI infused with cognitive search and predictive ML will enable a more-personalized virtual assistant that can address every user request. Multiple chatbots will converge to a single, more efficient, and decisive virtual agent, paving the way for a more-interactive user experience. The ability to identify a user's mood with voice modulation, body language, and emotional signals makes it possible for evolved chatbots to handle complex questions and carry out multifaceted conversations. Additionally, using big data analytics, companies will be able to predict customer churn and provide recommendations from user data available on multiple data sources including social media. In short, by revolutionizing their contact-center automation, companies can drive efficiency and revenue by moving beyond the scope of simple chatbots. References Sumalatha Subramanian Principal Consultant & Practice Manager, Wipro AI Solutions Sumalatha is a technologist and innovator. She architects and delivers AI solutions for various customers from a variety of domains and identifies opportunities to deliver significant business benefits by applying cutting edge techniques in machine learning. She is also focused on building Conversational AI solutions on the Wipro Holmes platform. Sumalatha holds a Bachelor's degree in Computer Science and Engineering from N. S. S College of Engineering. Her hobbies are playing badminton and reading books.   To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Electric Vehicle Battery Health Forecasting

----- Arcticle source ----- https://www.wipro.com/analytics/electric-vehicle-battery-health-forecasting/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Electric Vehicle Battery Health Forecasting August | 2021 Modern vehicles predominantly run on fossil fuels, the reserves for which are fast depleting. As a result, electric vehicles that only require battery power are quickly emerging as an eco-friendly alternative. According to a report published by Fortune Business Insights, the electric vehicle battery market size is projected to reach $82.20 billion by 2026, exhibiting a CAGR of 6.6% and a significant leap from its $71.83 billion valuation in 2018. Other drivers behind the shift to electric vehicles include increased emission regulations, EV technology maturity, and declining prices for the electric vehicle battery, among others. Soon, electric vehicle battery charging will become the new "fuel" for the automotive industry, and monitoring and regulating battery health will become vital. Measuring EV Battery Health: The Challenge With electric vehicles rapidly permeating the automotive sector, monitoring EV battery health has become paramount. Electric vehicle battery parameters and status must be continuously reported to vehicle owners, as the EV battery charge status is equivalent to the fuel gauge for an internal combustion engine. Drivers need this information to plan their routes and/or visits to the nearest charging station for EV battery recharging. However, measuring these parameters like state of charge (SoC), state of health (SoH), and remaining useful life (RUL) isn't straightforward. The batteries in electric vehicles are subjected to multiple charging/discharging cycles and exposed to varying weather conditions. These issues can impact the performance of an electric vehicle, causing unreliable estimates on battery health parameters. Electric Vehicle Battery Health Prediction: A Solution One solution for analyzing battery parameters is gaining traction. It uses a data-driven approach that leverages advanced AI/ML techniques and can effectively measure battery health parameters by capturing all variables of electric vehicle battery use over time (for example: environmental effects, vehicle load, and driving pattern). By leveraging this battery usage data, more accurate battery health forecasting estimates can be achieved. Wipro's Data Science practice, having enabled AI/ML-based predictive asset maintenance and other asset-failure prediction solutions across industries, has developed an electric vehicle battery health prediction model. This ML-based solution predicts electric vehicle battery health parameters with 96-97% accuracy. The solution is available via open source on the IBM Watson platform and uses the advanced capabilities of Watson AutoML for rapid prototyping. How Does it Work? Figure 1: Solution Overview Data Preprocessing: As shown in Figure 1, the electric vehicle battery pack has close to 15 cells and allows approximately 1,100 charging cycles. The solution uses the data of one cell with all charging cycles to train the AI/ML model, which is later trained and tested on the remaining cells individually. Multiple advanced statistical techniques (e.g. ZScore and Hampel Filter) are

then applied to clean the training data and remove outliers as shown in Figure 2. Figure 2: Data preprocessing to remove outliners that cause noise in results Model Development: The solution leverages automated machine learning (AutoML), a process of automating manual tasks that data scientists must complete as they build and train ML models. These tasks include feature engineering and selection, choosing the type of machine learning algorithm, building an analytical model based on the algorithm, hyper-parameter optimization, training the model on tested data sets, and running the model to generate scores and findings. AutoML helps data scientists build predictive models without having deep ML model expertise. It also frees data scientists from the routine tasks involved in building an ML pipeline, allowing them to focus on extracting the insights needed to solve important business problems.   Figure 3: AutoML System Architecture The AutoML system includes a meta-learning component that leverages cleaned historical information for training models. The ML framework is responsible for automatically choosing data processor and feature preprocessor algorithms and selecting the models. In deep learning (DL), this model selection is typically replaced by Neural Architecture Search (NAS) that performs additional post-processing by combining multiple models together, as shown in Figure 3. Model Deployment: On the platform, a deployment space acts as a registry to manage the assets associated with a model deployment. The deployment assets may include a serialized model, scoring script, schema of the inference dataset, and more. This model can be accessed via REST endpoint to send the test date and get the model predictions. Leveraging the AutoML approach for solution development results in reduced time and effort. The system takes care of data preprocessing, partitioning, feature engineering, hyper-parameter tuning and more, running multiple ML algorithms in auto-pilot mode to churn the best fit model and deliver the most optimal performance while predicting EV battery health with 96-97% accuracy. Leveraging the Solution for More Than EV Battery Health Prediction While battery health prediction is a horizontal capability, this solution can be augmented with other technologies and be leveraged for other uses like customer support, inventory optimization, and product quality. a) Enhanced Customer Service For instance, the solution can predict electric vehicle battery health and display the status on the vehicle's dashboard. If the battery needs servicing, this information can be easily integrated with geographic information systems to help the driver locate the nearest charging station or service center. If the driver fails to immediately address an alert, s/he is advised on the next best action using a voice-driven chatbot (via mobile phone or head unit) to avoid the hassle of delayed support. If the DIY approach fails via chat support, the chatbot could then spot the nearest service center and initiate human assistance by creating a ticket in the system. The dealer could then look at the ticket details for vehicle location, spare parts required, etc. and automatically dispatch a service engineer to remedy the breakdown issue. b) Inventory Optimization Orchestrated from the central server, it is possible to send notifications/alerts to EV dealers such as the predicted/reported electric vehicle battery health issues for EVs within the dealer's geographic area. Based on these alerts, the dealer can anticipate service volumes and optimize its EV parts inventory accordingly. c) Product Quality Improvement By conducting a periodic review of all predicted malfunctions, the solution can decipher defect trends in electric vehicle battery health and

performance and provide meaningful inputs for battery health and quality improvements at the production level. R&D teams can inspect the defect trends and determine the root causes, over time improving the overall quality of the electric vehicle battery. The adoption of AI/ML for predicting EV battery health is gathering momentum. With a data-driven model that addresses the entire EV battery lifecycle across different charging and loading cycles, battery health forecasting can be much more reliable. Platforms leveraging AutoML help fast-track development cycles by automating the routine data-science activities without compromising prediction accuracy. Wipro's EV battery health prediction solution can be further leveraged to realize multiple uses including customer experience, dealer inventory management, product quality improvement, and more. Manish Okhade Practice Lead – Predictive Asset Maintenance, AI Solutions, Wipro Limited Manish Okhade has more than two decades of industry experience in different domains e.g. ER&D, Digital and Artificial Intelligence. Manish has been involved with development of Wipro's AI platform Holmes since inception and developed multiple AI/ML use cases across the industries. Manish is presently leading the Predictive Asset Maintenance (PAM) Practice in Wipro's AI/ML solutions group. His current focus areas are building accelerators, thought leadership and forging partnerships with niche startups in the PAM domain. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption =====================

The Importance of Data Fabric in 2022 And Beyond

----- Arcticle source ----- https://www.wipro.com/analytics/the-importance-of-data-fabric-in-2022-and-beyond/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content The Importance of Data Fabric in 2022 And Beyond January | 2022 The 12 strategic technology trends for the coming year per Gartner shouldn't surprise anyone; they focus on automation, security and AI. The technicalities go deeper, of course: hyperautomation and autonomic systems, increased security through mesh and privacy-enhanced computation, generative AI, decision intelligence and AI engineering. But the larger issues are generally familiar. One trend is particularly familiar – the use of data fabric – because of its recurrence on Gartner's list. Data fabric's return is both notable and important; it underscores the need for a unified view across the democratized and ever-growing landscape of technology offerings in data storage and processing. The technology-trend predictions reflect companies' demand for process optimization and better

use of available technology. The goal, per Jayant Prabhu, is that 80% of business leaders want to move to an intelligent enterprise, which as he notes, is more than merely technology. It's the people who are the differentiator – and having the ability to use a company's data assets is key. Building an intelligent enterprise therefore means "…investing in a journey that pays as much attention to cultural and process changes and it does deploying new tools." Advances in AI engineering, hyperautomation, and total experience are just a few of the tools available, with the Data Fabric acting as that layer of accessibility. With the wealth of data technologies available for storage and processing, upskilling the workforce across each technology to analyse output means a large upfront cost, not to mention time. These inherently mean the organization will struggle to get executive buy-in for key initiatives. But by creating a single layer of accessibility through data fabric, companies can accelerate ROI – and therefore buy-in — for cloud initiatives and other strategic ventures. So, what is the Data Fabric? The data fabric is the overarching data-management solution across data uses, from centralization of data assets to a single point of access for analytics and AI. The fabric is more than just a data layer but is an insights portal with numerous uses. By enhancing the data fabric to become a "shopping cart" of data and analytics assets, enterprises step into the world of the data marketplace, one in which data objects can be bought and sold figuratively or literally. The concept of a data fabric was coined by NetApp in 2016, where they defined it based on five core principles: control, choice, integration, access and consistency. In short, data fabric is a single layer that enables data users to collaborate and share information and value across any number of platforms, cloud or on-premises. Considering its clear value, why is it still a trend going into 2022? The industry has been talking about this for some time now; why hasn't it become table stakes? Data Fabric Enables Companies to Overcome Technical Debt As companies embrace the cloud for revenue and growth, there's a clear need to reduce technical debt (per Gartner). It would appear the peaking of data fabric is actually the result of technical debt accumulated over years of increased technology adoption, rather than the reduction of that debt. Enterprise data transformations today include a multitude of technologies – and an equally dizzying number of skills needed to support those technologies. No longer are we considering the use of relational stores like MS SQL Server, Oracle, or PostgreSQL; but now we have NoSQL options like MongoDB, Cloudera, Neo4J, MarkLogic, and others. On top of this, we are adding cloud options to the stack, with AWS Redshift, GCP BigQuery, MS Synapse, Snowflake and more. We are comparing and adopting numerous solutions of awesome capabilities and thus becoming dependant on their features. Yet they can't move everything at once to achieve value, let alone manage all those disparate resources. Data fabric brings a single management layer to help businesses take advantage of all the value these technologies bring. This not only allows domains to continue with their own technology roadmap, but it also enables end users to take advantage of what other domains have put in place. This concept then allows for a multi-layered management and governance landscape by advancing Data Mesh capabilities across an organization, where governance and transformation are pushed back and democratized at the domain level. Bring on the Future Centralizing the data fabric allows for democratization of domain-level processes and data. Monolithic can't be the answer anymore. As Gartner notes, large-scale lift

and shift is on a downward trend, and cloud-native services are on the rise for 2022. However, cloud-native service doesn't simply remove the hurdles of an organization's past technology adoption. Having a single point of insights and accessibility has become fundamental for organizations to achieve value from their data assets and lay a foundation for their cloud-everywhere futussre. Enter the data fabric. David Tuppen Chief Data Evangelist and Chief Architect for Wipro Europe David is the Chief Data Evangelist and Chief Architect for Wipro Europe. He works closely with large global organisations as a CDO advisor, supplying thought leadership on the domain of Data and Analytics. He has over 20 years' experience in IT Services & Technology from within Sales and Consulting and works closely with leading technology vendors and analysts to understand technology changes and trends in the market. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ===================== ----- Arcticle source ----- https://www.wipro.com/analytics/wipro-wins-three-2022-microsoft-partner-of-the-year-awards-analytics-power-bi-and-compliance/ ----- Related Articles Contact Wipro Please fill the required details to access the content Wipro wins three 2022 Microsoft Partner of the Year awards— Analytics, Power BI, and Compliance July | 2022 The prestigious Microsoft Partner of the Year awards recognize partners who have demonstrated client delivery excellence. We are proud to announce that Wipro has been chosen 2022 Microsoft Partner of the Year award winner or finalist in four important categories: "Wipro is thrilled to be recognized by Microsoft in these three categories. This is a testament to our investment in data analytics, data management and data security and highlights a strong commitment to providing our joint customers with data-driven insights," said Don McCormick, Wipro VP, Global Microsoft Partnership Lead. Working across Microsoft Azure data services domains and Power BI, Wipro helps clients build intelligent secure ecosystems, enabling the creation of sustainable and innovative products and transforming experiences through AI, actionable insights, and trusted data. Wipro also drives positive business outcomes by developing enterprise IT/OT systems with IoT, data platform, and analytics capabilities, while maintaining compliance. Microsoft announces Partner of the Year awards annually prior to the Microsoft Inspire global partner conference, which took place on July 19-20, 2022. The awards recognize Microsoft partners that have developed and delivered outstanding Microsoft-based applications, services, and devices during the past year. They are presented in a variety of categories, with honorees chosen from over 3,900 nominations across more than 100 countries worldwide. To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk

Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption ======================

Unlocking CPG warehouse management innovations with edge

----- Arcticle source ----- https://www.wipro.com/analytics/unlocking-cpg-warehouse-management-innovations-with-edge/ ----- Contact Wipro Please fill the required details to access the content Unlocking CPG warehouse management innovations with edge February | 2023 In response to the ever-changing digital landscape, the consumer-packaged goods (CPG) industry has directed its focus to edge computing, a distributed IT architecture transforming how businesses process data. It not only reduces the amount of data travelling around a network, leading to lower latency and faster overall speeds, but also minimizes security threats because of its decentralized structure. Edge computing optimizes internet devices and web applications for faster performance by moving computing resources from clouds and data centers as close as possible to the originating source of data. The pandemic's mandatory containment measures and health and safety compliances have put huge pressure on remote operations covering warehouse management processes, resulting in the rising need of edge data centers. With the vast amount and variety of data being handled daily in supply-chain management processes (as shown in Figure 1), CPG enterprises require greater levels of efficiency and speed to analyze processes and make quick improvements, as well as identify inefficiencies. Edge computing can deliver these kinds of benefits by bringing the storage and processing of data closer to the equipment, allowing teams to gather and analyze data on equipment performance from IoT sensors. Automated analytical computations on the edge data center generate real-time insights that enable operations to run at a required efficiency while reducing data transmission costs and downtime, and they're also governed by compliance and data security needs at the edge. In an edge-based intelligent warehouse management process for CPGs, which have limited shelf-life and are intended to be used quickly, a significant amount of data is generated. Stakeholders then analyze the data to derive valuable insights, resulting in effective real-time inventory monitoring and decision-making. For instance, cosmetics typically deteriorate if exposed to extreme temperature fluctuations and thus require temperature-controlled environments from production to consumption. A warehouse's IoT temperature sensors can measure humidity, temperature, and light levels to ensure the data points do not exceed the defined threshold. With edge-driven continuous monitoring and reporting of these conditions, quality products can be shipped, compliance can be met, and unexpected expenses can be avoided. The impact of edge computing on warehouse management A deeper look into the supply chain, from transport and logistics to shipping to a trading partner,

reveals that edge can enable a smooth and efficient process flow: Advancing equipment maintenance with edge-driven predictive analytics In addition to enhancing inventory monitoring, adopting IoT and edge-based analytics can transform how organizations manage equipment maintenance. The performance of predictive analytics models locally optimizes and enhances the speed and performance of predictive equipment maintenance. The implementation of predictive analytics solutions not only attenuates data storage costs, but also facilitates real-time updates. Various machines and equipment connected to sensors, actuators, beacons, and cameras produce a huge amount of operational data, as shown in Figure 2. Analytics and computational capabilities integrated into these devices can analyze the collected data at the edge layer, providing real-time insights that enable operators to make informed and prompt decisions. Within this edge layer, edge devices such as smart phones and PCs communicate to the edge data center through gateways. The synchronization of these databases installed on the edge devices helps prevent any loss or corruption of data. Edge computing also improves the performance and speed of ML predictive models, which are implemented locally, overcoming the dependency on network connectivity for transferring data from a device to the cloud. AI and analytical models can then aggregate and analyze the data from the various devices. With the resulting data-driven insights, organizations can develop more efficient operations and improve asset lifecycle management, helping lower processing costs and strengthen their bottom line. In addition to the vast advantages that edge computing delivers, it provides transparency across the supply chain by assuring real-time product and pallet matching while alerting staff to fraudulent barcodes or wrongly placed pallets. This not only eliminates the need for traditional hand-scanning barcodes, but also reduces error rates and enhances warehouse process optimization. With these benefits, the CPG industry can utilize edge computing to boost operational efficiency as well as offer a unique customer experience, determine customer trends, and promote security and compliance. Edge, in combination with 5G networks, will further optimize functionality, modernize processes, and deliver new cloud-driven experiences. Data processing in closer proximity to end users, enabled by edge and 5G, can reduce costs and latency, further enhancing operational performance. Authors Sources ======================

How to Safeguard Business Interests in Generative AI Applications

----- Arcticle source ----- https://www.wipro.com/analytics/how-to-safeguard-business-interests-in-generative-ai-applications/ ----- About the Authors Contact Wipro Please fill the required details to access the content How to Safeguard Business Interests in Generative AI Applications The field of generative AI has witnessed remarkable advancements in the recent years. It is propelled by ground-breaking innovations like generative adversarial networks (GAN) in 2014, transformer neural networks in 2017 and

reinforcement learning with human feedback (RLHF) in the same year. Accompanied by these algorithmic strides, continuous hardware acceleration has unlocked unprecedented capabilities, empowering the training of large language models (LLMs) on colossal natural language datasets. However, the true turning point came with OpenAI's game-changing release of ChatGPT. This momentous launch, followed by the announcement of GPT3.5 and DALL-E 2 models on Microsoft Azure, Google Bard, GPT4 and Microsoft CoPilot, ignited a wildfire of interest that has rapidly intensified, shaping the landscape of generative AI in an exponential manner. Today, businesses are actively exploring the potential of generative AI, engaging in use case identification, conducting proof-of-value exercises, executing pilots, and integrating the technology into their operational processes. Common Enterprise Applications for Generative AI There are four broad areas in which generative AI finds application within enterprises: Challenges for Generative AI Models Some of the biggest challenges for generative AI models, such as GPT or PaLM, are data privacy and protection, but businesses are also concerned about generative AI models violating regulations and general norms: Key Considerations for a Stronger Generative AI Approach There are solutions to above concerns, some of which may be easy to implement while others may take longer efforts. Considering the potential benefits of generative AI, many enterprises have begun efforts to build stronger solutions. The following considerations can help companies be sure they're addressing critical risks or concerns from an application architecture perspective. Information security To safeguard confidential information, it is crucial to limit employees' direct access to interfaces like ChatGPT. Organizations should provide access to purpose-built business applications that utilize generative AI models within a robust information security framework. This can be achieved by leveraging enterprise-grade frameworks offered by cloud service providers or implementing in-house solutions within the secure enterprise network. The information security framework should cover all aspects of data interchange with generative AI models, including prompts, custom training and fine-tuning data, the trained model instance, and the generated responses. Encryption, access control, and data retention controls must be implemented to ensure the highest level of protection for these data elements. Restriction to purpose General-purpose generative AI models like GPT and Bard are trained on enormous corpora of information across almost every discipline of human knowledge. This makes it possible, intentionally or unintentionally, to elicit responses from the AI that are irrelevant to business purposes and are potentially harmful. Exposing customers or employees to such responses can negatively impact business outcomes, credibility, goodwill and even result in legal liability. To mitigate these risks, businesses should develop specialized individual applications that are restricted to specific business purposes, built on top of the generative AI models. Each request to the application should be programmatically evaluated to ascertain relevance to the intended purpose before providing a response. This filtering process can be achieved using a custom-trained classification model. Implementing this filtering mechanism will establish necessary guardrails to ensure that the application is used solely for its intended purpose and prevent unintended usage. Custom training and finetuning Many enterprise use cases of generative AI can leverage knowledge available within the enterprise itself. This requires custom training or fine-

tuning and provides a higher level of control over the data used to train the models, resulting in increased transparency. Moreover, a transparency framework can be created on top of the enterprise document corpus used for custom training, by storing document embeddings. This framework enables tracing back the responses to the source documents used for training, providing transparency and explainability in the system's responses. Consequently, it builds credibility. Custom training and fine-tuning also help achieve fairness by providing control over the data used to train the models. Response moderation Response moderation is necessary to detect and remove harmful elements in the generated responses, including irrelevant, inappropriate, plagiarized, or copyrighted content. The likelihood of harmful content increases in use cases that rely heavily on the pre-trained knowledge of the model, which comes from training that has happened outside the enterprise. Therefore, the implementation and rigor of response moderation should vary depending on the specific use case. Programmatic response moderation can be achieved using available services that detect different types of harmful content, combined with an ensemble of custom-trained classification models. While these broad principles can help mitigate many of the risks associated with generative AI in an enterprise setting, their applicability varies depending on the use case. For example, a virtual assistant used by employees will have higher adaptability for custom training, thus presenting relatively lower risks when implemented alongside the other principles. On the other hand, a marketing catchphrase generator or code generator relies more on the pre-trained knowledge of the model and therefore has a higher propensity of generating plagiarized or copyrighted content. Businesses should conduct a risk assessment for each individual use case, considering the applicability of these principles, to determine their roadmap of adapting generative AI based on the specific risk profile of each use case. Anindito De Head of AI and Automation CoE and Practice, Wipro Swapnil Belhe Chief Architect of Generative AI CoE and Practice, Wipro =====================

Unleashing the Metaverse: Revolutionizing Business Models and Empowering Data Assets

----- Arcticle source ----- https://www.wipro.com/analytics/unleashing-the-metaverse-revolutionizing-business-models-and-empowering-data-assets/ ----- About the Author Contact Wipro Please fill the required details to access the content Unleashing the Metaverse: Revolutionizing Business Models and Empowering Data Assets June | 2023 The Metaverse is no longer a concept confined to science fiction movies. It is becoming a reality. In the near future, customers could explore and test products in virtual reality, providing a seamless and personalized experience. This is where Metaverse and Master Data Management (MDM) come into play, providing a foundation for personalized experiences. The Metaverse is revolutionizing business models across diverse industries, blurring the lines between the physical and virtual realms. A digital approach holds tremendous potential

in meeting customer experience and engagement needs efficiently and cost-effectively. And businesses from various sectors have embraced this mantra, recognizing the power of digital transformation to deliver exceptional experiences while maintaining affordability and timeliness. Back to Basics – Metaverse and MDM The "metaverse" is a virtual reality space where users interact with computer-generated environments and each other in real-time. It goes beyond traditional VR experiences, aiming to create an immersive and interconnected digital universe accessible across devices and platforms. This seamless and persistent virtual world incorporates elements of AR, VR, and the internet. Within this realm, users can personalize avatars, socialize, explore virtual environments, and partake in activities like gaming, shopping, education, entertainment, and business transactions. As per Gartner Report, by 2026, at least 25% of people will immerse themselves in Metaverse technology activities such as work, virtual class, social media, and entertainment. The Metaverse is set to undergo a transformative journey across three interconnected phases: emerging, advanced, and mature. The current phase draws inspiration from the market and technologies of Web3.0 apps. As we progress, the advanced phase will build upon the emerging metaverse, taking a combinative approach. Ultimately, the metaverse will reach maturity, characterized by immersive experiences and interoperable virtual economies. This exciting evolution is expected to reach its full potential by 2030. However, it is crucial for tech product leaders to begin assessing the opportunities presented by the Metaverse without delay. Metaverse is currently in its emerging phase and will incorporate diverse technologies such as 5G, IoT, AI, blockchain, and more. The technology architecture will evolve and mature over time. However, data, especially master data such as customer and product information, as well as reference data, will be a crucial component for the successful realization of the Metaverse. To ensure a successful metaverse experience, master data must meet higher standards in terms of accuracy, availability, completeness, and compliance. As product leaders innovate metaverse products, solutions and services, it is essential to create a solid foundation of master data in the pre-metaverse phase. The Changing face of MDM to serve the Metaverse MDM is a collection of technologies and processes used to manage and upkeep the master data within an organization. The Product Information Management (PIM) system, an integral discipline within MDM, stores, organizes, and oversees product data, encompassing descriptions, images, pricing, and availability. It guarantees the accuracy, consistency, and uniqueness of data across various channels and touchpoints. Let us consider a simple scenario in a retail store: In the Metaverse, a retail store operates with virtual land as the location. Products and associated digital assets are published in the store as master data. Customers, represented by avatars, explore these virtual stores, trying out products, creating new assortments, enjoying immersive experiences, and making informed purchases. Various currency options are available. Once a transaction is complete, the ERP system generates an order, following the order-to-cash process. The MDM application provides essential master data such as customer details, location information, product data and currency as reference data to the ERP system. While there may be some overlap between PIM and the Metaverse in terms of managing and organizing digital data, they have distinct focuses. PIM primarily deals with product-related data management within organizations, whereas the Metaverse

encompasses a broader scope of virtual environments and experiences, which may or may not involve products. PIM can effectively handle product data in the Metaverse, including existing data management and virtual product creation. Users within the virtual world have the opportunity to explore different product combinations, offering valuable feedback to PIM systems for recommendations on new assortments or product mixes. Regarding customer data, the MDM system can handle information related to customers who have made purchases or it can gather prospect data through sales campaigns. MDM effectively manages customer preferences, digital addresses, transaction preferences, digital bank details, and more. The traditional MDM architecture, implementation styles, industry data models, and use cases must evolve to: Exploring the role of MDM/PIM across various business sectors Here are impactful industry use cases for data product leaders venturing into the MDM/PIM journey as the Metaverse evolves: While the metaverse brings about substantial business outcomes, establishing a solid foundation of master data is crucial. Implementing an MDM strategy becomes a prerequisite for enterprises to establish trust and ensure success in the Metaverse journey. Conclusion The metaverse is poised to revolutionize business models and fundamentally transform the way master data assets like Customer, Product, Service, Partner, Employee, Location, and Supplier interact. In this rapidly expanding metaverse landscape, MDM/PIM systems emerge as the linchpin for success, facilitating seamless data integration. A robust data foundation, governed with precision and completeness, empowers continuous optimization of user experiences. The stage is set for a new era where the metaverse and well-governed master data converge to drive unparalleled business growth and customer satisfaction. ======================

Responsible Design and Use of Large Language Models

----- Arcticle source ----- https://www.wipro.com/analytics/responsible-design-and-use-of-large-language-models/ ----- Contact Wipro Please fill the required details to access the content Responsible Design and Use of Large Language Models Large Language Models (LLMs) have created a lot of buzz in recent years. More often, conversations around LLMs are about its greatness, but sometimes it also delves into how it could possibly harm humans. Some of these apprehensions are not unwarranted, given the rapid influx of biased, harmful or outright fake content floating in the digital universe. With these scenarios in mind, the organizations need to be vigilant to reap the benefits of LLMs by keeping the threats at bay. Our whitepaper outlines a pathway for the organizations to optimally use LLMs and guides on implementing checks-and-balances necessary for responsible usage of LLMs. Our paper provides pathways to solution for a plethora of questions that the industry is hard-pressed to find out: To kickstart your LLM utilization journey download the whitepaper from here. About the Authors Anindito De CTO AI Practice, Wipro Bhargav Mitra Data Science Expert and MLOps Consultant, Wipro Dipojjwal Ghosh Principal Consultant, Wipro Siladitya Sen Data Scientist,

Wipro Soumya Talukder Consultant, Wipro
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Harnessing the Power of Analytics in the Cloud: An Automotive Perspective

----- Arcticle source ----- https://www.wipro.com/analytics/harnessing-the-power-of-analytics-in-the-cloud-an-automotive-perspective/ ----- Contact Wipro Please fill the required details to access the content Harnessing the Power of Analytics in the Cloud: An Automotive Perspective The automotive sector is currently undergoing a significant transformation driven by new trends such as Autonomous Driving, Connectivity, Electrification, and Shared Mobility. This shift is a result of digital transformation and evolving consumer preferences. These dynamic changes are shaping the automotive industry as it enters the digital realm. With consumer demand pushing for intelligent vehicles, automotive companies are exploring ways to infuse digitalization into their products to enhance their intelligence. The industry has evolved beyond its traditional role of providing transportation and has now evolved into a comprehensive system capable of generating substantial market value through data-based services. Recent trends reveal the following projections for the future of the automotive industry: 5G-enabled cars are expected to represent over a quarter of global connected car sales by 2025 [1]; Autonomous driving is projected to generate $300-$400 billion in revenue by 2035 [2]; Electric vehicle sales are set to more than triple by 2025 [3]; and Shared mobility is predicted to drive $1 trillion in consumer spending by 2030 [4]. These ongoing trends are shaping the industry into a data-driven market, elevating data to the status of the most valuable output. This paves the way for significant opportunities for automobile manufacturers, who can tap into data to extract insights that further fuel the growth of the automotive sector. Figure 1: Provides an overview of the myriad data points generated by these trends. Leveraging cloud analytics can unlock advantages from both operational and business perspectives. Connected car data contributes to passenger safety by enabling the creation of vehicle features that enhance security. For example, Tesla sends sensor and camera data to a cloud server, which subsequently delivers insights to vehicles through software updates, enhancing functionality. Remarkable growth opportunities lie hidden within the enigmatic world of data associated with each of these trends: Understanding Connected Data Modern vehicles equipped with sensors serve as sources of connected car data. Contrary to the notion of transportation as a decentralized process connecting two points, connected vehicles offer a unified experience [5]. Various touch points of connectivity are possible, such as: Vehicle to Infrastructure In this scenario, vehicles communicate with the road infrastructure, generating data related to traffic, weather conditions, road accidents, speed limits, etc. Vehicle to Vehicle This communication system facilitates the exchange of real-time information between vehicles, which can also be leveraged for safety purposes. Vehicle to Network This allows

connectivity with existing cellular networks (LTE, 4G, 5G), enabling the car to function like a device itself and interact with other vehicle devices, much like a mobile phone. Vehicle to Device This is facilitated by a Bluetooth/Wi-Fi connection that can include systems like Google Android Auto and Apple CarPlay, enabling other devices such as smartphones, tablets, and wearables to interact with the vehicle's infotainment system. Cloud analytics harnesses copious amounts of data to analyze and comprehend events like hard braking, real-time traffic intelligence, and historical insights into road incidents [6]. Manufacturers can utilize insights from connected car data to enhance the safety of both drivers and passengers, making the driving experience more enjoyable. Understanding behavioral patterns aids in identifying novel features and areas for investment. Vehicle data also enables manufacturers to optimize revenue through data monetization. A case in point is Ford's introduction of the 'Power Up' over-the-air update, which not only enhances vehicle performance but also monetizes customer data. Enhancing Autonomous Car Data Autonomous driving relies on substantial computing power to analyze vast streams of real-time sensor data [7]. Other autonomous technologies, such as Over-The-Air (OTA) updates, similarly demand high-performance capabilities and intelligent connectivity. To meet these demands, cloud analytics can leverage computing power while ensuring data security and insights to facilitate intelligent connectivity both within and outside the vehicle. The analyzed data, devoid of biases, and hosted within a centralized cloud infrastructure, can be employed to effectively train machine learning models for constructing autonomous driving features. Tesla's 'Navigate on Autopilot' exemplifies this with features that enable overtaking slower vehicles and taking exit ramps through lane changes. Empowering Electrification Data Electrification is gaining prominence in the automotive sector as it strives to reduce carbon footprints and embrace eco-friendly mobility solutions. Electric vehicles (EVs) generate substantial data about both the vehicle and the driver with every mile driven. Automakers can harness the power of cloud analytics to ingest and interpret this data, focusing particularly on battery data—the most invaluable information from EVs. This empowers drivers to comprehend real-time battery health and optimize its usage. Moreover, ecosystem players within the automotive sector can leverage these insights to devise innovative solutions. Sensing Shared Mobility Data Ever-evolving consumer preferences have given rise to shared mobility concepts like car sharing and car rentals [8]. This emerging trend has captured the interest of investors and the automotive sector alike. This shift has prompted automotive manufacturers to reconsider their traditional business models in favour of Mobility-as-a-Service. Leveraging analytics in the cloud for shared mobility data can open up new revenue streams. These insights can be strategically employed to develop innovative offerings, such as subscription models for end-users. Notably, Ola, a proponent of shared mobility, not only offers car sharing but also provides in-car infotainment and Wi-Fi enablement for customers. Deciphering the Automotive Value Chain for Enhanced Outcomes The benefits of cloud analytics extend beyond the immediate. The automotive value chain comprises critical activities performed at each stage, from vehicle design to customer experience. Introducing cloud analytics at various stages of this value chain can yield multiple advantages, enriching the overall outcomes sought by automakers. This includes optimizing vehicle performance, refining business models,

reducing costs, and supporting Environmental, Social, and Governance (ESG) initiatives. Cloud-based analytics can unlock these benefits by harnessing data generated from various touchpoints throughout the value chain. Figure 2: Elucidates the key activities within the value chain and the data-driven outcomes facilitated by cloud analytics. Notably, data-driven insights can enhance safety by predicting failures and anticipating maintenance issues related to brakes, engine oil capacity, and battery health, among others. Embracing a Cloud-First Strategy in the Automotive Industry In the era of a cloud-first strategy, the automotive industry is actively embracing cloud technology to unlock agility, resilience, efficiency, and productivity. The integration of analytical tools within cloud infrastructure continues to revolutionize the industry's outlook, shaping the future of the automotive sector. This unified platform has the capacity to ingest massive volumes of data and generate significant insights, thereby supporting the holistic growth of both the industry and the broader ecosystem. About the Authors Satyajit Vasant Sarak Senior Practice Manager, Decision Science (WEF - Data, Analytics & Intelligence) Sharqua Shaheen Associate Consultant, Strategy Planning and Market Insights (WEF - Data, Analytics & Intelligence) Sources [1] 5G connectivity in cars – Business Standard [2] Future of Autonomous Vehicle - Mckinsey [3] Sales of internal combustion vehicles now in 'permanent decline' - CNN Business [4] Shared mobility : Sustainable cities, shared destinies - Mckinsey [5] Connected vehicle data is driving the future of auto industry -Telematics Wire [6] Driving the future of automotive manufacturing with cloud native analytics - Grid Dynamics [7] How industrial companies can capture cloud technology's full business value - McKinsey [8] Digital transformation use-cases in the automotive industry - Acuvate
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Ecosystem Orchestration Enabling Order Management for Direct-to-Customer Business Model

----- Arcticle source ----- https://www.wipro.com/analytics/ecosystem-orchestration-enabling-order-management-for-direct-to-customer-business-model/ ----- Contact Wipro Please fill the required details to access the content Ecosystem Orchestration Enabling Order Management for Direct-to-Customer Business Model In today's rapidly evolving landscape, brands that fail to adapt to changing consumer preferences risk losing their market relevance or, at best, their customer base. For the Retail and Consumer industry to thrive and endure, it is imperative for brands to continuously monitor their consumers' needs and pain points. Traditionally, brands had limited direct interactions with consumers and relied heavily on third-party intermediaries for accessing consumer data. As a result, brands have been reshaping their business models to establish more direct connections with consumers by embracing the "Direct-to-Consumer (D2C)" approach to sell their products. This approach involves accepting orders directly from consumers. With D2C, brands bridge the gap between themselves and their

audiences, fostering more intimate and direct connections. Today, an increasing number of brands are contemplating a transition to the D2C model. For instance, Adidas unveiled its "Own the Game" strategy, which includes a shift toward the D2C business model, with a projected contribution of approximately 50% of net sales by 2025. However, adopting the D2C business model presents its own set of challenges, with one of the most significant being the order fulfillment process. Figure 1: Order Fulfillment Process Flow As depicted in Figure 1, brands can ask the 3PL provider to pick the item from warehouse or from their retail store or utilize last mile carriers to fulfil orders from retail store. This choice depends on consumer's preferred delivery time and location, product availability, packaging requirements, etc. Consequently, the complexity of choice varies from one order to another, presenting a significant challenge for brands. To operate profitably in the D2C landscape, brands must confront the following related challenges: Distributed Inventory: In the D2C model, brands must locate inventory that is closest to the consumer. This means that brands count inventory as items available not only in their warehouses but also the items present in the nearby retail stores. To process individual orders efficiently, brands must account for all inventory distributed across this network. Order Size Variability: The shift to D2C results in daily processing of orders from consumers, in addition to periodic orders from retailers and distributors. Moreover, order sizes vary from smaller individual parcels to bulk shipments, altering the dynamics of order processing. Local Delivery Partnership: To successfully implement D2C model, brands need carrier partners capable of delivering bulk orders in addition to small individual parcels. Order Processing Enhancements: Processing daily individual orders poses a different set of challenges compared to bulk shipments at regular intervals. Brands must consider various parameters such as delivery region, delivery time, stock availability, and more when choosing the appropriate fulfillment channel for each order. Integrated Ecosystem: In the order fulfillment process, the ecosystem comprises consumers, brands, 3PLs, regional delivery partners, and a network of retailers, all exchanging data daily for multiple orders. Additionally, order cancellations and returns can occur at various stages, from after online payment to after the consumer has used the item for a few days. Different domains, including warehouse, logistics, finance, and customer care, become involved in processing cancellations or returns depending on the stage at which the order is cancelled. Without a collaborative system facilitating accurate information exchange, brands will struggle to implement order fulfillment in the D2C business model. To address these challenges, it is essential to examine all stakeholders involved in the end-to-end process and transform it by considering each stakeholder's requirements and contributions. Figure 2: Order Fulfillment Ecosystem When examining the order fulfillment process within the D2C ecosystem, three primary types of stakeholders emerge, as illustrated in Figure 2 : It is evident that various stakeholders within this ecosystem contribute their data to complete a single process while maintaining their distinct data architecture. However, attempting to manage this disparate data through a centralized system is challenging and costly. Here, the concept of Data Mesh architecture offers a solution. Data Mesh is based on a distributed architecture for analytical data management and revolves around four key principles: The evolving priorities of the industry and shifting consumer preferences necessitate a revaluation of processes

beyond order fulfillment in the D2C model. This includes considerations like enabling KYC, analyzing marketing campaigns, and more, that requires seamless collaboration within the ecosystem while achieving individual KPIs. With our bold vision of enabling Intelligent Ecosystems, Wipro ensures that the entire ecosystem evolves to deliver an enhanced customer value proposition. About the Authors Satish Vaidhyanathan Strategy and Market Research head, Wipro Yogit Tembhurne Strategy & Market Research Consultant, Wipro Jayakumar Rajaretnam Consulting Partner, Data, Analytics & Intelligence, Wipro =====================

GenAI Supercharges Data Governance and a Data-Driven Culture for Manufacturers

----- Arcticle source ----- https://www.wipro.com/analytics/genai-supercharges-data-governance-and-a-data-driven-culture-for-manufacturers/ ----- Contact Wipro Please fill the required details to access the content GenAI Supercharges Data Governance and a Data-Driven Culture for Manufacturers Manufacturers have always struggled to balance cost optimization with robust service quality for manufacturing assets. Increasingly, they are turning to data-driven solutions to advance asset efficiency and reliability. These solutions also help to provision asset data for regulatory compliance, health and safety, and integration with other service providers. To achieve optimal data-driven outcomes, manufacturers will need adaptive data governance. Adaptive data governance is an approach to data governance that focuses on flexibility and responsiveness to changing business needs and data landscapes. It recognizes that data governance is not a one-size-fits-all approach. Business requirements, technology, and data sources are constantly evolving. An adaptive data governance framework allows companies to rapidly integrate new data sources and modify their definitions and policies. Employees can leverage an adaptive governance framework to address emerging risks and compliance requirements while enabling proactive and collaborative decision-making. GenAI can accelerate the ROI of adaptive data governance, particularly as all teams within the organization, not just data teams, adopt a data-driven mindset. GenAI analysis and recommendations create a high-value feedback loop between humans and analytics that improves the underlying data ecosystem. GenAI can identify data gaps/breakages and surface opportunities for improvement across different departments and locations, and enable all users to seamlessly harness the value of integrated asset data for decisions and asset triaging. Applying GenAI to Data Governance GenAI automates data discovery, profiling, labeling, and annotation, providing a contextual data quality engine powered by distributed processing engines for speed and scale. GenAI doesn't just analyze data—it creates a feedback loop for employees to improve the data ecosystem. This processing power delivers advanced analytical insights to business users and data scientists. Companies should begin by addressing the real-time challenges of siloed asset data operations. Teams can leverage GenAI to define the parameters of

adaptive data governance and use the technology to add adaptive capabilities and lineage tracking to ensure the fidelity of the asset data, giving companies the reproducibility and traceability needed to audit GenAI output. GenAI-assisted adaptive data governance leverages ML and AI to find critical asset data across structured and unstructured sources. It onboards new data automatically with oversight and control and automatically tags data with business context to help users assess relevance. Using company-defined parameters, it produces recommendations on downtime triggers and equipment failures, provides visibility to underperforming equipment, addresses safety/environmental incidents, and gives teams valuable analytical insights for various functioning assets to aid proactive maintenance. Using GenAI-infused adaptive data governance, businesses can automate and streamline asset data, asset cataloging, data provisioning, data literacy, data control, and data quality. Leveraging a Machine Learning Data Catalog The core of a GenAI-driven adaptive data governance program is a machine learning data catalog (MLDC). MLDCs advance asset health by exploiting machine learning to improve data management, governance, and consumption. Every data catalog function learns from data patterns, user queries, data searches, and annotations. A MLDC delivers: GenAI Helps Companies Becoming Data-Driven With the growth of sensors and smart assets, manufacturers face astronomical asset data growth. The challenge for the industry is implementing data governance that helps them manage their data efficiently and responsibly to drive better decision-making. However, data governance is not a one solution approach. Adaptive data governance infused with GenAI helps organizations respond quickly to changing needs, regulations, and goals. It creates a high-value feedback loop between humans and analytics that addresses unique business requirements as data sources constantly evolve. About the Author Sayantan Banerjee Cluster Delivery Head, Data Analytics and Intelligence, Wipro Limited
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GDPR Triangulation

----- Arcticle source ----- https://www.wipro.com/analytics/gdpr-triangulation/ ----- Contact Wipro Please fill the required details to access the content Wipro's GDPR Framework Powered by Informatica data management and AWS Cloud Agile GDPR compliance underpinned by Wipro's "as-a-Service" with a unique catalogue based "pay per use", and block chain solution built on Informatica and AWS Cloud platform Wipro's General Data Protection Regulation (GDPR) framework covering the various areas of GDPR compliance is powered by Informatica' s data governance and compliance products in areas such as data governance, data discovery, data masking, data remediation, data archiving and data consent management for GDPR. The solution is hosted on the AWS platform leveraging AWS's industry-leading GDPR compliant offerings. Wipro's GDPR Triangulation offering is a one-stop-shop for services, tools and platform for GDPR compliance. This pre-built solution with pay as you go model and price bundling helps client achieve considerable cost and time efficiencies in achieving GDPR compliance. =====================

Intelligent Procurement Planning

Intelligent Procurement Planning Accelerate operational procurement planning to increase profitability Improve Dynamic Pricing Capabilities, Forecast Accuracy, and Cash Flow Visibility with Procurement Speed Planning One of the six major features of our speed planning solution built on Anaplan software is our procurement planning platform. Its data-driven agile framework enables enterprises to accelerate their procurement planning operations and align strategies across geographies and departments/segments. Our procurement speed planning model unifies business data so that organizations have visibility into each stage of the procurement process and can quickly make adjustments when needed to ensure successful outcomes. The solution also offers critical actionable insights to CPOs via KPIs through its executive summary dashboard. The tool's key analytics features include the following: In addition to our procurement planning platform, our agile XP execution model enables businesses to speed up project deliveries with basic deployment capabilities that reduce delivery times to five to eight weeks. Teams can keep iteration cycles to one to two weeks and customize projects according to their business needs. =====================

Modernized & Efficient Financial Planning

Modernized & Efficient Financial Planning Delivering Stronger Scenario Modeling, Integrated Simulations, Financial Forecasts, and Cash Flow Visibility Wipro's Anaplan-based Intelligent Financial Speed Planning solution provides a comprehensive financial management platform with six major features, including an innovative financial planning component. With its planning capabilities, enterprises can take a more targeted approach to budget calculations depending on business needs and devise plans specific to geographical regions, departments, or teams. As an agile data-driven tool, this financial planning feature enables enterprises to make informed business decisions more quickly and streamline essential tasks. The tool's what-if analysis capabilities and scenario simulations predict the real-time impact of planned changes, whether top-down and bottom-up financial strategies, allowing financial teams to make adjustments when necessary to ensure business goals are met. The tool's key analytics features include the following: These capabilities are part of the larger innovations we offer through our solution, and our agile XP execution model also enables businesses to speed up project deliveries with basic deployment capabilities that reduce delivery times to eight to ten weeks. Teams can keep

iteration cycles to one to two weeks and customize projects according to their business needs. =====================

Data warehouse modernization with Amazon Redshift

----- Arcticle source ----- https://www.wipro.com/analytics/data-warehouse-modernization-with-amazon-redshift/ ----- Contact Wipro Please fill the required details to access the content Data warehouse modernization with Amazon Redshift Organizations are facing a number of challenges in their data landscapes while catering to an increased customer base and their changing preferences. Some of these challenges are: - Increased cost and performance issues with existing enterprise data warehouses. - Delays in onboarding new data sources. - Data warehouses not capable of handling newer types of workloads and the data generated. - Overcoming the difficulties in realizing an organization's vision of enabling real-time insights. Migrating to the cloud-based data warehouse Amazon Redshift offers lower infrastructure and operational costs, as well as lower risks, and it allows enterprises to benefit from storage, compute separation and scale per specific business requirements. Our Redshift migration approach: Why partner with Wipro on your DWH modernization journey? =====================

InspectAI

----- Arcticle source ----- https://www.wipro.com/analytics/wipro-inspect-ai/ ----- What We Think Contact Wipro Please fill the required details to access the content InspectAI Effective Asset Monitoring for Asset-Intensive Enterprises Move beyond reactive maintenance to predictive asset management For asset-heavy enterprises, timely inspections and preventive asset maintenance are key to maximizing asset integrity and profitability. Ineffective management can lead to lengthy inspection cycles; limited inspection coverage; high inspection costs; inefficient data gathering; and health, safety, and environmental risks. Wipro's InspectAI transforms inspection workflows by combining process, technology, and business model elements to deliver an enhanced inspection management service. As a scalable solution designed for the oil and gas, utilities, energy, telecom, and manufacturing industries, its range of functionalities allows enterprises to reimagine inspection tasks through: InspectAI empowers businesses to inspect their assets comprehensively and frequently, and create historical data. Based on an asset's condition and InspectAI's anomaly prediction, real-time alerts can trigger the asset maintenance workflow proactively. By moving from a reactive to a predictive maintenance approach, enterprises can increase asset integrity and improve workplace environments to support worker health and safety.   Organizations can also reduce their carbon footprint by leveraging technologies such as drones to decrease human travel and reduce CO_2 emissions. The solution's automated processes lead to less resource consumption, and since inspections can be done more often,

any performance issues can be spotted quickly, minimizing any environmental impact. Move from reactive maintenance to predictive asset management Asset integrity management is a key activity for energy companies. ======================

Intelligent Document Processing

----- Arcticle source ----- https://www.wipro.com/analytics/intelligent-document-processing/ ----- Contact Wipro Please fill the required details to access the content Intelligent Document Processing Unlock insights from varied documents Ramped up processing of the unstructured information coming in from multiple channels Every organization has large sets of documents, but the reality is that 80% of these documents are unstructured and locked in emails, texts, images, PDFs, videos, and even scanned images. Current systems and technologies require human intervention to handle these documents. In some cases, these are even overlooked, resulting in incorrect insights that may hamper their business decisions altogether. Wipro's Intelligent Document Processing (IDP) adds the power of AI technologies such as computer vision, NLP and ML on the top of these documents. It helps in automatically digitizing documents, classifying them, extracting information from them and enabling cognitive search. It learns continuously and reveals insights that augment CXOs to make the right business decisions in driving their end customer experience. ======================

Cognitive Finance

----- Arcticle source ----- https://www.wipro.com/analytics/wipro-cognitive-finance/ ----- Contact Wipro Please fill the required details to access the content Wipro's Cognitive Finance Creating Intelligent Financial Services with AI AI-led finance transformation brings efficiency, simplification, and drives valued outcomes Mired in the day-to-day challenge of automating manual processes, many CFOs focus on short-term goals and have little time to develop long-term strategies to leverage AI for business outcomes and value delivery. Wipro's Cognitive Finance solution infuses AI into the finance value stream to optimize business operations, drive intelligent business enablement, and strengthen control and compliance. This infusion allows CFOs to operationalize intelligence and, ultimately, enable their finance transformation efficiently and simply. Empowering businesses to manage finance and accounting operations for improved productivity, faster turnaround times and cost savings, Cognitive Finance presents better information access and customer interaction through a comprehensive portfolio of cognitive-led intelligent financial services. Working across the finance and accounting value chain, Cognitive Finance's range of solutions allows enterprises to gain a competitive edge through: The additional AI-based offerings increase operational efficiency through automation and further finance transformation by allowing companies to build and implement innovative use cases for customers and create new revenue streams. To identify and discover AI use cases in a CFO organization, Wipro

follows a unique methodology called Enterprise Intelligent Quotient framework (E-IQ) which uses the five pillars of Sense, Decide, Act, Interact and Adapt, that benchmarks your current E-IQ from a scale of 0 to 10 and provides a roadmap to attain an optimal E-IQ score for your finance organization. Cognitive Finance helps enterprises build intelligent financial services by turning data into information, and information into insights, with AI-driven intelligence infused across multiple financial processes. To learn more about how Cognitive Finance can deliver on real-time insights and on-the-spot future forecasts, contact our team.
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Wipro Data Intelligence Suite

----- Arcticle source ----- https://www.wipro.com/analytics/wipro-data-intelligence-suite/ ----- Contact Wipro Please fill the required details to access the content Wipro Data Intelligence Suite A one-stop solution that accelerates cloud modernization and data monetization to unlock business opportunities Data has become a fundamental building block for leading enterprises in today's digital world. It has the power to increase knowledge and drive change. But with the data creation rate continuing to increase, organizations find themselves drowning in data, struggling to determine how best to manage, store, access, use and protect these vast sums of information. The limitations of legacy platforms are an increasing source of frustration across any organization. Forward-thinking business leaders know they need to leave legacy systems behind and move to the cloud to deliver business value. Understanding these challenges and inspired by the opportunities and tremendous value that data puts within reach, our team of data, analytics and AI experts developed Wipro Data Intelligence Suite. Fast-tracking modernization journeys to realize digital transformation ambitions Wipro Data Intelligence Suite focuses on modernizing data estates, including data stores, data pipelines and visualizations, powered by a set of low-code/no-code, AI/ML-infused accelerators, enabling end-to-end automation of the cloud transformation journey spanning across major hyperscalers. By enabling end-to-end automation of a company's cloud migration journey, Wipro Data Intelligence Suite ensures that businesses can gain business value quickly while mitigating migration risks. It delivers an efficient, reliable pathway to cloud-driven modernizations that set the stage for accelerated workflows and enhanced data analytics operations. The platform supports multicloud infrastructures in alignment with an enterprise's strategy and business goals. As a comprehensive modernization and migration solution, Wipro Data Intelligence Suite provides all the necessary technical requirements and is compatible with any cloud service platform. Its innovative suite of accelerators and ready-to-deploy modules allow enterprises to develop an effective strategy for migrating legacy applications and data. Wipro Data Intelligence Suite helps enterprises unlock new opportunities and delivers value across the organization. In addition to avoiding stability, latency and data loss issues, the platform provides increased productivity, reduces migration costs and drives faster time to market. At Wipro, we help clients simplify the complexities of technology to enhance business value and set opportunities free. Are you

ready to fast-track your modernization journey? Contact us to unlock new business opportunities. =====================

Build your business with Wipro's Strategic Advisory Services

----- Arcticle source ----- https://www.wipro.com/analytics/build-your-business-with-wipro-strategic-advisory-services/ ----- Contact Wipro Next-Gen Data and AI Operating Model Data and AI Governance Data Transformation Insights Transformation Business Solutions and Value Realisation Data Strategy Maps Marketing Science Lab Elevating Customer Retention in Telecom: A Data-Driven Approach with Deep Analytics and AI-ML Unlocking CPG warehouse management innovations with edge Wipro positioned as a Leader In Everest Group D&A Services Peak Matrix 2023 Wipro Positioned as "Leader" in Everest Group Data and Analytics (D&A) Services PEAK Matrix® Assessment 2022 Wipro named a Leader in 2022 Gartner® Magic Quadrant™ for Data and Analytics Service Providers Please fill the required details to access the content Build your business with Wipro's Strategic Advisory Services Today, forward-looking C-suite executives envision new business models, pushing the boundaries of success by placing data and intelligence at the heart of every pivotal decision. At Wipro, we specialize in enhancing experiences and creating tangible business value through cutting-edge data and intelligence products. We focus on helping Chief Data and Analytics Officers (CDAOs) unlock the full potential of enterprise intelligence, transforming their role into a profit-driving function while adhering to rigorous Data and AI governance mandates. We pride ourselves on delivering actionable insights, scalable solutions, and unparalleled expertise to drive your business towards excellence. Let us be your strategic partner in the journey of transformation and growth. Empower your decisions. Elevate your business. Our comprehensive suite of Data, Analytics and Intelligence strategic advisory services covers the entire data-to-impact value chain: Our Offerings Rethink and reshape your business with a scalable, composable, and collaborative Data & AI operating model to unlock the next wave of growth. Navigate the complexities of AI adoption with expert management of data policies, compliance, rules, and regulations to mitigate risks and liabilities. Create your unique data transformation journey by addressing challenges at different stages with a bespoke approach to transform data from a cost to a profit center. Demystify information veracity with a robust insights strategy that separate valuable intelligence from experimental residuals to unlock innovative solutions. Reimagine business boundaries with industry-specific data cloud and implementation frameworks. Leverage tailored solutions and value realization scorecards to enhance growth. We offer a unified approach to assessing the current data estate and its maturity by combining a defensive and an offensive strategy. Accelerating value at the intersection of data science and agile marketing. News, Awards & Recognition Contact Us =====================

See the whole picture with Business Analytics

----- Arcticle source ----- https://www.wipro.com/analytics/see-the-whole-picture-with-business-analytics/ ----- Contact Wipro Line of Business Analytics Cross-functional Analytics Process Analytics Elevating Customer Retention in Telecom: A Data-Driven Approach with Deep Analytics and AI-ML Unlocking CPG warehouse management innovations with edge Wipro positioned as a Leader In Everest Group D&A Services Peak Matrix 2023 Wipro Positioned as "Leader" in Everest Group Data and Analytics (D&A) Services PEAK Matrix® Assessment 2022 Wipro named a Leader in 2022 Gartner® Magic Quadrant™ for Data and Analytics Service Providers Please fill the required details to access the content See the whole picture with Business Analytics Organizations aiming to propel growth, foster innovation, and enhance operational efficiency must unlock the true potential of their data assets. Today, fostering a data-driven culture is critical. Wipro's Business Analytics group stands as a catalyst in this transformation, homing in on business analytics across various facets within your organization, including processes, functions, and lines of businesses. With analytics and AI at the core, we seamlessly integrate domain expertise with cutting-edge technologies, providing invaluable insights that transcend traditional boundaries. Wipro's Unique Approach At the heart of our success is a highly effective 3-in-a-box model that seamlessly integrates our Advisory, Practice, and Solutioning teams. Drawing on the collective expertise of our domain specialists in the Advisory team, we initiate discussions and collaborate with our Practice Subject Matter Experts (SMEs) and Solution SMEs to brainstorm and formulate effective Go-To-Market (GTM) strategies. This unique model enables us to maintain a robust focus on four key industries - BFSI, RCTG, HMD, and LS - while also addressing three crucial cross-industry themes - Marketing, Supply Chain, and ESG. By combining the strengths of these teams and aligning them with targeted industries and themes, we ensure a dynamic and comprehensive approach to meet our clients' diverse needs. At Wipro, we don't just analyze data; we transform it into actionable insights that drive success. Our Offerings Uncover insights specific to each line of business (LOB) with tailored analysis empowering individual LOBs to make data-driven decisions and optimize performance. By breaking down data silos, we offer a holistic view that empowers decision-makers such as CXOs with meaningful insights and comprehensive information. Leverage data, analytics, and AI for process optimization, enhanced efficiency and informed choices to harness valuable insights for operational excellence. News, Awards & Recognition Contact Us ======================

Transform data into actionable insights

Contact Wipro Unlocking CPG warehouse management innovations with edge Unlocking CPG warehouse management innovations with edge Wipro positioned as a Leader In Everest Group D&A Services Peak Matrix 2023 Wipro Positioned as "Leader" in Everest Group Data and Analytics (D&A) Services PEAK Matrix® Assessment 2022 Wipro named a Leader in 2022 Gartner® Magic Quadrant™ for Data and Analytics Service Providers Please fill the required details to access the content Insights Transformation Over the past few years, the role of analytics and insights has evolved into a critical determinant of success. Technological strides in analytics and AI, coupled with the emergence of sophisticated data platforms and unprecedented volumes of data, have presented a challenge to outdated insight systems built over the past two decades. These legacy platforms were designed for retrospective reporting and curated dashboards, lacking the agility required for today's fast-paced decision-making landscape. The need of the hour is to democratize data-driven decision-making, leveraging visualization, machine learning, and AI technologies to unearth new revenue and cost opportunities. Our Solutions Modernize & Transform your Insights Layer. Drive Business Impact. Democratize Data driven decision making. Infuse Innovation through AI. Re-Imagine Processes through Foundational AI. Drive New Experiences & Capabilities through Generational AI. Insights News, Awards & Recognition Contact Us =====================

Incubate Intelligence through AI

Contact Wipro Build Business Value through Generative AI Please fill the required details to access the content Incubate Intelligence through AI Infuse Innovation through AI. Re-Imagine Processes through Foundational AI. Drive New Experiences & Capabilities through Generational AI In a world dominated by data, the integration of Artificial Intelligence becomes critical. Our commitment to excellence in AI is deeply rooted in our understanding of the symbiotic relationship between AI and data. Our team at Wipro is dedicated to infusing intelligence into your operations. We incubate transformative AI solutions that not only enhance your existing processes but also lay the foundation for innovation. Through Foundational AI, we redefine the way you approach and execute tasks, creating a framework for sustained success. Generative AI, the pinnacle of our offerings, propels your organization into a future where new experiences and capabilities are not just aspirations but realities. Partner with Wipro to embark on a transformative journey where insights are not just generated but harnessed to drive unparalleled business impact. Our expertise in AI, coupled with a data-centric philosophy, positions us as your strategic ally in the era of

Insights Transformation. How we help Leverage generative AI for transformative solutions at Wipro. Co-innovate, upskill, ensure ethical AI, and drive success across industries. Infuse AI to drive successful outcomes though the enterprise. ======================

Unlock Insights from your Data Assets

----- Arcticle source ----- https://www.wipro.com/analytics/insights-transformation/unlock-insights-from-your-data-assets/ ----- Contact Wipro Please fill the required details to access the content Unlock Insights from your Data Assets Modernize & Transform your Insights Layer. Drive Business Impact. Democratize Data driven decision making. Wipro's team of Decision Scientists/Engineers specializes in managing and modernizing your insights fabric. We go beyond conventional boundaries, constructing smarter insight platforms that empower self-service, fostering a culture of democratized insights. Our expertise extends to supporting business and process innovation through AI-driven applications. How we help Advisory Services to assess and define a new consumption fabric and framework to meet organization needs. Advisory Driven Transformation through our WDIS solution and Transformation Office. Unlock the power of Data by Enabling self-service Analytics to empower users with faster decision making and right governance. Unleashing growth opportunities by harnessing Analytics and Industry specific solutions for business success. Drive Data Driven decision making by embedding and augmenting insights into process and applications. Expand adoption and control costs by using cloud-native technologies. ======================

Data Discovery Platform

----- Arcticle source ----- https://www.wipro.com/analytics/data-discovery-platform/ ----- Our Expertise Our Success Stories Form Title Form Title Form Title Form Title Our Success Stories What we Think Form Title Form Title Form Title Form Title What We Think Industry-Specific Apps Industry-Specific Apps Contact Wipro Please fill the required details to access the content Data Discovery Platform Pertinent insights, faster decisions Deploy a digital platform that uses advanced technologies to surface new perceptions, understanding and insights around business Extract deep insights from data with Wipro's Data Discovery Platform (DDP) and use sophisticated techniques such as visual sciences and storytelling to simplify interpretation and decision-making. The core of the platform brings together the Wipro HOLMES Artificial Intelligence PlatformTM and stream computing to deliver wide-ranging insights such as preventive action for customer attrition, predictive maintenance of assets to minimize downtime and practices to reinforce online reputation. An energy processing and transportation company empowers business users with flexible, self-service business intelligence Wipro helped a Media industry leader to reduce issue resolution response time by 65% by tracking customer experience

proactively through Social media analytics. Wipro's robust analytics solution reduced the annual operating expense by USD 1.5 Million for a leading healthcare service provider For a Government transport authority in APAC, Wipro delivered 19% savings in a year through its best-in-class analytics driven solution Wipro employs predictive analytics for Store labor optimization for a leading US retailer leading to enhanced customer experience and $100 million in estimated savings. Wipro helped a global financial services major implement a consolidated platform for AML and Trade Surveillance across geographies, bringing down annual TCO by 30% Wipro's high-performance Big Data platform projected savings of USD 1.5 Mn from campaigns for a global medical device and pharmaceutical major Wipro's driver-based forecasting solution helped integrate treasury and product planning for a banking major Using predictive analytics, Wipro is delivering an effi¬cient claims settlement process for a major European insurance provider, facilitating higher customer satisfaction through better and faster settlements. For a global Hi-tech major, Wipro delivered a modern customer master data ecosystem to empower the customer facing teams with improved analytics and faster time-to-market Wipro's robust analytics solution shortened the planning and forecasting cycle by over 90% for an American chain of department stores For a Government transport authority in APAC, Wipro delivered 19% savings in a year through its best-in-class analytics driven solution An energy processing and transportation company empowers business users with flexible, self-service business intelligence Wipro is delivering the back office transformation across multiple operating countries through a multi-domain MDM implementation for a Telecom major in Africa and Middle-East Wipro's robust analytics solution reduced the annual operating expense by USD 1.5 Million for a leading healthcare service provider For a Global Pharma major, Wipro delivered 25% reduction in Cost of Operations through a vendor master Data Lifecycle Solution enabling enterprise wide transparency into the data management process and master data visibility Wipro's robust analytics solution simplified planning, forecasting, and optimized staff resources, resulting in GBP 60K annual savings for an electricity distribution major Wipro helped a Media industry leader to reduce issue resolution response time by 65% by tracking customer experience proactively through Social media analytics. Wipro enabled faster data processing and computing for a leading manufacturer of networking equipment with centralized data systems Wipro enabled an online gaming giant to seamlessly accommodate 27k users on their gaming platform, while providing an enhanced gaming experience Wipro's reporting and visualization solution enabled improved reporting efficiency and productivity for a leading healthcare provider Wipro helped a leading pharmaceutical company to reduce 50% cost of sourcing provider data by implementing Master Data Management solution Wipro enables simulation for workload and capacity in field services to improve utilization rate by 35% using cloud based, in-memory Anaplan solution for a leading energy management and automation service provider Wipro helped a leading US business services company, move their workload from on-premise data warehouse to Amazon Redshift Migration to asset management platform enables ISO 55000 compliance and annual savings of $2.5 Million The multinational company built data inventory and enabled data protection with Data Discovery as a Service Savings of $12 Million over five years due to migration to cloud-based master data management solution Global data

migration factory solution using Data Stewardship Platform reduced IT deployment expense by 60% and improved time-to-market by 20% University establishes modern data environment and develops actionable insights at all levels of the organization Data migration to S/4 HANA and native HANA reporting enabled cost savings of $4.5 million per year The bank met compliance obligation with time and effort efficiencies leveraging Wipro's remediation solution Implementation of automation for master data management enables the company to become a strong data-driven organization via continuous improvement The company gets future-ready with a scalable data platform that enables real time data processing and the capability to handle complex computation The company integrated key elements of strategy, price setting, transaction and performance management The network provider leveraged a real-time insights platform with the capability to process 15 billion events a day and a real-time personalized campaign management solution to smart-connect with its subscribers across digital channels Wipro creates an integrated data ecosystem to improve data consistency and user access, driving meaningful insights and intelligent solutions. Wipro enabled $12 Million savings for the IT company, reducing its sales credit cycle time by 50% The client partnered with Wipro to spearhead a large-scale intelligent HR transformation exercise leveraging the power of digital technologies. A large international banks had a long-term strategy of reducing the company's data centre footprint. The global pharmaceutical market is projected to grow at a compound annual growth rate of 13.74% from 2020 to 2027. A multinational investment bank and financial-services company had experienced significant growth, and business projections anticipated the positive trend to continue. The subsequent growth in data would stress the company's existing storage and computing capabilities, and operational risks would arise if the data became too siloed and caused increased on-premise expenses. To accommodate its continued growth through mergers and acquisitions... Wipro's Human Resources Shared Services (HRSS) serves more than 200,000 employees One of the largest telecommunications companies in Australia collected and stored data across more than 20 siloed sources. An Australian energy-distribution company wanted to become more customer-centric VW Credit, Inc. (VCI), a financial services arm of Volkswagen Group of America, provides competitive financial services to its dealers and 1.2 million customers. The credit arm wanted to provide more timely and customized products to its customer base. By collaborating with Wipro, Integra solidified its leadership in the medical device industry and expanded the tech maturity of its organization. Cigna recognizes the importance of quality data for its external and internal reporting for both its business and its customers and has been taking steps to foster a truly data-driven culture throughout its entire organization. Thanks to Analytics Data Discovery Platform which helps a business user to explore this data and generate insights without much training and expertise in any analytics tool Universe of customers doesn't have to be categorized into broad segments any longer. You can now create communication and campaigns that are CUSTOMER SPECIFIC, persuasive and produce winning results. Key differentiator would be an effective discovery environment that would enable rapid decision making and implementation of new offerings quickly in the longer run CAOs can now use data for a variety of purposes. It can help manage operational efficiencies, discover customer needs, identify new markets, give shape to

new products and value-added services and develop defensible differentiators To gain the advantages of new technology, organizations are getting ready to undertake a BI Transformation journey moving from historical reporting to planning and forecasting in a bid to identify and address emerging opportunities Challenges in Risk Management can be addressed with technologies leveraging KRIs, as risk technologies will put Enterprise Risk Management more centrally in organizations CFO's roles have evolved from being official bean counters to that of strategic partners. CFO's responsibilities & experiences make them to most suited to embrace as well as advocate technology adoption Key trends directing future investments in Enterprise Risk Management Wipro offers vendor agnostic approach with consistent experience across a range of Data Integration and Business Intelligence tools with predictive capabilities to overcome failures and delays during data warehouse batch runs Money Laundering is a threat of greater than expected magnitude. The risk associated with poor AML practices cannot be underestimated simply because crime methodologies are getting highly sophisticated and need equally intelligent counter measures. CAOs can now use data for a variety of purposes. It can help manage operational efficiencies, discover customer needs, identify new markets, give shape to new products and value-added services and develop defensible differentiators There is an increasing recognition that CFOs and CROs are not on opposite sides of the battlefield. Instead, it is more appropriate to think of them as two sides of the same coin. But, the question to ask is how can this realization actually add value to the organization? The arrival of the Internet of Things (IoT) introduced a new deluge of data getting processed and used for analytics Data is the genesis for insights but the question is how value from data has indeed created protable avenues, just as it has from oil. All forms of business management, and all studies of management science, require accurate, duplicable and reliable data at their very foundation. Big Data is helping manufacturers achieve the same. Using advanced analytics on top of Big Data, customer data can help retail banks solve business problems by transforming their traditional data warehouses into information delivery platforms Using insights gathered from production-data analysis, two-thirds of companies report annual savings of 10% or more in terms of the cost of quality and production efficiency. Going into the future, a thumb rule would be to bear in mind that investments in database appliances would do better if they had a wide availability of tools – hopefully from the open source space – and were built with industry speci¬fications and standards in mind As businesses change their processes, data structures undergo a concurrent change. This food of complex data is crippling current systems. What businesses need is robust scalability, resource optimization, consolidation and fexibility to meet even unforeseen business needs MDM put in place tools that processes and controls reducing errors, improve data usability, enhance the quality and reliability of master data Smart factories are the future. But they don't have to mean abandoning your current investments in technology, data management and monitoring Through effective and integrated data management and analysis from various manufacturing process, a significant impact can be made to various facets of manufacturing Astute technology companies have relied upon online technical and non-technical communities to help other users with product or service features, highlight glitches, raise red ¬flags, sight early warnings, discuss performance issues, etc. Large volume of processed data start

making more sense only when it is tagged and related to the master data entities of the organization. As the digital wave sweeps the business world, traditional approaches towards managing data are impacted significantly such that methodologies and techniques require an overhaul to support this new digital age data Key differentiator would be an effective discovery environment that would enable rapid decision making and implementation of new offerings quickly in the longer run Clustering techniques can also provide a better view of the customers and enable Utilities to target them better with only the relevant offers. Using the right technology to gather real-time data from internal and external data sources and applying advanced analytics to derive real-time meaningful insights can help decision makers to shift to a more predictive mode of functioning than a reactive one. When the CFO-CRO relationship is strengthened, we can expect to reap the benefits of operational stability, predictability of returns, enhanced reporting, increased compliance and improved profitability. With ever increasing volumes of data, relying on data processes without a governance layer is equivalent to sitting on a bomb waiting to explode. manufacturing industry is leveraging the Internet of Things to collect product and usage data directly and regularly rather than depend on dealers and surveyors to collect and send in the data after a machine or device has broken down Universe of customers doesn't have to be categorized into broad segments any longer. You can now create communication and campaigns that are CUSTOMER SPECIFIC, persuasive and produce winning results. Cloud infrastructure is penetrating fast, and the forecast for the industry looks really sunny. Even industries known for stricter regulations on data confidentiality have embraced Cloud for a variety of processes. A road map for transformation and rationalization that entails an unbiased understanding of the BI Inventory stack, enterprises can unlock the benefits of a cost-effective, agile and intelligent BI platform Retailers can further enhance the in-store shopping experience through advanced video analytics, aggregate analysis of store footfalls, parking lot information and physical characteristics of store visitors to optimize product assortments. An experienced technology partner can ensure that the business identifies the data required to be captured based on business goals and vision and prevent the risk of over inventing and over investing for retailers Insurance fraud detection is a challenging problem, given the variety of fraud patterns and relatively small ratio of known frauds in typical samples. Thanks to Analytics Data Discovery Platform which helps a business user to explore this data and generate insights without much training and expertise in any analytics tool Data Envelopment Analysis is a very powerful technique to evaluate the relative efficiency of business units when multiple inputs and outputs are involved. The benefits of targeted marketing are two-fold: one, the total cost of marketing and acquisition decreases, and two, a well targeted campaign increases the likelihood amongst target audience to respond. This leads to enhanced response rates and Return on Marketing Investment (ROMI) Rising need of a Unified Cloud Brokerage Governance Console - a services hub - to facilitate consumption of an increasing diversity of cloud services Paper guides you in understanding the role of analytics in optimizing Smart Meter rollouts. Financial crime detection and prevention is critical in any organization and how augmenting it with Artificial Intelligence and Machine Learning will help industries Intelligent enterprises are being shaped by the rapidly expanding footprint of Artificial Intelligence Real

world evidence (RWE) is the clinical evidence regarding the usage and potential benefits or risks of a medical product derived from analysis of the data relating to patient health status and/or the delivery of healthcare routinely collected from a variety of sources Machine Learning and Artificial intelligence helping Organizations enhancing data quality for better insights Discover how to humanize AI to deliver analytics that matter? The need to understand business performance in real time in order to manage the modern enterprise makes it important to overcome existing planning systems bottlenecks In the digital age, digital data lakes have replaced file cabinets, and every organization is sitting on an astounding amount of data. Harnessing advanced analytics and AI to optimize the value from IoT With the growing client expectation of faster time to market, most of workforce efforts in the IT industry are spent in maintaining the infrastructure of the project instead of focusing on the actual work items. Organizations are rapidly adopting advanced analytics to enable data-driven business decisions. As a result, the demand for data science experts is growing. Amazon successfully used automation and artificial intelligence for order recommendations and fulfillment in their ecommerce platform and warehouses, but when it came to evaluating job candidates, the scoring engine failed The Web API or API in short, is not a new technology. It has been there for more than a decade and today Programmable- Web directory lists more than 20,000 public APIs available for consumption. The retail industry, now, has access to a wealth of data across a customer's lifecycle. The data helps predict customer behavior, assesses needs for new products, and triggers buying decisions. The Six Sigma methodology is not new - it has been around since the 80s. What is interesting is its long shelf life. It continues to be relevant to modern day operations despite rapid technological advancements. A data protection process encrypts the data and removes personally identifiable information from data sets, so that the actual people whom the data Today, AI to most businesses is a technology that aids in the automation of tasks and augments decision making by providing insights to key leaders and decision takers. Cloud has been a great enabler in this race towards digital, building a connected cosystem that is essential to not only satiate the need of customers but also partners, vendors, employees and things. Growing adoption of Artificial Intelligence (AI) in systems that assist, rate, and offer advice on how people are treated and what opportunities they are offered is resulting in broad discussions on how to build objective systems. Over the years, asset-intensive industries like energy, utilities, and manufacturing have witnessed several service failures and safety incidents around machines and structures without warning. The volume and variety of data available to organizations in the digital age is enormous, giving rise to the need of expanding their data-management infrastructures considerably and rapidly. Data lake, a new class of data-management system, holds a strong potential to achieve success in this area. The acute need to become an insights-driven enterprise Having the right set of processes ensure consistency in delivering promised business outcomes through intelligent systems powered by the right technology and right capability ETL modernization with its cost-saving approaches to transactional and analytical data processing is becoming a key strategy for organizations' IT estate rationalization It is vital that the leadership understands the potential impact of AI across the value chain and drives the AI adoption initiative. UDM is the driver of success for the

organization that wishes to benefit from the enormous dataset (master and transactional) being hosted in any of its larger application landscape. Product Information Management solution delivers to organizations strategic advantages that greatly enhance the digital experience of both, its internal as well as external stakeholders DataOps helps overcome the hurdles and complexities and deliver analytics with speed and agility, without compromising on data quality The foundation for high performance analytics Every business needs to have a scalable, reliable model in place that addresses all business functionalities and enables understanding of business performance in real time. IoT, 5G and AI are ushering in a new era of customer and citizen engagement. Defining migration strategy – Defining strategy for extraction of data from different source systems, cleansing of data, validation and reconciliation of data, environment planning is very tricky and needs a customized approach suiting the project requirement. Building smart cities and smart healthcare with edge analytics and 5G Digital Voice User Interface will take enterprise human-machine interaction to the next level There has been considerable improvement in use cases ranging from facial / voice / image recognition. One reason could be the abundance of labeled input data sets. We have as many photographs of human beings, cats, or dogs as we can. The more the machine can play and learn, the better it gets. The same as what happened with chess or Go. The rapid spread of COVID-19 poses a global threat in an increasingly interconnected world. The strategy for optimizing pricing and maximizing profits First, take control of your data As COVID-19 transforms the way consumers behave, it will affect demand estimation, customer targeting, and product and service fulfilment strategies. Indian agricultural sectorpresents some staggering numbers. It provideslivelihood to 58% of India's population with aGross Value Addition of 265.51 billion USD(agriculture, forestry & fishing combined)1. At283.37 tons, India had a record production offood grains in 2018-191. The Private Data Privacy Act entitles Indonesia residents to even more control over their personal data. Download our quick guide to learn more. The UK government has mandated that energy suppliers install smart metering systems across Great Britain by the end of 2024. Regulators estimate that energy suppliers will deploy 53 million smart meters during this period Over the past decade, we have witnessed an unprecedented technological disruption in application and data functions. They are now enabling enterprise-wide digital transformation initiatives to empower customers and colleagues. The questions on everyone's mind Financial institutions have been slow at adopting cloud technologies primarily due to concerns around security, regulatory compliance, and governance. As a result, they have been facing business model-related challenges like legacy technology, high running costs, and lack of scalability. Open banking is an emerging financial technology where regulated financial institutions share some customer financial data to permit competition, innovation, and better financial products A New Age of IP solutions Led by AI As organizations race towards digitization, it is imperative that the underlying infrastructure keeps pace. The need for 'anywhere, everywhere and always-on' IT infrastructure calls for a paradigm shift in this space. The technology landscape is full of solutions that can parse historical data, but modern businesses increasingly want to predict the future. What are the risks? What are the opportunities? Where will the market – and revenue – be five years from now? Using predictive analytics, organizations can take steps

toward answering these future-focused questions. Driving efficiency and revenue by moving beyond the scope of simple chatbots Modern vehicles predominantly run on fossil fuels.... The 12 strategic technology trends for the coming year per Gartner shouldn't surprise anyone; they focus on automation, security and AI. The technicalities go deeper, of course: hyper automation and autonomic systems, increased security through mesh and privacy-enhanced computation, generative AI, decision intelligence and AI engineering. But the larger issues are generally familiar. One trend is particularly familiar – the use of data fabric – because of its recurrence on Gartner's list. Data fabric's return is both notable and important; it underscores the need for a unified view across the democratized and ever-growing landscape of technology offerings in data storage and processing. The prestigious Microsoft Partner of the Year awards recognize partners who have demonstrated client delivery excellence. In response to the ever-changing digital landscape, the consumer-packaged goods (CPG) industry has directed its focus to edge computing, a distributed IT architecture transforming how businesses process data. Today, businesses are actively exploring the potential of generative AI, engaging in use case identification, conducting proof-of-value exercises, executing pilots, and integrating the technology into their operational processes. The Metaverse is no longer a concept confined to science fiction movies. It is becoming a reality. ChatGPT and Bard have taken the world by storm! In many circles, even in casual conversations, discussions about the huge positive influences of Large Language Models (LLMs) and the sobering risks they pose to our socio-economic fabric are happening in the same breath. ChatGPT and Bard have taken the world by storm! In many circles, even in casual conversations, discussions about the huge positive influences of Large Language Models (LLMs) and the sobering risks they pose to our socio-economic fabric are happening in the same breath. In today's rapidly evolving landscape, brands that fail to adapt to changing consumer preferences risk losing their market relevance or, at best, their customer base. Manufacturers have always struggled to balance cost optimization with robust service quality for manufacturing assets. =====================

Total Customer Centricity

----- Arcticle source ----- https://www.wipro.com/analytics/total-customer-centricity-elevator-pitch/ ----- Our Expertise Our Success Stories Form Title Form Title What we Think Form Title Contact Wipro Please fill the required details to access the content Total Customer Centricity Make Customer Focus a Successful Mission Propel customer centricity with Wipro's Master Data Management solution. Wipro's Total Customer Centricity (TCC) solution permits Master Data Management (MDM) across a manufacturing organization. Power by Informatica® and backed by Wipro's 10+ years of MDM experience with Fortune 500 companies, TCC creates an accurate, unified and consistent view of customers. A variety of benefits have been reported by TCC users. These range from an 85% increase in freight rebates, 75% improvement in customer onboarding time and a 60% reduction in customer complaints.   For a global Hi-tech major, Wipro delivered a modern customer master data ecosystem to empower the

customer facing teams with improved analytics and faster time-to-market Wipro is delivering the back office transformation across multiple operating countries through a multi-domain MDM implementation for a Telecom major in Africa and Middle-East Large volume of processed data start making more sense only when it is tagged and related to the master data entities of the organization. =====================

Data Model Quality Analyzer

----- Arcticle source ----- https://www.wipro.com/analytics/data-model-quality-analyzer-elevator-pitch/ ----- Our Expertise Contact Wipro Please fill the required details to access the content Data Model Quality Analyzer Objectively Evaluate the Quality of Data Models Data models determine how well data is represented – how compliant is your model to best practices? Wipro's Data Model Quality Analyzer (DQA) aids reviewers to validate data models for compliance to Data Modeling Best Practices and identifies areas for improvement. The DQA's rules-based scorecard defines metrics for modeling categories with a web-based GUI facilitating automatic dashboard on Data Model Review. DQA also covers guidelines for OLTP Data Model review and can be customized for database architecture review. Organizations that use DQA significantly reduce data model review effort, duration and cost. =====================

Database Performance as a Service

----- Arcticle source ----- https://www.wipro.com/analytics/database-performance-as-a-service-elevator-pitch/ ----- Our Expertise Contact Wipro Please fill the required details to access the content Database Performance as a Service Elevator Pitch Is Your Database Performance Below Par? Don't Compromise. Improve database performance and watch application performance soar Database performance engineering and optimization lie at the core of how your applications perform. Wipro's database performance service analyzes and ensures your databases are in top condition at every phase of the SDLC through Database Architecture/Database Design, Infrastructure setup, Development and Testing. It includes SQL Query optimization, Disk I/O Optimization, Network optimization, Database code optimization and Database Model Optimization, resulting in lowered maintenance, improved application performance and higher ROI. =====================

RiDE

----- Arcticle source ----- https://www.wipro.com/analytics/ride_elevator-pitchanalytics/ ----- Our Expertise Contact Wipro Please fill the required details to access the content RiDE The One-Stop-Shop for a Trusted Version

of Truth Manage reference data from internal and external sources across the organization Wipro's RiDE is a solution that delivers a single, trusted version of truth for streamlined compliance. Developed by Wipro on IBM Infosphere MDM RDM Hub, RiDE offers cross vendor streamlining, intelligent look-up service and robust data governance. RiDE users improve ease of business reporting while reducing operational cycle time and faster execution of transactions. ===================== ----- Arcticle source ----- https://www.wipro.com/analytics/artificial-intelligence/ ----- Our Expertise Our Success Stories Form Title What We Think Form Title Form Title Form Title Form Title Contact Wipro Please fill the required details to access the content Artificial Intelligence Digital disruption has transformed global business. As new models and processes emerge, artificial intelligence (AI) plays an integral role in boosting companies' agility, enterprise intelligence and success. With Wipro's AI Solutions, leaders can integrate AI into their overall strategy and value stream, maximizing their business value. Wipro's AI Solutions partners with organizations to help them transform into intelligent enterprises by leveraging trustworthy AI scaled across business functions, supported by actionable insights and powered by curated data. Combined with Wipro Holmes and a global partner ecosystem, Wipro's AI Solutions enable enterprises to foster innovation and boost their profitability. Stay ahead of the transformation curve and maximize your business value with Wipro's AI Solutions. Learn more or book a meeting with us at aisolutions.contact@wipro.com Mitie, a UK-headquartered facilities management (FM) and professional services leader employing almost 50,000 people with revenues of £2.2 billion in FY20, wanted to drive significant efficiency improvements and cost savings. In the midst of a multiyear transformation program that started before the COVID-19 pandemic, Mitie teamed with Wipro to manage their SAP cloud ERP migration to Microsoft Azure. Driving efficiency and revenue by moving beyond the scope of simple chatbots The pace of growth around the world has led to globally distributed, multi-tiered, large, and complex. Artificial Intelligence (AI) is clearly being adopted by enterprises, with just 15% of organizations saying they are not doing anything with AI. Patient safety is the most critical aspect in the drug lifecycle. =====================

Semantic Data Hub

----- Arcticle source ----- https://www.wipro.com/analytics/semantic-data-hub/ ----- Our Expertise What We Think Contact Wipro Please fill the required details to access the content Semantic Data Hub Build and operate the enterprise brain Extract semantic meaning and relationships, and represent knowledge in computable form to enable new classes of intelligent applications Wipro's Semantic Data Hub (SDH) enables enterprises to extract semantic meanings and relationships from both structured as well as unstructured data sources to build knowledge graphs that would enable completely new classes of intelligent applications powered by Artificial Intelligence (AI) and curated knowledge. The solution helps enterprises manage data efficiently by providing a unified interface to discover data assets spread across the enterprise, including private storage or AWS Cloud

storage. SDH uses powerful AI/Machine Learning (ML) based techniques for text, speech, image and video analytics to enable development of intelligent applications for the enterprise. Undergoing the migration to a new method of storing and managing data is a daunting task for even the most agile insurance organization. Before tackling such a project, it's important to know how an organization will be able to measure the success of their semantic data hub and enterprise brain. ======================

Intelligent planning with speed

Our Expertise What We Think Form Title What We Do Contact Wipro Please fill the required details to access the content Intelligent planning with speed Overcome contingency planning challenges with speed for tactical and strategic outlook Enabling enterprises to react and re-plan/re-adjust faster than ever before Wipro's 'Intelligent Planning' is a unique, integrated and consensus-based collaborative planning solution that addresses business exigencies and economic disruption challenges with agility, leading to higher and faster ROI. As the 'new normal' comes into effect, scenario-based simulation, driven by an integrated and connected planning approach will serve the short- and medium-term contingency planning requirements resulting from increasing customer demand. The six major tenets of our speed planning solution will help transform organizations into intelligent enterprises by providing an agile framework to react and re-plan faster than ever includes Workforce planning for business continuity, SCM planning to manage sudden demand fluctuations, Financial planning to optimize operation and capital cost, Merger & Acquisition planning for scenario planning for cash adequacy, Sales planning to accelerate revenue channels and Operational procurement planning to control cash spend. Key solution features include Business continuity planning, Workforce remote enablement planning, Social distancing & workforce health safety planning, Workload vs. capacity planning, Integrated scenario simulation planning for finance, Cash flow impacts & cash liquidity planning, Supply & demand planning during exigencies, Sales forecasting and quota allocation planning, Operational procurement planning to optimize and control vendor spend. Faster delivery approach with Agile XP execution model, which allows quicker Iterations of 1-2 weeks, reduced the project delivery to 3-5 weeks with basic solution feature deployment, allowing opportunity to further customization in future. The UK government has mandated that energy suppliers install smart metering systems across Great Britain by the end of 2024. Regulators estimate that energy suppliers will deploy 53 million smart meters during this period Accelerate operational procurement planning to increase profitability Delivering Stronger Scenario Modeling, Integrated Simulations, Financial Forecasts, and Cash Flow Visibility =====================

Marketing Sciences Lab (MSL)

What We Think Form Title Form Title Contact Wipro Please fill the required details to access the content Marketing Sciences Lab (MSL) Accelerating value at the intersection of data science and agile marketing Driving rapid exploration and experimentation to improve the top line In today's rapidly changing market, sales and marketing teams want to continuously enhance their customer engagements and remain effective. They are looking for rapid exploration and experimentation capabilities that supercharge their agile marketing initiatives, thereby improving customer experience and the top line. Wipro's Marketing Sciences Lab (MSL) is a repeatable, fast, and business outcome–focused offering that helps businesses accelerate their ability to gain insights using data and AI, delivering short- and long-term business value in sales, marketing, and advertising domains. Built at the intersection of Wipro's human-centric design and data science expertise, MSL propels clients to achieve quicker sales and marketing growth outcomes. MSL helps businesses solve customer- and market-centric business problems using agile marketing methodologies and data science through a test-and-learn lab setup. MSL business solutions enable benefits across a range of topics: As COVID-19 transforms the way consumers behave, it will affect demand estimation, customer targeting, and product and service fulfilment strategies. Retailers today face the unique challenge of engaging with incredibly diverse customers across a range of geographies and digital channels. Customer demands are changing rapidly, and consumers expect far more from retailers than ever before, including hyper-personalized service in near-real time. =====================

Data Platform Modernization with Google Cloud Data Platform (GCP)

Contact Wipro Please fill the required details to access the content Data Platform Modernization with Google Cloud Platform (GCP) The latest innovations in cloud technologies are giving businesses the opportunity to modernize their data operations, gain valuable business insights, and become more resilient as disruptions occur. A Gartner article reveals that over 70% of businesses have migrated part of their workloads to a public cloud platform, and it's expected that further migrations will take place in response to conditions brought on by the pandemic. To ensure organizations can migrate their data seamlessly, Wipro is delivering customized solutions with Google Cloud Platform (GCP) for modernizing data analytics landscapes at an optimal cost and an accelerated pace. With our frameworks, automation platforms, and ability to deliver data insights, we're leading GCP adoptions that transform processes and increase business value, driven by our industry-specific expertise built

from multiple cloud migration and modernization journeys. We also leverage Google Cloud Data Analytics to migrate data from various data sources, transforming them into actionable insights, and leverage AI to drive smarter business decisions and uncover new opportunities. Our Services =====================

Data Platform Modernization with Amazon Web Services (AWS)

----- Arcticle source ----- https://www.wipro.com/analytics/data-platform-modernization-with-amazon-web-services/ ----- Contact Wipro Please fill the required details to access the content Data Platform Modernization with Amazon Web Services (AWS) Gartner predicts that by 2022, "public cloud services will be essential for 90% of data and analytics innovation." The latest achievements in cloud technologies are giving businesses the opportunity to reduce the cost of their analytics platforms while improving speed, scale, and efficiency. With the new Lake House architecture from Amazon Web Services (AWS), organizations can now modernize their analytics operations and accelerate their ability to gain valuable insights. Its capabilities enable enterprises to directly and seamlessly run queries (through Athena/Spectrum) against data in operational data stores (Relational Database Service [RDS]), lakes (Amazon Simple Storage Service [S3]) or data warehouses (Redshift) while ensuring unified governance controls through services such as Lake Formation. By adopting the architecture, organizations can gain improvements in both cost and performance. Wipro offers an array of data platform modernization services, ranging from assessments, roadmap building, and piloting to industrial rollouts of AWS analytics platforms. Our services are backed by Wipro's years of experience migrating large, on-premise analytics platforms to the cloud. With our frameworks, accelerators, and automation platforms, we can offer our clients a low-risk migration to the cloud while containing costs. Our 4S Levers, outlined below, are the foundation for our modernization approach and our ability to empower organizations to achieve greater business value. ===================== ----- Arcticle source ----- https://www.wipro.com/analytics/wipro-ai-solutions/ ----- Our Offerings Our Success Stories Form Title Form Title Our Success Stories What We Think Form Title What We Think News & Events Form Title Form Title Our Success Stories Analyst Speak Form Title Form Title Form Title Contact Wipro Please fill the required details to access the content AI Solutions Digital disruption has transformed global business. As new models and processes emerge, Artificial Intelligence (AI) plays an integral role in boosting companies' agility, enterprise intelligence and success. With Wipro's AI Solutions, leaders can integrate AI into their overall strategy and value stream, maximizing their business value. Wipro's AI Solutions partners with organizations to help them transform into intelligent enterprises by leveraging trustworthy AI scaled across business functions, supported by actionable insights and powered by curated data. Combined with Wipro Holmes and a global partner ecosystem, Wipro's AI Solutions enable enterprises to foster innovation and boost their profitability. Effective Asset

Monitoring for Asset-Intensive Enterprises Creating Intelligent Financial Services with AI Unlock insights from varied documents Reinvent the marketing experience with intelligence driven strategies Expedite ML Journey with Wipro's Amazon SageMaker Offerings Infusing AI to cultivate a superior customer experience The pace of growth around the world has led to globally distributed, multi-tiered, large, and complex. Driving efficiency and revenue by moving beyond the scope of simple chatbots The impact of AI on business-process transformation has had a remarkable impact .. Modern vehicles predominantly run on fossil fuels.... Artificial Intelligence (AI) is clearly being adopted by enterprises, with just 15% of organizations saying they are not doing anything with AI. Patient safety is the most critical aspect in the drug lifecycle. Building tomorrow's mobility and autonomy, today Less than a decade after breaking the Nazi encryption machine Enigma and helping the Allied Forces win World War II, mathematician Alan Turing changed history a second time with one simple question: "Can machines think?" The COVID-19 pandemic drove an explosion of online and social conversations during lockdown. Effective IP management strategies can provide the needed encouragement Asset integrity management is a key activity for energy companies. It ensures safe operations, avoids unplanned downtime, and prevents incidents. Legal systems worldwide have embraced English jurist William Blackstone's idea of letting ten guilty people escape rather than having one innocent person suffer. But, "justice delayed is justice denied" is also a very common adage in the judicial domain. Both raise three important points: ensuring justice is delivered, supporting it with correct evidence, and addressing it in a timely manner. In his book "Homo Deus," Yuval Noah Harari contends that "organizations are algorithms" – processing information through various divisions, departments, and hierarchies to deliver decisions, with their employees and teams working as information-processing agents. As businesses leverage AI and digital to transform into intelligent enterprises it is important that they also reexamine their structures and operating models. The Hackett Group Principal Paul Morrison talks with Wipro's VP of HR and Global Head of HR Shared Services Putul Mathur and VP and Global Head of AI Solutions Practice Mukund Kalmanker about Wipro's AI-led digital transformation in human resources, which won the company a 2021 Digital Award in the Hire-to-Retire category from The Hackett Group. Ecommerce has long been growing in popularity with private consumers and enterprises alike, but the pandemic drove an unprecedented flurry of activity even from segments that hadn't previously embraced online shopping. IDC MarketScape evaluated 19 AI services providers based on a comprehensive framework and a set of parameters expected to be most conducive to success in providing AI business services in both the short and long term. Contact Us
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InteractAI

----- Arccticle source ----- https://www.wipro.com/analytics/interactai/ ----- AI Infused Transformation Contact Wipro Please fill the required details to access the content InteractAI Infusing AI to cultivate a superior customer experience for enterprises The emergence of multiple contact channels and

dispersed data makes it difficult for contact centers to meet customer expectations consistently and across channels. To deliver a seamless customer experience, enterprises need a platform that can streamline operations and integrate data from each customer touchpoint. Wipro's InteractAI enables businesses to differentiate themselves by providing a superior customer experience while reducing costs. Leveraging the power of AI, enterprises can deliver a personalized experience and offer services catered to a customer's specific needs via his or her preferred channel. Wipro's industry experience, combined with prebuilt frameworks, prediction models, and conversational AI, bridges the gap between enterprises and their customers. With InteractAI's platform-agnostic compatibility, organizations can seamlessly integrate the platform into any existing contact center system and create customer relationships that build brand loyalty. InteractAI enables companies to find the information they need through integrated guided navigation and assessments of real-time calls, emails, and chat sessions. Executives and agents alike gain valuable insights by retrieving data from the right sources, with a unified 360-degree customer view and an integrated chat interface that delivers a seamless omnichannel customer interaction. InteractAI includes pre-designed industry solutions that follow best practices and targeted business outcomes, and it can be tailored to specific domains or industries. This enables faster, easier adoption and delivers hyper-personalized customer experiences through conversational AI. It also enables any enterprise to transform its customer-engagement function from a cost center to a revenue generator.
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Data Strategy Maps

----- Arcticle source ----- https://www.wipro.com/analytics/data-strategy-maps/ ----- Contact Wipro Please fill the required details to access the content Data Strategy Maps Most organizations are in the process of building a data-driven culture that allows them to analyze or experiment with any volume, variety, or velocity of data and derive valuable insights from it. The key to achieving this is with a data strategy map, a visual representation of an enterprise's data strategy that illustrates the variety of data channels throughout the company. With this in place, organizations can ensure their data strategy aligns with their business needs and make fact-based decisions on how to achieve the next wave of profitability. A well-constructed data strategy map is similar to a city's metro map. Just as a metro map is essential for understanding transportation routes across a city for future development, a data strategy map would enable an enterprise to better understand its data workflows. A Wipro Data Strategy Map offers a unified approach to assessing the current data estate and its maturity by combining a defensive and an offensive strategy (explained below). It ensures the integrated flow of data, as well as its uniformity, security, and enrichment, to deliver quick business benefits. Each strategy is focused on achieving specific goals: Democratize, Secure, Standardize, Monetize, Innovate, and Optimize. A Data Strategy Map shows the pathways and elements covered by the two defensive and offensive data strategies, which help organizations identify their current data maturity and create a robust data strategy for

developing further advancements. The map contains stations, which are the set of defined capabilities required along the pathway, and intersections, which depict the common capabilities required across the various lines. A defensive data strategy focuses on minimizing downside risk, ensuring compliance, leveraging analytics to detect and limit fraud, and building systems to enable control and prevent theft. It's developed to achieve the following beneficial tasks: An offensive data strategy is focused on driving innovation and change, conducting quick experiments, and supporting business objectives, such as increasing revenue, profitability, and customer satisfaction. This strategy gives enterprises the ability to achieve the following tasks: Each of the lines in the Data Strategy Map has a set of questionnaires and artifacts related to them, which helps in assessing the maturity of those lines. This provides an indication of the data strategy's current state and is pivotal for making it more robust in the future. The individual lines also need to be monitored through each set of defined KPIs, including input, process, and output KPIs. Dashboards and videos also demonstrate the key initiatives and their results. Included in our Data Strategy Map offering, the Wipro Command Center periodically records the overall progress of the data strategy in achieving the key functions, such as customer satisfaction, increased revenue, reduced risk exposure, and employee efficiency. With this information on the strategy's progress, Chief Operations Officers can track the growth of their multiple data and analytics initiatives and share it with the larger organization. Data Strategy Maps also provide enterprises with a comprehensive view of their data estates and their impact on the business. To learn more about this solution, please reach out to ask.analytics@wipro.com =======================

AI for marketing

----- Arcticle source ----- https://www.wipro.com/analytics/ai-for-marketing/ ----- News & Events Form Title What We Think Contact Wipro Please fill the required details to access the content AI for marketing Reinvent the marketing experience with intelligence-driven strategies In a world of increased digitization and rapidly evolving consumer behavior, companies must devise new marketing and engagement strategies to account for changing preferences and trends. Artificial intelligence can transform marketing by making campaigns more productive, predictive, and effective at driving customers through the funnel through hyperpersonalization and an omnichannel approach to engagement. Wipro's AI for Marketing optimizes marketing processes, providing valuable marketing insights, omnichannel customer engagement enhancing customer experience, and improved conversion rates at every stage. Bringing the speed and precision of multitouch attribution, AI for Marketing delivers across branding, hyperpersonalization, digital engagement, customer support and dynamic pricing. A comprehensive approach to an AI- infused Marketing discover.IQ Wipro's AI for Marketing ensures companies can reach larger audiences and have a more-qualified, higher volume of traffic by identifying customer needs and providing valuable marketing insights. consider.IQ Develop statistical correlations between customer attributes by analyzing profiles, predicting customer behavior, and identifying and nurturing the most

valuable leads. decide.IQ Real-time user monitoring, easier marketing, future-demand prediction, deep marketing insights into user behavior and interests, generate instant brand awareness, and set dynamic pricing for a competitive advantage. engage.IQ Deliver targeted communication at every touchpoint through different platforms to increase omnichannel customer engagement and earn trust through hyperpersonalization. Gain a deeper understanding of the customer's wants and needs with one-on-one connections, streamline and automate sales interactions and push your prospects through the sales funnel. Assist marketers in identifying high-performing content ideas and increase output quality by targeting the right audience with the right content. Ecommerce has long been growing in popularity with private consumers and enterprises alike, but the pandemic drove an unprecedented flurry of activity even from segments that hadn't previously embraced online shopping. With this rapid growth, and with customers' evolved expectations for timing and delivery, there is a growing need for direct-to-consumer brands to accelerate their marketing capabilities. The COVID-19 pandemic drove an explosion of online and social conversations during lockdown. ======================

Wipro at DATA + AI SUMMIT 2022

----- Arcticle source ----- https://www.wipro.com/analytics/data-ai-summit-2022/ ----- Form Title Contact Wipro Please fill the required details to access the content Wipro at DATA + AI SUMMIT 2022 ======================

Turning ambitions into reality : Banking, Financial Services & Insurance

----- Arcticle source ----- https://www.wipro.com/analytics/services/turning-ambitions-into-reality-banking-financial-services-and-insurance/ ----- Data Monetization in Capital Markets Contact Wipro Please fill the required details to access the content Turning ambitions into reality : Banking, Financial Services & Insurance In the BFSI sector, companies are navigating a challenging environment marked by economic fluctuations, complex financial operations, strict regulations, and the need to turn vast amounts of data into actionable insights. The goal is to improve BFSI services while managing costs, dealing with technological changes, addressing cybersecurity and fraud risks, and ensuring data management and privacy. Data analytics emerges as a key strategy, helping BFSI firms use data to achieve financial stability, enhance security, quickly adapt to technological shifts, and meet customer demands for smooth digital experiences. This shift is critical, leading to more efficient operations, personalized services, clear lending processes, prompt customer service, effective loss and collections management, and the effective integration of AI and technology. To tackle these challenges and capitalize on the opportunities presented by data

analytics, AI, and Fintech, BFSI leaders are turning to solutions specifically designed for their industry. These solutions boost operational speed and efficiency, improve service quality, retain customers, enhance security, and offer proactive, customer-focused strategies, all while reducing costs and complying with regulations. Services BFSI Business Solutions for Data, Analytics & Intelligence Data and AI are revolutionizing the BFSI organizations by combining analytics and AI/ML to address challenges, unlock personalized financial stability, boost customer relations, forecast market trends and client needs, and streamline operations while ensuring regulatory compliance. Wipro's Data, Analytics, and Intelligence solutions play a crucial role in Risk Management and Fraud Prevention. By employing advanced analytics, these solutions detect irregularities and enhance security, and offer deep insights for crafting personalized Customer Experiences. Wipro's Banking Industry Architecture Network (BIAN) offering It's a comprehensive framework for compliance, standardized integrations, providing a unified customer view in the banking industry which helps unlocks future monetization opportunities. Wipro brings vast industry knowledge, Domain driven design and BIAN expertise combined with various technical assets to accelerate the BIAN adoption journey. For Banking platforms based on or gearing towards Microsoft and Databricks technologies, Microsoft's Common Data Model (CDM) can be leveraged to reduce data governance complexity. Our Digital Lending Solutions For Origination The mortgage sector is witnessing a significant shift. Digital lending leaders are solidifying their market stance by prioritizing experience, transparency, and responsiveness. Our BFSI-tailored solutions offer hyper-personalized services, providing a comprehensive customer view. By harnessing Generative AI with Guardrails, we deliver pervasive intelligence across the board. For Servicing The lending industry is undergoing a major overhaul, spurred by digital innovation within banks and financial institutions. This evolution, shaped by changing consumer preferences, technological progress, and new regulatory frameworks, represents a marked change from the past decade. Our use of Generative AI in digital lending automates credit scoring, risk assessment, and customer service, combating silent attrition. Our solutions enable precise customer segmentation, churn prediction, and mortgage analytics, supported by in-depth data analysis for a data-driven, customer-first strategy that adheres to ethical and regulatory standards. For Collections, Loss Mitigation & Default Navigating credit risk in today's market volatility and regulatory landscape demands a digitized, analytics-driven approach. Our solutions offer smart strategies for loss mitigation, loan workout options, and enhancing debt-collection efforts. Generative AI provides effective tools for managing loan defaults, ensuring legal compliance, maintaining operational excellence, and protecting reputation in a constantly connected world. Wipro's BFSI Solution Offering Integrated Digital Lending Solution – A comprehensive app suite for all digital lending needs. This Gen AI-powered integrated solution consolidates various applications, covering customer segmentation, campaign response modeling, LOS analytics, mortgage analysis, and loan default analysis. It identifies key sentiment drivers, allowing businesses to pinpoint factors influencing public opinion, enabling targeted strategies, and facilitating data-driven improvements. Traditional insurance carriers are sitting on a mountain of data. To extract maximum value from this data, they need to embrace innovative data monetization strategies. Featured

Resources Capital markets firms are increasingly optimistic about data monetization as a strategy to unlock additional revenue streams. The journey to successful data monetization is not one-size-fits-all; it diverges significantly across sell-side entities, buy-side firms, and infrastructure companies. Contact Us =====================

Turning ambitions into reality: Healthcare and Life Sciences

----- Arcticle source ----- https://www.wipro.com/analytics/services/turning-ambitions-into-reality-healthcare-and-life-sciences/ ----- How Healthcare Companies Can Get their Data Monetization Strategy Right Contact Wipro Please fill the required details to access the content Turning ambitions into reality : Healthcare and Life Sciences The Healthcare and Life Sciences industry grapples with a global operating environment of increasing complexity, regulation, and challenge of transforming the vast data into actionable insights to redefine patient care. Companies must navigate cost management, quality control, and safeguarding IP and data security in the ever-evolving landscape marked by the advent of latest technologies and new market entrants. Data analytics in healthcare serves as an alchemist, intended to help the providers overcome obstacles to the widespread application of data-derived intelligence that aims to enhance clinical care, disease prevention, and treatment effectiveness. This transition is paramount for healthcare and life sciences, ushering in better patient outcomes, personalized medicines, on-demand drug production, and cutting-edge genetics-based and AI-driven treatments. To navigate the challenges and harness the swift strides in science and technology, healthcare and life sciences' leaders embrace industry-tailored business solutions. These solutions facilitate faster and more efficient operations, accelerating the development of both new and established treatments, and simultaneously driving down the production costs while ensuring compliance with rigorous regulatory standards. Services Healthcare Business Solutions Healthcare Business Solutions serves as a key asset, leveraging the power of Generative AI to offer healthcare organizations various comprehensive solutions across its domains. It optimizes Finance through improved billing and forecasting, enhances Risk Management by detecting fraud, tailors services via Customer Analytics, boosts Brand Image by analyzing digital opinions, and optimizes Operations with real-time data access. This multifaceted tool aids in financial stability, risk mitigation, customer relations, online reputation, and operational efficiency within the healthcare sector. Our Value-based Care Solutions For Clinical Trials- Decentralization of clinical trials has emerged as the new paradigm endorsed by the trial sponsors with an aim to accelerating the trials and enhancing patient & physician experience. Our solutions are bringing trial activities closer to the patients through a composable data and analytics framework with a resilient and secure IoT network. Generative AI plays a key role in processing huge volumes of data and providing insights to physicians via conversational experiences. For Supply Chain Management and Predictive Asset Maintenance- The strategic alignment of our value-based care solutions and supply chain management

orchestrates cost-effective, patient-centric healthcare delivery, fostering the alignment of financial sustainability with delightful patient outcomes. Similarly, the synergy between our value-based care solutions and predictive asset maintenance drives operational and cost efficiency in healthcare, ensuring optimal resource allocation for superior patient experience. Generative AI infuses deep intelligence in these processes to enhance community health and well-being. For Patient Experience- The strategic alignment of our data-driven insights with a patient-first approach enables transparent, cost-effective, personalized and quality care throughout the patient journey, resulting in exceptional healthcare outcomes and a delightful patient experience. These tenets constitute the bedrock of value-based care, informed by continuous patient feedback for superior service delivery. Generative AI infuses deep intelligence into the process chain and powers cognitive digital interfaces for enhanced patient centricity. Wipro's Healthcare Solution Offering across the Value-chain Fig: Wipro's Healthcare Solution Offering across the Value-chain Featured Resources Many companies have been unsuccessful in identifying the right data strategy that can give them sustained competitive advantage. Contact Us

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Turning ambitions into reality : Retail Industry

----- Arcticle source ----- https://www.wipro.com/analytics/services/turning-ambitions-into-reality-retail-industry/ ----- ISG Briefing Note: Elevating Retail with Wipro & Microsoft's GenAI-led Intelligent Contact Center Contact Wipro Please fill the required details to access the content Turning ambitions into reality : Retail Industry The power of data analytics has emerged as a critical force driving unprecedented transformation in the Retail industry. Leading retailers across the globe are leveraging data-driven insights to not only redefine customer experiences but also to streamline operations, improve decision making, and foster innovation in product offerings. This strategic use of data analytics is setting new benchmarks in operational excellence and customer satisfaction. While the benefits of data analytics in the retail sector are vast and varied, the journey towards harnessing these benefits is not without its hurdles. Chief among these challenges is the intricate task of data integration. In the digital age, retail companies are inundated with data from a multitude of channels: online sales platforms, brick-and-mortar transactions, social media interactions, and customer feedback mechanisms, to name a few. Each of these channels generates a staggering volume of data, rich with potential insights. However, the diversity and disparity of these data sources pose a significant challenge. Integrating these disparate data sets into a cohesive, unified system is not just a technical challenge; it's a strategic one that requires careful planning, robust technology, and a deep understanding of both the retail landscape and data science. Why for Wipro for Retail solutions Wipro stands at the forefront of retail transformation, leveraging a robust delivery network to drive advisory-led IT transformations. Our strategic alliances with leading tech giants, hyperscalers, and niche

specialists empower us to deliver unparalleled in-store enhancements and innovations. With Wipro, retailers gain access to a sophisticated array of retail-specific tools and solutions, designed to expedite time-to-market. Industry Business Solutions for Retail Unified Customer Intelligence: Revolutionize your customer understanding with our Unified Customer Intelligence. By integrating both external and internal data, we provide a comprehensive single customer view, enabling precise segmentation and behavioral analytics. Overcome the limitations of siloed data to unlock personalized experiences, deeper insights, and foster unparalleled loyalty and growth throughout the entire customer journey. Intelligent Contact Center: Elevate your customer support with Wipro's Intelligent Contact Center. Designed for the digital age while preserving the essential human touch, our solution transforms contact centers into dynamic, strategic assets. Leveraging extensive data analysis, including conversational nuances and emotional indicators, we empower you to refine your services, adapt to evolving needs, and truly connect with your customers. Experience Intelligence: Craft and execute a visionary marketing strategy with our Experience Intelligence module. Utilizing advanced data intelligence, we guide you in setting ambitious yet achievable goals, prioritizing projects, and monitoring campaigns across all channels. Dive deep into market analysis to uncover both challenges and opportunities, ensuring your marketing efforts are as effective as they are innovative. Smart Store Insights: Enhance in-store engagement and boost customer loyalty with actionable insights from our Smart Store Insights module. Dive into detailed analytics on store performance, merchandising effectiveness, customer interactions, and traffic patterns to refine your in-store strategy and create unforgettable shopping experiences. Retail Control Tower: Master your supply chain with the Retail Control Tower. This powerful tool provides critical insights into demand forecasting, inventory optimization, supplier performance, and overall supply chain efficiency. Stay ahead of the curve with real-time analytics and strategic oversight, ensuring your operations are as streamlined as they are responsive.   Featured Resources The analysis provides insights into how Wipro and Microsoft's Intelligent Contact Center, powered by GenAI, is poised to address a broad spectrum of challenges confronting the retail industry. Contact Us ======================

Consulting Services

----- Arcticle source ----- https://www.wipro.com/consulting/ ----- Business Process Services in the Era of GenAI Thailand's Bank of the Future : Will the New Virtual Banks Reshape the Industry? How to Master Cloud Economics and Harness the Power of AI Why Insurance Companies Need to Rethink Loyalty Strategies Data Analytics Transform the Airport Experience An Interview with the Co-Founders of FemTech Lab Global Insurance Survey 2023 Championing the Chatbot Decarbonize and Grow Turning Energy Retailers into Customer-Centric Brands Contact Wipro Please fill the required details to access the content Wipro leverages advanced technologies and deep domain knowledge to help clients drive business transformation and build resilient, next-generation operating

models. The practice provides strategy consulting for financial services, energy, utilities, healthcare and life sciences, sustainability, talent management and change, CIO advisory and consumer businesses. Here is some of the latest thinking from Wipro Consulting, Fullstride Cloud, Engineering Edge, Lab45, Designit and Capco. In today's fast-paced business landscape, staying ahead requires more than just keeping up with the latest trends—it demands innovation. This is particularly true in the realm of BPS, where efficiency, accuracy, and adaptability reign supreme. In our latest special report, we delve into the transformative power of GenAI and its profound implications for the future of BPS. Thailand's banking sector is set for transformation as new virtual banking providers aim to innovate and better serve underserved consumers and SMEs. The impending challenges, opportunities, and changes in customer expectations can inform financial institutions operating far beyond Thailand's borders. Our recent groundbreaking report with Forbes presents new insights about how to approach cloud computing resources in the age of AI. Insurance companies are replacing outdated engagement with innovative strategies that prioritize genuine customer care and satisfaction. Learn about the forces driving change, the foundational pillars for a meaningful relationship model, and the exciting opportunities that lie ahead. Enhancing the passenger experience has become a top priority for busy airports around the world seeking to increase non-aero revenue. They key is finding ways to leverage vast amounts of underutilized data to create personalized offerings that redefine travelers' relationship with the airport. The latest Designit interview reinforces that innovation doesn't happen inside a computer, but inside our minds and imagination. But the pressure to adapt quickly to market changes makes it difficult to focus on the right types of innovation, which presents both opportunities and challenges.   Capco's research sheds light on the role of data and personalization as insurers map their optimal path forward. The insights and recommendations gleaned from input by 13,750 respondents can help insurers navigate an increasingly digitized and competitive marketplace. Chatbots and other virtual assistants will soon be much more ubiquitous across the employee experience. Change management will de-risk their implementation and promote broader acceptance. Carbon-reduction initiatives are expanding in scope and will inevitably evolve further in the future. While decarbonizing the value chain may seem like a burden, viewed through the proper lense and strategic vision, it can bring exciting opportunities for new business models and growth. As oil and gas retailers consider the renewables dominated future, an enhanced customer experience will be key to attracting retail fuel customers, building new revenue streams, and preserving market share. CIO Advisory Sustainability Services Talent and Change Management Digital Transformation Banking Energy Utilities Consumer Packaged Good Healthcare Life Sciences Retail Telecom Contact Us =====================

Digital Organizational Change Management

----- Arcticle source ----- https://www.wipro.com/consulting/digital-organizational-change-management/ ----- Contact Wipro Please fill the required details to access the content Digital Organizational Change Management Human-centric, technology driven change Prioritize user experience with digital organizational change management Leveraging our unique change management approach, data-driven insights, and user experience feedback, Wipro's Consulting practice accelerates transformation in internal user behavior that cements new ways of working. Our approach blends traditional and 'zero touch change' techniques, and a system of incentives and rewards to create cost effective change management. Significantly, it allows the success of change management to be measured against impact and user experience instead of predetermined milestones. Clients have found that employees quickly begin to demonstrate a positive and deep desire to adapt, resulting in lasting change in workplace culture. Get in touch: global.consulting@wipro.com ======================

----- Arcticle source ----- https://www.wipro.com/consulting/connected-source-to-pay/ ----- Contact Wipro Please fill the required details to access the content Connected Source-to-Pay Source-to-pay processes and tools haven't kept pace with broader technological innovations and are dependent on time-consuming manual tasks. Traditional procurement solutions create hidden inefficiencies due to no orchestration across people, functions, and systems. The absence of consolidated data results in a lack of end-to-end process views, creates limitations and errors, and non-compliant transactions. The outcome is low spend visibility, frustrated suppliers and internal conflicts that can significantly impact revenue and profits. Wipro's Connected Source-to-Pay solves these issues. Leveraging Celonis, ServiceNow S2P and Wipro IP and methodology, this innovative solution infuses process-mining technology with source-to-pay capability. It finds inefficiencies, frames quantified opportunities, automates actions to prevent or remediate issues, and captures untapped business value. Connected Source-to-Pay helps companies: Cut the costs of procurement spend, discount realization, people efforts, technology, and infrastructure costs. Optimize working capital by contract enforcement and accurate terms, eliminating duplicate invoices and enabling on-time payments. Improve revenue-generating processes to impact the top line. Enrich the user experience through autonomous and seamless processing. Continuously improve processes and provide insights as your business grows and

changes. In today's fast-paced business landscape, achieving visibility, control, and efficiency in the S2P process requires harmonious convergence of people, processes, and systems. Wipro's Connected Source to Pay solution tackles these challenges without undergoing a full-scale system transformation. =====================

Risk and Compliance

----- Arcticle source ----- https://www.wipro.com/consulting/risk-and-compliance/ ----- Contact Wipro Please fill the required details to access the content Risk and Compliance Eliminate uncertainty in risk and compliance management Make your investments in risk management and compliance initiatives go the extra mile Wipro's Consulting practice helps financial institutions improve the effectiveness of their risk management and compliance initiatives. Our end-to-end solutions include: conducting gap analysis and developing implementation roadmaps, business and technical analysis IT services, data management and analytics, custom applications development, and operations support, Know Your Customer (KYC) and anti-money laundering services. Our risk and compliance consultants comprise ex-regulators who leverage our investments – such as Opus Capital Markets Consultants, Opera Solutions, Vicarious, Vectra Networks and Emailage, and our cognitive AI platform and process automation engine HOLMESTM – to provide clients with strong risk and compliance capabilities. We also run a risk and compliance training program for our clients to build capacity and capability, and operate a regulator-certified processing center in Ireland. Get in touch: global.consulting@wipro.com =====================

Digital Value Chain

----- Arcticle source ----- https://www.wipro.com/consulting/digital-value-chain/ ----- Contact Wipro Please fill the required details to access the content Digital Value Chain Insight-driven growth with synergistic impact Infuse supply chains with intelligent, automated solutions that integrate customers, products, and services Wipro's Consulting practice helps organizations boost cost structure competitiveness and improve customer service by reducing value chain complexity. Our digital value chain solutions combine tried and tested business transformation methodologies with groundbreaking emerging technologies such as Robotic Process Automation (RPA), Cognitive Process Automation (CPA), and Artificial Intelligence (AI). Our market leading approach leverages data-driven insights to drive operational efficiency and seamlessly integrate customer, product, and service journeys. This allows us to rapidly generate quantified business improvement opportunities and deliver them in an agile fashion, often using an outcome based commercial model. Get in touch: domain.consulting@wipro.com =====================

Digital Change Adoption

----- Arcticle source ----- https://www.wipro.com/consulting/digital-change-management/ ----- Contact Wipro Please fill the required details to access the content Digital Change Adoption Human-centric, technology driven change Now more than ever, companies are under significant pressure to make transformational changes, not merely to reduce operating costs, but also to remain relevant in a rapidly changing marketplace. The simplification of enabling technologies has made it much easier for small, agile competitors to go head-to-head with large organizations. As such, well-established organizations, in particular, need to adopt new ways of working within a modernized technical landscape, and activate more streamlined operating models. We help organizations identify opportunities to maximize the value of new digital ways of working by first ensuring successful adoption of technologies and optimized processes and then making sure that adoption translates into measurable business improvements and the achievement of overall goals and objectives. Our Digital Change Adoption capability enables us to take an active role in transformation and implementation programs that focus on the human impact of new digital processes, roles, systems and behaviors, and that result in rapid and sustained adoption. Our Organizational Change Management (OCM) framework creates a positive, forward-thinking transformation experience and supports both strategic and technical goals through the enablement of core behaviors. We approach change by: Additionally, we support the technology solutions and ensure that people want to – and are able to – adopt the new ways of working. During the change process, we focus on the employee experience specifically through: Contact us at domain.consulting@wipro.com ======================

Workforce Transformation

----- Arcticle source ----- https://www.wipro.com/consulting/workforce-transformation/ ----- Contact Wipro Please fill the required details to access the content Workforce Transformation Enabling a future ready workforce Humans have an extraordinary ability to continuosly adapt to changing environments and new discoveries. Today, amid accelerating technological innovations market fluctuations, and sustainability demands, organizations need to build adaptability as a core strength that will allow them to continuously enhance, evolve and thrive. This ever-evolving transformation process can seem both overwhelming and challenging. By guiding organizations through a clear, pragmatic and approachable step-by-step process, we can enable organizations to recognize early success, amplify their potential for transformation and meet the future head-on. For us, this process begins with establishing a partnership model, working side-by-side with our clients to evolve their workforce capabilities. Our Workforce Transformation team embeds collaboratively with organizations to understand their business landscape. Wipro works side-by-side with the team to explore their strategic vision. The level of alignment is examined at

the executive, management and employee levels, with particular focus on specific business objectives (KPIs, OKRs, etc.) to ensure alignment with the future direction. We investigate the organizational culture (shapers and manifestations) to determine potential impacts and outcomes. Understanding each client's unique landscape enables us to conduct a comprehensive marketplace and industry-specific assessment that accurately pinpoints the most impactful transformation opportunities. Together, once aligned on a transformation strategy, we work within targeted operational areas to determine competency gaps and upskilling/reskilling opportunities, then curate plans to ensure that team members receive the necessary training to become future-ready. For those clients that want to look further into the future, Wipro provides a unique design thinking experience that envisions potential future outcomes, identifies pathways to ensure operational integrity, and converts those pathways into specific milestones with supporting interactions, activities and owners to achieve maximum value and people potential. Our Workforce Transformation engagements are designed to: 1. Enable a future-ready workforce that is poised to take advantage of emerging technologies 2. Leverage workforce intelligence and analytics within a global data bank to both identify current market trends and skill gaps and forecast future skills needs 3. Curate a better employee experience that builds psychological safety, growth mindsets and enhanced retention. 4. Identify sustainable opportunities to enhance diversity, equity and inclusion (DEI) and mitigate systemic barriers limiting organizational evolution and relevance. 5. Support organizational culture transformation by identifying and elevating norms, values and behaviors that empower great work; engaging employees; and eliminating factors that detract from peak organizational performance. 6. Develop a 'right-fit' operating model and organization design that enables teams to pivot with agility in response to technology innovations and market advancements. To find out more, get in touch at domain.consulting@wipro.com   =====================

Data Privacy Strategy & Governance

----- Arcticle source ----- https://www.wipro.com/consulting/data-privacy-strategy-and-governance/ ----- Contact Wipro Please fill the required details to access the content Data Privacy Strategy & Governance Compliance with data privacy regulations through AI, automation and analytics Take the holistic route to GDPR compliance, data privacy, and maintaining customer trust Wipro's Consulting practice helps clients determine appropriate solutions to protecting personal information while ensuring compliance with ever evolving data privacy regulations. We evaluate business needs, conduct privacy maturity assessments, and develop strategy in line with applicable regulatory requirements such as General Data Protection Regulation (GDPR), Privacy Shield, HIPAA, and other geography specific privacy laws. Leveraging a combination of AI, automation, analytics, and Wipro's proprietary solutions, we design and implement controls and responses to protect data, identify and report breaches, and take timely action. Our

services include: privacy risk and compliance; privacy readiness, impact and risk assessment; contracts, legal and vendor risk assessment; process risks impact and remediation; breach response assessment; data privacy, protection and security; privacy and security by design – assessment and architecture; privacy and security controls assurance; data protection officer (DPO)-as-a-service; breach response and consent rights management automation; and end-to-end governance, risk and compliance automation.
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CIO Advisory Services

----- Arcticle source ----- https://www.wipro.com/consulting/cio-advisory/ ----- Contact Wipro Please fill the required details to access the content Align business ambitions with technology – define and deliver results. Technology leaders face tremendous pressure to deliver new solutions that support business needs. Unfortunately, many organizations are saddled with legacy technology infrastructure and "keep the lights on" costs, making it onerous to build the business case for change. These leaders need solutions that address their current and future goals while optimizing costs. CIO Advisory Services provides guidance and perspective to solve a CIO's most pressing challenges. The growing global practice has more than a dozen highly experienced consulting partners exceeding collectively 150 years of relevant experience in multiple industries. This breadth of experience has helped CIOs address challenges such as cost containment, innovation enablement, rapid solution delivery, and operating efficiency improvements. Our growing practice has the capabilities, skills, knowledge and tools to offer sound advice and deliver value to our clients. Wipro's CIO Advisory Services team has a solid track record of outcomes. Our purpose-built accelerators expedite execution, and extensive methods provide clients with innovative solutions to solve their most pressing technology-related challenges. As a global organization, we bring a unique combination of domain experience, technology insight, partnership ecosystem and comprehensive offerings to deliver results anywhere in the world. Drive Business IT Alignment IT and business rarely align with their needs and delivered solutions. To make matters worse, often the CIO has no seat at the executive management table, yet technology and its use continue to be a differentiator that provide companies with a competitive edge. Technology organizations face pressure to deliver solutions faster and cheaper. Otherwise, the business will sidestep IT and self-procure technology solutions, leading to fragmented data and operations. CIOs need a better way to align business and IT. Wipro helps CIOs create a strategic vision and provide the capabilities they need to achieve business IT alignment with the Board and the business. Our practitioners help businesses and IT jointly define their goals, desired outcomes and a roadmap to achieve success. With a solution set that includes Enterprise IT Strategy and Planning, Enterprise Business Architecture, and M&A Integration and Divestiture services, IT can demonstrate they understand the needs of the business today and the future and can deliver value-added solutions efficiently and economically. We help CIOs overcome these common perceptions: Find out how companies are

driving alignment between the business and IT. Transform IT Governance CIOs must respond effectively to continuous change – M&A, divestiture, automation, technological advancements, rising costs and macroeconomic pressures. IT organizations are evolving. CIOs must address these challenges by revamping their operating models and organizational design to continue delivering rapidly, understanding business needs and providing the best technology solutions. IT organizations need operating model transformation to deliver higher value and help the business maintain a competitive advantage. Wipro helps CIOs respond effectively with solutions for IT Operating Models and IT Organization Re-design. The solutions assist the CIO to optimize their workforce and build an agile, efficient and forward-looking operating model that grows or shrinks to meet business needs. We help IT organizations overcome the challenges below: Learn how companies are transforming their IT operating models to deliver more value. Simplify and Modernize IT Assets IT organizations are dealing with simultaneous complex issues such as M&A, technology advancements, pressure to deliver quickly and economically, budgetary constraints and technical debt. These challenges have expanded the IT application portfolio unsystematically, making it more difficult and expensive to maintain. Further, many IT organizations rushed to migrate to the cloud and to modernize their IT environment. That adoption has resulted in burgeoning costs due to ungoverned and undisciplined rollouts. In short, application portfolios have become complicated which presents a challenge to adopt, deploy and leverage newer technologies, such as Generative AI, for productivity gains. CIOs must reduce technical debt, reduce duplicity of capabilities and better manage the technology portfolio lifecycle. Wipro gives CIOs the tools to simplify their technology environments, making it easy to modernize their technology assets. The offerings include Technology Portfolio Rationalization, Cloud Adoption Acceleration & Industry Cloud and Emerging IT Adoption. The solution allows IT to reduce technology sprawl, remove duplicity of capabilities, optimize their application portfolios and promote continuous improvement practices that optimize the tech portfolio. Simplify & Modernize IT Assets helps IT organizations overcome these challenges: Optimize IT Spend Technology has continued to evolve, and organizations continue to allocate larger amounts of their organizational budget to technology spend. To boot, a large percentage of technology spend is on run activities versus deploying new capabilities. Technology and Finance leadership at best have fragmented visibility in their technology costs, and there's no line of sight to the business value being delivered from those technology costs. The solution allows organizations to achieve visibility and insights into their technology spend, optimize run and change budgets, demand financial accountability for outcomes, provide an understanding of total costs of ownership (TCO) and support business decisioning based on the value delivered. Optimize IT Spend offerings include IT Financial Management (TBM) and IT Cost Transparency and Optimization which help businesses overcome pressing challenges such as: Learn more about how businesses can optimize their IT budget. Contact Us
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Agile & DevOps

----- Arcticle source ----- https://www.wipro.com/consulting/agile-and-devops/ ----- Contact Wipro Please fill the required details to access the content Agile & DevOps Speed, flexibility and innovation in project delivery Swiftly embrace market change and respond to new opportunities Wipro's Consulting practice helps enterprises bring their products and services to market at a faster rate while reducing delivery costs and ensuring quality for customers. We identify and remove waste in the software lifecycle and enable business and IT teams to deliver continuously while fast-tracking speed, flexibility and innovation, which are imperative in the digital economy. We also help IT organizations adopt DevOps practices, creating cultures centered around process improvement and driving total collaboration across the entire value chain – including business, development, and production support – to boost velocity, reduce overall costs, and increase accuracy of software delivery. From assessing the landscape to driving outcomes, our approach to redesigning client strategies achieves measurable results – improving time to market by up to 50% and improving product and service quality by up to 75% in most cases – by leveraging the latest enablers, accelerators, and Wipro's proprietary solutions. Our proprietary DevOps framework enables clients to take a methodical and clearly defined approach to transformation through fitness assessment, future state design, trailblazing, industrialization, and continuous improvement. Our experienced SAFe and SCRUM certified consultants, coaches, architects, and engineers are located across the globe to offer clients their expertise locally. Get in touch: domain.consulting@wipro.com =====================

Digital Transformation

----- Arcticle source ----- https://www.wipro.com/consulting/digital-transformation/ ----- Contact Wipro Please fill the required details to access the content Digital Transformation Simplification by Design Digital transformation at pace and scale Digital is transforming the world around us. Organizations are seeking answers to some important questions, including: how can we re-invent ourselves and transform our culture to create new ways of working, develop new products and services, and engage differently with our employees, customers, partners, and suppliers? The process of transformation is complex, especially at an enterprise scale, where the process of change becomes too complex, too quickly. Wipro's Consulting practice helps our clients answer these questions and embrace digital transformation at speed and scale, whilst also reducing complexity and risk. We simplify the process of transformation while focusing only on the things that matter most. From our research and experience, we have identified 5 'moments of truth' common to any digital transformation journey: Successful digital transformation is determined by getting these moments of truth right. We help clients determine these moments of truth and accelerate transformation at each point with a suite of assets that

combine proprietary solutions and consulting services. We make digital transformation simple, by design. Get in touch: domain.consulting@wipro.com =====================

AI & Machine Learning

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Technology Business Management

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current state and desired TBM objectives. No matter where a company is on its TBM journey, we are here to help define, implement, and optimize TBM design principles that meet your TBM strategy and vision. We pride ourselves on our ability to help our customers adopt the TBM framework across their entire IT operating model by leveraging our TBM Journey Map. CIO Advisory Service Our CIO Advisory services team is a global team of senior IT professionals and former CIO(s). We bring together all the complex dimensions required to run an agile enterprise scale IT organization. This includes Cloud First strategies, Technology Business Management, Mergers and Acquisitions, Portfolio Management and Next Generation IT Services and Strategies. Events Wipro TBM Thursday Webinar: 18 November Disruption Comes in Many Forms: Being Prepared with TBM Host: Tim Pietro, Wipro TBM Practice Partner Speaker: Ralph Loura, Lumentum, CIO Register Here   =====================

Learning & Development Consulting Services

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Talent and Change Management

----- Arcticle source ----- https://www.wipro.com/consulting/talent-and-change-management/ ----- Contact Wipro Workforce Transformation Digital Change Adoption Learning & Development Consulting Services Please fill the required details to access the content Unleash your most valuable asset: People As digital disruption and digital transformation accelerate, people remain at the heart of every successful organizational transformation journey. By combining technology expertise with a people-centric approach to transformation, Wipro Consulting helps clients enhance and evolve their capabilities to deliver positive business outcomes and drive growth. Wipro Consulting's Talent & Change practice helps clients define and build a high-performing culture that can quickly pivot to new ways of working, while

attracting, retaining and developing top talent and improving the employee experience. Our solutions are underpinned by real-time analytics that help focus our activities, guide critical decisions, and measure outcomes. Meanwhile, our global network of highly skilled talent and change professionals, with an average of 15+ years of experience, provides the expertise, industry experience and localized knowledge necessary to manage any large-scale business transformation. Humans have an extraordinary ability to continuously adapt to changing environments and new discoveries. Today, amid accelerating technological innovations market fluctuations, and sustainability demands, organizations need to build adaptability as a core strength that will allow them to continuously enhance, evolve and thrive. This ever-evolving transformation process can seem both overwhelming and challenging. By guiding organizations through a clear, pragmatic and approachable step-by-step process, we can enable organizations to recognize early success, amplify their potential for transformation and meet the future head-on. For us, this process begins with establishing a partnership model, working side-by-side with our clients to evolve their workforce capabilities. Our Workforce Transformation team embeds collaboratively with organizations to understand their business landscape. Wipro works side-by-side with the team to explore their strategic vision. The level of alignment is examined at the executive, management and employee levels, with particular focus on specific business objectives (KPIs, OKRs, etc.) to ensure alignment with the future direction. We investigate the organizational culture (shapers and manifestations) to determine potential impacts and outcomes. Understanding each client's unique landscape enables us to conduct a comprehensive marketplace and industry-specific assessment that accurately pinpoints the most impactful transformation opportunities. Together, once aligned on a transformation strategy, we work within targeted operational areas to determine competency gaps and upskilling/reskilling opportunities, then curate plans to ensure that team members receive the necessary training to become future-ready. For those clients that want to look further into the future, Wipro provides a unique design thinking experience that envisions potential future outcomes, identifies pathways to ensure operational integrity, and converts those pathways into specific milestones with supporting interactions, activities and owners to achieve maximum value and people potential. Our Workforce Transformation engagements are designed to: Now more than ever, companies are under significant pressure to make transformational changes, not merely to reduce operating costs, but also to remain relevant in a rapidly changing marketplace. The simplification of enabling technologies has made it much easier for small, agile competitors to go head-to-head with large organizations. As such, well-established organizations, in particular, need to adopt new ways of working within a modernized technical landscape, and activate more streamlined operating models. We help organizations identify opportunities to maximize the value of new digital ways of working by first ensuring successful adoption of technologies and optimized processes and then making sure that adoption translates into measurable business improvements and the achievement of overall goals and objectives. Our Digital Change Adoption capability enables us to take an active role in transformation and implementation programs that focus on the human impact of new digital processes, roles, systems and behaviors, and that result in rapid and sustained adoption. Our Organizational Change

Management (OCM) framework creates a positive, forward-thinking transformation experience and supports both strategic and technical goals through the enablement of core behaviors. We approach change by: Ensuring universal engagement from the outset by actively involving all employees throughout the journey – whether they be C-suite, mid/senior management, technologists, business operations or end users (direct or tangential). Embedding change thinking in everything we do, from design to build to delivery of solutions, ensuring that each cloud transition or change initiative delivers the maximum business benefit with speed and at scale. Encouraging technology teams to challenge traditional thinking by applying a design thinking approach to expose business problems and operational sentiments, while ensuring that disruptive cross-functional impacts are minimized or fully mitigated. Delivering an immediate positive impact by leveraging value realization frameworks that ensure joint business and IT ownership and goal alignment. Enabling seamless transitions and new implementations though a suite of change toolkits (including accelerators and digital assets) that accelerate and embed engagement and user adoption. Additionally, we support the technology solutions and ensure that people want to – and are able to – adopt the new ways of working. During the change process, we focus on the employee experience specifically through: Wipro's Learning & Development (L&D) services leverage recent learning innovations as well as proven principles and methodologies to create custom solutions that enable clients to reap maximum benefits and achieve their objectives. Our approach aims to solve client issues and concerns swiftly while equipping their workforce to tackle future challenges more efficiently. From setting up L&D frameworks to transforming learning practices, we make constant improvement a part of the organization's DNA. Our team of learning and development experts is focused on evangelizing the learning experience and ensuring the continuous development of employees by drawing on both technological and psychological assets to build a culture of learning. We create value for our clients by: Contact Us =====================

Digital Strategy, Operations and Transformation

Invigorate Strategy and Operations Contact Wipro Please fill the required details to access the content Accelerate tech-enabled transformation at speed and scale while achieving breakthrough operational performance improvement Constant and rapid change has become a rule, not an exception. New technologies consistently offer better capabilities for businesses to enhance customer experience and differentiate themselves. Yet many organizations struggle with how to transform digitally to deliver impactful, multi-channel, platform-agnostic experiences while maximizing their operational performance. Wipro's Digital Consulting practice is an innovation-led, enterprise transformation partner

built for today's digital challenges. We focus on the things that matter: insights, interactions, integrations, and innovations that make extraordinary things happen for brands, businesses and their customers. Leveraging Wipro's unique blend of proprietary solutions, data-driven insights and agile execution, global enterprises can embrace digital transformation at speed and scale with reduced complexity and risk. After identifying the Five Moments of Truth in their transformation journey, clients work with Wipro Consulting to accelerate their go-to-market speed and reduce costs, maximizing the business value of IT and empowering the CIO organization to become a strategic partner for the business. Disruptive technologies and new business models are forcing companies to innovate, adapt and transform for a digital, customer-first world. We derive insight, shape interaction, develop integration and unlock innovation — with the customer's journey at the center of everything we do. Wipro's Digital Consulting practice delivers integrated strategy, digital, and domain expertise to achieve breakthrough operational performance improvements across the entire value chain. We help organizations simplify their value chains through proven business transformation methodologies combined with emerging technologies such as Robotic Process Automation, Cognitive Process Automation, and Artificial Intelligence (AI). The result is improved customer service and cost structure competitiveness. Our proprietary Simplification by Design approach transforms business and operating models through smart automation, data insights, seamless experience, and service innovation. The result is an organization that runs IT as a business effectively and efficiently with service management, PMO, PPM and DevOps packaged accessibly as-a-service. This streamlines delivery, optimizes business processes and improves operational resiliency. Contact Us =====================

Is Your Organization Ready for Change?

----- Arcticle source ----- https://www.wipro.com/consulting/is-your-organization-ready-for-change/ ----- Contact Wipro Please fill the required details to access the content Is Your Organization Ready for Change? In the current business climate, change has become the status quo. Increasingly, more pressures (globalization, technology, customer demands) are pushing companies to respond, often requiring a department or organizational transformation. However, many change programs fail to achieve their goals. The irony is that change is necessary to survive and thrive. How do companies break out of this cycle? The answer is determining an organization's change maturity. Effective change management starts with minimizing the disruptions that can negatively impact the success of any type of change program. Change leaders should begin any change management exercise by asking a simple question: Is my organization well-prepared to embrace and celebrate change? What is Change Maturity, and What is Wipro's Change Maturity Assessment? Drawing on more than 20 years of deep experience in large-scale change management, Wipro has developed a model that calculates a company's change maturity – a

company's readiness for change. The Change Maturity Assessment model provides an unbiased evaluation that helps organizations structure their transformation projects for success. The assessment maps out five essential dimensions of successful change (the "5Cs"): The Change Maturity Assessment aims to determine the current maturity level of an organization's change management (OCM) approach in these five dimensions. The 5Cs further divide maturity into granular aspects, each equally important in evaluating preparedness for change. In addition to a ranking in each of the five critical areas, the assessment identifies strengths and weaknesses, proposes short- and long-term goals and points toward best practices and global benchmarks for success. Discover Your Organization's Change Maturity Are you considering a change program? Wipro's Change Maturity Assessment is the optimal starting point. A 45-minute assessment session will provide a maturity ranking across the 5Cs and an actionable plan to improve your organization's change maturity. Change management is a critical driver of business success for all people, process, and technology transformations. Reach out via the contact form below to launch your change management transformation. Contact Us

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The Human Element of S/4HANA Implementation

----- Arcticle source ----- https://www.wipro.com/consulting/the-human-element-of-s-4hana-implementation/ ----- About the Authors Contact Wipro Please fill the required details to access the content The Human Element of S/4HANA Implementation While no ERP migration is easy or simple, persona-led engagement and learning delivers stronger return on investment. Slowly but surely, SAP's ECC 6 enterprise resource planning (ERP) solution is being replaced by a new system: S/4HANA. From 2027 on, ECC 6 will not be fully supported and will become costly to maintain. SAP is steering new customers to the S/4HANA system, and all ECC 6 customers will eventually have to find a new solution. Organizations that have already implemented S/4HANA are finding that it brings powerful new capabilities in areas like supply chain and finance. Yet despite the eventual upsides of the migration, no organization relishes the prospect of a major ERP transition. That may explain why, globally, 70–80% of ECC 6 customers have not yet transitioned to S/4HANA. Moving to S/4HANA is no simple upgrade. The shift will transform supply chain, finance and sales/distribution processes in every corner of the organization, impacting ways of working across functions, sites and geographies. Enterprises must be prepared to effectively manage the far-reaching human element of this transformation to ensure rapid return on investment and a steady path to new ways of working. Focus on People to Avoid ERP Implementation Failure No new enterprise technology, however beneficial, creates positive change in and of itself. Organizations can spend hundreds of millions of dollars ironing out a host of technology and process challenges, but in the end, thousands of human beings need to simultaneously and enthusiastically adopt the new solution if it is going to contribute to improved business outcomes. In the

context of ERP implementation, problems can often be traced back to poor change management, which manifests in a lack of executive support, a lack of widespread buy-in, and sometimes even an actively change-resistant culture. A people-driven organizational change management (OCM) approach to ERP implementation actively counters these tendencies in order to drive effective implementation. An OCM approach anticipates the human barriers to change by understanding how the transformation will impact people across the organization. Implementation leaders need to develop and consider a wide range of employee personas, model the impact of change on those various personas, and tailor each user journey in order to incentivize buy-in and create positive user experiences. By targeting the right interventions at the right employees at the right time, persona-led engagement and learning provides all stakeholders with the tools they need to embrace and support the profound shifts required to achieve maximum ROI from S/4HANA implementation. Delivering ROI for S/4HANA Implementation: Seven Change Management Levers No matter the exact implementation approach ("greenfield" vs. "brownfield", moving from a SAP or non-SAP product, cloud vs. on-premises — see figure above), the following seven interventions are crucial to achieving persona-led transformation and maximizing returns on ERP investment. Achieving S/4HANA Implementation Success No ERP implementation will be without its challenge. The benefit of a persona-led approach is that it allows organizations to anticipate many of those challenges, regularly measure readiness and subsequent adoption, and act quickly when necessary to resolve problems before they become systemic. A persona-led focus on each user journey works because, in many ways, the GPOs and end users are best positioned to understand how S/4HANA will impact their own roles and responsibilities. While leaders may best grasp the strategic importance of the change, they need eyes and ears throughout the organization as they seek to assess the state of the transformation in real time. Organizational change management provides the tools to receive and act on that feedback, minimizing the potential for transformation failures while accelerating adoption so that the full benefits of the new system can be realized more quickly. David Lyons Partner, Talent & Change, Europe David has more than 20 years of experience in change management, organization design and HR advisory, and has led end-to-end consulting engagements for many household brands, including programs involving Oracle- and SAP-enabled ERP transformations. Signe Reiser Managing Consultant, Talent & Change, Europe Signe has twenty-six years of international experience in consulting, leading change and digital transformations across multiple industries and functional areas in EMEA & APAC for both SMEs and Fortune 500 organizations. Contributor Arun Kumar Pothapragada SAP Practice Director

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Uncover Banking's Next Cost Takeout Frontier

----- Arcticle source ----- https://www.wipro.com/consulting/uncover-bankings-next-cost-takeout-frontier/ ----- About the Author Contact Wipro Please fill

the required details to access the content Uncover Banking's Next Cost-Reduction Frontier   The next wave of cost-takeout opportunities will emerge by strategically pulling key operational and infrastructure change levers. July | 2023 Amid an economic triple-whammy of new credit demand slowdown, increased delinquencies, and interest rate shock, we've entered a "cost takeout" era in banking. Banks traditionally respond to similar disruptions by cutting budgets for technology and consulting, scaling back on new investments, reducing workforces, pausing hiring, and eliminating high-cost centers such as in-house operations or custom technology with inflexible fixed costs. The cost of technology typically accounts for 12–15% of a bank's revenue; the cost of operations is closer to 30% or even 40%. In this fraught environment, banks need to explore a new frontier for cost reductions that reimagines operational expenses while also creating open, agile and flexible systems that reduce technology expenses. This requires transforming the expense mix from "run the bank" to "change the bank" and redeploying resources rather than simply finding the least-painful areas to trim budgets. The Four-Pronged Approach to Next-Gen Cost Takeout Opportunities to re-think cost takeout span the banking enterprise, from automating lending processes and call center operations to streamlining fraud management and embracing cloud transformation. It should surprise no one to hear that deploying an AI and automation strategy alongside traditional budget reductions can help accelerate cost takeout objectives. What may be surprising is to learn that such an approach can also help avoid the budget-cut pitfalls of reduced productivity and a degraded customer experience. As they pursue impactful synergies between cost savings, improved customer experience, and product innovation, banks will find the most powerful levers in the areas of process transformation, automation, new location and productivity approaches, and technology transformation. Process Transformation For the past 20 years, banks have instituted numerous process transformations on top of largely legacy core platforms. While omni-channel approaches, customer self-service capabilities and decision engines have allowed them to innovate and squeeze efficiency out of legacy systems, efficiency gains from these standard process transformation levers have largely been exhausted. One emerging lever to help banks uncover additional process improvements is process metrics extraction-based analysis and redesign using tools such as Celonis. Generative AI is opening further process-transformation horizons. Some banks have been more comfortable using generative AI tools for internal use cases (for example: agent assistance), but these tools will increasingly evolve to support direct customer interactions through chatbots, voice assistance, and authentication. From there, generative AI will expand to support use cases across the front, middle, and back offices, including employee education and training, virtual banking assistance, know-your-customer (KYC) verification, and even underwriting. Automation Banks have been relying on optical character recognition (OCR) for more than 20 years to reduce the need for costly manual data entry. Recent advances have bought predictive capabilities to OCR algorithms, making OCR more accurate than ever. This increased accuracy allows OCR to work more seamlessly with robotic process automation (RPA) and is solidifying industry confidence that automation and straight-through processing rates are at an inflection point. While some complex products, like home mortgages, will not be subject to complete auto-decisioning any time soon,

30–40% of the home mortgage process is now ripe for complete automation. On the cost-takeout front, this means banks will spend less time hiring and training for roles that involve manually correcting inaccurate data capture and can instead focus on hiring and retraining for higher-level jobs. In parallel to OCR improvements, voice-recognition software has reached new heights and will be able to advance cost takeout insofar as it can be used not just for call escalation and analysis, but also to provide truly automated responses to high-volume customer inquiries. Location and Productivity Until recently, European banks tended to be more comfortable than US banks when it came to business process outsourcing (BPO). In many cases, this hesitancy among US banks stemmed from concern about regulatory requirements and third-party risk management burdens. However, as they battled relentless attrition during COVID and the "great resignation," US banks changed their tune. It helped that new digital monitoring tools gave banks confidence that they could validate the quality of service they received from outsourced contact centers (whether nearshore or offshore). With call center attrition near all-time highs, the most frustrating cost burden on banks is not so much customer service agent salaries themselves as it is the cost of maintaining an HR operation big enough to constantly hire and train new customer service talent amid unprecedented churn. To mitigate these costs, a strategy that creates significant space for BPO can be a lifesaver. At the same time, banks have found more interesting product-based BPO propositions in areas like fraud and dispute management. Particularly in the case of fraud management, a digital platform-enabled BPO approach often ends up being faster, cheaper, and more accurate, and banks can absolve themselves of the difficult task of staying on top of the accelerating volume and variety of digital fraud schemes. Technology Transformation When it comes to technology transformation, cloud migration is the wave of the future in banking. Compared to many other industries, banks have been conservative about jumping into cloud. But recent interest rate hikes and resulting drops in loan volumes have banks seriously re-thinking their investments in expensive data centers, which carry high fixed costs (both technology and people) regardless of processing volumes. Cloud spends, by contrast, are variable and can rapidly scale up or down as processing volumes shift, offering massive cost savings during periods of low activity. Fortunately, cloud is about much more than cost savings. It is also about agility and developer velocity. For example, in a traditional mainframe-based world, building a new capability like a contact center chat function requires a lengthy process of RFPs, requisitions, infrastructure builds, and sourcing team involvement, not to mention large and dedicated operations and technology teams to support the chat servers. A cloud-based solution, on the other hand, can in a matter of weeks be running a functional chat program that supports most major customer support themes. As banks strive to be ever-more product-driven, cloud adoption is one way to ensure that cost takeout is compatible with accelerated product innovation. In conjunction with their cloud journeys, banks are also finally becoming more comfortable with open-source software with software license cost rationalization and new capabilities pushing the banks towards open source. Integrated Cost Takeout: The New Imperative Like every commercial sector today, banks are under incredible pressure to cut costs. As they look for ways to find further efficiency gains, banks need to achieve their strategic cost takeout objectives while also improving the

customer experience — a critical differentiator in this hyper-competitive market. Plus, they need to ensure that their cost takeout strategies don't choke any future potential for growth. An integrated approach to cost takeout focuses on changing the bank rather than just doing the same things with fewer resources. That means reducing technology costs, yes, but also boldly transforming operations to be more agile, so that banks are prepared to seize new opportunities when the winds of change shift. Ashish Shreni, US Banking Practice Head, Wipro Consulting Ashish leads Wipro's banking consulting practice for the United States. He is responsible for CXO advisory, CXO relationships, data and analytics, digital strategy, process and technology transformation, risk management, and partnership and alliance strategies, as well as industry representation and industry relationship management. =======================

Building Blocks for Successful S&OP

----- Arcticle source ----- https://www.wipro.com/consulting/building-blocks-for-successful-s-op/ ----- Contact Wipro Please fill the required details to access the content Sales & Operations Planning is both a science and an art. Like any science, it relies on principles, rules, methodology, and specific measurable outcomes. But an S&OP implementation also calls for creative, incremental thoughts to address challenges. Since the birth of Sales & Operations Planning (S&OP) in the late 1970s, volumes of text have been written about the subject and hundreds of organizations have embarked on implementing S&OP. It has been referred to by a number of names, including Executive S&OP and, more recently, as Integrated Business Planning (IBP). Still, four decades later, organizations struggle to realize the promise of S&OP. In 2010, for instance, Gartner reported that about 70 percent of global organizations are in Stage 1 or Stage 2 of the four-stage S&OP Maturity Model. Most organizations continue to acknowledge the need for a step-change improvement to their S&OP process. Why then do organizations find it arduous to achieve sustained success from S&OP? Lots of rich, intellectual content on S&OP presents valuable insights on strategies to succeed in this game-plan. Yet, there appears to be systemic reasons why so many organizations have had limited success. =======================

Outperforming Capital Delivery Programs in Water Industry

----- Arcticle source ----- https://www.wipro.com/consulting/outperforming-capital-delivery-programmes-in-water-industry-/ ----- About the Authors Contact Wipro Please fill the required details to access the content Introducing Enhanced Supply Chain Collaboration Introducing Enhanced

Supply Chain Collaboration Driven by the need to improve the performance on their capital delivery programmes, water utilities face the challenges of effectively managing complex supply chain networks woven into a number of strategic alliances. In the UK, the new regulatory period for capital delivery led by the Water Services Regulation Authority (Ofwat) and known as AMP6 2015-20, has gained the attention and focus of the UK water utilities to find new ways of managing their supply chains. In addition, the recent introduction of Total Expenditure (TOTEX) based accounting by Ofwat necessitates stronger linkages between operational costs and capital delivery costs. This paper talks about how digital supply chain collaboration platforms can boost operational efficiencies and help water utilities meet their capital delivery commitments to regulators and end users. Growing Investments in Water Infrastructure An ageing Infrastructure continues to be one of the main concerns of water utilities in the UK. Today, the industry is bowing under the burden of antiquated assets, the inability to meet demand from an increasing population, the pressure to adopt smart technology, and the challenges posed by growing urban congestion. Investments in modernization and asset refresh are increasing. There is £44 billion of Ofwat-approved capital investmenti waiting to be delivered in the AMP6 periodii. Given the size of the investments, capital delivery programs are naturally coming under scrutiny. Much of the investments will go to construction companies who will be contracted to deliver large capital projects. A few percentage points shaved off the £44 billion through better capital delivery will translate into substantial saving for the industry. Water utilities have been investing consistently in technology to develop their online customer service, relationship management, customer interactions and payment processes. Some have invested in data and analytics to ascertain asset condition and forecast risk. They have used technology to move to a predictive asset management model and bring down operational costs, improve service resilience and boosts customer satisfaction. However, they have yet to begin applying technology with equal focus and urgency to others parts of the business. Procurement, supply chain management and approaches to support alliances for capital delivery are three such areas that have had little attention. These areas have seen the use of email or Sharepoint for document exchange. At best, they have used modest in-house portals where sophisticated solutions were required. This needs to change. The Need to Outperform Capital Delivery Programs The recent introduction of TOTEX-based accounting by Ofwat into the APM6 regulatory period will increase the focus on managing the relationship between operational costs and capital delivery costs. With an incentive to outperform agreed baseline costs and meet milestones, every capital delivery program will aim for efficiencies in procurement, inventory reduction, resource coordination and overall scheduling optimisation. This will trigger a period of cooperation, coordination and collaboration between partners engaged by a water utility to deliver a capital program. There is a good reason for success being elusive thus far, despite the intent. Capital delivery projects in the industry have too many moving parts. Orchestrating projects with multiple partners and several layers of suppliers – from initiation, program awards, contracting, executing, overseeing, assessing and preparing for long-term operations and maintenance -- is a herculean task. Meeting execution goals, realizing business plans and delivering against shareholder expectations has, historically, been difficult. Can they be suddenly outperformed? Can

water utilities reduce supply chain and inventory costs? Can they become more efficient to meet the goals of AMP6? The answer is "yes". The 'How' of Outperformance Today, executives orchestrating capital delivery programs can lean on advanced supply chain collaboration platforms that are capable of managing and optimizing extended supply chains (see Figure 1: Multi-Tier Supply Chain and Collaboration Processes). Figure 1: Multi-Tier Supply Chain and Collaboration Processes Benefits of Cloud Adoption A cloud-based supply chain collaboration platform can transform their fragmented and disconnected supply chains into a vibrant interconnected digital water value chain. Today's leading edge collaboration platforms allow this level of connectivity regardless of the variety of systems, messaging standards or IT maturity of the trading partners in the supply chain. Such a platform can help keep 'buy-side' and the 'delivery-side' activities fully co-ordinated via a 'control tower'. The control tower manages and oversees the complete project cycle, from planning, fulfilment and invoicing to reconciliation. In addition, the system alerts and flags issues in real time before they become full-fledged challenges and delays. The platform can become the cornerstone for water utilities keen to outperform the AMP6 business planiv. Proven Solution in Other Sectors This solution has been proven in other sectors with similar challenges to water utilities in the delivery of capital programs. For example, in the oil and gas sector critical processes must be kept running for production as well as ensuring critical asset maintenance, refurbishment and replacement processes are fully aligned with production and service plans. In such industries, a "Track and Trace" solution has been deployed, fully integrated with Planning, ERP and PLM systems between partners and across a range of highly productive platforms including mobile, web and fully delivered in a cloud based infrastructure. This enables major oil and gas players to increase their productivity across the complete end-to-end supply chain, reduce their working capital and obsolete inventory as well as increase on-time and on-budget fulfilment for capital projects. Similarly, the aviation industry has benefited from cloud-based supply chain collaboration platforms. These have been implemented to coordinate the on-time delivery of major components from across the globe into the main assembly line of the last generation of long haul airliners. Benefits of a Supply Chain Excellence Platform The benefits that utilities would gain from adopting this type of solution are wide-ranging. These gains include the ability to address some deep-seated issues the industry has traditionally found difficult to optimize and manage: Win-Win for All A strong underlying factor that will propel success is the fact that water utilities will benefit from a supply chain collaboration platform and so will their partners. There is a desire on both sides of the delivery process to stay in control of projects and become efficient in the way interactions are managed between partners. Water utility partners and suppliers would gain from visibility into emerging project needs and delivery schedules. They would be able to improve procurement and minimize logistics costs. If collaboration and analytics can provide value to planning and delivery, such a platform would be a win-win for every actor in the capital delivery program. References Brian Nolf is Partner, Strategy & Transformation – Consulting Practice, Wipro Limited. Jesus Oregui is Partner, Strategy & Transformation – Consulting Practice, Wipro Limited. Get in touch: global.consulting@wipro.com. Slowly but surely, SAP's ECC 6 enterprise resource planning (ERP) solution is being replaced by a new system: S/4HANA. From 2027 on, ECC 6 will not be fully

supported... Amid an economic triple-whammy of new credit demand slowdown, increased delinquencies, and interest rate shock, we've entered a "cost takeout" era in banking. S&OP relies on principles, rules, methodology, and specific measurable outcomes. But an S&OP implementation also calls for creative, incremental thoughts to address challenges. ======================

A Practical Approach to Post-Merger Integration

Please fill the required details to access the content Post-merger integration (PMI) is rarely straightforward, but the approaches most businesses take have made it slower, less effective, and more expensive than it needs to be.This may help explain why, in study after study, so many deals fail to deliver their expected value. The irony is that massive investments of money and time go into most deals. Why, then, do they so often fall flat? In our experience it's because it is much easier to develop the investment thesis justifying a deal than to create a workable plan to transform two companies into one. Even the most well reasoned strategy, thoroughly vetted target, and comprehensive financial model are of little value if you cannot integrate quickly and effectively. The good news is there is a solution. We have seen that structuring decisions up front about how the newly combined businesses will operate makes it much likelier that an M&A deal will deliver the envisioned shareholder value. The Certainty of Uncertainty It would be easy to attribute the failure of past deals to the natural uncertainty that accompanies M&A, as many textbooks do. But such an explanation seems like the pronouncements of armchair quarterbacks who've never really managed a PMI team. Uncertainty is absolutely relevant, but it is also surmountable if you understand its dynamics: it is not a matter of knowing enough, but rather a matter of timing. As soon as a deal is announced, external stakeholders react. Markets immediately pronounce their judgments through share-price movements. Customers and trading partners wonder about possible near-term disruptions and the longerterm implications of the deal. Competitors begin to whisper in the ears of both firms' key customers, hoping to poach a few in the wake of disruption. Meanwhile, internally, and at the worst possible moment, the deal becomes a source of gossip and distraction. Precisely when the rest of the market needs reassurance, employees have astrong urge to look inward. They wonder about new bosses, new budgets, new policies, job security, and a host of other important issues.We believe it is this misalignment of focus at the most inopportune moment that often causes M&A value to dissipate, even more than a lack of good strategy or thorough due diligence. The Siren Song of "Discovernance" Many, if not most, companies try to overcome uncertainty with process, money, and effort. They employ exhaustive process discovery and elaborate program management governance—a one-two punch we have termed "discovernance." Employees descend into the

uncertainty and, despite good intentions, often magnify the drama. Current-state capabilities are exhaustively mapped. Cross-company integration teams and supervisory committees proliferate. Senior management delegates important decisions to these teams, which hesitate to make the wrong call. Accountability weakens the more distributed it becomes. In the absence of clear decision-making authority and accountability, many integration teams focus instead on strict adherence to the PMI process as provided to them by their advisors. Unfortunately, this is a poor replacement for the decision-making that actually fuels integration. All it does is aggregate the complexity of how things operate today. We typically ask clients the following question: "What decisions will you be making during the integration team's kick-off meeting?" Usually, the answer sounds something like this: "Understanding the PMI process taxonomy and methodology, ensuring fully-representative team composition, establishing the template to be used for reporting the team's activities, and mapping all possible stakeholders from whom the team will need to seek input." All are important things to understand, but in and of themselves they do not help you actually do anything. Decision-Centric PMI Rather than cataloguing the complexity of today, what is really needed is a clearer understanding how things will run tomorrow. This would serve the dual purpose of resolving employee uncertainty and improving signals to outside stakeholders. In order to do this, integration planning and execution should be driven by how the newly combined company will operate. Therefore, the paramount activity must be to make the foundational decisions that will define this future operating model. Everything else—especially process and governance — exists to enable this goal. The fundamental operating decisions that comprise the future operating model ultimately boil down to four basic options. Consider the following high-level example: Business Example The Value Chain Gang: Structured Decision-Making in a Large Deal A high-tech manufacturing client had successfully completed numerous small acquisitions but was struggling with a recent large deal. Unlike smaller companies, the larger target could not simply be swallowed into the client's existing business model. Integration teams quickly found themselves in the weeds trying to solve for numerous complexities simultaneously. Using a value-chain structure, the decision-centric approach disaggregated the client's acquisition into its operational piece parts. Each part contained a decision tree for senior leaders to complete: Completed decisions were highly effective for detecting underlying integration risks. Where the target's operating practices were preferred, new capabilities had to be developed and milestones extended. Where leaders designated two strategies, as they did for two geographic markets, integration teams were able to request additional resources. It also highlighted delays due to decisions that had not yet been made. In the course of one afternoon, a group of Senior Managers were able to make "80%-right" decisions that framed the rest of the integration. The decision-centric approach reached beyond just this integration. Many operating decisions led to a richer understanding of the capabilities and weaknesses of their operating model, and shaped future integration that could be standardized for future use.The client was able to achieve repeatability, scalability, and time-to-market reduction in future planning. In non-textbook integrations, managers face many smaller, more complicated variations of the same choices.We advise clients to start by structuring these decisions in an end-to-end, value chain

view as soon as possible. (see sidebar, The Value Chain Gang). This allows them to cluster decisions appropriately, facilitating comparisons between similar functions at both companies, even if the target's business model is vastly different. Each value chain step represents a tree of operating decisions—starting broadly and becoming increasingly specific—that must be made for the new company. We find this early decision making exercise is most productive when it involves only a handful of pivotal client managers. Optimally, they are seasoned, upper-mid-level operating managers—the people who know the most about how things actually get done. We have facilitated such knowledgeable groups tackle as much as 80 percent of key decisions in a single afternoon. As they begin working their way through decisions, the group quickly finds that what may have appeared at first to be a tall challenge reduces itself to a series of discrete choices about a finite list of topics, many of which they have considered before in different contexts. Participants should see up-front decision making as an opportunity to map out a preliminary integration path, defining it by the many decisions that could add friction to the process—over time, in both companies, and within and across functional areas. Decision sessions should focus on identifying potential bottlenecks where integration is likely to take longer, cost more, drive higher risks, or stumble over legacy business processes in need of reengineering. Together, these early decisions form a straw man operating model that actually provides direction. Managers can now tap their staffs to generate targeted analyses that inform specific decisions. Of course, there will be some genuinely thorny decisions that require complex problem solving and iterations to identify the optimal solution. But unlike the "discovernance" approach, in which such analyses are not clearly tied back to a specific purpose, the decision-centric approach harnesses the intellectual horsepower of integration teams to drive toward choosing the future operating model that best delivers value. In the many instances where preliminary decisions have been made, the path is clear and integration can begin.Where doubts remain or bottlenecks exist, governance committees now have a purpose: to oversee and resolve the complexity delaying integration. Perhaps most importantly, clearer goals allow managers to make more accurate financial and resource projections well in advance of the need. To be sure, post-merger integration will never be trivial. But we believe our approach can increase your chances of success. By emphasizing top-down accountability for key business operating decisions early in the process, you can reduce uncertainty and focus integration teams on the work that really matters: getting the combined company back at full stride, competing in the marketplace.
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Finding a New Collaborative Insurance Model in a Commoditized Market

There was a time when customers needing insurance relied solely on insurance agents to break down the differences between providers, policy features and prices. Customer loyalty to a provider or agent was rarely considered, and there were true product features and service distinctions to be considered. Those days are gone. Consumers today view many retail insurance products as much the same. Their focus is on pricing and customer service—information about which is readily available through websites, social media and mobile apps. To compare services, they don't need to interact with providers, let alone an insurance agent. They can tap an insurance aggregator to compare and contrast the features of various insurance company offerings and even buy a policy. One result of this shift is that customer stickiness has become increasingly difficult to achieve, especially now that switching between insurance policies from different providers has become so easy. Moreover, insurance carriers are using much of the same social media and demographic data to match competitor offerings, making pricing advantage an elusive goal. Add the fact that investment yields are at an all-time low and it's clear that many personal lines are struggling to make a profit. There is distinct product polarization occurring in the industry. At one end there are profitable specialized business products driven by case-based underwriting and tailored pricing. At the other end, there are commoditized products that are grounded in population-based underwriting driven by demographics. This commoditization is happening in insurance offerings related to property and casualty, as well as life and pension. Commodity markets often operate with low margins—and to even get such margins requires massively efficient operations and economies of scale. There's limited value play available. The current state of the insurance business means it's time for insurers to take a page from industries like high-tech, telecommunications and automotive by adopting cost takeout strategies focused on the primary expense drivers e.g. infrastructure, labour, R&D. One of the most successful of those strategies has been "industrywide collaboration." Industry-Wide Collaboration For industries that have experienced extreme competition and increased margin pressures—not to mention regulatory encroachments and technology advances requiring huge investments—the options can seem limited. However, by adopting collaboration, businesses can achieve sustainable cost reductions and compete at other levels. We have seen this in the automotive industry where there has been collaboration between leading car manufacturers. Similarly, a weakened U.S. newspaper industry is using

collaboration to fight declining print advertising, falling circulation and smaller newsrooms. Recently, the Boston Globe announced it would take over all printing for its long-time rival, the Boston Herald. Similar publisher-initiated collaborations include NewsRight, an online rights clearance initiative, and Find & Save, a local deals site, both of which generate new revenue for partners. In the global telecom industry, economies of scale and rising infrastructure costs have led to infrastructure partnering among otherwise competing service providers. Sharing sites, antennae and base stations can cut costs considerably. Collaboration is not entirely new to insurers. Indeed, looking back at the original coffee houses of London in the early 17th century, collaboration was what gave birth to the industry. And collaboration continues to be critical to many of the Lloyds syndicates today, where infrastructure and services are shared. A more specific, focused collaboration began in 2006 with the creation of the Insurance Fraud Bureau in the U.K. This not-for-profit organization seeks to identify and prosecute criminals traflicking in illegal motor accident claims, and is now expanding to cover fraudulent property and life claims. This not only benefits participating insurers, it also benefits policyholders by reducing inflationary premium pressure. Candidates for Collaboration Which processes are ideal for industry-wide standardization in Insurance? Non-core processes like policy administration and content management are good starting points. These can be enabled through system aggregators who can offer them as Cloud-based services. With system integration and management of service components like applications, products, infrastructure and business processes, insurers can purchase a virtualized business service. Other processes like input management also have non-core components that can be good standardization and collaboration candidates. Insurers spend millions annually on paper-based regulatory communications, forms and contractual documents. When branding opportunities are limited to the company logo and don't attract much customer attention, it's possible that this content can be standardized in regulator-approved, industry-wide templates for use by all carriers in porting data from customers to their databases. Are You Ready for Collaboration? For many insurers, this kind of collaboration is difficult to imagine and fraught with competitive tensions. But the harsh reality is that many carriers are slowly realizing that traditional lines of business in mature markets are no longer tenable. What insurers must come to terms with is that elements of the business that were once considered critical to success are no longer as important, and are a drag on profitability, if not survivability. In fact, the actual value is contained in a much smaller component of the business. To move ahead and consider collaboration, insurers must first ask themselves the following questions about their processes: Leading the Collaboration Imperative The insurance industry is experiencing a major paradigm shift. Yes, there already has been momentum in driving down costs through economies of scale and performance consistency in operations and infrastructure. However, that approach can be taken by individual organizations only. It is time for insurers to look beyond their internal operations and identify non-proprietary processes and activities that can be shared with third-party companies for standardization and industry collaboration. Trends like social media and digitalization are here to stay, and as consumers focus ever more on price and customer experience, insurers must respond by developing distinctions that

consumers appreciate while collaborating in areas where differentiation isn't as important. At its core, insurance is about taking on risk—at a price, of course. It's time for insurers to examine the risk of sticking with the status quo as compared to the potential advantages of daring to lead in industry collaboration—a collaboration that will drive profitability and generate the returns shareholders expect and deserve. For more information please contact global.consulting@wipro.com Mark Foster Collier is Client Partner – Wipro Limited. Get in touch: global.consulting@wipro.com. ========================

Operational Productivity:

A New Route to Improving

Insurance Competitiveness

----- Arcticle source ----- https://www.wipro.com/consulting/operational-productivity--a-new-route-to-improving-insurance-com/ ----- About the Authors Contact Wipro Please fill the required details to access the content For years insurance companies across Europe have been struggling with an accumulation of bad news. It's been an almost perfect storm of soft markets, low yields, increased regulation, and unprecedented natural catastrophes. The result has been forced mergers and divestitures, withdrawals from markets, and the sale of closed books. In short, the insurance industry has been hammered, and the result is an all too familiar pattern: an announcement of reduced earnings is tied to an announcement of job cuts. Yet, without doubt, once things begin to improve, headcount and expenses will start to creep up, only to get cut with the next troubled earnings report. It's a disruptive cycle of short-term fixes, and insurers know that to escape it they need to make fundamental changes to how they operate—perhaps even a total business transformation. But that's unrealistic at a time when most organizations are struggling simply to stay afloat. Even without a 'big bang' solution, however, there's a path insurance companies can follow to give them more knowledge and control in stabilizing their business—a strategy that also offers a competitive advantage, since improving knowledge and control can allow products and services to be offered more efficiently and at a lower cost. The path to this solution is to tackle operational performance using supply chain operations as a model. From Short-Term Fixes to Sustainable Productivity: Units of Work Talk to any supply chain executive in product industries—from tablets to groceries to shoes—and you'll get an earful about "cost per unit." Let's say you have headsets that cost €10 to produce. By knowing the use and cost of each element in the production process, including FTEs, you can adjust the components of your supply chain to drive effectiveness, efficiency, and productivity. Done correctly, the result is reduced cost, increased profit, and improved competitiveness. Many manufacturers, like insurers, operate at low-margins, and have learned to look beyond financially-oriented industry metrics like Operating Expense Ratios to stay competitive. Instead, they delve into the microeconomics of

their business. They examine processes in each work stage, what we've termed a "unit of work," to understand and improve each of the underlying elements that drive their costs and operating performance. Applied originally to the plant floor, manufacturers have extended this focus to include their entire supply chains. These microeconomic drivers include transaction volume and variance, work structure and required skill levels, cost and productivity per paid hour of both labor and capital, as well as number of hand-offs, process bottlenecks, and re-work. This microeconomics mindset hasn't been pervasive in the insurance industry. Yes, there have been sporadic attempts to apply Lean/Six Sigma manufacturing principles to insurance, but with limited measurable impact on the bottom line. Internal arguments about the unique requirements of insurance, and concerns about preserving critical expertise in the "knowledge work" of insurance operations, usually doomed most of these earlier improvement initiatives. We've also seen many insurers waste enormous amounts of IT capital on automation without achieving sustainable returns from that investment—a pattern that's traceable back to a lack of sufficient attention to the microeconomic drivers of processes and performance. Ironically, insurers stand to benefit perhaps even more than traditional manufacturing by attacking costs through "unit of work" productivity and other microeconomic drivers, since insurance products are virtual. Most of an insurer's cost is in headcount. We have successfully applied the microeconomic unit of work approach in our own firm and elsewhere in the financial services sector, and it is just as applicable to insurance. As an insurance executive you can't simply rely on new products, Process Disaggregation: premium increases, or even emerging markets for higher profits. You also need to know the step-by-step performance involved in delivering services so you can manage them to create a streamlined, responsive, and profitable organization. As you examine performance and drivers in units of work, you'll find that even some of those old "core versus non-core" arguments can be exploded and your valuable and expensive subject matter experts (SMEs) can be focused on driving value and, through that, increased competitiveness. The process starts with digging into your company's operating ratio. Many insurers use this as a key metric, but few use it to focus investment or productivity drives. How does this play out in new business processing for life insurance? By breaking down key steps in acquiring a new customer, for example, you can see there are a lot of hands —and associated costs—involved. At the outset there's the marketing and lead generation, and a needs analysis based on a customer inquiry. Then someone has to create and discuss a proposal with the prospect. Once the proposal is accepted, the application form must be completed, submitted, processed, and vetted. Next comes underwriting, which may be automated or manual. The payment method must be activated and processed, and the system must be updated to include the customer information. Then you bind the policy and send the customer the policy schedule and welcome kit, which must be written, designed, and printed. That's just for one customer. How many FTEs help customers through each of these processes in each branch and central location? What does it cost to recruit and process each new customer through each of these eight steps? Each of the steps represents a "unit of work" for potential improvement. So, let's say it costs €100 end to end to set up a new customer. You can now examine options to bring down the cost to, say, €75. Can the work be structured to be done by

fewer people or a different mix of people? How much of each workday are your SME's actually using that expertise versus performing other less valuable tasks? When you follow the work flow of a single customer setup across all of the units of work, do existing IT systems help or actually hurt productivity (i.e., multiple data sources must be consolidated by a person)? Do some agents require more support than others? Are there issues with different needs assessments? What are the variances between literature costs, given the detailed examination required to ensure that the documents are accurate and compliant with prevailing regulations? In examining your operational processes you will likely discover duplicated efforts and system redundancies, or processes that require more steps than necessary because of aging exception-handling rules. All these inefficiencies are now exposed and correctable. For a sense of how this would work, consider a company whose operating expenses continued to rise even after a 15 percent headcount reduction. The company examined its microeconomics by detailing and reviewing the steps used in the new business process and baselined its costs for onboarding new customers. For each step, the company calculated its productivity and cost per unit of work, comparing it to historical costs and competitive data. Through this examination the company discovered a problem in the application vetting stage. Within this activity, the analysis showed 20 percent of applications were responsible for 80 percent of the effort and cost. Certain types of applications contained significant errors and had to be repeatedly checked. But more interestingly, not all of these applications had the same level of errors, but the same brokers made consistent errors. By focusing on the brokers submitting the erroneous applications, two changes were initiated: Computer Based Training was provided to the brokers involved, and a simple change was made to the forms required for a class of products. With a huge reduction in vetting, the company's unit of work costs for new business dropped from €100 to €88. The company could then look at the remaining new business processes to streamline the unit of work even further; and with these efficiencies and lower operations costs, they could even bring down product prices to attract new customers. This example shows that within the application, vetting, and underwriting processes there are numerous work steps which the unit of work approach categorizes as either transaction or knowledge steps. More often than not, the execution of the transaction steps surrounding the knowledge steps is performed by SMEs. By isolating productivity, headcount costs, and knowledge versus transaction steps, you can increase the opportunity for improvement with even more options for making changes than the simple fixes described above, such as automating transaction steps or "leaning" processes. Or, perhaps it suggests the advantages of making investments in truly differentiating knowledge steps while rethinking core versus non-core activities. The point is that now you can make choices that have both short-term and long-term benefits to the organization instead of being reactive to the markets or the forces of Mother Nature. Two Opportunities Examining your organization's core capabilities and the processes that deliver output gives you a functional understanding that offers two additional key opportunities. You can remove, reduce, or outsource areas that are not at the core of your value chain; and you can create a baseline of your current output production for each area. With actual historical operations data, trending different units of work allows you to zero in on those with declining productivity and make necessary changes.

As you get started, here are the key questions you'll want to ask: Conclusion Insurers have three big buckets of activity that define their business: putting business on the books, managing the business while on the books, and settling the business when it comes off the books (that is, dealing with claims). While insurers generally use their combined operating ratio as the master metric—say, moving from 102 percent down to 99 percent—they tend to just cut the biggest numbers without delving into the precise metrics. By changing your focus to operational productivity you could potentially move your operating ratio 10 to 20 points—doing it rationally and benchmarking yourself using value as your guide. This will help drive your firm's competitiveness. You can reinvest these gains into your pricing and servicing because you will understand precisely how your organization works, know that you're running it without fat, and know that you've made it nimble for when change is necessary. The units of work model may not prevent earthquakes, floods, or new regulations, but it will help make your company better able than your competitors to survive them. Mark Foster-Collier is Consulting Partner at Wipro. He is based in London and may be reached at mark.collier@wipro.com. Kris Denton heads Strategy & Transformation Consulting at Wipro. He is reachable at kris.denton@wipro.com. ======================

Is Outsourcing Just Another IT Project?

----- Arcticle source ----- https://www.wipro.com/consulting/is-outsourcing-just-another-it-project-/ ----- Contact Wipro Please fill the required details to access the content The advantages of IT outsourcing IT are well known. You can transform fixed costs to variable costs, reduce dependence on commoditized and non-core components, and readily access industry best practices. All of which reduce costs and allow you to focus on adding value to core areas of the business. But with so many advantages to be gained by outsourcing your IT, why do companies so often end up being disappointed? In our experience, it's because many executives treat outsourcing as a pure cost-reduction initiative and underestimate the changes that IT teams and business users face. Substantial time and money are spent selecting the right outsourcing partner, including hiring advisory consultants, identifying potential suppliers, creating, evaluating and responding to RFIs and RFPs, conducting due diligence, visiting supplier premises, and, eventually, negotiating the contracts. Yet the amount of time spent on considering the impact on IT teams and end users is comparatively minimal. Once the transition is complete, business users must, among other things, adapt to new service management processes, get used to concepts like self-help and self-heal, and do without long-established onsite IT support. For global companies, cultural differences may also be a crucial factor. You can hardly blame business leaders of specialized functions like R&D, trading, production or customer service for fearing that an outsourcing partner (service provider) may not deliver what they need. If you do not reassure such user groups by bringing them into your project from the start, then you

could face internal resistance, operational disruptions, and even heightened regulatory and compliance risks. What Outsourcing Brings to the Table For IT teams, outsourcing brings new roles and responsibilities based on the specific details of the future mode of operations. There will also be new processes and tools to understand, and new relationships to develop with counterparts from the outsourcing partner organization. For instance, the retained IT team will have to focus on areas such as supplier relationship, governance, and service management, some of which can be completely different from their pre-outsourcing responsibilities. In short, without fully understanding the people and organizational ramifications of outsourcing, you run the risk of creating an experience that could negate your intended IT cost savings and deter your business leaders on further outsourcing. This happened to a global telecommunications company. After a long procurement cycle, the transition to the outsourced model resulted in resistance from business leaders who were unprepared to change the ways in which they used IT services. Previously, end users could approach the IT department directly to resolve technical issues. In the outsourced model, they were expected to call a helpdesk to log tickets. This seemingly small change created frustration, especially because users were expected to use self-help tools without appropriate training. In the end, the company's IT executives were forced to delay the outsourcing program, resulting in significant losses and contractual issues with their outsourcing partner. Turning IT Outsourcing into a Change Management Initiative In our experience, the most successful IT outsourcing projects are designed and executed as Change Management initiatives. That means in addition to the IT specialists required to design an effective technology solution and processes, you need to include Change Management experts to create a partnership with business leaders and users—one that has a clearly defined IT service vision and agreed-upon success criteria. In an effective outsourcing plan, your Change Management experts should work alongside technical team members and company stakeholders to: Making IT Outsourcing Work for You We recently partnered with a global telecom organization that was planning to outsource the IT infrastructure services of its R&D function. Business leaders and end users alike were not too convinced about this as previous attempts at outsourcing had not worked as per plan. Now, the company's IT executives were under intense pressure to deliver the right results. The project team decided to approach the project from a business user's perspective. The company's Change Lead worked closely with the outsourcing partner's Change Management experts from the start. Together, they aligned priorities among the regional leaders of the seven countries in the company's footprint, analyzed the impact of the planned changes on different stakeholders, enabled the retained IT teams, and educated the business users on the new IT processes and tools. The result was the kind of success that had eluded the company in its first outsourcing attempt. Business users readily adopted the new IT service delivery model and started a new culture of collaboration between IT and business users. For decades, organizations have been turning to outsourcing to reduce costs and gain access to the most up-to-date technologies and practices. However, leadership teams in companies have underestimated the impact of outsourcing on their people. For IT outsourcing to succeed, the transition must be treated as both an IT project and a Change Management project. Yes, the technology solution is critically important. But it's by

driving ownership and adoption of the new IT service model between your business users and IT communities that you will ensure your project's long-term viability and gain the competitive edge in the marketplace. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/state-of-cybersecurity-report-2020/manufacturing/ ----- Contact Wipro Please fill the required details to access the content Manufacturing October | 2020 COVID-19 created spikes and shortages in supply and demand across the global manufacturing industry. For only the third time, Interpol issued a security warning of a significant rise in cybercriminal activity. The vast majority of these cyber attacks targeted healthcare and global manufacturing ecosystems, specifically industrial targets during the pandemic. Although many supply chain and warehouse management leaders recognize IoT and OT technology benefits, they're rightfully concerned about adopting them as a part of their modernization strategies. OT technology has the potential for tremendous positive impact, but without the right cybersecurity framework, it can cause potentially irreversible financial, legal, and reputational damage to global manufacturing enterprises. The mass adoption of cloud-based technologies and remote working technologies has increased security vulnerabilities, making it critical to consolidate access management and security roles to ensure that what matters is secure. Centralizing access and visibility can help global manufacturing leaders reduce costs and gain more visibility into who is accessing what, when, and on which device. To learn how Industry 4.0 is coming to fruition through OT technology and why attacks on R&D environments are on the upswing, and what you can do about it, download The State of Cybersecurity Report. =====================

Dark Web 201: How to Leverage External Threat Hunting to Prevent Cyberattacks

----- Arcticle source ----- https://www.wipro.com/cybersecurity/dark-web-201-how-to-leverage-external-threat-hunting-to-prevent-cyberattacks/ ----- Related Articles Contact Wipro Please fill the required details to access the content Dark Web 201: How to Leverage External Threat Hunting to Prevent Cyberattacks February | 2021 A necessary pillar of an effective cyber defense strategy is the capability to detect and mitigate threats at the earliest stages of the cyber kill chain. While internal and perimeter security solutions are critical to your security program, external threat intelligence gives you the ability to defend forward by eliminating threats outside the wire. This ebook is designed to provide a framework for security professionals on how to conduct effective external threat hunting on the dark web. The dark web is a haven for cybercriminal activity. Accessible only through private browsers, like Tor, that enable anonymous browsing and communication, the dark web allows threat actors to operate in the shadows and maintain relative obscurity and anonymity. While most cybersecurity professionals are well aware of the dangers that lurk across the dark web, many do not have the time, knowledge, or tools at their disposal to identify,

validate, and mitigate threats that are being orchestrated against them. The dark web, by far, provides the most challenging landscape for threat hunting due to its anonymous nature and inherent challenges in enforcing regulations. Creating a game plan: You're only as good as your sources Strong intelligence starts with good sources. Your sources can be found in any place where you hunt for or gather intelligence, including black markets, hacker forums, and instant messaging groups, like Telegram, IQ, and Discord. It's much better to have one source of really strong intelligence than to have thousands that turn up very little. In addition, it's critical to map the threats, attack vectors, and source types that are most important to your unique organization, so you can focus on establishing the right mix of sources. Each organization will have different sources and hunting methodologies based on its intelligence needs, weak points, common attack vectors, industry-specific threats, and more. For example, the ways a bank could be attacked are very different from the ways a healthcare organization might be. Therefore, threat hunters must tailor their efforts to the landscape surrounding their organizations and utilize sources that enable them to find relevant threats. Banks probably don't need to hunt for leaked medical records, and healthcare organizations probably don't care as much about stolen credit card numbers. There are many different types of sources across the dark web where you can find threats, and these source types often specialize in a certain area of cybercrime or information trade. Here are some common "sub-categories" of dark web sources: General Markets: These markets offer almost anything for sale, including drugs, weapons, credit card dumps, miscellaneous services, digital products, counterfeit merchandise, and much more. PII & PHI: These markets sell personal identifiable information (PII), like Social Security Numbers (U.S. Market), mailing and email addresses, and dates of birth. Credit Cards: These markets and forums are dedicated to buying, selling, and sharing leaked or stolen credit cards. They can often be purchased in bulk or individually. Digital Identities: These are relatively new sites on the dark web that sell stolen "digital fingerprints" of a user's web browsing device (i.e., IP address, OS information, time zone, user behavior). These sites enable the purchaser to impersonate a legitimate online user and circumvent standard security protocols. Some examples of these sites include the Genesis Market and Richlogs. Information Trading: This can include stolen databases, leaked documents, trade secrets, and more. Remote Access: These sites sell and trade Shells (exploits) and remote access via RDP, VNC, or other access to hacked servers. Personal Documents: This might include stolen passports, driver's licenses, social security cards, or fake IDs. Electronic Wallets: These sites sell access to stolen or compromised wallets, typically containing Bitcoin or other cryptocurrencies If there's one constant across the dark web, it's change. These dark web sources of cybercriminal activity are never permanent, often being shut down by law enforcement or taken offline by administrators to avoid getting caught. Staying on top of the latest movements and popular hubs is a tricky task given the elusive nature of the threat actors using them. That's why becoming an active member of the community can open the door for threat hunters to stay on top of the constant change and access the most valuable sources across the dark web. Establishing access: Venturing behind enemy lines Cybercriminals and other threat actors are intentionally deceptive, and will try to avoid being identified in any way possible. This makes searching for sources challenging

– where do you begin? To compound the challenge, activity hubs are periodically shut down by law enforcement with no notice, forcing threat actors and threat hunters alike to adapt on the   fly and find new sources for trade and information exchanges. Since most dark web activity takes place on the Tor browser, which anonymizes users and isolates each site, it can be difficult to keep track of forums and black markets, which are often unindexed and only accessible via obscure URLs. During the past year, there have been several notable shutdowns – Altenen was shut down by Israeli authorities in May 2018, and Dream Market voluntarily closed its doors at the end of April 2019, which may or may not have been part of a law enforcement sting. Deep Dot Web, Valhalla, and Wall Street Market were shut down by authorities soon thereafter. Going back a couple of years, AlphaBay and Hansa were shut down in July 2017. The more popular a site becomes, the more likely it is to be shut down or taken offline. These closures and shutdowns of large-scale markets in recent years show there is no singular source of cybercriminal activity. Tracking emerging black markets can be helpful, but the best intelligence is often gathered by assimilation into cybercriminal watering holes. Threat hunters must earn the trust of cybercriminals to become accepted into those communities, which can be a complex and risky task – one that CISOs often outsource to experienced professionals. "What is the Tor browser? Tor is a dark web browser that was originally created by the United States Naval Research Laboratory in 2002 as an anonymous communication tool for intelligence agencies. Ever since, it has become the go-to tool for cybercriminals, cybersecurity professionals, researchers, academics, and law enforcement alike. Tor works by randomly routing a user's encrypted traffic through a series of connected volunteered systems, called relays. This ensures activity cannot be traced back to the end user. Tor users can access special sites with .onion domains, which can only be accessed through Tor browsers. Tor is now maintained by The Tor Project, a non-profit 501c3 organization based in Massachusetts. While funding is provided by a number of foundations, corporations, and individuals, the vast majority of the Tor Project's funding continues to come from the U.S. Government. Despite this, Tor is largely unregulated – in part due to its anonymous nature – allowing cybercriminals and hackers to form a thriving ecosystem." Assimilating into the hacker community Threat hunters are faced with a daunting task: infiltrating advanced hacking and cybercrime communities where the barriers to entry are substantial. In order to be accepted into these communities, new users often must pass a series of tests – both literal tests and tests of character – to prove they are both technically capable and, most importantly, not working with law enforcement or cybersecurity groups or companies. In sophisticated forums, you must demonstrate your technical prowess by passing rigorous, challenging tests that sometimes require a referral just to take these exams. The language barrier is one of the biggest challenges threat hunters face – not necessarily in terms of being fluent in certain languages, but, rather, being fluent in cybercriminal jargon. The slightest slip-ups can expose threat hunters as undesirables and lead to instant bans from the communities they are trying to access. Even worse, if your true identity is discovered, it makes you and your company instant targets for hackers. To further complicate matters, even those experienced with cybercriminal lingo might be considered suspicious if they attempt to gain access using a new avatar. It is therefore critical to spend time cultivating

an active persona, sharing useful information with other users, and contributing on more publicly accessible dark web forums to prove your credibility. It's also important to take part in these forums at odd hours of the day. It's easy for hackers to sniff out a threat hunter via avatars that only log in from 9 to 5. Think of it like tending a vegetable garden: If you spend more time feeding and weeding it, you'll eventually yield better quality crops. If you do the bare minimum and neglect your plants, they will eventually wither and you'll have to start over. Security measures and identity protection Even on the anonymized dark web, identity protection is crucial for threat hunters. Although your connection is anonymous, your device can still be hacked or infected, which can expose your true identity. Before venturing onto the dark web, you should invest in security tools that will help ensure your identity does not risk exposure. Some examples include using a virtual private network (VPN) and/ or proxy, and setting up a virtual machine before connecting via Tor. As always, it's wise to implement multiple layers of security to decrease the chance of being outed (or doxxed, as it's referred to online). Moderators of cybercriminal hangouts are actively searching for threat hunters, law enforcement agents, and other dark web users who are seeking to thwart their efforts. They constantly analyze users to find holes in their backstories or other clues that might expose them as oppositional. Threat hunters must operate with caution to avoid putting themselves and their organizations at risk. Staying on top of new sources The dark web is a volatile place, with new websites, markets, and forums constantly being spun up, moved, and taken down. Hackers like to move around and quickly shift the sites they use in their attempts to avoid law enforcement. To be an effective threat hunter, you need to constantly monitor for – and gain access to – new sources that can be used for intelligence gathering. It can be difficult to search across the dark web, but there are a few popular crawlers that can be used to discover new sites. One of the more popular ones is Fresh Onions, but it often gets taken offline and has limited reach, so it may not be as reliable as Google. Speaking of Google, the clear web can often be used to find entry points into dark web forums. Simply Googling "dark web websites" or "dark web forums" often returns clear web sites that offer .onion links to dark web pages. However, these are often well-known and well-established sites on the dark web, so you likely won't find anything brand new or highly exclusive. Telegram, another channel that's growing in popularity among dark web users, can be used to find new hacker watering holes. Telegram is an instant messaging platform that has both open and invite-only groups. The invite-only groups typically have the best resources (with highly restricted access), but users often post new forums or markets on open channels. If you're active in Telegram and build your credibility, you can sometimes get invited to the more exclusive private groups. Overall, the best way to stay on top of new sources on the dark web is to embed yourself into the community. This takes both time and skill, as you'll need to blend in with other threat actors, and often will have to build your credibility as a "fellow threat actor" to be trusted. If done correctly, this is the best way to find new sources of intelligence as hackers like to share only with people who have been vetted. The stronger your dark web reputation, the more likely you'll get invited to exclusive groups and forums. Generating intelligence: Identifying threats targeting your organization Now that you've identified your sources and established yourself as credible, you need to know what to look for. Much

goes on across the dark web, and threat hunters are often tasked with trying to find the needle in the haystack. But when it's discovered, it can be incredibly valuable in helping you anticipate and mitigate threats before they're used against you. Identifying and validating threats As you can imagine, finding threats on the dark web is not black and white. False claims are often made, data is constantly recycled, intent is not always clear, and validation is often needed to distinguish benign activity from suspicious or malicious campaigns. Think of it as a spectrum, with benign all the way to the left, suspicious in the middle, and malicious to the right. So, how do you assess whether a threat is far enough toward "malicious" to warrant action? Threat hunters often need to piece together separate clues from different sources to understand the full context of a threat. This might involve purchasing or asking for samples of data for sale to validate sources and/ or legitimacy. It's also important to track and record activity over time, as threats often evolve over the course of weeks or months. All of these variables play a part in determining the context and severity of a threat, so it's critical to have broad visibility and sufficient analysis skills to uncover threats in a sea of unrelated activity. Ultimately, intelligence is only useful if you can act on it, so it's critical to find and validate threats that specifically relate to your organization. Automating external threat intelligence Continuous dark web monitoring is a time-intensive – and often overwhelming – task for even the largest teams of threat hunters and researchers. This is why many organizations are embracing external threat intelligence solutions that allow them to automate the monitoring and analysis process for dark web intelligence. This is often complemented with additional manual hunting and threat validation to significantly reduce the burden on security operations teams that are charged with rapidly responding to and mitigating cyberattacks. The key to building an effective intelligence process is to connect it to your existing security initiatives. Take credential leakage, for example. Every organization needs to ensure its employee credentials are secured to avoid unauthorized access to company systems. Leaked credentials are one of the most common digital goods on the dark web, so companies must have clear processes established for how to identify and lock down compromised credentials while minimizing disruptions to employee productivity. Activities should include collecting new credential dumps, analyzing contents, validating credentials against your Active Directory, and orchestrating appropriate action to reset or lock down those credentials. External threat intelligence supports numerous security initiatives. Mapping out the mitigation process is one fundamental way to gain value from your intelligence program. Taking it to the next level: Using HUMINT to bolster threat hunting When cybersecurity teams extend their visibility beyond their perimeters, they often look across the clear, deep, and dark web for indications that they are at risk or may be attacked. There are many tactical elements – like automating the process for discovering leaked credentials – that build a foundation for effective dark web monitoring. But there are more advanced tactics that can be used to go deeper to uncover the threat actors and motives behind attacks. This practice is called HUMINT – or Human Intelligence – and it involves gathering intelligence through interpersonal contact and engagement, rather than by technical processes, feed ingestion, or automated monitoring. It's typically a manual process, requiring a very specific set of skills and knowledge to remain undercover and not raise suspicion. It's the high-tech

equivalent of what an undercover FBI agent does, spending months or years working to infiltrate a criminal organization. It's painstaking and nerve-racking work, and can be a dangerous activity for an individual, regardless of experience and skill. Here are some key use cases for establishing sources and conducting HUMINT gathering: Post-Attack Investigation: Hackers will often make claims or take credit for attacks online. If the attack mentions your company or, perhaps, another in your industry, it may be worth contacting the threat actor to investigate how the attack was launched, what entry points were used, and which tools were deployed. This intelligence can be used to stop further damage and/or protect against a similar attack. Extortion Attack Damage Assessment: If your company is being extorted, you might want to verify what data has been stolen as well as its value. This information can be used to assess the potential impact of a breach. New Attack Vector Discovery: As a part of the threat hunting process, HUMINT can be used to discover new scamming methods, new exploits, and other hacker TTPs that may be used against you. Threat intelligence solutions can provide you with a lot of this intelligence, but supplementing it with your own HUMINT gathering can help you gain an even deeper understanding of current threats. Because sources and avatars take time to develop, you shouldn't wait until after one of the above scenarios happens to begin collecting HUMINT. You need to start developing your HUMINT process now so that you have the credibility and sources in place if you find yourself in one of these situations. If you reach out to threat actors as a new avatar right after a recent security incident, they will immediately be suspicious of your motives. Threat hunting is a risky endeavor for security teams, but the intelligence gathered can give you a significant advantage in protecting your organization. Remember, this is a delicate practice that should be performed only by experienced professionals. The last thing you want to do is be exposed, and immediately and simultaneously, put your personal life and organization at risk. What can IntSights do to help? IntSights provides a comprehensive external intelligence solution that enables organizations to identify and neutralize threats across the clear, deep, and dark web. Using our unique cyber reconnaissance capabilities and multi-dimensional threat analysis, we deliver validated, actionable intelligence and orchestrated mitigation to help you proactively protect your organization. Our platform seamlessly integrates with existing security solutions to eliminate operational vulnerabilities, secure data, and protect resources. Our commitment to marrying automated external threat intelligence with expert threat hunting by our dedicated analyst team empowers security teams to take control of the environment beyond their perimeters and Defend Forward. The dark web poses a risk to all organizations, but it also presents an opportunity. Start using dark web activity to inform a proactive security strategy, and gain an advantage over your adversaries. This article is contributed by IntSights Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Context: The Core of a Successful Zero Trust Strategy

Context: The Core of a Successful Zero Trust Strategy March | 2021 The network is no longer the sacrosanct environment where good and bad guys can be distinctly identified and access restricted to ensure security. Defining the perimeter or zones as part of securing the network does not suffice now. With the advent of cloud, remote working, and mobile, the earlier concept is dissolved. Whether it is cloud SaaS applications or running in IaaS, our workloads and users have escaped that perimeter. Zero Trust approach to security moves away from the failed perimeter-centric approach to a model that's more data and identity centric. It is about users who are using devices over networks to connect to workloads. The concept of context surfaces in the whole chain --- what is being accessed, where is the request coming from, which device is involved, and how the access is requested – the key considerations before a decision is taken. This also implies that the network does not hold any specific privilege; the privilege of the trust is no longer rooted in the network. Instead, all access requests whether they are from managed devices or not, come through some kind of an access proxy / gateway supported through single-sign-on, user /group database, and identity provider. Access control decisions are taken using an access control engine, which can infer the trust based on device inventory, device posture, location, certificates and access control tokens. Instead of just looking at the network perimeter and all the things inside as trusted, we need to view all access requests as initially untrusted, and then make those access control decisions based on full context of the access chain. The relevance of context in zero trust At the core of the context in Zero Trust lies the identity of the user or an application process whether it is on-premise, cloud based, or API based. The identities start to melt together because the model combines employees, privileged users , privileged identities, temporary identities of contractors and third parties. The complexity increases with more and more systems being exposed to partners, or strategic partners with specific access requirement than others. The context of Zero Trust is about gathering those metrics that an organization can leverage to assess the legitimacy of an incoming access request. This varies from organization to organization and the primary factor is the context of risk assessment at a business level and then establishing the relevant metrics applicable to the individual metrics. Every organization should start developing their respective framework to build the appropriate context and move from the perimeter-centric model to the Zero Trust model. Concept of context varies between scenarios, threat landscape and business domain. Here is a simple example for understanding context. In any situation, we have network context. However, instead of being the root of all trust and assuming good to go while the user is within the company network, it is worthwhile to authenticate to company Wi-Fi using certificate. The data gathered for orchestrating to device management

add to the richness of the context. We can understand the source of the request and other information confirming legitimacy of the incoming access request. Often, it may so happen that this goes outside the boundary of traditional controls and we can simply ask, have I seen you from this IP before. It is possible that the user is logging in from a remote dynamic IP address and the IP address has not changed in at least a few years. It is also possible that the request is coming from an unknown IP address and in such situations, it can be referred from a threat intelligence source. Have we seen any suspicious login attempts from similar sources? From the example above, we can see that the context can be richer with interesting data leading to a better decision. Organizations can also look at fighting the false positives with enriched context as it helps in gauging the velocity of genuine versus malicious looking attempts. Risk assessment is key for context We focus on the technical risk when we look at our cybersecurity designs, but basis the risk assessment, we know that certain resources and certain systems need to be treated with tighter security controls. With that information, we can act on it, implying the orchestration of the underlying infrastructure for a full stack visibility, and how data is handled and stored etc. This also needs to be backed by an integrated program and the use of analytics, automation and orchestration. A useful reference would be NIST Zero Trust Architecture 800-207. If we sum up all the output from risk assessment and create a progressive journey for Zero Trust, we look upwards in ascending order starting from traditional network infrastructure and software defined perimeters, then servers and workload perspective using micro segmentation. Metrics for context development Starting with firewalls, zoning and data isolation and eventually turning into a strategic initiative with tools and technologies acting as enablers is the correct way to develop all the metrics required to reach ultimate state of Zero Trust. For every organization, this is a maturity journey achieved through tighter integration of tools and technologies, automation of processes, and revisiting respective user roles to achieve the state of Zero Trust. For every organization, the metrics are unique and there is no mandatory sequence to develop these metrics. Common metrics to develop the context for legitimate access request are users' identity, location, device, traffic path/ networks, data and workloads. The metrics can be augmented

through reference decisions from visibility and analytics tools. Let's take the example of an identity centric approach to articulate the process of metrics development. The objective here is to grant the identities and accounts with optimal access rights and verify connections before any explicit trust can be established. In order to make appropriate decisions, we need to know a few parameters such as: Level of resistance (least for a company managed device accessing company SSO portal and most for an unmanaged device from an unexpected location accessing cloud based Jenkins server configuration) Ability to access all of the above information on a run time to make decision is key to developing metrics and context for Zero Trust. Shifting paradigms in Zero Trust The implications when implementing one of these metrics, especially users, groups and the concept of least resistance is analogous to the concept of privilege users. We are familiar with programs where we have selected more sensitive resources, and their users are subjected to prove their identity and authorization through PAM, a system used for managing privilege access with Zero Trust approach. However, enterprises should consider a radical shift in the approach to privilege users.

For example, developing controls within systems where we can elevate the privileges appropriately. We could move away from the concept of privileged users to just users; the users are provided with their actual identity, the right level of access to the resource in the right context at the right time. This also implies that access to those users can be customized based on demand. In essence, we will have a number of systems where there are no more privileged users. Another fundamental shift is how enterprises can move to context-based, metric-driven and time-bound decision to allow sign in. This will allow organizations to move away from insider threats, disgruntled employees, and operational nightmare related to removing unused RDP, SSH session keys from fleets of servers and applications. This way, we can enforce Zero Trust access control decision even for server admins, and more importantly, the control is now universal because the same control would apply to a browser session when they log in to their end user applications like email, SharePoint, file shares etc. Similar to the context of user, groups and access, network also plays a fundamental role in enriching the context data. Assume that the network is compromised with threat actors trying to move laterally within the systems. Architectural decisions start to play a critical role to decide how the infrastructure is following macro segregation and allowing system communications. Here, a tool that allows you to do software-defined networking, or server workload-based micro segmentation becomes a critical asset to our arsenal. In the COVID-19-induced norm of remote working, the wave of unrequested BYOD is far greater than it used to be. This changes our security posture rapidly and the need for context too. Not only are we interested in knowing ease of device management, but also, the device. Can we have something on that device that can give a validation of pattern of access or its current location with respect to time or security state. And, can we verify the application that runs on Mac and Windows and iOS and Android? Metrics like these are driving richer hardware-based context that help us with quick contextual decisions. Understanding the security state of the device needs an integration with an endpoint management framework, including endpoint security detection and response system. This places the technology controls in right order and ahead of the traditional management framework. Enriching the context with further information on software upgrade update policy of the device operating systems can take us directly to the decision point, and to an extent, improve the data for known device beyond the corporate managed fleet to partner and BYOD scenarios. There is also a need to move away from point integrations to a central policy and access control. The value of rich context of data and access control decision is better leveraged with central control plane. In a recent attack on FireEye systems, an elite group took advantage of a vulnerability to implant malware, which then found its way into the systems of SolarWinds customers when they updated their software. Such occurrences are frequent, and when they do happen, with a centralized approach to security controls, organizations can take quick decisions to tackle such adversaries, discover vulnerabilities, and apply automatic mitigating controls for access to all systems. All of this information equips us with necessary data for posing a contextual response, and knowing the exact challenge for the incoming access request. The size or magnitude of challenge depends upon the level of resistance that is applicable in accordance with the business criticality of the applications and nature of access request vis-a-vis the

current user role. Let's look at the development curve and possible architecture solution to integrate all of these components. Zero Trust: Maturity curve and reference architecture Figure 1: Zero Trust maturity curve Starting from stage zero, we have categorized the journey into four stages. First one was mostly perimeter focused with implicit trust, and fragmented identity, where most data was still on active directory on premise; there was little cloud integration and passwords were everywhere. However, with maturity, we witness single sign on across employees contractors, and partners, supported through modern multi-factor authentication, push authentication, whose policies are mostly unified across applications. Hence, over the journey, certain organizations have a bit more of a control point for authentication and authorization, thus a stepping stone of context build towards Zero Trust. Since the year 2019 and 2020, this journey has been through contextual access, automation and orchestration with identity lifecycle management, where the access policies are not fixed based on any particular resource, but the context of the user and the devices. The next step will be how organizations will deploy different kinds of authentication factors for different user groups based on the level of resistance that the incoming request faces. This also is the stage where we often see organizations really starting to pay more attention to APIs, especially with API access management via access tokens. With the disruption caused by COVID-19 and the increase in remote workforce, organizations will have to move toward risk-based access and access policies. This is termed as adaptive workforce in Figure 1. A Zero Trust organization will have to build the context and develop continuous and adaptive authentication, authorization, device security state, resource criticality, application type and network information as part of the key decision making process.   Figure 2: Reference architecture for Zero Trust In Figure 2, we can see that the identity is no longer only about the user; it is also about the device. Figure 2 is a vendor-agnostic reference architecture /framework providing an idea of basic building blocks for zero trust. Zero trust is not about any particular tool, it is about an integrated approach that combines people, process and technology to combat modern threats. The devices and users that an organization recognizes by having the right context is the starting point. Rest of the context can also be provided by other systems. For instance, SSO IDP system can provide time, context of the users and devices associated with the requested access method. Further, the network context can provide inventory of the locations including remote versus on-premises. Then comes the application context, method and type of access being requested. From user context perspective, it is important to draw as much details possible about user's identity for verification. One of the key things to draw inference is the ability to understand whether the request is coming from a compromised user or bot. For example, integration of email security gateways with authentication system allows us to take advantage of the context of user -- type, identity, location, resource and possibilities of phishing attacks or email attacks on the user. From a device context perspective, information available from device posturing and location brings a wealth of contextual data for decision making. From a network context perspective, most organizations are equipped with many tools. For example, existing network edge appliances like load balancers, proxies can provide great context about resource and nature of access. When all the contexts are integrated with identity and device information,

an informed decision can be taken before granting access to the resources. The resource type and access methods play a key role in the architecture. If it's an on premise application that is relying on error-based authentication or using Kerberos tickets, local certificates, we can enforce control through an access gateway and based on the Zero Trust framework to decide the best course for the incoming request. And, if it's a modern cloud application that uses a similar method or identity provider, we can federate based on successful metadata challenge. Similarly, the concept can be applied to any other type of resource, whether it is LDAP or radius based access, SSH, RDP connections or infrastructure components. Next steps are about controlling access to the APIs through the same framework. Organizations should look beyond API gateway to authentication tokens and role definitions for respective APIs. The architecture is similar to NIST Cybersecurity protect framework, however the cycle of total defense is incomplete without emphasis on detect and response strategies. With all the context information, authorization information, rich identity context as an input to SIEM, analytics and store platforms for correlation, analytics and orchestration, we have the outputs for taking informed decisions. Despite compelling integrations available for intelligence and analytics, it is often overlooked. Platforms like Demisto, CyCognito, Siemplify can be integrated into the context decision point. Dynamic user group changes similar to the concept of quarantine can be applied till the incoming request is cleared of any suspicion. The journey to Zero Trust The Zero Trust reference architecture is a vendor-agnostic high-level framework that provides guidance on where and how to leverage different solution building blocks. From a technology perspective, three fundamental principles or properties would be useful when an organization embarks on a journey of Zero Trust. Firstly, an organization should take stock of their current inventory for the potential Zero Trust solution and then evaluate what could be reused from the existing stack. Secondly, what are the gaps that could exist after considering re-use. Finally, what products/technology currently exist in the market to fulfil those gaps. The output of this exercise will determine the properties that can measure the tool or the vendor for a successful solution. Zero Trust is not a single product or solution; it is a combination of people, process and technology applied with the right context considering involved business risks. Begin your Zero Trust journey Schedule a discussion with our experts to understand how we can help you become a Zero Trust organization. Contact us @ souvik.khamaru@wipro.com Souvik Khamaru Cybersecurity and Risk Services practice partner Wipro Souvik Khamaru is Cybersecurity and Risk Services practice partner for UK and EU at Wipro. He is responsible for cybersecurity practice development, leading the GTM for the region, evangelizing and building cybersecurity solution offerings and value propositions. He also actively participates in client events and meetings to share current state of cybersecurity, industry trends and challenges faced by organizations. Souvik can be reached at souvik.khamaru@wipro.com Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients

are expecting healthcare to be delivered as a service.
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How to Keep Your Virtual Desktop Environment Secure

----- Arcticle source ----- https://www.wipro.com/cybersecurity/how-to-keep-your-virtual-desktop-environment-secure/ ----- About the Author Contact Wipro Please fill the required details to access the content How to Keep Your Virtual Desktop Environment Secure April | 2021 Due to the COVID-19 pandemic, most of the organizations have their employees operating from home. To reduce the impact of the pandemic on business, to improve operational resilience, and to increase productivity of employees while working from home, organizations started adopting Virtual Desktop Infrastructure. Virtual desktop infrastructure (VDI) and cloud computing are the new generation of end user computing. VDI allows users to remotely access Virtual Machine (VM) hosted with specific operating system through any device and from any location by using VDI agent. Remote operations will not go away even after this pandemic. Organizations have seen the opportunity to improve Employee Value Proposition and reduce real estate cost in the new operating model. Therefore, VDI and remote operations will continue to grow. Components of VDI Main components of VDI are Figure 1: Virtual Desktop Infrastructure The key advantages of VDI infrastructure is that the users can access the organization's data only through virtualized desktop and the VDI is managed through central servers. Centralized image deployment, policy management and patch management, ease of portability, and the flexibility for users to access their desktops from anywhere, are the key differentiators of virtual environment vs physical environment. Risks in VDI Though VDI offers different level of security than the traditional physical server, VDI environment is not free from threats and risks. VDI environment exposes different kinds of risks. Some of the VDI risks are: To avoid such risks, VDI environment controls should be deployed starting from initial planning phase of the VDI environment. A phased approach to secure VDI NIST 800-125 proposes implementation of virtualization controls from Initiation to Disposition phase for secure VDI solutions. Figure 2: Secure Virtualization Planning and Deployment Phase 1: Initiation This phase is a key step in virtualization control framework. The key thing to be developed as part of initiation control is a Security policy that defines what form of virtualization is allowed, which application to be allowed to run in VM, and how data will be accessed in VMs. The task will be to check all other security policies that might impact virtualization policies. Periodic updates to the security policy is vital to keep up with emerging technologies and standards. Phase 2: Planning and design This phase includes major considerations like Architecture, Authentication, Cryptography. Architecture includes selection of virtualization software, storage controls, network topology, bandwidth calculation and availability. Authentication includes separate access controls for each layer of the virtualization environment. Cryptography includes selecting the encryption and integrity protection solutions meeting the compliance requirements. Security incident response

plan should be updated to incorporate virtualization incidents. Phase 3: Implementation Implementation phase includes testing of prototype. Evaluation of the VM includes VM conversion, authentication, monitoring of events, connectivity, and applications performance in VM. Final decision should be sought after vulnerability assessment is performed. All the components should be updated with latest security patches. Phase 4: Operations and maintenance It is a very important step for maintaining virtualization security continuously. Administration access should be reviewed periodically, checking for patches and relevant software upgrades should be done by agreed timelines, time synchronization should be checked to ensure logs are relevant in correlation. Access control review and RBAC (Role base access controls) policies should be updated to keep up with rapid technology changes. Phase 5: Disposition Before disposing any VMs, organization should ensure to wipe any sensitive data. Performing a periodic risk assessment for virtualization environment is necessary to avoid security breaches, revenue loss, business impact etc. An effective VDI risk assessment process VDI risk assessment process should cover people, process and technology controls used to support the cybersecurity requirements of an organization's VDI infrastructure. Risk assessment process will leverage the NIST recommended methodologies and controls (NIST 800-30, NIST 800-53, NIST 800-125) relevant to End User Computing (EUC) Virtual Workspace System (VWS) environment. The various stages, key inputs, tasks and outputs of the assessment process are given in Figure 3. Figure 3: Risk assessment process Table 1 includes the indicative examples of risks and controls in the context of VDI. Focus Area NIST 800-53 Control Family Key Risk Key Controls Process Configuration Management Misconfiguration resulting in inadequate capacity causing availability issues Configuration management policy and procedures, access control, configuration change control Technology Configuration Management Misconfigured systems could be exploited by malicious players to cause security breaches Baseline configuration and configuration change control People Awareness and Training Standards not followed hence allowed insecure application to get provisioned Security awareness and training, policy and procedures Process Maintenance Missing some servers on manual check of server reboot will impact business System maintenance policy and procedures Table 1: Indicative examples of risks and controls in context of VDI Risk register is a guide used by the organization to understand the risks, likelihood, and impact with risk rating. The risk recommendation is evaluated by the risk owner and the same is updated in the risk register. Sample of VDI related entry in risk register is depicted in Table 2. Asset Asset Criticality Rating Threat Vulnerability Control Business Impact Likelihood Risk Rating Risk Risk Recommendation VWS High Hacker introducing malware Insecure system configurations Standard image guidelines with hardening High Medium High Security breach resulting in unavailability of systems Baseline configuration and configuration change control VWS High System failure Mis-provisioned VMs to critical user Training for administrators High Medium High Critical user has incorrect VMs resulting in business impact Security awareness and training, policy and procedures Table 2: Sample of VDI related entry in risk register Toward a secure environment Virtual Desktop Infrastructure is not a new environment or a new technology. Since it has become the standard for many organizations' desktop infrastructure, managing the risks and threats

to the VDI landscape is very critical for business continuity. Planning helps to ensure that the virtual environment is as secure as possible and in compliance with all relevant policies and applicable regulations. Periodic risk assessment to the VDI environment, maintaining the controls, and a firm action plan to mitigate or reduce the impact of the risks identified is very important to have a secure VDI environment. Wipro can enable a secure VDI landscape for you through a comprehensive approach. Our consultants leverage industry-best frameworks and perform in-depth technology assessments. For details, connect with us at cybersecurity.services@wipro.com Kalpana Ramamurthy Principle Consultant – Presales, Risk & Compliance, Wipro Kalpana has over 19 years' experience in IT and cybersecurity across a wide range of global roles. She is an engineering graduate, holding industry certifications like CISA, PCI-DSS, PIMS, Azure, ColorToken, MCITP, ITIL. She has also contributed to various University forums for discussions on cybersecurity.

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Overcoming Security and Compliance Challenges in a Hybrid/Multi-Cloud Environment

----- Arcticle source ----- https://www.wipro.com/cybersecurity/overcoming-security-and-compliance-challenges-in-a-hybrid-multi-cloud-environment/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Overcoming Security and Compliance Challenges in a Hybrid/Multi-Cloud Environment Key Takeaways from CISO Panel Discussion April | 2021 Cloud adoption & common security challenges Industries are adopting cloud for various benefits. Some of the key driving factors are: Cloud benefits are being realized everywhere today. However, it also brings some security challenges to enterprises: they have to protect their "crown jewels" data from various sophisticated advanced threats. As per an old school of thought, cloud is insecure, and on-premise-centric solutions are cheaper. This is far from the truth: comprehensive threat visibility and protection to the hybrid/multi-cloud assets and continuous compliance validations can be achieved through unified and integrated security solutions that are designed for public cloud. Many organizations have adopted a cloud-first strategy and try to eliminate on-premise footprint for their applications and infrastructure. However, many legacy applications demand on premise setup due to dependencies, and add complexity and inefficiencies through multiple security solutions for hybrid environments. Highly regulated industries like Banking/Insurance meet compliances likes PCI & GDPR. Their cloud service providers (CSPs) natively support the highest privacy controls and the ability to continuously assess their cloud workloads and applications against compliance standards, and alert the enterprises for the gaps with recommendations. Some countries' (like UAE) laws mandate to keep sensitive data within their regions, and CSPs like Azure provide Geo locations to keep the data within their boundaries to achieve compliance. One of the key concerns most enterprises have today is

"Availability" of their cloud services. In the initial days of cloud adoption, confidentiality and compliance/governance were primary concerns, but with the CSPs' advancing maturity over time, they are no longer a cause of concern. However, now, enterprises are heavily dependent on cloud services for their mission and business-critical applications. Visibility to all cloud workload resources is critical to apply security and compliance policies. In a hybrid and multi-cloud environment, bringing all security alerts to a centralized and modern SIEM platform powered with Extended Detection and Response (XDR) helps in effective monitoring, investigation, threat hunting and incidents response. How you can address these challenges Microsoft provides a comprehensive and integrated security and compliance solution for Azure cloud workloads. Its layered security helps in achieving Defense in Depth strategy. Most of these native controls can be extended to hybrid and multi-cloud environments Figure 1 – Microsoft Native controls for intelligent & integrated layered security Securing the cloud data is #1 priority Enterprises have more control when the data resides within the network perimeter. With cloud adoption, data is stored and processed by many 3rd parties like CSPs and SaaS providers. Though certain level of data security and assurance is provided by these 3rd party providers, it is the enterprise's responsibility to ensure adequate data protection controls to maintain confidentiality, integrity and availability. Encryption at all levels is essential to build a persistent data security strategy for the enterprise. While enterprises need to keep their data on premise or with one specific CSP, key management and protection becomes critical. Azure provides a Key Vault service that can be leveraged to a hybrid and multi-cloud environment through Azure Arc, and supports bring your own key (BYOK) and 3rd party HSMs to protect your master keys. There are concerns that CSPs can get access to customer keys. But, there are many controls available to limit the access to the keys and get visibility to who has accessed the keys for compliance perspective. Enterprises dealing with most sensitive data that demands strictest protection requirements can leverage Microsoft Double key encryption (DKE). In this approach, customer holds one key with full control and Microsoft stores one key. Customers who move their workloads and data to Azure cloud get greater confidence as Microsoft provides a holistic solution to secure organization's sensitive data. Figure 2: Integrated data security controls from Microsoft IAM strategy is key to success Identity and Access Management plays an important role in protecting enterprise users and the applications that are deployed on premises and in cloud. Enterprises leverage CSPs and 3rd party IAM vendor solutions to provide identity lifecycle and access functions for regular, privilege users and system accounts. IAM availability is critical and higher availability assurance from providers like Azure AD (99.99%) ensures business continuity. When enterprises are dealing with multi-cloud environments, privilege identity and access are given highest priority to ensure least privilege principles are in-place. A centralized IAM solution to manage identity and access in a hybrid and multi-cloud environment helps to reduce the complexity and improve the efficiencies. To mitigate privilege escalation attacks, enterprises need to continuously monitor the privilege users' activities, their role/permission utilization, and build a process to remove unused and excessive privileges frequently. Since COVID-19, enterprises are witnessing increased phishing and identity-centric attacks. Risk-aware authentication with real-time protection is essential these days for users connecting through internet.

Most enterprises leverage Azure AD Identity Protection that detects real-time user and session risks and provides various mitigation methods like blocking access or enforcing password reset etc. Microsoft Azure AD helps organizations to adopt single identity approach to provide unified IAM policies across hybrid and multi-cloud environments for B2E/B2B/B2C identities. Azure AD conditional access with identity protection ensures zero trust access for users who access enterprise applications. Figure 3: Single identity strategy for hybrid and multi-cloud Active Directory has been the heart of identity trust for most organizations until now. This is a two-decade old technology designed for on-premise network and systems, but being extended to support cloud workloads. Most of the attacks are targeted to gain control on the enterprise Active directory. Reducing the dependency on Active Directory is one quick ways of reducing the risk. For example, adopting cloud-based authentications for workstations in the form of "cloud joined" devices with strong authentication will greatly reduce the AD exposure to identity related risks. Decentralized passwords through password-less adoption can also reduce various password-related attacks towards Active Directory. Also, cloud workloads that require active directory can leverage CSP managed services like Azure AD Domain Service for reduced complexity and increased security. Unified cloud security posture management and workload protection In a single or multi-cloud environment, continuously monitoring the security and compliance posture, and rapidly detecting and responding to the threats are critical to success. Cloud security posture management (CSPM) solutions help to achieve this. CSPs Native Cloud Security solutions like Azure Security Center offers unified and integrated CSPM functions for hybrid and multi-cloud environments. Securing the workloads, VMs, containers and server-less functions are also critical and cloud workload protection platforms (CWPP) help to achieve this. Azure Defenders provide an integrated security to cover all azure workloads and can be extended to hybrid and multi-cloud environments. Multiple non-CSP/3rd party solutions are also available that provide both CSPM and CWPP for multi-cloud environments. In conclusion To summarize, common security challenges in a hybrid and multi-cloud environments are: Enterprises can mitigate these challenges by: Wipro and Microsoft, together, bring a strong portfolio of solutions and services to help you overcome security and compliance challenges in a hybrid/multi-cloud environment. For details, connect with us here. Prakash Narayanamoorthy Partner & Microsoft Security Principal Architect at Wipro Prakash has over 19 years of experience in the Identity and Security domain, helping multiple large global organizations with their cloud security and compliance transformation. He was one of the presenters from Wipro at this CISOs panel event. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Realigning Security Paradigm for Successful Devsecops in the Evolving Technology Landscape

Realigning Security Testing Strategy for Successful DevSecOps in the Evolving Technology Landscape May | 2021 Change has been a constant catalyst contributing towards the evolution of information technology. Market trends have been the centrifugal force driving exploitation of technology to meet growing business needs and future innovations. The change to technology landscape arise from two different stimulus, namely technology creation and technology diffusion. The former is the combination of fundamental capabilities enabled by advances in foundational science and engineering research, yielding to a new functionality. The latter is the adoption of these technologies in new products and services and their emergence in new markets over time. Historically, IT landscape has evolved in phases, namely a) Development Process b) Application Architecture c) Deployment Environment and d) Infrastructure Hosting. Phase 1 of development process witnessed waterfall model where priority was given to development activities as market demand was for a fit-for-use product, thus security was of least priority or checkbox item. This phase had a siloed approach with the development, quality assurance, and operations teams functioning in a disjointed manner. Not to mention, security teams weren't taken seriously considering the development priorities. Proactive defect fix was a painful activity as testing consideration were much later in the process. Finally, after 45 years of inadequacy, emerged agile manifesto, which led to Phase 2 of the evolutionary cycle for development process. Agile was a transformative model, which was the proponent of adaptive planning, early delivery, and continuous improvement, and encouraged flexible response to change. Essentially, it was an answer to growing business demand of speeding software development processes by embracing smaller release cycles. Now software development moved from 18-month to 2-3 months cycle where customer had a working product however, security was viewed a technology prerogative. Phase 2 translated to addressing immediate business need of going to market on time. With the increasing agility from development and testing team, operations team experienced bottleneck leading to Phase 3 of evolution. The remedy to common hold up was introducing agile process to operations and infrastructure, resulting in DevOps thus marrying development and operations activities during development process. Automated infrastructure provisioning, enabled developer to move significantly faster, rooting the application development process in an automated toolchain. Security was blamed for stalling the pace of development considering it had become a gating criterion. And until security was collaborating as part of development and operation, it would

remain a bottleneck, resulting in DevSecOps. Figure 1: Changing security precedence with evolution of IT industry On the long road to well designed and secure applications, numbers of tools and technologies have emerged. Static application security testing (SAST) tools enabled detecting security vulnerabilities within Code, detecting defect early in root to live. Dynamic application security testing (DAST) tools enabled simulating hacker vista before code goes live. Then, IAST tools provided instrumentation on analyzing running applications. Finally, RASP tools enabled detection of live attack and self-heal with necessary measures. Application Security Testing essentially aims to deliver secure applications by adopting a proactive and reactive approach during development and operations. Let us discuss what approach and tooling are still relevant and will suit your needs in the development/testing process considering the constant change. Reality of point-in-time snapshot Traditionally, legacy application developed during the waterfall era provided snapshot view of security posture. Before the advent of SAST, pen-testing was considered the holistic approach to vet security postures, however, the challenge was it just provided a point-in-time view of security. Followed by SAST and DAST, which covered, both inside-out and outside-in view. However, it again only provided a point-in-time snapshot of security posture. These approaches worked well for waterfall/agile as application security landscape was playing catch-up. However, with DevSecOps coming into play, the goals has evolved from point-in-time snapshot to continuous feedback in the areas of code level vulnerabilities, hacker vista simulation, and maximizing on automation. Further amplifying the problem, the SAST and DAST tools come with a downside of reporting false positives, which leads to increased dependency on security experts to exploit proper usage and invites manual effort to address accuracy of findings. Possibility of continuous feedback With the new architectural style of software development, software started getting consolidated as small services. With increasing adoption of faster development cycles and changing business needs, microservices are gaining traction in the development world. This has helped organizations to get into the market faster and serve the customer with minimum capabilities, which are modified over time to meet the full demand and work on full scale. With microservices based deployment models, it becomes mandatory to verify the code and check for vulnerabilities with the speed of deployment cycle. Most organizations when they make the move to microservices, opt for DevOps frequent-release cycle. As a result, instead of releases occurring once or twice a year, they can happen once or twice a week—or multiple times a day. This has led to an increase in adoption of tools, which can automate and help to reduce the testing burden for security/developer teams. Moreover, microservices produces small chunks of working code in production, giving a unique and restricted functionality to the application. This creates a smaller attack surface for testing consideration and does not require entire set of services. It gives an accurate information on vulnerabilities developers can focus on rather than scrolling the entire gamut of things in a monolithic application development. Security tooling empowered with integration onto CI/CD achieved the goals of continuous feedback in the areas of code level vulnerabilities, hacker vista simulation and maximize on automation. However, given a firm that has a mix architecture landscape i.e. both monolith and microservice or rather firms migrating from monolithic to microservices and are stuck in between, wherein applications are built on

both traditional and modern architecture. This brings us to the question, "Are these approaches and tools still relevant in the DevSecOps evolutionary paradigm?" or rather "How to leverage the existing approaches and tools to achieve relevance in the DevSecOps evolutionary scale?" Winner combo for application security testing Vendors operating in security domain float varying combination of enterprise tools. Vendor C offers SAST +IAST, a combination of application security testing with a potential to replace DAST (SAST+ DAST). Vendors are leveraging ML algorithms to deliver better results among SAST+IAST findings. IAST adoption requires a mature outlook to application security and is unfit for the traditional way of application development, where the entire application is developed and the CI/CD pipeline is absent, the use of IAST is negligible. Organizations where developers have strong security background are skipping SAST/DAST and going straight to IAST in some selected cases. SAST insights into code level vulnerability providing provides inside-out view desired just before deploying onto QA environment. DAST comes handy to highlight outside-in view, which is desired just before moving code to production. Early testing was the ideal theme, which promoted surfacing DAST issues because it surfaces development issues early within the SDLC before it starts compounding. DAST tools, moreover, unveils vulnerabilities missed by SAST tools. Thus, SAST+DAST is still foolproof application security testing combo. Figure 2 provides a matrix of testing tools that align with different development architectures. Monolithic + Micro services SAST Best fit Best fit Best fit DAST Best fit Good fit Adaptable IAST NA Best fit Adaptable SAST + DAST Best fit Moderate fit Potential fit SAST + IAST NA Good fit Adaptable SAST+DAST +IAST Adaptable Good fit Best fit Figure 2: AST tooling combo for various development architectures Some vendors are offering IAST along with DAST purchase, thus not selling independent IAST. This might demonstrate lower confidence in the IAST solution considering the underlying technology mechanism, which is more of an evolved-DAST, rather than an IAST. There are other vendors who offer IAST with minimal technology (3-4 language) support, as they didn't find momentum in the solution during the launch. Although IAST vendors have experienced less traction in the past, as per Gartner, there has been 40% growth in inquiry volume since 2019, which demonstrates the curiosity in the product with the change in market mood to DevSecOps adoption. Essentially, customers are seeking AST capabilities which can bring together best of both SAST and DAST. DAST cannot scale rapidly similar to IAST to achieve continuous testing. Thus, DAST will be viable option where frequency of test is not continuous, and is mostly point in time even with desirable shift right and left integration into development pipeline. Moreover, some DAST tools are capable of leveraging QA automation scripts or recording their own test, reducing the tester's effort. Some of the DAST tools are providing integration for containerization as well. In addition, many strong DAST tool vendors do not have SAST offering, creating a competitive disadvantage. Conclusion With all types of IAST tooling options in the market, there is an ever-growing debate over the best ones to be procured and deployed. The equally varied development tools curated for specific requirements and solutions aggravates this dilemma of choosing an application security toolset. Based on our analysis from vendor datasheets and internal proof of concept, it's suggested that current offerings in IAST are good for firms, which are heavy on microservices and require continuous security testing

during development cycle. In addition, it's advised to use DAST+SAST combo for monolith-based applications until the firm completely moves to micro services-based architecture. IAST has the capability to replace DAST in the near future, where micro services-based architecture rules the space. However, for now, SAST+DAST can be more helpful and SAST+DAST+IAST complement each other. For more details on improving security of your software, connect with us at cybersecurity.services@wipro.com Allam Vinodh Kumar Practice Partner, Cybersecurity & Risk Services, Wipro A globally recognized Cybersecurity Assurance Evangelist, Vinodh has more than 20 years of experience building, developing, and securing web-based software systems. As a Practice Partner for Cybersecurity & Risk Services at Wipro, his technology teams launch and expand critical application security initiatives and build secure applications and infrastructures, integrating security throughout the development process. Arun Pillai DevSecOps Architect, Cybersecurity & Risk Services, Wipro Arun champions DevSecOps charter for Security Assurance Service within Wipro's Cybersecurity and Risk Services division. He has over 14 years of experience with specialization in the security domain. He has worked and managed projects related to Security Architecture, Secure SDLC, Threat Modelling, Secure Coding, Penetration Testing and Security Consulting. Arun is an ISC2 Certified Information Systems Security Professional (CISSP) and ISACA's Certified in Risk and Information Systems Control (CRISC). He holds a Master's degree in Information Technology from Sikkim Manipal University of Science & Technology and is a TOGAF certified Enterprise Architect from TheOpenGroup.   Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Application Security Framework

----- Arcticle source ----- https://www.wipro.com/cybersecurity/application-security-framework/ ----- About the author (s) Related Articles Contact Wipro Please fill the required details to access the content Application Security Framework A Holistic Approach to Application Security and Risk Management June | 2021 Introduction This document details an enterprise level strategy for approaching security assessment to enable assurance regarding the achievement of specific security objectives. The security assessment framework applies across all assessment methods, namely examination, interviewing and testing. Testing is the process of exercising one or more assessment objects under specific conditions to compare actual and expected behaviors. Examination includes checking, inspecting, reviewing, observing, studying, or analyzing one or more assessment objects to facilitate understanding, achieve clarity, or obtain evidence. Interviewing involves conducting discussions with individuals or groups within an

organization to facilitate understanding, bring clarity, or identify the location of an evidence. The underlying significance of security assessments depend on the level of maturity an organization practices. Assessment results are used to determine security control effectiveness over time. In the absence of an overarching strategy to approach security assessment, organizations adopt ready to use methodologies and techniques to cater to ongoing security assessment tasks. This can create gaps, as the approach is not aligned to the business requirements and decision-making processes of organizations. Objectives and principles A Security Testing Framework, developed for Wipro's internal consumption, achieves the following objectives: Security objectives provide an effective basis for evaluating the capabilities and performance of the security testing framework, along with the solutions and the supporting process used to deliver security testing. Each objective defines a business or technical requirement that is derived based on an organization's policy, directives or a formal position that can be measured either quantitatively or qualitatively. A security objective that is supported by a risk-based baseline provides a deterministic guideline to select a testing reference model. Principle Nuts and bolts of the AppSec framework The Application Security Testing Framework derives its guiding principles from NIST RMF and the Cyber Security Framework. The framework's stratum consists of a classification layer, baseline layer, and a control layer, which enable effective utilization of the existing testing methodology and approach adopted by Wipro. Figure 1: The Application Security Testing Framework The Control layer provides the core engine for the application security testing framework. It offfers an industry specific (HIPAA, PCI, ICFR) basis, with a clear structure of cyber security management processes, that are powered by 18 control areas. The Control layers bring in the taxonomy for each function, defining multiple categories and subcategories which an organization can pick and mix, to put together a set of items that correspond to its individual risks, requirements, and expected outcomes. For example, Asset Management within the Identify function is ID.AM, and Response Planning within the Response function is RS.RP. Each category has further subcategories that correspond to appropriate activities. For example, the subcategory of Detection processes are tested under the Detection Processes category and Detect function is identified as DE.DP-3 Listed below are the 18 different controls that fall under NIST SP 800-53. These controls are divided according to their impact scale – low, moderate, and high. Let's apply the controls to web application security, by analyzing five different functions namely Identify, Protect, Detect, Respond, and Recover in the context of an organization's existing and planned security activities and risk management processes. Organizations must select categories and sub categories that are relevant to specific needs, and apply them to their security policies in order to ensure sufficient coverage w.r.t the required cyber security activities. Identify: Protect: Detect: Respond: Recover: The Baseline layer provides the foundation for deterministic security requirements that cater to an organization's vision, mission, and near and long term goals. This layer imbibes the organization's policies, standards, and procedures that are developed in-line with its risk appetite, as this module runs as a central theme for security requirements. Each security testing objective determines its definition from a discrete business or technical requirement that is derived from a policy, directive, or a formally stated position of the

organization. For example, "A cryptography policy states that application traffic needs to be encrypted in transit and at rest." The framework determines its testing and remediation guidelines basis the associate standards and procedures for cryptography policies. For instance, for an asset which has data classification of strictly confidential and hosted external facing, it's mandatory to implement encryption both in transit and at rest. However, for an asset with data classification that is for official use only and hosted as external facing, it's mandatory to implement encryption in transit and but encryption at rest is good to have. Thus the baseline layer is leveraged as the basis or justification factor for supporting the security requirement to perform the required test procedures as part of the security testing engagement. The Classification layer receives inputs to understand the scope, purpose, and approach supported by the guiding principles. This layer determines the security solution portfolio, categorizing the projects into enterprise adhered collections for test procedure selection and suggested risk treatment in the course of security testing. Classification Module Description Module Name Description Strategic and Enterprise level (Tier 1) Provides a high-level architectural definition to describe logical areas to security testing services and capabilities that involve maintenance development/activities, mergers and acquisitions, or compliance to regulatory requirements and domestic and/or international legislation. This involves enterprise wide testing efforts to measure the security posture of applications and infrastructure at a point in time and provide support to strategic initiatives/roll-outs and security direction. For example, the IDAM program to enable BYOD (e.g. MDM products) in multiple business functions that reflect potential organization changes. Results from penetration testing would identify the security posture change of the modified component, which would be compared to the existing security posture in order to determine the effects of such changes. Business and Process level (Tier 2) Provides the architectural basis to define business specific, security testing service and capability that involves ongoing development activities for Operational Systems (MyWipro, HR, Finances, etc.), and vendor solutions supporting daily operations, business and support functions. This involves business wide testing efforts to measure the security posture of application and infrastructure supporting business functions, suppliers supporting the respective business processes on a periodic and on going basis. For example, security testing will be conducted on a regular basis on various infrastructure and applications supporting Wipro business functions such as the MyWipro portal. The testing will be unannounced and will be used to determine the security health of the fleet. The supplier/support function is then required to remediate any identified issues in the set timeframes. IRMC will track remediation activities after testing has occurred. Tactical , Solution and Project level (Tier 3) Provides the architectural definition to define project and technology security testing service and capability that involves new development/maintenance activities for Wipro external/internal customer projects or compliance to regulatory requirements as per the business rule book definition for the end customer. This involves supporting security testing for Wipro's internal/external customer operating from Wipro's ODC setups to identify security vulnerabilities in new or existing applications and infrastructure before changes are released into the production environment. For example, a Wipro external customer project team wants to deploy an internet facing system enhancement or application.

Before the project goes "live", security testing will be undertaken to identify any potential security exposures, and remediated thereafter before deployment into production.   In accordance with the Application Development and Maintenance Policy (ADM 12.04), all Wipro operational systems, systems under development, and systems undergoing major changes are in the scope for Certification and Accreditation (C&A), whether they are hosted in Wipro's internal infrastructure or hosted by external service providers. For the purpose of this document, we have categorized the systems into the following categories: The classification layer embeds a risk-based testing approach as part of the overall C&A process performed by CRS. This approach has two key elements- i) Selection of the information security test procedures and supporting documents required to certify the system and ii) Assessment of residual risks from an information security perspective to make an informed decision in order to authorize a system for operation. The framework requires focus on information security risks that impact the confidentiality, integrity, and availability of the information system in the scope of engagement. While tailoring the procedures to certify the system, various criteria are considered. These include the following risk factors: Based on these factors and the category of the system, the approach is tailored on risk and is focused on assessing vulnerabilities at several layers including, operating system, database, and application, where ever applicable. In addition to performing tests at each of the applicable layers based on risk factors and category of system, the C&A team also validates the following: Conclusion The Application Security Framework, provides a holistic approach to information security and risk management by providing organizations with the breadth and depth of verifying/validating security controls that are necessary to strengthen information systems and the associated environments. In the digital era, where organizations are still embarking on completely moving to an agile vs DevOps journey, a framework of similar shape and form caters to the workload, leveraging both waterfall/agile/DevSecOps. The Application Security framework is the first steps towards a "Building It Right" strategy coupled with "Continuous Monitoring", to empower leaders, making ongoing risk-based decisions that affect mission critical assets. The pursuit we aim to resolve is to combine standard based policies that are tailored to business and compliance requirements with enterprise best practices derived for industry specific frameworks, and superimposed with a risk management framework, to deliver effective security testing guidelines that produce repeatable results. For more information on the application security framework and what it can deliver to your organization, connect with us. Arun Pillai DevSecOps Architect, Cybersecurity & Risk Services, Wipro Arun champions DevSecOps charter for Security Assurance Service within Wipro's Cybersecurity and Risk Services division. He has over 15 years of experience with specialization in the security domain. He has worked and managed projects related to Security Architecture, Secure SDLC, Threat Modelling, Secure Coding, Penetration Testing and Security Consulting. Arun is an ISC2 Certified Information Systems Security Professional (CISSP) and ISACA's Certified in Risk and Information Systems Control (CRISC). He holds a Master's degree in Information Technology from Sikkim Manipal University of Science & Technology and is a TOGAF certified Enterprise Architect from TheOpenGroup. Allam Vinodh Kumar Practice Partner, Cybersecurity & Risk Services, Wipro A globally recognized Cybersecurity Assurance Evangelist,

Vinodh has more than 20 years of experience building, developing, and securing web-based software systems. As a Practice Partner for Cybersecurity & Risk Services at Wipro, his technology teams launch and expand critical application security initiatives and build secure applications and infrastructures, integrating security throughout the development process. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. ======================

How to Make Artificial Intelligence Core to Your Cybersecurity Strategy

----- Arcticle source ----- https://www.wipro.com/cybersecurity/how-to-make-artificial-intelligence-core-to-your-cybersecurity-strategy/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content How to Make Artificial Intelligence Core to Your Cybersecurity Strategy June | 2021 In the post COVID-19 world, businesses are looking for ways to be more agile and reduce latency driven by traditional ways of working. This is not only reflected in their back-office processes but also in their customer facing ones. They are increasingly relying on hyper automation and artificial intelligence (AI) to solve complex business problems. Cybersecurity and risk programs should be part of this AI-led approach. With the need to reduce operating cost across enterprises, AI has become the hallmark for driving the 3Es – Efficiency, Economics and Experience. Understanding what the AI technologies can do for you, how you can get past the adoption hurdles, and how to achieve non-linear growth in speed, scale and agility are some of the biggest challenges we face when considering the use of AI in cybersecurity and risk. In addition, use of AI solutions should not be interpreted as "replacing a team" but instead, complementing your team to increase productivity. As such, the use of AI should be core to your cybersecurity strategy. Common AI methods applied across cyber There are several techniques that are commonly used in AI such as deep learning neural networks, decision trees, Monte Carlo methods, clustering, ranking, linear classifiers (Fisher's method, Support Vector Machine), Bayesian Statistical Inference, Markov chain, Linguistics, and Bias. These are broadly applied across seven methods, described below and in Figure 1: Figure 1: Common AI methods for cyber and their impact Applicability of AI across cyber According to Wipro's State of Cybersecurity Report 2020, 49% of the cybersecurity patent filings were in the AI/ML and data science space. The report also predicted that over a 12-to-16 month period, AI/ML and SOAR (security orchestration, automation and response) will become mainstream to cybersecurity automation. The application of

artificial intelligence should be explored across all facets of cybersecurity from the perspective of process efficiency and business outcomes. This requires reimagining the existing business processes to embrace a robust and effective approach. The matrix in Figure 2 highlights key cyber domains and how they map against AI methods. How can Wipro help you in your cyber-AI journey? Wipro's Cybersecurity and Risk Services partners with the Wipro HOLMES™ team comprising data scientists, stewards, and engineers skilled in AI techniques. Combined with Wipro's rich technology heritage, we can provide our customers a holistic AI-enabled business transformation service. Figure 3: Holistic AI-enabled transformation Considering the factors that make AI enablement a success, Wipro has created a delivery framework for AI-enabled transformation in cyber: Figure 4: Wipro's delivery framework Wipro HOLMES™, Wipro's AI and automation platform, is the bridge between foundational AI algorithm builders and applied AI. The HOLMES platform handles all your needs from building, publishing, metering, governance to monetization of heterogenous AI solutions. It can act as a standalone platform to provide solutions you need and act as a complementary platform with AI capabilities. This flexibility provides Wipro the ability to work with its customers and provide the same set of capabilities on the customers' infrastructure and platforms Figure 5: Wipro HOLMES framework Wipro has been recognized for its holistic AI-enabled transformation solutions: If you are interested in knowing how Wipro is helping our clients achieve their vision of a transformed AI-powered cybersecurity system, connect with us at cybersecurity.services@wipro.com. Saugat Sindhu Global Head - Strategy & Risk Practice - Cybersecurity & Risk Services, Wipro Saugat is currently leading a team of diverse professionals that provides clients business advisory, management consulting, technology enablement & intelligent automation-based transformation services. He leverages Wipro's HOLMES ecosystem along with alliance partnerships to bring forth cyber and risk process enhancement strategy and solutions that solve business problems of economics, efficiency, and experience. Supported by: Partho Pratim Das Group Head, HOLMES   Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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How Media & Entertainment Industry Can Protect Against Ransomware

----- Arcticle source ----- https://www.wipro.com/cybersecurity/how-media-entertainment-industry-can-protect-against-ransomware/ ----- About The

How Media and Entertainment Industry Can Protect Against Ransomware June | 2021 In recent times, the media & entertainment industry has become the prime target for ransomware. Large organizations such as Disney and Sony as well as A-list celebrities such as Elton John and Lady Gaga, have faced a cybersecurity attack. The complexity and number of these ransomware attacks are growing by the day. A survey by Sophos which found that the media & entertainment industry suffered the most with nearly 60% of organizations reporting ransomware attack. Most of the attacks are centered around social media, which leads to phishing campaigns and opens the door for malware to come inside the network. The cost of remediation of such attacks is exorbitant and often linked to the size of the organization. To address this challenge, Wipro has designed a holistic approach to prevent and remediate ransomware attacks by granular assessment of all the security controls. Multiple actors and security web in media & entertainment industry The most valuable asset for the media & entertainment industry is content. In a bid to match consumer habits and preferences, media & entertainment companies explore many channels. Among them, mobile and streaming devices are leading the steady growth of the digital content. Media & entertainment executives explore several avenues to keep with the explosion in digital content market. They collaborate with mid-sized and smaller network owners and studios, vendors, making the value chain longer. The other factor is increased usage of social media platforms for outreach and publicity. The always-on social media has posed trust issues and challenges for a long time now. Beyond connection and sharing, social media platforms have become gateways for consuming content in various formats. In a survey by Deloitte, 60% of respondents felt that social media companies are responsible for the content people post on their platforms. The security risk factors in the media & entertainment ecosystem have increased manifold with multiple actors at play. Organizations need to integrate all the links in their chain for an effective cybersecurity strategy. Cybercriminals have recognized the opportunities that online platforms and multiple actors in the ecosystem represent for the media & entertainment industry. The cost of remediation is effectively based on the market presence and revenue potential of the organization. Today commodity malware allows hackers to run successful campaigns as it is easier to implement, and may not require a Command & Control (C&C) server to execute. They are easier and cost efficient ways to extort money, by enabling threat actors in enterprise networks using lateral movement, escalation of privileges, exploitation of vulnerabilities, and data exfiltration. Types of ransomware and attack vectors A ransomware is malware that encrypts the victim's files and then demands a ransom be paid to decrypt the files. Leveraging social engineering techniques, by sending phishing emails with a malicious attachment in them, an attacker can gain access to the system after the user has opened the attachment. This process downloads the malware's executable file, installs it, and scans for files on the system to encrypt them. Using drive-by malware or users browsing infected content in a website downloads the malware, which looks attractive for the user. Attackers use Bitcoin to get ransom payment, which allows them to remain anonymous and the transaction to remain untraceable by the authorities. In a typical scenario, no additional action is required by the attacker using any communication channel to retrieve the victim's files.

Certain variants of ransomware do not even require communication to obtain the encryption key for file encryption as they come packaged with a pre-determined public key. Security control measures taken by enterprises today Enterprises today take several steps to mitigate cyber security threats. We underscore here the most prevalent actions taken by media and entertainment companies to thwart such risks. Wipro's framework for ransomware attack management Wipro's Cybersecurity and Risk Service can help you stay ahead of the threats. We take a holistic view of all the security controls that prioritize not only prevention but also minimize risk and control loss. Ecosystem of Security Controls & Ransomware Attack Figure 1 depicts the different phases and mechanisms of compromise. Every security control mentioned in the Figure has a significant role in prevention or propagation of ransomware in the infrastructure, which Wipro has derived based on the MITRE ATT@CK framework. Failure to meet the control efficiency can result in an attack. Media & entertainment enterprises should adopt a framework that maps their journey - before, during, and after production and release. Timely action can help prevent any ransomware from propagating the infrastructure and mandating costly remediation. Wipro provides detailed assessment of maturity for security controls to protect against ransomwares. The output shows heat map of control existence, maturity level & priority-based recommendation to fix the gaps. Reach us at cybersecurity.services@wipro.com for more information and quick discussion on this topic. Angshuman Chattopadhyay Infrastructure Security within Cybersecurity and Risk Services, Wipro Angshuman is the Consulting & Solutions Lead for Infrastructure Security within Cybersecurity and Risk Services at Wipro. He brings extensive experience with over 19 years in IT and cybersecurity across a wide range of global roles. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Identity Management Simplified!

----- Arcticle source ----- https://www.wipro.com/cybersecurity/identity-management-simplified/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Identity Management Simplified! A Quick Walkthrough of an ID Conversion Project for a Bank July | 2021 In the twenty-first century, no matter what industry you are in, it is important to have a secure identity. In banking, specifically, there are genuine threats to an environment that can be easily exploited due to lack of unique or secure identities. Let's take a look at a case where a bank had seven Active Directory (AD) domains and one LDAP infrastructure. The LDAP was the centralized repository for all users. The scattered environment where employees and contractors worked on seven different domains (MAX / CORE / PROD/ MWS / MMR/ B2B/ B2C) added complexity to

the legacy infrastructure, as shown in Figure 1.   All these AD user / service accounts (seven AD domains) were synced with LDAP in different organizational unit under the single LDAP branch. Hence, all the critical applications, including SiteMinder, connected to LDAP for authentication and authorization. Since such infrastructure could not support future technologies and could face numerous challenges during migration, the bank decided to migrate all seven AD domains to one single AD domain to modernize and simplify the architecture. Precursor for migration Complex infrastructure, higher cost for maintenance, administrative overhead, and longer resolution time. Migration approach As a part of the cost reduction strategy, we consolidated all AD domains to one domain (CORE). Our approach was that of migrating complex environments to simple ones. We focused on migration in waves for seamless migrations which would allow users and resources time to adjust.   We formed a team (ID Conversion), to access, analyze, implement, evaluate the migration tasks, and collaborate with multiple dependent teams. This new unit worked together with LDAP, Desktop, Exchange, AD, RSA, Azure, Application teams, WebEx, and others as users were spread across multiple locations. Implementation During the pilot identity conversion wave, we identified a few gaps in the current system. We then designed an eight-month migration plan to address these issues and get on track. We were able to complete the project much faster than anticipated. Preparation for migration We segregated users into multiple waves and planned the migration schedule. We informed all the dependent teams including (AD/LDAP/RSA/Desktop/exchange/Application), to align with the schedule. During the migration We migrated the accounts from the source domain to the CORE domain, switched the account in LDAP, and the dependent application teams propagated the changes in their respective applications. Users validated their access and confirmed. The objective for migration The objective was to migrate from a complex environment to a simple environment for cost reduction, future-readiness, and cloud migration. Performance benefits Cost benefit Maintenance/ support benefits Aravind Ramani Aravind has 15+ years of extensive IT experience in Identity & Access management domain which includes six years in Wipro as Technical Lead. He has hands on experience in various IDAM products like Oracle Unified Directory, Oracle Directory Server Enterprise Edition, Sun One Directory Server, CA Site Minder, ForgeRock, FIM and Identity Synchronization for Windows. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Ten Considerations for Data Privacy Governance in the Digital World

Ten Considerations for Data Privacy Governance in the Digital World August | 2021 With data privacy and protection regulations gaining momentum across geographies, a robust and mature data privacy governance program has become an imperative for organizations. Data privacy governance is not just about compliance: it brings in the true benefits of an ongoing data privacy program. The demands of a burgeoning data economy in the backdrop of the pandemic have shifted the focus to an online world, whether its finance, healthcare or retail. Companies face extinction without an online presence to continue delivering services, products and value to end users and customers.   A significant change is the shift in user behavior patterns towards ecommerce, digital payment, online banking, eHealthcare, and many other online avatars. An immediate outcome is the tremendous growth in the volume of personal and sensitive data being stored, processed and transmitted across the data economy. Organizations are also adopting cloud in a significant way, to be nimble footed against competition. This has resulted in personal data moving into an environment managed by the cloud provider. Given this scenario, organizations have to be conscious of the impact on personal data and how strongly it needs to be safeguarded through their existing privacy programs. Post the implementation of the General Data Protection Regulation (GDPR), organizations have become increasingly aware of the various controls, and they have initiated privacy programs. However, while these programs exist, and as organizations mature in adopting best practices, technologies and processes for robust data privacy and protection measures, they must also implement sound privacy governance. The privacy programs driven in organizations already have an element of governance included. However, these are often diluted in every day transactions, movement and change of stakeholders, newer regulations and so on. Even as organizations implement various aspects of privacy, from cookie consent to data subject rights, it is critical to ensure that data privacy governance is aligned to the data privacy machinery. Here is a distilled list of ten considerations for data privacy governance in a digital world to help organizations stay on top of privacy programs: Sharpen data classification: Privacy programs already include data classification and mapping of data flows as the first step towards building privacy controls. This needs to be sharpened further to include newer personally identifiable information (PII) definitions, expand geographies, and increase in business application footprint. Ensure governance policies are well defined and available: The data privacy governance policy framework must be available across knowledge management sites. Assign data ownership across the stakeholder ecosystem: Identify stakeholders and owners to drive, monitor,

and govern the data privacy program with a defined privacy organization to meet the multi-skilled people across functions such as legal, information security, privacy, business, and IT. Assess privacy frequently: Conduct periodic privacy assessments to evaluate As-Is status and risk based analysis with measures to address gaps if any. Start at the beginning: Include privacy in the overall blueprint of the organization as a part of governance. Also, ensure that it is followed through with checks and balances for new and upcoming business requirements. Measure your progress: Dashboards and reports with an overarching view of various aspects of the privacy program with measurable progress supported by well-defined KPIs and metrics are critical. Meet the stakeholders: Ensure regular steering committee meetings with stakeholders and sponsors to track privacy vitals and sound off any alarm bells. Know the rules: A continuous process should be initiated to identify the new and upcoming data privacy regulations and compliance requirements.   Create awareness: Privacy awareness programs across the organization can bring everyone up to speed on privacy, its impact, protecting personal data, and so on. Programs can be woven into the academic curriculum for new members. Listen to the change: Do continuous impact analysis and monitoring of changing regulations, business footprint for new services and products, expansion into newer geographies, on the organizations' privacy posture. The endgame is not just about meeting compliance requirements driven by regulations but also ensuring that personal data is protected and privacy requirements are addressed through sound governance. If you are interested in learning how Wipro is helping our clients achieve their vision of a sound Data privacy governance program, connect with us. About the author Rupa Parekh Rupa Parekh is Practice Director with Wipro Limited, and has around 18 years of experience in various consulting, business and delivery roles in the information security domain. She is an accomplished risk and compliance leader with extensive experience in data privacy and protection. She is passionate about creating and delivering effective and efficient solutions to clients in their information security journey in the fast-paced digital world. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. ======================

Risk Management — It's a State of Mind

----- Arcticle source ----- https://www.wipro.com/cybersecurity/risk-management-its-a-state-of-mind/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Risk Management — It's a State of Mind August | 2021 I have been involved in risk management and company governance for more than 30 years, – and

one thing I have learnt is that risk management is never just a question of tooling or processes, or a matter of organization or people. It's a state of mind. Embracing risk at the enterprise level requires a cultural paradigm shift. It means adding the "Management by Risk" capability into the board and the executive committee. In the early 2000s, after the Committee of Sponsoring Organization (COSO) II was released post the Enron crisis, risk became a key focus of audit committees and directors did not know what to do with it. It took more than 15 years to transform how decisions are made at the top level in our companies. But, have we really transformed the culture of our companies? Many have started adopting governance risk and compliance (GRC) tools to better understand their risks, provide assurance on compliance with laws, regulations, and internal policies, and to manage their system of control. Nevertheless, we find that the initial objectives have not been fully achieved. The state of risk management Challenge 1 Most of the tools are still siloed in various part of the organization, not truly allowing for end-to-end, bottom up, top down, and horizontal understanding of risk across departments and geographies. You will have a system for IT, another one for finance, a third one for cyber risk, others for human relations (HR), environmental, social, and governance (ESG) management, etc. Often, you will see business lines, regions, or countries using different tools and of course, they will not talk to each other, they will not aggregate. You cannot manage risk if you cannot consolidate, understand, and respond to your risks in the same way all across your company, whatever the function, business line, country, etc. You need to be able to consolidate at the board level and drill down from there to the individual department or function's risk and response action plan. Challenge 2 Consolidation is not enough. Adopting risk state of mind means transforming your culture. There are CXOs who understand this. One of them once told me that during management meetings he asks his directors to talk about their top three risks. "If they are unable to, I tell them that I did not recruit them to manage business as usual — their teams can do that perfectly — but to manage the unexpected, the tough decisions and their risks, he said." This is a great example of how to transform a company's mentality towards risk. It illustrates the need for a cultural shift. Another example of effective cultural transformation is rewarding early risk reporting and challenging late discovery of major issues. When you audit company behavior, you often notice that the top management is eager to know about risk, and people in the field are eager to talk about it. It is often the middle management that has difficulty relaying the information. Which is why it is important to focus on changing middle management culture if you want to change the mindset towards risk. Where, on one hand, you do not shoot the messenger who talks about risk, but reward it. On the other hand, you challenge the one escalating major issues belatedly and too late, instead of flagging and responding to the risk earlier. Move from firefighting to forward (risk) planning. Rewarding people for highlighting risk is not common yet, but it will help to grow your understanding of your true risk exposure, and in making better business decisions. Challenge 3 To achieve risk state of mind, it is important to come back to the definition of risk per ISO 31000. If we agree that risk is a deviation from business objectives, then we need to change our culture and tools accordingly, not only recording and appraising threats, or negative risks, but also mitigating opportunities, or positive risks. Mostly, they are two sides of the same coin. For, often, a negative risk has

proven to have a positive side. This pandemic is obviously a dramatic event for most of us, with serious illness, unexpected death, and mental health issues upending life as we know it. But, at the same time, look at how some companies have succeeded in reinventing themselves, how remote working has thrived, and the positive impact this has had on the climate crisis. On the other hand, look at how positive risks, or opportunities, can also be risky. How — with large mergers and acquisitions (M&A) — poorly managed exponential growth could be devastating. How your largest contract, with uncapped liabilities, could ruin your company. Most companies still only consider, record, and manage negative risks. Embracing the positive and negative dimensions of risk management is a great way to transform the culture and to socialize robust risk management across the organization. Doing good business is taking informed risk.   Connect with us at cybersecurity.services@wipro.com to know more about robust risk management. Eric Le Martret Practice Head, ServiceNow-Risk and Security, Wipro Eric has over 38 years of experience in Risk, Compliance, Audit, Privacy and Security Management, mostly as a practitioner. Before joining Wipro as Global Head of ServiceNow Risk & Security Practice, he has created IRM Expert Ltd and Belasis Ltd, two Service Now Partners dedicated to IRM-GRC and SecOps services and solutions. He had worked in several executive roles, such as Chief Risk Officer or Deputy Head of Internal Audit, for global companies. He is also a former member of the Institute of Risk Management and certified to ISO 31000. Eric holds an MBA (International Business) from AUDENCIA (France). Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =======================

US President's Executive Order on Improving National Cybersecurity

----- Arcticle source ----- https://www.wipro.com/cybersecurity/us-presidents-executive-order-on-improving-national-cybersecurity/ ----- Related Articles Contact Wipro Please fill the required details to access the content US President's Executive Order on Improving National Cybersecurity October | 2021 The Executive Order - Key Takeaways Public and private sector organizations in the US are under attack by nation states and cyber criminals using increasingly sophisticated and malicious activities. Cases such as the Solar Winds, Colonial Pipelines, and Microsoft Exchange point to a need to improve cyber defenses, protect public and private sector entities and the American people's security and privacy. On 12th May 2021, the US President signed an executive order that covered three key areas to improve national cybersecurity: Improve software supply chain security by establishing baseline security standards Modernize

and implement stronger cybersecurity standards Improve the Federal Government's investigative and remediation capabilities Key Considerations for a New Reality For effective implementation of policies, frameworks, standards and guidelines that will be formulated as part of the execution of the order, the top management should seek answers to key questions in each of the three areas in order to understand their current state and the gaps: Software Supply Chain Security Modernize Cybersecurity Improve Cyber Defense Strategies to Improve Cybersecurity Posture Consider developing a strategy that helps close the gaps identified in
your supply chain security, the current cybersecurity structure, and cyber defense mechanism. People, process, and technology, play a critical role in building cyber resilience and improving your cybersecurity
posture. Following are the points you could consider: Modernize and Implement stronger cybesecurity standards Strengthen cyber defence Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Wipro's Open Source Security Program: A Key Initiative to Enhancing Cybersecurity with Open Source

----- Arccticle source ----- https://www.wipro.com/cybersecurity/o31e-wipros-open-source-security-program-a-key-initiative-to-enhancing-cybersecurity-with-open-source/ ----- Impact: Related Articles Contact Wipro Organizations can leverage the open-source security program to Be-Secure community Creating a partner network for open source security Please fill the required details to access the content Wipro's Open Source Security Program: A Key Initiative to Enhancing Cybersecurity with Open Source October | 2021 Open source empowers organizations to pursue their business transformations with greater agility and control while avoiding vendor lock-in. However, components with potential security vulnerabilities are not identified and remediated by organizations before consuming them. Security risks are further enhanced in the absence of formal security policies and controls. This risk elevation amplifies the need for security for open source projects. Wipro's Open Source Security Program Wipro has instituted an open source security program to secure open source projects and standardize open source security assessment. The program is designed to deliver enterprise grade trusted and verified open source software (TAVOSS) and customized open source security services to customers. The program comprises of open source security lab, open source security projects and

open source community necessary to enable platform scale open source security. Be-Secure is a platform and an umbrella project of open source security tools, sandbox (security assessment) environment, and utilities for the open source security community. The Be-Secure platform aggregates various open source security tools and services to offer security assessments efficiently. The open source security lab is offered as an enterprise service. There are several ways to deploy open source technologies and develop an open source solution. An organization needs to narrow down to a select list of trusted and secured open source components to build open source solutions. Due to the very nature of open source, keeping all open source components updated is a tedious and time-consuming process. An organization must keep track of all changes that happen across the open source software technology stack. Open source projects have been categorized into five open source security tech stacks or Be-Secure tech stack to help standardize security assessments of open source projects. Open Source Security Lab The open source security lab forms the base for offering various open source security services to our customers. We perform open source and security compliance checks, automated evaluation and hardening of open source tech stacks, and seed open source security community projects and tools at the lab. Figure 1: O31E Lab overview *O31E is an abbreviation of "Open Source Security Lab as a Service". The term "O31E" is derived from its spelling, indicating the number of characters between the letters O and E The community is key to any open source project. The Be-Secure community is responsible for supporting and maintaining Be-Secure project tools and sandbox environments used for regular assessment of open source security stacks. The open source security program also focuses on leveraging the open source community to develop and sustain the Be-Secure platform. The community will help identify new open source technology stacks, proactively flagging off a potential vulnerability in open source components and contributing to new security assessment environments. The community involvement leads to the assessment of the open source stack and triggers the generation of the patch to create trusted and verified open source software (TAVOSS). As part of the open source security program, we intend to develop a network of trusted security partners to collaborate on defining security assessment models for open source technology stacks and open source security best practices. We will aggregate the service offerings from our security partners to offer cutting edge open source security capabilities at a platform scale. The open source security program helps drive awareness of open source security among organizations and open source community members. It also allows organizations access to standardized security assessment services that align with the open source security stacks. Today, many open source projects/components are consumed in a predefined manner without exploring the possibility of interoperability across open source technology components. The program helps to address this shortcoming by offering customized environments, pre-bundled with various open source projects. The program enables the open source developers to access the best practices/tools/projects and sandbox environments to secure open source projects. Utilization of Be-Secure open source technologies stack will drive the efficiency of open source security assessments. Wipro's open source security program expects to drive greater adoption of open source technologies, enhance awareness of open source and open source security,

bring together cybersecurity expertise covering all domains of security, and enable continuous security assessment to address changing security needs of open source projects. About the Authors Vinod Panicker Global Head Open source & Blockchain Security, Cybersecurity & Risk Services, Wipro Vinod is a Distinguished Member of Technical Staff, Senior Member and Chief Architect. He has over 21 years of experience in software development and product architecture. Vinod currently leads the open source and blockchain security initiatives for the cybersecurity practice at Wipro. He is an expert in decentralized identity, blockchain security, building open source solutions, community-led tools development, open-source licensing, and re-engineering of products. Sumod Rajan George, PMP Sr. Project Manager, Cybersecurity and Risk services, Wipro Sumod has over two decades of experience in software development, managing various projects and programs for business domains, such as retail, finance, healthcare, and transportation. He is currently part of the open source and blockchain security practice team with CRS, which focuses on security for open source and blockchain technology-based solutions. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Securing Patient Privacy in the Era of Digital Health

----- Arcticle source ----- https://www.wipro.com/cybersecurity/securing-patient-privacy-in-the-era-of-digital-health/ ----- Related Articles Contact Wipro Please fill the required details to access the content Securing Patient Privacy in the Era of Digital Health October | 2021 In this age of hyper-connectivity, the face of the global healthcare industry is changing rapidly with innovations in technology and the rise of interconnected medical devices. Should you be concerned about medical data privacy and security? Did you know that the healthcare industry worldwide has witnessed a 45% increase in cyber-attacks? Medical device manufacturers are vulnerable to cyber-attacks as their sensitive patient data traverses the vast network of managed and unmanaged medical devices. While security measures have been very successful in addressing the risk of data theft, a layer of trust established between patients and healthcare providers, is achievable when we adopt best practices for privacy. For example a Privacy Impact Assessment helps organization to identify the patient's personal information processed by the company and analyze and manage the risks of processing such data. Read the white paper on Safeguarding Privacy in the Complex Healthcare Ecosystem to get an in-depth information about why Privacy Impact Assessment is a cornerstone in building a healthcare system that evokes patient trust and confidence. Cyberattacks have moved on from

traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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A Closer Look at Managing Data Privacy in AI-Based Medical Devices

----- Arcticle source ----- https://www.wipro.com/cybersecurity/a-closer-look-at-managing-data-privacy-in-ai-based-medical-devices/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content A Closer Look at Managing Data Privacy in AI-Based Medical Devices To minimize biased outcomes, one must consider non-technical attributes of devices, in addition to technical specifications and controls. November | 2021 Market growth of AI The application of AI in the healthcare sector is growing. The key factors contributing to AI's growth in healthcare include: AI-based healthcare informatics due to large volume of patient data, a need to improve efficiency in hospital operations, and increase in the number of start-ups offering AI-based healthcare software. Another contributing factor is the government's support towards technology innovation in many countries such as India, Canada, US, Denmark, Hungary, China, Singapore, and many more. For example, India launched INDIAai platform in 2020, With an objective to improve collaboration among ecosystem players and spread awareness about AI across sectors. Large corporations such as Google, Microsoft, Apple and others are also developing AI based tools and software. Commercial usage of AI, however, raises concerns around ethics and data privacy. There are numerous debates around commercialization of AI based tool such as GPT-3, which has more than scale of operations. As an example, a leading medical device manufacturer leverages AI to 175 billion parameters to base its automated decision on, but still raises question about data privacy and ethics. Ethics and data privacy challenges become more pronounced in medical devices as it collects personal sensitive health information. Growth of the AI market is attributed to investments by governments, as well as innovations happening in the private sector. However, AI poses significant challenges around ethics and data privacy that need to be addressed in near term. Challenges in AI-based medical devices Hospitals are using AI based devices for screening decision without human intervention. The algorithm provides physicians with the recommendation on the next steps after analyzing the patients. However, the greatest challenge in this field remains lack of trust and existence of privacy issues. In AI-based devices/algorithm-based set-up, the patient's consent becomes one of the leading challenges. It is challenging to understand the data flow because of unexpected correlations. A simple

solution to this challenge is to work only on an anonymized dataset. Data privacy and cybersecurity challenges also impact the big data/AI based devices. Some of the risks arising may be the result of lack of cybersecurity controls (access controls, encryption, logs), and lack of privacy controls (data minimization isn't followed, lack of data segregation, unattended data such as individual's preference capture due to corporate policies etc.) While data privacy and cybersecurity challenges can be solved by implementing traditional controls, and following the regulatory guidelines, the challenges around reliable & trusted recommendation and algorithm biases are comparatively niche and hence difficult to solve. Automated decisions run "behind the scenes", thus making it difficult to scrutinize. Thus, to minimize the biased outcomes, one must consider non-technical attributes of devices, in addition to the technical specifications and controls. Missing on either of the aspects may not help device manufacturers to solve this challenge. Other key success factor will be cooperation within industry to push for larger adoption of the AI-algorithm assessment for bias. To overcome the data privacy and cybersecurity challenge, organizations in the healthcare sector must conduct a Data Privacy Impact Assessment (DPIA), along with assessment of the underlying algorithms for these medical devices, at the beginning of the project. Wipro's approach to address privacy challenges Wipro recommends a risk-based approach to address privacy challenges. Such an approach must begin by asking a key question – why is DPIA needed in the given context? AI-based medical devices (or in general medical devices) collect and use personal data that has an impact on the privacy of individual,if mismanaged. This becomes the key reason for carrying out a DPIA. Other reasons could be compliance requirements, building trust among stakeholders, and identifying and addressing the risks to the personal data of the patients An approach to solve these challenges takes 5 steps, with emphasis on how well the data is being stored and managed by medical devices. It should begin by understanding and documenting the inherent features and specifications of medical devices, controls that are in place, and potential vulnerabilities that can be exploited in the light of prevalent threats. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Cross-border data transfers: Our point of view

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cross-border-data-transfers-our-point-of-view/ ----- Related Articles Contact Wipro Please fill the required details to access the content Cross-border data transfers: Our point of view January | 2022 The safety of our clients' data is our utmost

priority. At Wipro, we have an established GDPR compliance program and, in the aftermath of Schrems II, we have reviewed our own contracts and transfers by looking at the legal framework that applies in the receiving country. We take into account relevant, objective, reliable, verifiable and publicly available or otherwise accessible information that reveals whether the transferred data will be appropriately safeguarded in practice. This experience helps us understand what our clients need and we can work with you to establish any additional measure required. Our customers can rely on unparalleled data security expertise. As a responsible global corporate enterprise, Wipro takes processing of personal data with the highest level of seriousness and ensures that processing follows globally accepted privacy principles. We promote a culture that values privacy through awareness and protects privacy of individuals through guidance, direction, and imposition. Wipro has a dedicated central Global Data Privacy Team as well as Data Privacy Champions across all internal functions (Governance structure attached for reference). Below diagram represents the Data Privacy governance at Wipro. Our cross-functional Data Transfers Team (encompassing the Global Data Privacy Team, Legal and Security) is in charge of rolling out the new SCCs and implementing them through the inclusion of additional measures when necessary. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =======================

Cloud with no chance of identity risks

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cloud-with-no-chance-of-identity-risks/ ----- Related Articles Contact Wipro Please fill the required details to access the content Cloud with no chance of identity risks Migrating your legacy IAM platform to the enterprise cloud March | 2022 The challenges of legacy identity platforms The post-COVID world constantly challenges businesses to ensure a secure work-from-home model while catering to the growing need for accessing cloud applications. The idea that identity governance should remain on-prem has been around for quite some time now, probably because physical hardware within the confines of premises can create a sense of regulation and security. Though potentially more customizable, this approach often leads to critical errors in management and maintenance of the IAM (Identity Access Management) infrastructure and even permeates into onboarding and off-boarding procedures. Why move your identity management to the cloud? The framework of legacy on-premises IAM solutions such as enterprise Single Sign On (SSO), Virtual Private Network (VPN), or web access management often has limited capabilities. It supports a relatively small number of

employees, restricting access to applications beyond the on-premises network perimeter. Further, in-house governance of identities is expensive, time-consuming, difficult to manage, and comes with its own set of risks involving people, processes, and products. From network overloads in directing cloud access traffic through an on-prem platform; to creating a possible single point of failure by relying on a VPN for cloud access; to the exponential costs incurred due to the maintenance of legacy solutions, the problems of maintaining an on-premises IAM for secure access of cloud applications are a-plenty. These cumulative issues, along with the incremental infrastructure costs and operational costs for management and support, have made the choice of migrating their on-premises legacy applications to the cloud a no-brainer for businesses. Moreover, the proliferation of cloud-based apps and distributed computing models have created a gap in the market where legacy IAM can no longer meet the needs of modern identity platforms. The cloud benefits Migrating your legacy IAM to the cloud can prove to be a more flexible, secure, and cost-effective solution that supports a wide array of systems, providers, and platforms through a centralized console and is future-forward. Let us take stock of the benefits that a real-world enterprise cloud platform like Savyint offers to get a clear understanding of the exponential rewards that you can reap. Establishing the point with a case study The need to transform A leading cloud-based provider of integrated digital human capital and business solutions had an outdated identity program that was almost 18 years old. The legacy platform had been through various acquisitions and divestitures and constantly added disjointed adhesive patches to keep it functional. The platform's different instances ran different versions that were out of support, and all these issues snowballed into huge infrastructure debt. The company realized that they were spending almost 40% of their IAM budget on fixing infrastructure problems unrelated to IAM, like server and OS upgrades. It was clear that the company needed a more efficient and streamlined platform and took this opportunity to leap to the cloud and be future-ready. The cloud journey Within four months of starting its transformation journey, the company could already connect its HR system. The following two months saw the company complete provisioning for their four directories plus Azure entitlements for licensing while onboarding applications. They completed the onboarding of around 300 applications in less than a year, with the high point being the onboarding of a whopping number of 150 applications in just one day! By harnessing the power of Saviynt's factory model, the company will continue the transition to a managed services model by operationalizing the platform and ensuring that they continue to expand their program's footprint to help out the customers who are the application owners in the environment. The business bottom line Shift from business operations protector to enabler The traditional perception of security has been about meeting a checklist of defending business operations. However, a more extensive security goal, especially in identity access management, is to enable business operations rather than just protecting them. Moving your legacy identity management platform to the cloud does not only provide efficiency, flexibility, enhanced security, and cost benefits. I starts your strategic journey towards being a business operations enabler rather than a mere defender by enabling your security posture with the power of cloud-based IAM. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in

stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.
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Cloud Security to Propel Digital Health

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cloud-security-to-propel-digital-health/ ----- Related Articles Contact Wipro Please fill the required details to access the content Cloud Security to Propel Digital Health March | 2022 Healthcare technology strategy and Internet of Medical Things (IoMT) have become more pertinent than ever. The World Health Organization (WHO) has estimated that there are 2 million different types of medical devices that are categorized into more than 7,000 different generic device groups. The inter-networked devices in IoMT include medical devices, diagnostic tools, hospital equipment and even wearable tech products. A huge volume of sensitive data is generated and transmitted continuously by the sensors. When vital signs like blood pressure, respiratory rate, pain, level of consciousness, pulse, oxygen saturation etc. are monitored remotely, knowing who has access to it and how it is managed is as important as the data itself. This sensitive data needs to be protected as it progresses through the DIKW (Data, Information, Knowledge, Wisdom) model and throughout the lifecycle from creation through archiving or destruction. One of the viable options to manage this enormous amount of data is to embrace the functionalities offered by secure public cloud platforms. Secure cloud adoption offers several benefits such as analytics capabilities, pre-built HIPAA compliant APIs in addition to meeting unlimited data storage and archival needs. The Internet of Medical Things (IoMT) is an offshoot of Internet of Things (IoT) and comprises connected healthcare equipment and applications used in medical information technology. The specialized hardware and software components of the integrated OT environments are now a ripe target for threat actors who seek to disrupt operations or steal confidential information. In Wipro's State of Cybersecurity Report, we analyzed the top 40 publicly reported data breaches and classified the breached data sets into seven broad categories: Figure 1: Analysis of compromised data Wipro's State of Cybersecurity Report 2020 noted that there has been a universal increase in the deployment of all core organizational control areas. The organizational control deployments for IoT are shown in the Figure 2. Figure 2: Controls planned to mitigate IoT risks Healthcare technologies must adopt the cloud to manage the massive scale of devices and healthcare technology improvements. It is imperative that providing a secure and compliant cloud environment forms the baseline for this adoption to be faster and successful. Leveraging cloud for healthcare requires adherence to Health IT Standards such as C-CDA, HL7, FHIR, DICOM in addition to the standard set of cloud

security controls and HIPAA compliance. Consolidated-Clinical Document Architecture (C-CDA) is a framework for creating clinical documents that contain both human-readable text and machine-readable XML. Fast Healthcare Interoperability Resource (FHIR) is a specification for exchanging clinical and administrative health care data. The standard is based on REST and OAuth. Health Level 7 (HL7) v2 messaging is a commonly used data interchange standard. This standard includes messaging specifications for patient administration, orders, results, scheduling, claims management, document management, and many others. DICOM® is the international standard to transmit, store, retrieve, print, process, and display medical imaging information Public cloud provides several capabilities to make compliance easier for customers. For example, collaboration tools such as Microsoft Teams, Google Workspace used for telehealth support HIPAA compliance. Customers who are subject to HIPAA must sign a Business Associate Agreement (BAA) with the cloud service provider. Amazon HealthLake, Amazon Comprehend Medical, Google Cloud Healthcare Data Engine, Healthcare API, and Azure Health Bot are a few examples of purpose-built solutions for the healthcare industry. Leveraging these solutions would significantly enhance the pace of the cloud journey. Readily available tools and templates can be used to build customized healthcare compliant solutions. The cloud environment undergoes multiple independent third-party audits that provide assurance that the implemented controls are validated. For example, adherence to disposal policy and use of techniques described in NIST SP 800-88 Revision 1 "Guidelines for Media Sanitization" is validated during the third-party audit and report on compliance is published. If tools developed in-house are to be hosted in the public cloud, customers should have the flexibility to access and review logs of action taken by the cloud service provider engineers / administrators. Also, de-identification of data must be done to protect patient privacy. Native security controls should be augmented with cloud security posture management, cloud native security analytics and container security solutions for enhanced protection. The greatest wealth is health. Health is personal and privacy is key. Privacy by design and privacy by default must be an integral part of every solution. Technologists who develop and implement secure, compliant digital health systems in partnership with health professionals will create enormous value and cybersecurists have a significant role to play. About the authors Bhaveshkumar Bhatt Cloud Security Practice Head at Wipro's Cybersecurity and Risk Services Bhavesh is the Cloud Security Practice Head at Wipro's Cybersecurity and Risk Services. He is a cybersecurity professional with 21 years of experience in security covering business strategy design, solutions and services development, and program and delivery management across industry verticals. Allen Stanley Jones Cloud Security Architect Allen Stanley Jones is an accomplished Cloud Security Architect with nearly 18 years' experience in multiple cloud and cybersecurity domains. He has participated in (ISC)² Security Congress and represented Cloud Security in Wipro booth at AWS re:Invent 2018. He is focused on working with clients to ensure that the right guardrails are in place for their fast-paced digital transformation journey. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted)

infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service. =====================

Why Leading CISOs are Adopting a Strategy-First Approach to Identity and Access Management (IAM)

----- Arcticle source ----- https://www.wipro.com/cybersecurity/why-leading-CISOs-are-adopting-a-strategy-first-approach-to-Identity-and-Access-Management-IAM/ ----- Contact Wipro Please fill the required details to access the content Why Leading CISOs are Adopting a Strategy-First Approach to Identity and Access Management (IAM) Optimize business outcomes with a strategy-first IAM approach Learn how your company should benefit from a multi-perspective IAM plan. With mounting cybersecurity threats, audit, and regulatory deadlines, CISOs are challenged with the lofty duty of prioritizing problems within an enterprise. As a result, IAM efforts are often managed from a technology-first standpoint. Download the white paper and discover how a strategy-first approach looks beyond technology to incorporate other important perspectives. You'll learn how to: An IAM strategy provides the secret weapon to create urgency, win over executive champions, and assuage change-wary users. Learn more about why leading CISOs are adopting a strategy-first approach to Identity & Access Management. About Wipro and Edgile Edgile, a Wipro company, is the trusted leader in cybersecurity transformation and risk services, partnering with the world's leading organizations, including 31% of the Fortune 100 and 20% of the Fortune 500. Our strategy-first model optimizes today's enterprise journey to the cloud and modernizes identity and security programs through a risk lens and expert compliance knowledge. We secure the modern enterprise by transforming risk into opportunity with solutions that increase business agility and create a competitive advantage for our clients. Download the Report =====================

A Quick Start to Zero Trust for the Modern Enterprise

----- Arcticle source ----- https://www.wipro.com/cybersecurity/a-quick-start-to-zero-trust-for-the-modern-enterprise/ ----- Contact Wipro Please fill the required details to access the content A Quick Start to Zero Trust for the Modern Enterprise A joint solution from Microsoft and "Microsoft Partner of The Year" Edgile, a Wipro company As many industry leaders are beginning to understand, traditional models for security are not attuned to the realities of modern business. Today, you need a model that can adapt to new

complexities – the hybrid workplace, the distributed workforce, the increasing diversity of people, devices, and applications. The multitude of hacks and breaches due to challenging and changing geopolitical conditions must also be considered. Data needs to be protected, wherever it is and wherever it goes. While the old model assumes that everything behind the corporate firewall is safe, the new model – known as Zero Trust – dictates that we "never trust, but always verify." It's becoming a table stake for securing the modern enterprise. Just as important, it's become critical to ensuring that the enterprise can grow. The question is, how do you get started? What steps do you need to take to begin the Zero Trust journey today? Edgile and Wipro provide a glide path for getting the most from your investment in the full M365 E3 and E5 Security suite to take advantage of all the available tools and resources. Download the eBook Wipro + Edgile: Cybersecurity by CyberSecurists Wipro is the trusted leader in cybersecurity transformation and risk services partnering with the world's leading organizations, including 55 of the Fortune 100. Wipro acquired Edgile in 2021 and together developed an integrated suite of cybersecurity services and technology — CyberTransformSM — which enables business growth through a strategy-first, business-aligned approach that solves security, risk, cloud, identity and compliance challenges on a global scale. CyberShieldSM — our managed services offering—defends business operations through on-demand cyber resilience management. To learn more, visit wipro.com/cybersecurity.
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The Growing Need to Proactively Track Technology and Security Regulations in the Middle East

----- Arcticle source ----- https://www.wipro.com/cybersecurity/the-growing-need-to-proactively-track-technology-and-security-regulations/ ----- About The Author Contact Wipro Please fill the required details to access the content The Growing Need to Proactively Track Technology and Security Regulations November | 2022 Over the last two years, many new regulations have been rolled out specifically relating to the banking, financial services and insurance (BFSI) sector. These regulations impact various technologies and processes such as cloud, consumer protection, privacy and data sovereignty.   Among the many reasons for this surge is the accelerated adoption of new technology during the coronavirus pandemic. While this trend helped organizations quickly adapt to business disruptions, many organizations were only able to move so quickly because they either fast-tracked risk evaluations for these new technologies or skipped risk evaluations entirely. Many technologies also required risk and cybersecurity teams to be upskilled to better identify risk exposure, but with limited time, training was sometimes put on hold.   Rushed adoption and overlooked security procedures increased organizations' exposure to breaches, some more than others. Research into the cost of data breaches globally shows the Middle East trending as the second most expensive region in terms of

average cost of breached data, up from 2021. The financial sector stands as the second most targeted sector globally.   Although these surges appear to be linked to the pandemic, they are not limited to the pandemic. As technology adoption continues, new security risks will emerge and new regulations will be introduced. Businesses need a way to outpace these changes, to move from a manual, reactive approach to regulatory tracking, to an automated, proactive one. A new pace for technology regulations The release of regulations is closely linked to the adoption of new technologies, specifically when those technologies can potentially impact organizations and the sector at large (e.g. UAE's Critical Information Infrastructure Protection Policy). Faster adoption of technologies during the pandemic has therefore led to faster roll out of regulations. The diagram below shows the timeline of technology adoption since to pandemic compared to the estimated timeline had the pandemic not occurred.   Regulators in the UAE have been releasing regulations addressing cybersecurity and technology risks for over 10 years, but the last two years has seen a sudden increase in the regulations with an added stringent adherence clause. The list below shows just some of the regulations and initiatives enacted in the UAE between 2020 and 2022 that have an impact on banks and BFSI sector. With critical entities and organizations throughout the Middle East's BFSI sector widely adopting newer technologies, regulators are pushing the release of more regulations, some of which may not be very clear or mature.   For example: In certain cases, Central Bank of UAE requires banks to seek CB UAE's approval for data stored outside the region. This may not be a sustainable model considering changes that banks in the regions are going through, such as some larger banks switching to cloud computing. It is likely that this approval process will be replaced with stronger and mature regulations in the future, but for now, this requirement from Central Bank has introduced delays and uncertainty in DevOps cycles and is impacting agile working methodologies. The manual-tracking issue With most countries in the Middle East embarking on digitalization initiatives and new business propositions gaining popularity, organizations can expect more regulations to be rolled out. This could pose a challenge because businesses are already struggling to keep up with all these new regulations due to outdated approaches, such as manually tracking regulatory requirements using a spreadsheet-based repository. Such manual approaches have several shortcomings: Siloed and difficult to maintain Spreadsheet-based repositories are generally built as a onetime effort by individual teams with limited access or communication with each other. These registers are often ignored because manually tracking new regulations and updating the registers requires extensive effort. Limited implementation   Repositories are generally built to mainly capture regulation requirements, with little to no analysis of the applicability of the clauses or mapped controls. Lack of visibility If the applicable regulation registers are not regularly updated or if access is limited, organizations and technology functions cannot know their true level of compliance with regulatory requirements, leaving them vulnerable to hackers and penalties from regulators.   Frequent noncompliance A common noncompliance reported by internal audits is lack of regulatory adherence or use of outdated regulations, and lack of awareness of new applicable regulations. How to address this challenge To keep up and remain compliant, organizations can no longer rely on manual regulatory monitoring; they

need the support of a strong regulatory compliance program that is specific to technology and cybersecurity. At a minimum, this program should: To establish and maintain a program like this, organizations first need to build a robust, well-maintained regulatory repository, then embed those regulatory requirements into normal operations by linking them to the organization's common control framework, as shown in the diagram below. As long as organizations consider identifying and implementing regulations as separate tasks, the chance of losing track of compliance is high. This is especially true for organizations operating across multiple geographies because regulations can differ so much from region to region. The first step in developing a strong regulatory compliance program is to develop a robust repository of regulations, one that is comprehensive and continuously updated. This will ensure that the organization is always up to date on the latest regulations and able to map them to common control. The diagram below shows several ways a well-maintained repository can benefit technology and cybersecurity operations. Organizations can further enhance their security programs by incorporating automation at every stage: With the regulatory landscape for technology and cybersecurity constantly changing, it can be hard enough to keep track of what's changed, especially for global businesses operating in different countries. To be prepared for these changes and actually be able to work with them, businesses need to be more proactive with their regulatory tracking, and automation can help. You can learn more about Wipro's cybersecurity and risk management solutions. Anoop Ravindra Partner & Head of Cybersecurity & Risk Consulting Services — Middle East, Wipro Anoop has more than 19 years of experience in cybersecurity, information and technology services, working across various sectors and specializing in BFSI. He has worked with several large global clients on technology, risk, and cybersecurity initiatives
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Multi-Cloud Security and Compliance Services

----- Arcticle source ----- https://www.wipro.com/cybersecurity/multi-cloud-security-and-compliance-services/ ----- Contact Wipro Please fill the required details to access the content Multi-Cloud Security and Compliance Services Adopt the most comprehensive solutions and enable a secure digital transformation journey December | 2022 Realize business ambitions via public cloud without compromising security and compliance Public cloud has become the top enabler for an organization's digital transformation journey. However, a common flaw in the adoption process is to leave out security and compliance, focusing on them as an afterthought. This error in strategy has the potential to derail an organization's ability to realize its business ambitions. Wipro's Multi-Cloud Security and Compliance Services provide Fortune 1000 clients with comprehensive, outcome-based cloud security, risk management, and governance solutions designed to protect multi-cloud business applications and assets. The service includes threat and security posture views powered by the Wipro IP CARG (Cloud Application Risk Governance) platform, as well as advisory, implementation, and

managed security services, aimed at assisting clients in adopting the right response model for potential risk incidents. Our services are powered and co-innovated with Palo Alto Networks and other top cloud service providers and offer the most comprehensive multi-cloud security and compliance management. ======================

Securing Digital Identities in the Cloud Era

----- Arcticle source ----- https://www.wipro.com/cybersecurity/securing-digital-identities-in-the-cloud-era/ ----- Contact Wipro Please fill the required details to access the content Securing Digital Identities in the Cloud Era February | 2023 Statistics show that 94% of businesses have suffered a data breach, with over 79% happening in the past two years (Source: Expert Insights). Identity security is critical for cloud enterprise success in the digital age. As more and more companies continue to transition their operations to the cloud, it is important to ensure that the security of their digital identities is top-notch. The current business and technology environment is evolving, with cyber threats becoming increasingly sophisticated, making it imperative for companies to take proactive measures in defending themselves against these threats. Ensuring the safety of sensitive information, including financial data, intellectual property, and personal details of employees and customers is now more important than ever before. Accelerating Cloud Investments A projected growth of 20.7% in cloud spending is estimated for the year 2023 (Source: Gartner). This highlights the fact that organizations are going to ramp up their investments in cloud technology in the future, recognizing its many advantages such as increased agility, scalability, and cost-effectiveness. The cloud enables organizations to reduce their IT infrastructure costs, streamline their operations, and enhance their ability to scale. Additionally, the cloud provides organizations with access to powerful and sophisticated tools and technologies that can help them to drive innovation and growth. As a result, many organizations are transitioning from traditional IT models to cloud-based solutions, with spending on cloud technology expected to continue growing in the coming years. This shift is driven by the growing recognition of cloud benefits and the increasing demand for cloud solutions across multiple industries and business functions. Importance of Identity Security in the Digital Era While the cloud provides organizations with convenient storage and access options, it has also opened new avenues for cyberattacks. Cybercriminals constantly lookout for vulnerabilities in an organization's security system, and digital identities are a prime target. Data as Currency in a Continuously Evolving Threat Landscape Data breaches can cause significant harm to a company, affecting both its finances and its reputation. Among various types of cyber threats, stolen or compromised credentials can take the longest time to detect. In some cases, it can take over a year and cost thousands of dollars to identify the source of the attack. Despite this, compromised credentials remain the most vital aspect of data that an organization must protect. It is therefore important for companies to invest in strong cybersecurity measures and regularly

assess and update their data protection policies to minimize the risk of a data breach and protect their assets and reputation. At Wipro, we understand the unique security needs of different enterprises. Edgile, a Wipro company, has been propelling innovative solutions to help enterprises bridge the gaps in their identity security management systems. Edgile's solution expertise was recently demonstrated on a global stage with our designation as the Global Delivery Admiral for both SaaS and Software at the SailPoint Sales Kickoff 2022 event.   The recognition highlights our proficiencies in SailPoint's IdentityNow (SaaS) and IdentityIQ (Software) platforms. It is a testament to our success inintegrating SailPoint solutions to enhance customer experiences, creating positive outcomes, and demonstrating our resource and technical expertise. About SailPoint SailPoint offers identity management and governance for managing access to unstructured data. The organization empowers enterprises across industries with an open identity platform to expand into new markets, enhance workforce capabilities, adopt cutting-edge technologies, drive innovation, and compete on a global scale. "What SailPoint has recognized is what our customers have known for years—we go above and beyond with every deployment, working to make sure that we continuously exceed our client's expectations and successfully deliver on our projects with highly skilled resources". - Gretchen Wichmann, Partner & Identity Service Line Leader – Edgile. It is imperative for enterprises to be proactive in implementing best practices, monitoring their security systems, and educating employees to protect their digital identities and to ensure the security of their critical assets. The combined expertise of Wipro and Edgile in SailPoint solutions creates a winning combination for enterprises to secure their endpoints and safeguard their organizations.
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Secure Cloud Foundation: Accelerate your AWS cloud journey

----- Arcticle source ----- https://www.wipro.com/cybersecurity/secure-cloud-foundation-accelerate-your-aws-cloud-journey/ ----- Contact Wipro Please fill the required details to access the content Secure Cloud Foundation: Accelerate your AWS cloud journey April | 2023   Protect your sensitive data and intellectual property in AWS As enterprises adopt cloud computing, they face new security challenges. Unlike the traditional data center model, critical data and intellectual property now reside on servers outside of the enterprise's direct control. Business leaders seeking to secure their AWS environment and migrate existing workloads to a hybrid environment should ask the following questions: Wipro's Secure Cloud Foundation (SCF) for AWS solution addresses these concerns by building a secure environment. The SCF covers the major areas of security, including compliance, identity and access management, data protection, application security, network security, and infrastructure protection capabilities, which accelerates AWS cloud adoption. By automating security processes, Wipro's SCF eliminates

or reduces the need for a pool of skilled resources for ongoing deployment and maintenance. Download the solution overview
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Managed Zero Trust Network Access
powered by Netskope

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-managed-zero-trust-network-access-ztna/ ----- Contact Wipro Please fill the required details to access the content Wipro's Managed Zero Trust Network Access (ZTNA) Secure your applications and data with unprecedented control and visibility As cloud and hybrid work environments become more prevalent, traditional network infrastructures with perimeter controls cannot protect against emerging threats. VPN devices become a single point of failure and traffic chokepoints negatively impact performance and the end user experience. Multiple solutions can make network management more complex, reduce visibility and control, and increase the risk of data loss. Enterprises cannot afford to compromise control over their applications and data, regardless of where the resources are located. A solution that provides secure and efficient access while maintaining control is essential. Wipro's Managed Zero Trust Network Access (ZTNA) solution, powered by Netskope, offers a comprehensive approach to network security that elevates customer experience and enables secure connectivity to resources hosted in the cloud or on-premises—without compromising control. Connect securely from anywhere using any device Wipro's ZTNA allows users to connect securely from anywhere using any device, eliminating lateral movement in the network and reducing the risk of exploitations by threats. Enterprises can retire legacy connections, resulting in cost reductions and operational efficiencies, while providing seamless access to applications and data. Whether your resources are located in the cloud or on-premises, Wipro's ZTNA solution provides the ideal solution to secure and streamline access while maintaining control. =======================

Wipro's Managed Secure Access Service Edge (SASE)
powered by Netskope

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-managed-secure-access-service-edge-sase-powered-by-netskope/ ----- Contact Wipro Please fill the required details to access the content Fast and reliable cloud-based enterprise security Cloud transformation is imperative to enable today's workforce. As users become remote and applications and services move to cloud, the native security controls become dated leaving users, applications, data, and cloud workloads exposed to threats. With Wipro's

Managed Secure Access Service Edge (SASE) powered by Netskope, enterprises can implement a cloud-based security posture that safeguards data, applications, and users—both on-premises and in the cloud—without impacting business productivity. The Managed SASE solution leverages Wipro's strategy-first design and implementation and Netskope's NewEdge Network, the world's largest, highest-performing security private cloud. The combination delivers unparalleled service coverage, performance, and resilience. Wipro SASE solution features and benefits

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Transforming Third-Party Risk Management: Leveraging AI for Faster, Accurate Assessments

----- Arcticle source ----- https://www.wipro.com/cybersecurity/transforming-third-party-risk-management-leveraging-ai-for-faster-accurate-assessments/ ----- About the Authors Related Articles Contact Wipro Please fill the required details to access the content Transforming Third-Party Risk Management: Leveraging AI for Faster, Accurate Assessments May | 2023 Implementing third-party risk management (TPRM) is crucial for organizations that rely heavily on external partners or vendors to run its essential services and operations. The traditional approach of conducting manual, slow, static, and tedious assessments may help achieve compliance, but does not prioritize prevention in modern times. In a recent study, it was discovered that 59% of data breaches involve external vendors . Hence, it is crucial to incorporate continuous monitoring of vendors as a key element of TPRM to gain a better understanding of the associated risk. The importance of TPRM TPRM aims to detect, evaluate, and manage risks associated with using services or goods from third parties. It is essential to choose vendors and partners who will adequately mitigate the risks and protect your organization's interests. TPRM has developed into a critical component of an organization's risk management strategy due to the growing number of vendors/suppliers and the complexity of their services. Leveraging AI for continuous monitoring Implementing ongoing continuous monitoring in TPRM, with the help of external datasets, can be highly beneficial. When supported by Natural Language Processing (NLP) and Optical Character Recognition (OCR) capabilities powered by Artificial Intelligence (AI) and Machine Learning (ML), it can strengthen and fast-track the TPRM assessment process. This allows vendors to respond quickly, and organizations can detect risks as soon as they occur and take appropriate action. Furthermore, it facilitates efficient engagement with vendors to partner in addressing identified risks and achieve favorable risk remediation outcomes. The growth of AI and ML in TPRM AI and ML technologies are increasingly being adopted in every field, and cybersecurity is no exception. The application of AI and ML technologies to third-party risk management is growing. According to a Gartner report, "By 2025, AI and ML will be used to reduce the likelihood of significant third-party incidents by 60% and reduce time to detection and response by 50%." As AI and ML technologies

continue to evolve and improve, they can be leveraged to enhance the TPRM process, allowing organizations to quickly identify and mitigate risks associated with third-party relationships. This will lead to more efficient risk management and better protection of sensitive data and intellectual property. Streamlining assessments with AI and ML Assessing third-party risk can be a complex and time-consuming process, requiring a thorough understanding of the vendor's business practices, financial stability, legal compliance, and more. However, by leveraging AI and ML-driven NLP OCR capabilities, organizations can simplify the assessment process and make more informed decisions. Using automation and advanced technologies such as Wipro's TPRM, organizations can drive faster auto response to assessments and make more accurate decisions that align with the speed of business. The future of TPRM To keep up with the evolving threat landscape, organizations must take a proactive approach to third-party risk management. This means leveraging advanced technologies such as AI and automation to quickly identify and respond to potential risks. Wipro's third-party risk management (TPRM) has evolved and matured over time by leveraging Natural Language Processing (NLP) and Optical Character Recognition (OCR), AI and ML technologies. By extracting valuable information from structured and unstructured data sources, such as compliance audit reports, assessment reports, and vendor contracts, organizations can automate assessing vendor risk and identify potential risks more quickly. These technologies can also provide insights into vendor performance and help organizations make better-informed decisions. This highly engaging and automated process highlights the areas that require attention, making it faster and more efficient. Conclusion The time has come to transform third-party risk management by leveraging the power of AI and ML for automated and efficient assessment cycles. TPRM is a critical aspect of an organization's risk management strategy, and continuous monitoring and external datasets are essential for detecting and responding to real-time risks. With AI and ML-driven NLP OCR capabilities, organizations can simplify and automate some extractable questions in the assessment process and gain valuable insights into vendor risk. By leveraging these technologies, organizations can make more informed decisions and reduce the time it takes to identify and respond to risks and threats. Shamir Lalani – Author Shamir is a seasoned CyberSecurist with Wipro's Cybersecurity & Risk Services (CRS). He is an experienced Cybersecurity Product leader with over 2 decades of experience in Global Risk, Compliance, Audit, and Assurance. He specializes in Third Party Risk Management (TPRM), Data Privacy, Environmental, Social and Governance (ESG), Cyber Risk Management, Cyber Defense, and Cyber Resilience. Shamir plays a crucial role in developing CyberSecurity IP and Platforms in CRS and possesses strong domain expertise in various areas, including Product development, Program Delivery, Business Stakeholder Management, Risk Management, and Change Management. Ramkumar Narayanan - Co-Author Ramkumar Narayanan is the Global Practice Lead for Wipro CRS's Strategy and Risk business. He is responsible for leading a team of diverse professionals providing advisory, technology enablement, and managed services focused on Governance Risk & Compliance (GRC), Third Party Risk Management (TPRM), Data Privacy, Environmental, Social and Governance (ESG) and Enterprise Security Architecture services. He has got extensive experience in providing cyber security & privacy consulting to Fortune Global 100

corporations in various industries like Banking, Finance, Retail, Telecom, Securities and Insurance. Cyberattacks have moved on from traditional techniques and have become more targeted and sector-specific. Attackers are operating in stealth mode, making attribution of attacks more difficult. Today's Cyber defenses are focused on defending unchanging (sprawling, distributed, & untrusted) infrastructure by monitoring, detecting, preventing and remediating threats. The healthcare industry is shifting focus to personalized preventive care and an increasing number of patients are expecting healthcare to be delivered as a service.

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Ventures partners, security product partners and academia to bring together additional perspectives on the changing cybersecurity landscape. The report combined both primary and secondary research to provide a multifaceted view of what it takes to become cyber resilient. The primary research involved surveying security leadership throughout US, Europe and APMEA geographies as well as collecting data from Wipro's 17 Cyber Defense Centers across North America, Europe, India, Middle East, and the APAC region. The secondary research was sourced from various public databases and research platforms to correlate trends in the cybersecurity domain. We collaborated with our Ventures partners, security product partners and academia to bring together additional perspectives on the changing cybersecurity landscape. Cybersecurity is a rapidly evolving field. To get the full picture and stay ahead of the bad actors, business leaders, CISOs and IT professionals must pay close attention to both macro and micro cybersecurity trends. Our extensive research covers four main topic areas: GenAI is a challenge for CISOs Is AI a Friend or Foe of Cyber Resilience? How Security Leaders Should Evaluate GenAI Systems Securing Data with Private GenAI Models Cybersecurity is a rapidly evolving field. To get the full picture and stay ahead of the bad actors, business leaders, CISOS and IT professionals must pay close attention to both macro and micro cybersecurity trends. Our extensive research covers four main topic areas: Macro-level cybersecurity trends An inside-out perspective Information Sharing & Collaboration Strategies Cybersecurity Patent & Technology Trends Cybersecurity is a rapidly evolving field. To get the full picture and stay ahead of the bad actors, business leaders, CISOs and IT professionals must pay close attention to both macro and micro cybersecurity trends. Our extensive research covers four main topic areas: GenAI is a challenge for CISOs Is AI a Friend or Foe of Cyber Resilience? How Security Leaders Should Evaluate GenAI Systems Securing Data with Private GenAI Models Cybersecurity is a rapidly evolving field. To get the full picture and stay ahead of the bad actors, business leaders, CISOS and IT professionals must pay close attention to both macro and micro cybersecurity trends. Our extensive research covers four main topic areas: Macro-level cybersecurity trends An inside-out perspective Information Sharing & Collaboration Strategies Cybersecurity Patent & Technology Trends

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We're Spending Too Much on Cybersecurity

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Please fill the required details to access the content We're Spending Too Much on Cybersecurity For at least the past year, inflation and the threat of recession have hung in the air. Growth for businesses has been a delicate act, and that's doubly true for getting a cybersecurity strategy right. Cybercrime is on the rise. According to the UK Government's Cyber Security Breaches Survey 2023, more than one-quarter of businesses admitted to experiencing cyber-attacks in the past 12 months, with the number much higher for medium businesses (59%) and large companies (69%). The combined effect of this increased threat and economic uncertainty is causing tangible differences in the cybersecurity market, and therefore how businesses tackle cybercrime. That is why more and more organizations are opting for macro platforms to protect themselves from cyber criminals, instead of looking for the expected best-in-class solutions out there. Let's have a more detailed look at why these platforms have become popular amongst businesses. Cost optimization means the pendulum is swinging towards security platforms To generalize, a macro trend we have seen in the cybersecurity market has been for businesses to oscillate between two different cybersecurity strategies. On the one hand, best-of-class platforms tackle specific areas of cybersecurity. While they can be effective, they can also have a complicating effect because organizations need to procure, integrate and measure multiple solutions to build a robust defense against cyber criminals. This, in turn, proves to be a time-consuming and costly exercise. Instead, in the face of increased demand for cost optimization, CISOs have been under pressure to do more with less. Platforms, therefore, offer a suite of solutions from a single company that handle different operations in cyber defense. Choosing a suite of tools can offer efficient, comprehensive protection against cyber threats and deliver on budget constraints through multi-year cost optimization; reducing costs significantly in the long run. This can be later supplemented with additional best-in-class solutions to cover any further requirements. There's another important reason why simpler, easy-to-integrate and cost-effective solutions might work best for CISOs and cybersecurity professionals. There is tangible exhaustion amongst leaders and board members when it comes to cybersecurity – above all, they want to break the endless cycle of purchasing a new solution, integrating it, and then having to replace or upgrade it only a few years later. What is driving this? Interview-based risk assessment is no longer working. What is next? The standard "interview-based risk assessment" often used to assess a business's cybersecurity readiness, is no longer fit for purpose. The holy grail of cybersecurity is to establish real-time and automated systems-led maturity assessments that end the exhausting cycle of investing and renewing. But so far, measuring precisely which tools have been leveraged, how effective these have been and whether their efficiency justifies their cost is extremely difficult. Consequently, businesses are finding hyper vendors and macro platforms offer the clearest path to achieve this goal in the short term. Here's where the conundrum lies: how can businesses ensure they employ the right tools and measurements to elevate their security posture in a way that resonates with the board? Achieving this kind of reporting visibility is not a one-size-fits all proposition, and ultimately CISOs should look to partner with experts able to draw on wider industry context and tailor to their needs and history. Automation has a key role to play The first step to presenting plans to the board and picking a platform is establishing visibility, reporting and systems-

led assessments. The skills gap may be a much-discussed concern but it's automation that can help to mitigate the issue, especially during periods of budget cuts, when layoffs are common. Secondly, automation can free cybersecurity teams from mandatory time-consuming repetitive tasks while scaling a business's security efforts. In tandem with AI and Machine Learning (ML) it can also play an important role in the design of cyber resilience plans. As a result, automation can further strengthen a company's cybersecurity strategy making it much more agile and flexible. Once visibility is established, the right expertise can make connections between data points to link cybersecurity to business outcomes and KPIs which boards can digest. An effective cybersecurity strategy starts with you It's clear that the recent economic uncertainty has caused consolidation in the market. CISOs under financial pressure are having to do more with less, and a move to macro platforms offers vital budget savings through multi-year cost optimization, all while delivering on high standards of protection. The first step to picking a macro platform that delivers on both cyber and cost saving needs is establishing visibility. Only by establishing the right measurements and KPIs can CISOs successfully present cyber investment in terms that the board can understand, such as its links to revenue and corporate reputation. Automation has a central role to play. Not only can it help teams to do more with less, but it can also improve a team's ability to measure positive outcomes and the sophistication of responses to threats. Taken alongside deeper collaboration with experts across the cybersecurity ecosystem who can help navigate change, provide context, and identify new vendors to integrate into their cybersecurity infrastructure. It's the first step towards a more holistic and stronger view of cybersecurity, that will help CISOs deliver cost savings as well as their organization's security needs. This article originally appeared on TechRadar Pro. Tony Buffomante Senior Vice President & Global Head – Cybersecurity & Risk Services, Wipro Limited Over the past 27 years, Tony has managed and executed cybersecurity risk assessments, strategies and implementations for the largest and most complex global organizations. He helps clients identify cyber risks and develop secure strategies that enable business value throughout the digital transformation journey.
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Cloud & AI Creating Cybersecurity Gaps

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cloud-and-ai-creating-cybersecurity-gaps/ ----- Contact Wipro Please fill the required details to access the content Cloud & AI Creating Cybersecurity Gaps Wipro cybersecurity report highlights emerging challenges for CISOs and how disruptive technologies like AI and the cloud present business challenges. [This article, written by Amber Jackson, was originally published by Technology Magazine.] Technologies like generative AI and the cloud have created gaps in cybersecurity, posing significant challenges for CISOs at global companies, according to research published by leading technology services company Wipro. According to the 2023 edition of its State of

Cybersecurity Report, providing an in-depth look at cybersecurity trends across seven industry sectors, CISOs are facing unprecedented security challenges, with increasing global geo-political tensions and constantly increasing quantities of cyber attacks. The digital evolution: businesses must continue developments The report included responses from the security leadership of 345 organisations across US, Europe and Asia Pacific Middle East and Africa regions, who each responded to 30 questions around trends, governance, security practices, collaboration and best practices. In the report, Wipro found that 32% of surveyed organisations are spending more than 10% of their IT budget for security, recognising that perhaps businesses are becoming more aware of the dangers of poor cybersecurity measures. In addition, 61% of organisations are focusing on regional compliance and suggest that compliance in particular is currently a priority for businesses. The top threats also remain the same, according to Wipro, with 81% of attacks being as a result of phishing having increased, alongside 79% being due to ransomware attacks. Breach notification laws are also being strengthened globally, with 70% of the 23 countries analysed having strengthened breach notification laws. With this information, Wipro will hopefully be able to confirm if they need to take any actions to better achieve cyber resilience moving forward. The report comes in the wake of The National Cyber Workforce and Education Strategy (NCWES) in the US stating that it is working to meet the evolving needs of the cyber workforce. Recently announced by the Biden-Harris Administration, the proposed outline is designed to build upon the existing US cyber workforce and education system and work to address critical cyber workforce shortages. It calls for greater knowledge and educational resources to be shared within the workplace to better combat cyber threats. Unprecedented changes occurring across cyber industry According to Wipro, CISOs are facing unprecedented changes across the cybersecurity landscape that are proving to be very disruptive. The report has been released in line with industry professionals citing that the cyber industry is on the edge of an industry crisis as a result of an ever-increasing workforce skills gap. Security needs have changed and, as demand for skilled cyber experts has risen, the number of specialists in the market has not grown to match this. In the midst of cloud adoption starting to increase in use across organisations, the new frontier of generative AI has resulted in greater amounts of data. "Political and economic uncertainties, coupled with the rise of sophisticated new technologies, including generative AI and machine learning, is creating a widening cyber resiliency gap within many enterprises," said Josey George, Editor of the report and General Manager for Strategy and M&A at Wipro CRS. "The insights and recommendations in the State of Cybersecurity Report will help organisations identify security, risk and compliance concerns and provide a path to achieving more resilient operations that can support strategic, business-aligned objectives."
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Unmasking the Illusion: Are Your Threat Feeds Truly Intelligent?

Unmasking the Illusion: Are Your Threat Feeds Truly Intelligent? In today's digitally connected world, the term "threat intelligence" is thrown around quite a bit. Many organizations — especially those in the realm of cybersecurity — invest heavily in both paid and open-source threat feeds. But are these feeds actually providing threat intelligence? The truth is - most of what you receive from these feeds is not intelligence at all. Often, it's simply raw data, or, at best, information. But you need to go beyond mere information to enhance your cyber resilience. The data, information, and intelligence spectrum Let's clarify what we mean when we talk about data, information, and intelligence in the context of cybersecurity. Data are simply raw numbers, facts, or observations. For instance, a list of IP addresses or domains associated with malicious activity. Information is contextualized and processed data that provides a better understanding of its significance. For example, knowing that a particular IP address is associated with the Dridex malware and has been involved in command and control (C2) communication on port 8043 between 7/23/2022 and 8/22/2023. Intelligence is information that has been analyzed, assessed, and applied with intention. Intelligence goes beyond knowing what happened to understanding why it happened, who might be behind it and how to respond effectively. How to turn data into intelligence One common issue with threat feeds is a lack of context. Simply providing a list of malicious IPs or domains is like trying to solve a jigsaw puzzle without the picture on the box. You have the pieces, but you don't know what the completed puzzle is supposed to look like. To understand the broader threat landscape and make informed decisions, context is crucial. Context may include details about the threat actor, the techniques they employ and their observed behavior. Without context, it's challenging to use the data effectively. The journey from data to actionable intelligence is a multi-step process. Here's how it can be achieved: The power of internal threat intelligence While threat feeds are a valuable source of information, they are only a part of the puzzle. Intelligence sharing programs, whether through closed communities or threat intelligence platforms (TIPs) can also provide insights. However, it's essential to remember that what constitutes intelligence for one organization may be mere information for another. Tailoring information to the specific needs and intentions of your enterprise is key. Effective threat intelligence requires a dedicated team with the skills and expertise to analyze, contextualize and apply the information. These teams play a critical role in turning data into actionable intelligence. They are the ones who add value to threat feeds. The most potent and high-fidelity threat intelligence often comes from teams within your organization. It's not about reading blogs or repackaging information, but about having a keen eye on what your security operations center (SOC) and incident response (IR) teams are observing in the real world. They are the ones who can provide insights into what is directly impacting your organization, and by applying discerning intention, they can help you convert information into

actionable intelligence tailored to your organization's unique requirements. Use intelligence to improve your cyber resilience In the world of cybersecurity, the term "threat intelligence" is often applied to threat feeds. But this can be an illusion. The raw data from threat feeds must be turned into actionable intelligence by applying context and discerning intention that aligns with an organization's needs. In this process, internal insights often provide the highest fidelity. The next time you pay for threat intel, ask, "is my organization getting what we need?". True threat intelligence goes beyond the feeds. It's about understanding, intention, and the ability to proactively defend your organization against evolving threats. About the authors Brian Bell Brian is Wipro's the Global Head of Next-Gen Threat Intelligence. He has over 15 years of industry, consulting and training experience with deep expertise in many cybersecurity practice areas, including threat intelligence, security operations, incident response and data analytics for the military and defense industry as well as security startups. Brian's team is currently designing new approaches to contextualize and operationalize cyber threat intelligence. David Charbel David is Wipro's Global Head of Next-Gen Threat Hunting. With over 10 years of industry and consulting experience, David has deep expertise in a number of cyber disciplines, including threat hunting, red teaming, penetration testing, vulnerability management automation and IT audits. He has implemented purple teaming strategies for a world class healthcare enterprise and designed red team engagements in support of the 2020 presidential debates. Currently, David's team is creating innovative ways to visualize threat Intelligence. =====================

True Zero Trust Should Mean VPN Retirement

----- Arcticle source ----- https://www.wipro.com/cybersecurity/true-zero-trust-should-mean-vpn-retirement/ ----- Contact Wipro Please fill the required details to access the content True Zero Trust Should Mean VPN Retirement As enterprises transition to the cloud and hybrid work environments, network infrastructure no longer has one clearly defined perimeter. Legacy approaches to remote access, including virtual private networks (VPNs), lead to slow and unreliable performance that can reduce productivity. Multiple vendor solutions increase deployment complexity and reduce visibility and control, heightening the risk of data loss. Even more concerning, legacy solutions provide a convenient way for malware to effortlessly cross into an enterprise's most sensitive areas. This is because a VPN is nothing more than an encrypted tunnel. It has no security-scanning functions (no anti-virus capabilities, for example) which means malware can get into the tunnel without being challenged. As the limitations of VPNs and other legacy approaches become more apparent, Zero Trust Network Access (ZTNA) is emerging as a better alternative, moving defenses from static, network-based perimeters to users, assets and resources. However, many enterprises will be forced to maintain VPNs for years until they can upgrade their infrastructure to leverage ZTNA. Wipro and Netskope offer a strategic approach that facilitate the transition to Zero Trust by assessing your

current cybersecurity maturity and designing application migration to ZTNA. Download the Whitepaper ======================

Wipro + Google SOC-as-a-Service

Wipro + Google SOC-as-a-Service Empower your Security Operations Center (SOC) with Wipro and Google In today's digital landscape, safeguarding your enterprise from cyber threats is critical. The Security Operations Center (SOC) plays a crucial role in monitoring and analyzing defensive controls to protect against cyber intrusions. Because it is impossible to build foolproof defenses, suitable monitoring must be in place to respond to attacks that break through. A SOC requires the right blend of security operations, full stack engineering, contextual threat intelligence, noiseless detection, threat hunting and incident response. That's where Wipro and Google come in. Together, we have developed SOC-as-a-Service, a comprehensive solution that addresses the challenges faced by modern SOC environments. Powered by Wipro's Cloud Security Operations (CloudSecOps), this offering equips organizations with the necessary resources to meet the demands of a modern SOC. Key features of our SOC-as-a-Service include: Unified security operations: Align your security operations with enterprise-wide intelligence, ensuring a holistic approach to threat detection and response. Context-aware threat detection: Leverage artificial intelligence and user behavior analytics to identify and mitigate threats with precision and speed. Proactive threat hunting: Harness the power of Google's speed and expertise to swiftly investigate potential threats and stay one step ahead of attackers. By choosing Wipro's CloudSecOps, your enterprise will experience accelerated and efficient transformations. Our automation jumpstart kit and other accelerators enable seamless integration and optimization of your security operations. Additionally, our dedicated team of Cybersecurists and our Center of Excellence (CoE) for managed security services provide a flexible operating model and enhanced governance on a global scale. Take the first step towards an empowered SOC. Download our brochure to learn more about how Wipro + Google SOC-as-a-Service can revolutionize your security operations. Download Brochure ======================

State of Cybersecurity Report 2023

Spotlight on AI

State of Cybersecurity Report 2023 Spotlight on AI State of Cybersecurity Report 2023 Spotlight on AI

Managing the risk, security and compliance of generative AI (GenAI) is a formidable challenge for CISOs. However, the rapid evolution of GenAI and large language model tools, with their seemingly unlimited capabilities, often leads to risk management being overlooked. Key challenges surrounding the increased use of AI include: AI, along with its machine learning (ML) and generative AI components, has the potential to significantly transform the cybersecurity landscape. It can continuously grow and learn, enabling defense reactions that outpace the tactics of the bad actors, even when they employ previously unseen attack patterns. But like all tools, AI is only as good as the people using it. To ensure a robust AI cybersecurity framework, a collaborative approach is essential. This involves having the right individuals to write the code, test it, and most importantly, oversee the AI programs on an ongoing basis. To discover valuable insights on deploying cost-effective AI governance, including strategies to prevent security vulnerabilities and backdoors that may lead to data breaches by cyber thieves or business competitors, download our Spotlight on AI.
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Complying with the EU Artificial Intelligence Act

----- Arcticle source ----- https://www.wipro.com/cybersecurity/complying-with-the-eu-artificial-intelligence-act-an-overview-of-the-eus-regulatory-framework-for-ai/ ----- Contact Wipro Please fill the required details to access the content Complying with the EU Artificial Intelligence Act An overview of the EU's regulatory framework for AI An overview of the EU's regulatory framework for AI Artificial Intelligence (AI) is an unstoppable force that has the world at the precipice of a new era. The European Union is taking groundbreaking steps towards implementing a comprehensive regulatory framework for AI called the Artificial Intelligence Act (AIA). Wipro has produced a guide that offers an overview of the AIA provisions and principles. Download your copy . It is crucial for enterprise security operations to devise strategies that will ensure the security and effectiveness of AI systems. The AIA introduces key provisions that help define the boundaries of AI deployment based on four categories of risk systems: Two examples of unacceptable risk systems are real-time biometric identification in public spaces and emotion recognition in law enforcement. High-risk AI systems encompass biometric and biometrics-based systems, essential public and private services, research and analysis systems for justice administration and democratic processes, and recommendation systems in social media platforms. These systems are considered high risk because they may pose a significant threat to the fundamental rights, health and safety of individuals. To ensure transparency and accountability, the AIA mandates that AI systems inform users — both natural persons and deployers — about their operation, capabilities, and the rights affected by their use. It emphasizes the need for thorough assessments of AI systems to identify their long-term impacts on humans,

society and democracy. Download our AIA guide to get early insights into the future of AI regulation. Stay ahead of the curve and be prepared for the transformative changes that lie ahead. Download Your Copy ======================

Securing Data with Private GenAI Models

----- Arcticle source ----- https://www.wipro.com/cybersecurity/securing-data-with-private-gen-ai-models/ ----- Contact Wipro Please fill the required details to access the content Securing Data with Private GenAI Models Generative AI (GenAI) is a dominant topic of conversation and strategy in every enterprise conference room. It can deliver extraordinary efficiency in countless tasks and perform fast analysis without human intervention. However, as enterprise use of GenAI proliferated, CIOs and CISOs immediately identified a security downside in the commonly used public models: Public GenAI models can leak sensitive data to competitors and undermine compliance posture by divulging personally identifiable customer information. Security-conscious enterprises have responded by insisting on private models for most GenAI use cases to control privacy and data handling. In a private model, users can customize the model for specific business uses and control data handling when training the model. However, adopting a private model does not guarantee a bulletproof security posture. To use GenAI effectively and securely, CIOs and CISOs need to consider several other data security factors specific to GenAI. Internal Security Risks: Prevent Data Leaks to Employees From a data security perspective, enterprises should carefully plan applications, interfaces and workflows to avoid intentional and unintentional misuse of the datasets used by the GenAI models. The problem can be complex. For example, sensitive data from one business unit may not be shareable with other business units, even in the same division. Some of the data to be analyzed may not be public information and only available to a handful of need-to-know employees. The goal should be to expose teams only to the data required for their roles/ tasks. CISOs should include all relevant stakeholders – legal, security, HR, and other essential business units – in GenAI strategy deliberations to identify the sensitive data and access rights relative to individual business units.   Third-Party Cybersecurity Risks: Contractors and Partners Using Open AI with Your Data A corporate partner can undercut an enterprise's security efforts by bringing sloppy GenAI practices into collaborative projects. Can CIOs and CISOs reap the benefits of collaborative GenAI projects and simultaneously sidestep the damages? The answer is yes, but GenAI must be implemented strategically and carefully. Corporate leaders should evaluate any project-related use of GenAI by partners and contractors. This will mean extending the enterprise's acceptable GenAI practices into contractor and partner contracts to ensure conformity with corporate privacy policies, including assurances that data will not leak to public GenAI models.   Model Training Risks : Data Leakage to the Model and Beyond One of the balancing acts of GenAI is model training. All GenAI models train on and get better with more data. However, more data could

lead to inaccurate outputs, false narratives, and potential exposure of sensitive data. Organizations using a private model will add their data for specific use cases, insights, and recommendations. Companies need to prevent the model from leaking that data externally by walling off company data and defining uses like "analysis only" to secure data and trade secrets. In addition, they can take steps to prevent platform vendors from ingesting company data to train and improve their platform, thereby inadvertently benefiting competitors. Professionals involved in the GenAI implementation strategy must fully understand the model training functions and how to protect the company's intellectual property and data when used for model training. Boundaries must be strict and well-understood. Wipro's State of Cybersecurity Report 2023 explains how organizations can establish an AI risk management framework with rules and controls to leverage GenAI safely. Where to Go from Here? GenAI holds the promise of significant efficiency gains and enriched experiences. However, it can harm a business if an adequate data security plan is not in place. This technology will continue to evolve. Strategies to properly govern the data fed into GenAI models will change correspondingly. Governments globally have already started to regulate AI (NIST AI-100-1, the EU AI Act, the U.S. White House's Blueprint for an AI Bill of Rights, etc.). However, AI regulation is challenging because few businesses, let alone governments, completely understand AI or the best regulation strategy. Inevitably, CISOs must monitor the evolving AI regulatory landscape to keep data secure while staying compliant. There is no doubt that CISOs have their plates full. However, this is not the first time a new technology has challenged how companies work. GenAI has the potential to make employees more productive and offer customers enriched experiences. Companies should launch their GenAI strategies by focusing on security issues, and keep those issues front and center throughout their use case design to safeguard business interests when implementing AI solutions. About the Author Saugat Sindhu Global Head Strategy and Risk Practice, Wipro Cybersecurity and Risk Services Saugat's team provides business advisory, technology enablement, intelligent automation-based transformation, co-sourcing and managed services. His areas of focus include cybersecurity, risk strategy governance and compliance (GRC), third-party risk management (TPRM), data privacy, enterprise security architecture, enterprise resource planning (ERP) platform security and AI governance. =======================

Wipro's Secure Cloud Foundation for AWS

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipros-secure-cloud-foundation-for-aws/ ----- Contact Wipro Please fill the required details to access the content Wipro's Secure Cloud Foundation for AWS As enterprises expand their cloud landscape, an increasing percentage of data are moving across traditional data center boundaries. This requires a consistent security mechanism that covers all cloud and on-premises environments. Wipro's Secure Cloud Foundation for AWS (SCF) addresses enterprise cybersecurity challenges by building a more secure environment

for AWS cloud deployment. SCF encompasses various aspects of cloud security, including data protection, application security, network security, infrastructure protection, compliance and identity and access management. Wipro's SCF also contains many functions to complement AWS security capability, such as customized guardrails for specific security needs, compliance packs for quick adherence to specific regulatory compliance standards and custom permission sets for integration with third-party identification stores. Major SCF benefits include: To learn more, please download the Secure Cloud Foundation for AWS whitepaper. Download Whitepaper =====================

Securing the Future of Manufacturing: Cybersecurity Challenges in the Industry 4.0 Era

----- Arcticle source ----- https://www.wipro.com/cybersecurity/securing-the-future-of-manufacturing-cybersecurity-challenges-in-the-industry-4-0-era/ ----- Contact Wipro Please fill the required details to access the content Securing the Future of Manufacturing: Cybersecurity Challenges in the Industry 4.0 Era Industry 4.0 refers to the fourth industrial revolution, a technological and organizational metamorphosis that promises to fundamentally alter the way we manufacture, operate and interact with the world. This includes the convergence of automation, data exchange and digital technologies which is enhancing efficiencies across manufacturing industries. Central to this transformative shift is the industrial internet of things (IIoT), a fusion of cyber and physical systems that create a smart manufacturing ecosystem. The promises include improved efficiency, cost reduction, agile manufacturing capabilities and reduced inventory. However, as we journey into this brave new world, cybersecurity becomes a daunting challenge. Understanding the Unique Threat Landscape Industry 4.0 creates new threats that were previously inconceivable in the traditional manufacturing landscape. As technology evolves, so do the tactics of cyber attackers. These threats can target critical infrastructure, operational technology, and even the safety of workers. It's not merely about protecting data. It's also about safeguarding the core of manufacturing operations. Interconnected systems can dramatically amplify the impact of cyberattacks when a breach in one area cascades through the entire manufacturing process leading to widespread disruption. The consequences can range from production delays to compromised product quality. Challenges in Embracing Cybersecurity in the Industry 4.0 Landscape A number of formidable cybersecurity challenges stand in the path of Industry 4.0's full realization: These challenges underscore the critical need for a holistic approach to cybersecurity in the Industry 4.0 era. Overcoming these hurdles requires careful planning, proactive measures, and a commitment to making cybersecurity an integral part of the transformation process. The Need for a Multidimensional Approach to Cybersecurity Addressing cyber risks in Industry 4.0 demands a comprehensive strategy. A one-size-fits-all approach is insufficient. Instead, organizations must adopt a multidimensional

approach that covers the following six aspects of cybersecurity: To navigate this new industrial revolution successfully, businesses must prioritize cybersecurity from the outset. Wipro's VISTRA framework — Visibility, Intelligence, Security, Trust, Resilience, and Awareness — stands as a beacon of hope in the cybersecurity landscape. It's a multidimensional approach that can help organizations conquer the digital divide and reap the rewards of Industry 4.0 while mitigating its risks. As we move forward, we must remember that Industry 4.0 is not just about embracing innovation. It's about securing it. Let us embark on this journey with vigilance, resilience and a commitment to safeguarding the future of manufacturing. *Source: Wipro State of Cybersecurity Report 2023

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Securing the 5G Landscape: Unveiling Risks and Monitoring Threats

----- Arcticle source ----- https://www.wipro.com/cybersecurity/securing-the-5g-landscape-unveiling-risks-and-monitoring-threats/ ----- Contact Wipro Please fill the required details to access the content Securing the 5G Landscape: Unveiling Risks and Monitoring Threats The emergence of 5G will revolutionize how we connect and interact with the world. However, with the widespread adoption of 5G, concerns surrounding network security have escalated. The future of 5G network security lies in embracing novel security frameworks and adopting proactive measures to counter emerging threats. In this article, we will delve into the intricacies of 5G network architecture, its key components, its impact on security and strategies to monitor and mitigate associated risks. 5G Network Architecture: An Overview Compared to its predecessors, 5G technology offers superior bandwidth and lower latency, paving the way for transformative possibilities. The 5G network architecture is comprised of three primary components: the radio access network (RAN), the core network, and the transport network. The RAN connects end-user devices to the core network, which in turn delivers voice, video, and data services, while the transport network connects the core network to the internet. One notable innovation within 5G is virtualization technology, enabling network slicing services. Network slicing allows the division of a physical network into virtual networks with distinct bandwidth, latency, and security parameters. While this enhances network performance, it also introduces new security vulnerabilities. Figure 1: 5G Network Architecture Open Radio Access Network (ORAN) and its Impact on 5G Network Security The concept of the open radio access network (ORAN/OpenRAN) seeks to create a more adaptable and open RAN environment by separating RAN hardware from software. While this approach can reduce capital and operational expenses, it introduces fresh security concerns such as supply chain threats, software vulnerabilities, configuration errors, and access control issues. ORAN's flexibility increases the attack surface, which in turn creates the need for vulnerability assessments and penetration testing. To mitigate security hazards, secure

connection methods like security gateway and IPsec should be employed. Figure 2: 5G Network Architecture with ORAN Network Slicing Services and Their Impact on 5G Network Security Network slicing empowers the creation of multiple virtual networks within a physical infrastructure, each tailored with unique characteristics. However, this technology introduces security risks as each virtual network has its own security requirements and vulnerabilities. Implementing a comprehensive security framework involving a security gateway (SecGW), IPsec, DDoS solutions and firewalls is essential to mitigate these risks. Regular security audits are crucial for identifying and addressing potential vulnerabilities. 5G Network Signaling, Legacy Technology, and Their Impact on 5G Network Security As 5G coverage expands worldwide, it relies on legacy technology networks and IP networks to manage existing services. This convergence of technologies compounds security challenges, including common threats such as man-in-the-middle (MITM) attacks, distributed denial-of-service (DDoS) attacks, UDP flooding, TCP SYN attacks, TCP session flooding, and DNS poisoning. Legacy networks like 2G, 3G, and 4G are also susceptible to SS7/diameter protocol threats, SMS-phishing, unauthorized A2P message terminations, network access authentication flaws, and unwarranted static/dynamic subscriber data queries. Employing a comprehensive security framework comprised of signaling security systems, SMS firewalls, and network firewalls is vital to mitigate these risks. Regular security audits and monitoring of network users and signaling traffic can further enhance threat detection and mitigation. 5G Network Security: C-Plane, U-Plane, and M-Plane The 5G network is divided into three principal planes (layers): Each layer has unique security requirements and vulnerabilities, necessitating the implementation of a comprehensive security framework. This framework should encompass firewalls, IPsec, vulnerability assessments, penetration testing, and overall monitoring capabilities. Figure 3: 5G Network Layers 5G Network Security Monitoring Using SIEM, SOAR, and Evolving Existing Security Operations Security orchestration, automation and response (SOAR), and security information and event management (SIEM) are essential components of any comprehensive security framework. SOAR enables the automation of security operations, while SIEM facilitates the collection, analysis, and monitoring of security events. Ensuring high visibility in network-related security events is vital for incident management so a robust security framework should integrate SIEM and SOAR to effectively monitor and mitigate security risks within the 5G network. Regular security audits and vulnerability assessments aid in identifying and mitigating potential security threats. 5G Network Security Services: What to Look For Selecting a 5G network security solution and service provider requires careful consideration. Look for providers offering a comprehensive security framework that includes vulnerability assessment, penetration testing, security system services, IPsec, and signaling firewalls. Additionally, the provider should conduct regular security audits and network traffic surveillance to detect and mitigate potential security hazards. A vendor-agnostic approach can help you select the most effective security products and procedures. As 5G network technology and deployment advances, new security threats are introduced, underscoring the importance of maintaining visibility and preparedness in the face of evolving challenges. Embracing new security frameworks and practices to mitigate emerging threats is the

future of 5G network security. For more information, contact our experts in our Emerging Technologies practice. =====================

Shortage of Qualified Critical Incident Response Professionals Continues to Plague Organizations

----- Arcticle source ----- https://www.wipro.com/cybersecurity/shortage-of-qualified-critical-incident-response-professionals-continues-to-plague-organizations/ ----- Contact Wipro Please fill the required details to access the content Shortage of Qualified Critical Incident Response Professionals Continues to Plague Organizations In Wipro's 2023 State of Cybersecurity Report (SOCR), 79% of organizations surveyed responded that ransomware is a top threat to their operations. Data leaks can disrupt systems and business operations for days, sometimes weeks. In addition to locking down systems through encryption, hackers are now using malicious extortion tactics against senior executives, threatening to release stolen data on the dark web. All this can negatively impact brand reputation and erode trust among customers and clients. To adequately address these threats, enterprises need skilled cybersecurity professionals securing the digital frontier. But data suggests that in-house cybersecurity teams are not enough on their own. Teams may not be large enough for round-the-clock monitoring, and new cyber threats require increasingly specialized skillsets to mitigate. A critical incident response team (CIRT) is a dedicated group of cybersecurity professionals who work around the clock to respond to threats, protect data and strengthen an organization's cyber resilience. Filling this critical incident response skills shortage is reportedly one of the highest priorities for CISOs across industries, especially in those that cannot afford downtime such as healthcare, government agencies, manufacturing and financial institutions. This infographic from 451 Research breaks down the cyber workforce capacity issue and offers insights for how to secure your digital frontier. Download Infographic =====================

Cybersecurity Strategies to Secure IoMT Healthcare Networks

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cybersecurity-strategies-to-secure-iomt-healthcare-networks/ ----- About the Author Contact Wipro Please fill the required details to access the content Cybersecurity Strategies to Secure IoMT Healthcare Networks Discover proven mitigation strategies to secure vulnerable IoMT healthcare networks. The healthcare industry is experiencing a transformative shift towards "Healthcare 4.0," driven by technologies like cloud, 5G, AI/ML, blockchain, IoMT, and more. This transformation will benefit patients with convenient and fast remote diagnosis and disease-prevention advice both in the hospital

and remotely in their homes. The IoMT and other emerging technologies will play a transformational role in modernizing healthcare networks and care delivery. These technologies power smart medical devices connected through communications mediums (Wi-Fi, Bluetooth, internet-to-cloud server, and mobile applications) that exchange sensitive patient medical data and personal details with a central location. The IoMT combines the digital and physical worlds to improve the speed and accuracy of diagnosis, treatments, and real-time monitoring. Amid numerous benefits, IoMT-driven modernization also brings new challenges to hospital Chief Information Security Officers (CISOs). Hospitals are full of networked medical devices that are now a target of various security threats. Health systems need to prioritize addressing the evolving threats that these connected devices pose. Understanding the Unique Threat Landscape A typical healthcare organization or hospital may have 20,000 or more connected devices, including IT, IoMT, IoT, and OT devices. In hospitals, Wi-Fi access is free for guest users. The guest might connect to the same hospital network to which critical medical devices are connected (in case of a flat network), potentially opening access to cyber criminals. The most common threats that IoMT devices introduce include ransomware, intentional data theft (including protected health information), attacks against the network, and tampering with devices to alter medical data that might impact patient health. Cybercriminal groups can also turn weak hospital networks into money-making machines (for example, through crypto mining). Attackers are becoming increasingly clever at scanning the internet to find vulnerable systems (including hospital networks and medical devices) that are ripe for exploitation.   Why Cybersecurity is Lacking in the IoMT Landscape With so many different networked-enabled devices in a hospital, it has been challenging to address cybersecurity. These heterogeneous IoMT devices are sometimes managed and sometimes unmanaged, often running an outdated OS, using old browsers, and connecting over wired or wireless networks. Some devices have insecure protocols and default credentials. Medical devices that use default credentials are weak links in the network. These devices exchange data over both propriety and insecure protocols, and both within and outside the network. Many healthcare facilities have weak patch management deployments. IoT medical devices often have static credentials (difficult to change), no encrypted communications, open ports, unknown services, and proprietary firmware. More issues arise due to a lack of identification and management of vulnerabilities. Installing security-enhancing agents on unmanaged devices is difficult due to device constraints like low memory, proprietary operating systems, and protocols. Existing IT-based vulnerability scanning tools that perform active scanning are often not supported by these devices. Some devices also use non-standard protocols, making it challenging to identify vulnerabilities within the devices. Proven Mitigation Strategies for Healthcare CISOs Wipro has worked with many hospitals to develop cybersecurity strategies that secure IoMT healthcare networks and ensure HIPAA compliance. Key IoMT security strategies for hospitals include: Key Takeaways Hospital systems have a daunting task ahead. Emerging technologies are progressing with speed and scale in functionality, benefits, and risks. Connected devices are more common than ever both in healthcare facilities and in patient homes. Any of these devices can pose a potential threat to the hospital and its patients. A comprehensive cybersecurity plan that extends from the device to the

network with a secure data pipeline is essential. Shyamkant Dhamke Shyamkant Dhamke is a cybersecurity professional with over 23 years of experience in IoT/IoMT, OT/ICS security services, cyber-physical security, and application and data security across various industries, including Healthcare, Manufacturing, ENU, Banking, Telecom, and ENU. He leads a global IoT and OT/ICS security practice at Wipro and has been honored with Distinguished Member of Technical Staff (DMTS) at Wipro.
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Migrating to a modern IGA platform involves several essential steps. Do you know where to start?

----- Arcticle source ----- https://www.wipro.com/cybersecurity/migrating-to-a-modern-iga-platform-involves-several-essential-steps-do-you-know-where-to-start/ ----- Contact Wipro Please fill the required details to access the content Migrating to a modern IGA platform involves several essential steps. Do you know where to start? In today's dynamic business environment, legacy identity governance and administration (IGA) platforms struggle to meet the evolving needs of organizations. As businesses embrace hybrid work setups, distributed teams, and diverse digital ecosystems, the limitations of legacy systems become apparent. Enter modern identity governance – a paradigm shift towards adaptable and robust identity management solutions. Our eBook, "Modernizing your identity platform," serves as a compass for organizations seeking to modernize their IGA strategies. Explore the challenges posed by legacy platforms and discover the transformative potential of upgrading your identity infrastructure. Wipro offers a strategy-first approach to IGA modernization, leveraging a comprehensive roadmap to enhance security, streamline operations, and ensure compliance. Start your journey towards a more resilient and efficient identity ecosystem today. Download our eBook and pave the way for a secure and agile future for your organization. What you will learn: Modern identity governance and administration (IGA) capabilities are necessary for each human and digital identity in a company. However, the growing complexity is pushing legacy IGA platforms to their limits. This eBook discusses the benefits of modernizing your identity platform, explores one organization's migration journey, and walks through a smart approach for modernizing your IGA platform. Download the eBook Key benefits of a modern IGA platform: Enhanced Security Advanced authentication methods strengthen security and reduce identity-related breaches. Streamlined Compliance Built-in compliance frameworks automate workflows and streamline compliance. Simplified User Experience Self-service functionality reduces dependency on IT staff and enhances user experiences. 61% of data breaches are caused by compromised credentials *"Cybercrime thrives during the pandemic: Verizon 2021 Data Breach Investigations Report." Verizon, May 2021 Why modernize your IGA system? Organizations need effective management of identities, access requests, and entitlements to maintain a strong security posture while adapting to the evolving needs of the business. The legacy IGA

transformation: A case study Organizations need effective management of identities, access requests, and entitlements to maintain a strong security posture while adapting to the evolving needs of the business.
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Cybersecurity Strategy: Key Techniques for Optimization

----- Arcticle source ----- https://www.wipro.com/cybersecurity/key-strategies-for-cybersecurity-optimization/ ----- Contact Wipro How to optimize the performance and costs of your cyber management investments. Shortage of Qualified Critical Incident Response Professionals Continues to Plague Organizations Please fill the required details to access the content Key Strategies for Cybersecurity Optimization 451 Research Business Impact Brief In today's digital landscape, security teams are increasingly overwhelmed by the sheer volume and complexity of cyber threats. Traditional methods are no longer enough to meet these escalating challenges. Explore how to revolutionize your cybersecurity strategy with our comprehensive business impact brief, created in partnership with 451 Research: 'Key Strategies for Cybersecurity Optimization.' This insightful report delves into the pressing challenges faced by security professionals and offers actionable strategies to enhance your cybersecurity capabilities. Learn how to: Don't let your security team struggle under the weight of uninvestigated events and complex policies. Download our business impact brief now to gain the knowledge and tools needed to control costs, improve controls, and reduce risk, ensuring your organization stays ahead of the curve in the fight against cyber threats. Download Report Resources
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Wipro Google Cloud Security Pack

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download the Wipro Google Cloud Security Pack whitepaper. Download Report =====================

Modern Cybersecurity Strategies for Today's Threat Landscape

----- Arcticle source ----- https://www.wipro.com/cybersecurity/three-modern-cybersecurity-strategies-to-navigate-todays-complex-threat-landscape/ ----- Contact Wipro Accelerating digital transformation with SASE to securely move from Edge to Cloud IDC Spotlight on Cloud Security: Multi-cloud Mastery Unveiled Security for Modern Infrastructure: Transforming next-generation solutions Please fill the required details to access the content Three modern cybersecurity strategies to navigate today's complex threat landscape As companies use digital transformation to drive growth and innovation, new security challenges have emerged that threaten success. Organizations face significant challenges to reduce complexity and solution sprawl and safeguard against intensifying threats – all while reducing costs. It's imperative to delve into the modern cybersecurity strategies to empower your business amid the complex web of contemporary threats. A striking "63% of security professionals herald the potential of AI to revolutionize threat detection," underscoring the pivotal role of advanced technologies in shaping the future of cybersecurity. Moreover, a concerning "80% of companies have reported encountering at least one cloud security breach over the past year," highlighting the urgent need for robust security measures. Learn how these advanced strategies provide: Download the infographic to learn how to protect your company's cyber transformation through integrated, accessible solutions that utilize best-in-breed technology for reduced complexity, a smaller attack surface. Download Report Resources =====================

Beyond the Breach: How to Safeguard Your Organization from Third-Party Risks

----- Arcticle source ----- https://www.wipro.com/cybersecurity/beyond-the-breach-how-to-safeguard-your-organization-from-third-party-risks/ ----- Contact Wipro Please fill the required details to access the content Beyond the Breach: How to Safeguard Your Organization from Third-Party Risks Recent data breaches have highlighted a common vulnerability — third-party cloud platforms, where hackers have accessed millions of sensitive customer records. Even though the breaches were carried out by different adversaries, they shared a common thread — the involvement of third-party cloud services. Robust risk management can protect your organization As businesses increasingly rely on third-party providers for essential services, it's crucial to assess and manage the associated risks. A robust Third-Party Risk Management (TPRM) program is vital for mitigating the risk of third-

party breaches. The program should verify that vendors both adhere to the organization's security standards and comply with regulatory requirements. TPRM must encompass the entire lifecycle of a third-party engagement, including onboarding, mitigation of risks, and continuous monitoring. Wipro has compiled the following best practices that can help safeguard your organization: 1. Minimize third-party access to sensitive data: Implement Privileged Access Management (PAM) to restrict third-party access to only what is necessary for contractual obligations. Establish clear policies for data storage and transfer. 2. Create an incident response plan: Your plan should outline security incident protocols and include provisions for third parties to promptly notify your organization if a breach occurs. 3. Incorporate risk management into contracts: Use detailed contractual agreements that specify security requirements, responsibilities and expectations to ensure vendor accountability. 4. Use data intelligence tools: Utilize tools to assess the cybersecurity posture of your vendors. Continuous monitoring of information security, vulnerabilities, and threats supports informed risk management decisions and minimizes attack impacts. 5. Offer training and awareness programs for employees and third parties: Ongoing education helps everyone understand their roles in protecting data and identifying potential risks. 6. Ensure compliance and regulatory adherence: Your third-party vendors should comply with relevant industry standards like GDPR and HIPAA. For critical vendors with access to highly sensitive data, request that they maintain security certifications or submit to annual assessments such as ISO27001, CSA STAR, PCI DSS, NIST, SOC 2 Type 2, and ISO 23001. Strengthen Your Defenses with Wipro's Cybersecurity Expertise In today's digital landscape, data breaches are a significant risk that can compromise customer trust and organizational integrity. Wipro Cybersecurists are specialists in cybersecurity, data privacy and operational resilience and are ready to support the ability of organizations to prevent, prepare for, and respond to third-party risk challenges. Our strategic approach ensures that your business is not only protected but also resilient in the face of cyber threats by offering: Today's enterprises are deeply reliant on third-party providers. The efficiencies and capabilities that third-party providers deliver generally outweigh the risks, and as we enter the age of AI, it will be essential for businesses to build new data-driven relationships with third-party providers. As these third-party relationships proliferate, organizations can future-proof their data strategy by investing in robust TPRM program. Leverage Wipro's expertise to fortify your third-party cybersecurity defenses and safeguard your organization against evolving digital threats. About the Author Stephanie Kasten Managing Director, Risk and Compliance Transformation Stephanie serves as a leader in the Risk and Compliance transformation team, extending from delivery and execution to risk management consulting across multiple industries. Stephanie is passionate about reducing risk, simplifying complex issues, and building cohesion across organizations. She comes to Wipro with 15 years industry experience building and leading risk programs in heavily regulated operations. =====================

Identity Management Center

What We Think Contact Wipro Please fill the required details to access the content Identity Management Center Simple, Secure, Automate & Accelerate A single holistic service management platform providing a single pane of glass view into your Identity & Access Management (IAM) ecosystem, including accelerators and automation tools that help you at every step of the IAM journey — implementation, transformation, and operations. An IAM program manager has to deal with several manual, effort-intensive, repetitive, and redundant activities. This takes away crucial time from IAM development and operations teams which is better spent resolving problems, performing root cause analysis, and implementing optimizations in the existing process. Wipro's IMC automates & accelerates activities at every stage of the IAM journey to help IAM teams focus on fixing problems rather than finding them. Problem triage is either automated or left-shifted to L1 and L1.5 teams, leaving the IAM niche teams to focus on the high-value activities. Customers can expect a 30–70% reduction in effort across application onboarding, manual user access management activities, regression testing, data clean-up, and application information collection during onboarding. It can also help left-shift repetitive activities like IAM-specific monitoring and regression testing to L1-teams. Overall, the IMC is a highly customizable tool designed to fit an organization's individual IAM needs and ensure high visibility into the IAM ecosystem. In this ever-changing enterprise landscape, several identity and access management (IAM) solutions are deployed to enforce security controls on the different types of identities – enterprise users, privileged users, contractors, and even consumers. =====================

Microsoft Security

Our Expertise What We Think What We Think What We Do Contact Wipro Please fill the required details to access the content Microsoft Security Enable customers to seamlessly adopt, architect, implement and provide managed services globally. In the current digital era, enterprises are dealing with multitude of identities through various personas and connected things. Enterprise data, applications and servers residency have been expanding from on-premise governed zones to multi Cloud environments. The explosion of Cloud and mobile applications along with rapid adoption of Cloud workloads have opened huge security risks posture and widened the gaps with on-premise security solutions that work in silos. To combat and stop advanced threats, enterprises are in need of easily deployable, multi-layered and integrated security solutions with cognitive intelligence. Microsoft provides a set of comprehensive Cloud and analytics powered security solutions to protect enterprise users, data and infrastructure. Enterprises can reduce costs and complexity by leveraging integrated Cloud and hybrid security offerings. Comprehensive security and compliance

solution from Wipro to provide a layered and zero trust security for Azure workloads Wipro and Microsoft jointly hosted a CISO panel discussion on "Overcoming Security and Compliance Challenges in a Hybrid/Multi-Cloud Environment". Integrated and intelligent security and compliance solution for SAP workloads on Azure. Wipro and Microsoft recently hosted a joint CISO panel event on the topic of Zero Trust user access for a secure remote working environment. Wipro's Modern SOC MDR service is Azure Sentinel powered fully managed Wipro's SAP on Azure offering provides a comprehensive security Identify and assess the risks posture of the IoT/OT environment by performing risk assessment leveraging Azure Defender for IoT service. Wipro's Azure AD Digital IAM managed service offerings to provide end-to-end Wipro's Microsoft Advanced eDiscovery offering enable organizations Wipro will assess organization's privacy posture and implement controls to reduce privacy risks on Microsoft 365 environment by leveraging Wipro's framework and Microsoft Priva solution. Wipro's Azure AD Digital IAM offering to provide Azure Active Directory consultation and Setup Discover your sensitive data in a hybrid environment to identify potential risks Microsoft 365 Security and Compliance powered Wipro's modern workplace security Wipro's Entra cloud permission workshop to help enterprises rapidly enable the service with Azure, and multi-cloud providers to discover privilege permission risks associated with identities =======================

Wipro achieves AWS Level 1 Managed Security Service Provider (MSSP) and AWS Security Competencies

----- Arcticle source ----- https://www.wipro.com/cybersecurity/aws-managed-security-services/ ----- AWS Infrastructure Vulnerability Scanning AWS Asset Inventory Visibility AWS Security Best Practices Monitoring AWS Compliance Monitoring Monitor, Triage Security Events 247 Incident Alerting and Response Distributed Denial of Service (DDoS) Mitigation Managed Intrusion Prevention System (IPS) Managed Detection and Response for AWS Endpoints Managed Web Application Firewall (WAF) What We Think What We Think Contact Wipro Please fill the required details to access the content AWS Managed Security Services Wipro is proud to be recognized as AWS Level 1 Managed Security Service Provider (MSSP) Competency Partner. The Level 1 Managed Security Services is a new baseline standard of quality created by Amazon Web Services (AWS), for organizations to refer to when choosing an AWS Partner to team up with when operationalizing their AWS security responsibilities in the cloud. The Competency Partners have had their technical and operational capabilities successfully validated against the Level 1 Managed Security Services baseline. The recognition is an endorsement for Wipro's Cybersecurity and Risk Services Practice, which helps enterprises stay ahead of the threats in the cloud. Wipro helps accelerating resilience during the cloud journey and

helps mitigate threats in an efficient manner. AWS Managed Security Services provides security protection and monitoring of essential AWS environment assets delivered as a 24/7 fully managed service through Wipro's AWS security experts. It comes with the additional flexibility of either supplementing the internal security team or end-to-end managed service. The managed security services help reduce business risk, increase cloud security posture, fill cyber skills gaps, and span across the six security domains: vulnerability management, cloud security best practices and compliance, threat detection and response, network security, host and endpoint security, and application security. As an AWS Managed Security Service Provider (MSSP), Wipro has closely worked with AWS security experts to develop the 10 managed security service (MSS) specializations to protect and monitor your AWS environment. Regular and automated scanning of your AWS infrastructure assets for software vulnerabilities to provide a single comprehensive view of the security status of all applications within an organization. Helps prioritize vulnerabilities and enable higher-level risk decisions across the AWS estate to quickly remediate these findings, ensuring that the infrastructure is in line with security best practices. Complete visibility across all customer accounts and regions is provided in a consolidated view along with the information of AWS assets being added, changed, or removed across your organization to help reduce business risk from unapproved activities. Provides visibility into cloud misconfigurations and their potential impact on application risk to avoid or reduce potential security breaches. Detects AWS accounts for the configurations of deployed resources not aligned with security best practices. Provides AWS application risk visibility based on risky changes in the environment and considers associated environmental health parameters providing improved visibility into cloud application risk and helps in risk reduction. Provides visibility into cloud misconfigurations and their potential impact on application risk to avoid or reduce potential security breaches. Detects AWS accounts for the configurations of deployed resources not aligned with security best practices. Provides AWS application risk visibility based on risky changes in the environment and considers associated environmental health parameters providing improved visibility into cloud application risk and helps in risk reduction. Enables organizations to prepare for cyber incidents through effective threat management and defend against and reduce the impact of cyber-attacks for their AWS environment. Complete visibility into security alerts related to your AWS environment, with a consolidated list of security events and recommended remediation guidance. Security intelligence services with a combination of automated tools and security experts monitoring AWS asset logs 24/7/365 to analyze and triage security events, providing remediation steps and guidance. Industry best practices for tuning and optimizing AWS log sources. Wipro provides protection by implementing cybersecurity best practices. Wipro offers DDoS protection solutions designed to protect everything on cloud and on-premise networks. DDoS protection from Wipro allows an organization to stay focused on running online business without disruption. Wipro has highly trained security experts offering threat analysis, strategy, which provides 24/7 globally distributed monitoring and security operations centers. Wipro`s IDS/IPS solution is designed to identify and block malicious traffic, prevent lateral movement of malware, ensure network availability and resiliency, and enhance network performance.

Wipro provides an additional layer of security by scanning and analyzing suspicious content for potential threats. There are various solutions available per customer requirement like Trend Micro and Alert Logic that integrate with AWS CloudTrail. It helps to collect API activity data within an AWS account and include it with log data from other applications and systems. Wipro's Cloud Endpoint Security solution is proficient to safeguard the data and instances on cloud. Wipro offers Real Time discovery of Public Cloud Workloads and Protection against malware and other threats. Wipro offers the most authentic WAF solution for AWS users. Wipro delivers enterprise-grade WAF solutions using AWS WAF and 3rd-Party WAF vendor solutions to safeguard your site from the latest threats; an intelligent array of performance monitoring and analytic services to provide insights about a website's security and performance. Wipro harnesses unmatched visibility into attacks to deliver curated and highly accurate WAF protections that keep up with the latest threats. Digital and cloud transformation initiatives are enabling organizations to adapt to changing business.....
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Third Party Risk Management

----- Arcticle source ----- https://www.wipro.com/cybersecurity/third-party-risk-management/ ----- What We Think Form Title Form Title Form Title Form Title Contact Wipro Please fill the required details to access the content Third Party Risk Management Continuous risk monitoring solution on an integrated risk management platform Wipro's Third-Party Risk Management (TPRM) is a fast and efficient automated process of collecting, validating, and continuous monitoring of data with real-time visibility of threat and risk across all your third parties. Wipro's TPRM champions holistic visibility across vendors and suppliers. Its agile framework solution addresses automation of the end-to-end lifecycle of TPRM processes - onboarding, detailed assessments, remediation planning and tracking, ongoing risk monitoring, and continuous monitoring with real-time visibility. TPRM involves a comprehensive plan for the identification and mitigation of potential business uncertainties. The flexibility of this solution allows it to adapt and blend with current practices in the organization. TPRM focuses on assessing vendors across multiple ERM domains and makes an assessment based on a questionnaire, feeds, and intelligent data from independent external sources. TPRM combines all assessment inputs and external feeds to understand the vendor's risk posture and then comes up with a rating. Overall, the TPRM framework solution empowers organizations to onboard and assesses vendors securely while continuously assessing risk via automation across multiple ERM domains. This gives your organization confidence and peace of mind of knowing that your vendors' security is continuously under watchful, expert eyes. Implementing third-part risk management (TPRM) is crucial for organizations that rely heavily on external partners or vendors to run its essential services and operations. In the movie 'After Earth', Will Smith asks his son Kitai to "take a knee" whenever he is out of ideas during a crisis. Why traditional risk management practices fall short The COVID-19 pandemic will have a lasting effect on our business and industry in general. It is no surprise that most corporate

security profiles are being changed and updated on a regular basis.
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----- Arcticle source ----- https://www.wipro.com/cybersecurity/google-cloud-security/ ----- Our Security Specialization Zero-trust Security Modernization Application Security Data Protection & Security Security Analytics & Operations Wipro Cloud Application and Risk Governance (CARG) Wipro's SaFE Water Wipro's Agile Mining Wipro's Retail in a box Wipro's RaCE for the Manufacturing industry Wipro's Energy Reach Wipro's Express ERP for Chemicals & Hi-Tech Wipro's RaCE template for LOBs Wipro's Intelligent Real Estate Enterprise Wipro's AutoSol Wipro's RaCE for the Consumer industry Contact Wipro Please fill the required details to access the content Google Cloud Security Cloud is the foundation enabling businesses to transform, differentiate, and gain competitive advantage. Many global organizations are now focused on cloud-first strategies as they advance the use of cloud services across the business. In North America alone, 40% of organizations plan to spend the majority of new or additional funding on cloud, according to a recent Gartner survey. GlobeNewswire predicts the global cloud computing market will grow at a compound annual growth rate (CAGR) of 18% from 2019 to 2027. Even the recent pandemic has motivated businesses to pursue cloud transformations. Cloud adoption is on the rise — but what about cloud security? In our experience working with Google Cloud, we've noticed that enforcing security controls, privacy, and data protection for data processed and stored on the cloud is a common challenge for businesses. Google and Wipro offer leading security solutions and services within cybersecurity operations and risk advisory. At Wipro, we help enterprises assess and transform their cybersecurity maturity levels on the Google Cloud. We also modernize enterprise cybersecurity by integrating native technology solutions that protect the business and its data while reducing the total cost of ownership. Our zero-trust approach blends the native security controls with best practices and technologies from our partner ecosystem, for superior protection for our clients' businesses and their customers'. Use strict parameters and rigorous security standards, not trust, to verify devices and protect sensitive environments Transitions to native solutions that strengthen cloud security while optimizing the TCO Reduce risk exposure for your applications before and after workload migrations on Google cloud Ensure compliance with data protection regulations and security standards with robust data security controls Optimize your security analytics to detect anomalies and potential data breaches with the Security Operations Center of the future Secure your business applications before, during and after migration to Google Cloud. A pre-configured solution for metering, billing, back office, asset management, and self-service functions of water utilities. The solution optimizes meter-to-cash processes, seamlessly integrates customer data, increases customer satisfaction and call center efficiency, and simplifies financials, billing and invoicing. A pre-configured solution that helps the mining industry manage commodity risks, improve asset utilization and effectively oversee operational safety, risk and compliance. An end-to-end SAP pre-configured solution for retail grocers to enable efficient omnichannel supply operations and customer service. It helps gaining flexibility of Assemble-to-Order components that are tightly integrated to core retail solution. A preconfigured industry solution for businesses in the Manufacturing

industry to accelerate SAP S/4HANA deployments. It helps expand intelligent automation capabilities across supply chain and finance operations with lower efforts and minimal risks A pre-configured solution to manage the end-to-end supply chain processes of refineries, terminals, jobbers and depots for oil and gas companies. The solution accelerates time-to-market, reduces capex, provides accurate inventory visibility, quicker invoicing, and dynamic scheduling. A rapid deployment solution to manage operations related to production and maintenance, ensure compliance and record and report production costs. It ensures reduction in percentage of lost orders, material costs and order to cash cycle time, and improvement in customer service levels and product availability. A pre-configured, ready-to-run SAP best practices driven template for rapid SAP S/4HANA implementation of core line of business (LOBs). A pre-configured solution to enable organizations to manage their real estate portfolios more proactively and efficiently. Designed for automobile original equipment manufacturers (OEMs) and tier-1 suppliers, this SAP pre-configured industry solution improves return of investment and performance of the entire value chain right from product design and innovation to aftermarket services, lowering R&D expenses and ensuring faster time-to-market. This SAP pre-configured solution enables rapid SAP S/4HANA deployment by adopting fit-to-standard industry best practices with scalability. It provides accurate traceability & tracking of consumer goods & perishable food products with batch managed inventory, efficient control & monitoring of material flow with pallet managed inventory options and embedded real-time analytics tailored to business needs. =====================

Wipro's Security Management Center

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipros-security-management-center/ ----- What We Think Form Title Contact Wipro Please fill the required details to access the content Wipro's Security Management Center Single pane of glass for entire cybersecurity estate Wipro's Security Management Center identifies operational security risks. It enables a better realization of security investments using a customized dashboard to consolidate overall risk, reliability, compliance, and operations effectiveness. "What you see and detect is what you can protect." Proactively protect enterprises from enormous threats and rampant cyber-attacks caused due to lack of "Security Hygiene" of the infrastructure, limited visibility of security controls and, associated ineffectiveness of services. Wipro's Security Management Centre 3.0 (SMC 3.0) enables CISOs to visualize compliance with trends & analytics across technologies. With this functional insight enterprises, attain operational maturity and reduced time-to-market to a great extent. Visibility is crucial to effective defense against modern and sophisticated threats by proactively identifying risks and prioritizing them for remediation. Greater visibility will allow smooth security operation by integrating different technologies and enable the use of extreme automation. Wipro offers its customers a state-of-the-art Security Management Center (SMC), built on the "beat before beaten" principle. It

takes an integrated approach combining predictive, preventive, and proactive activities based on automation and analytics to ensure a 360-degree business-oriented view of security operations. Wipro provides a consolidated view that comprises risk, reliability, and efficiency of infrastructure through SMC, with the richness of correlated data, aggregated information, and transparency of services offered. The best features of SMC to call out would be: Get a consolidated view comprising of risk, reliability and efficiency of the infrastructure to understand your security posture Driving improved effciency in security operations, from insight to action, leveraging extreme automation
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AWS Security

----- Arcticle source ----- https://www.wipro.com/cybersecurity/aws-security/ ----- Wipro's Security Service Offerings on AWS Our Success Stories Form Title Form Title What We Think Our AWS Security Solutions Infrastructure and Workload Security Data Protection Secure Identity and Access Management Application Security Threat Monitoring and Detection Governance and Compliance Managed Security Services Contact Wipro Please fill the required details to access the content AWS Security Securing the AWS landscape throughout the digital journey Securing cloud journeys is one of the most important aspects being considered by enterprises worldwide. Even though enterprises embrace AWS to realize the full potential of the cloud, they are still concerned about securing their business applications, information, workloads, and identities. Wipro's Cybersecurity & Risk Services (CRS) helps enterprises in their digital journey through innovation, transformation, and optimization while enabling businesses to be more secure and compliant to various stringent regulatory requirements. CRS helps customers gain the control and confidence needed to secure their business against evolving and sophisticated cyber threats. Using its expertise, solutions, and innovative platforms, Wipro enables enterprises to protect their assets on AWS. This solution considers both the native controls of AWS and third-party controls and tools. We differentiate ourselves by providing a holistic risk view of the entire AWS Security Posture and proactively mitigating the risks. Wipro delivered best in class AWS cloud based security solution comprising of native and third party security controls to meet customer's business needs.. Wipro enabled the road and public infrastructure safety agency... Plan, design, build, transform, and manage AWS native and third-party security controls with enterprise cloud security strategies and best practices. AWS solutions provide isolation and segmentation, secure landing zones, secure dedicated connectivity, DDOS protection, network and traffic load balancing, and building and maintenance of secure workload images. This service helps an enterprise protect its data and workloads from unauthorized access. Wipro's AWS data protection service continuously monitors and protects data and workloads through data discovery, classification, key storage management, certificate management, secrets management, and database security. Securely manage identities, resources, and permissions at scale. Manage access to workloads and applications through identity management, secure AWS resource

sharing, encryption key management, single sign-on, multi-factor authentication, and directory service. IAM continuously detects and helps remediate over-permissioned identities. Stay on top of breaches and discover and control active threats present in your AWS environment. Application security protects against web attacks via rule-based traffic filtering and secures application development by employing best security practices in DevOps, along with robust vulnerability management. Identify threats by continuously monitoring network activity and account behavior within your AWS environment and quickly assess your high-priority security alerts and security posture across AWS accounts in one comprehensive view. TMD services offer predefined and custom use cases and playbooks for AWS environments. A single pane of glass view across multiple AWS accounts covering various AWS services that provides enterprise the deeper visibility of their asset inventory, comprehensive view of compliance status, and continuous controls monitoring of your AWS environment using automated compliance checks based on AWS best practices and industry standards. It provides a consolidated compliance posture of business applications and their associated AWS services and helps fast track application migration to the web services your organization follows. AWS Managed Security Services provides 24/7 continuous security protection and essential AWS environment monitoring delivered as a fully managed service through Wipro's AWS security experts. MSS comes with the additional flexibility of either supplementing the enterprise's internal security team or performing an end-to-end managed service. =====================

Managed Deception Services

----- Arcticle source ----- https://www.wipro.com/cybersecurity/managed-deception-services/ ----- Contact Wipro Please fill the required details to access the content Managed Deception Services Detect and deflect cyber attackers proactively A comprehensive defense strategy that leverages deception to swiftly thwart sophisticated zero day attacks. Cyber deception has emerged as an effective and offensive threat hunting technology to offer protection for core information networks and infrastructure. It involves luring attackers to decoy systems, which unmasks their activities and provides key indicators of compromise. This enables defenders to act swiftly and thwart sophisticated zero day attacks. The technology also gives attackers a false sense of achievement by allowing them to believe that they have penetrated the network. Deception technology can be placed across enterprise networks by placing decoys, breadcrumbs and lures. It empowers organizations with a proactive defense strategy by providing comprehensive coverage on zero-day exploits. It also reduces the dwell time of the intruder from over 180 days to a few hours, providing maximum accuracy (high fidelity detection) with minimal human intervention. Wipro's AI-based deception technology can be integrated with SIEM, EDR and firewalls to provide a more holistic picture of the attack surface. Once there is positive affirmation of a compromise (on a decoy), a "Detect and Deflect" approach will elect to block the threat actor. Advanced IR (incidence response) and threat hunting capabilities provide us the opportunity to engage with the attacker and learn more about the threat actor's TTP (tools, techniques and

procedures). Wipro facilitates seamless integration with other detective and protective security controls to enhance layered defenses. We partner with Acalvio to offer Managed Deception Services to our customers. ======================

ServiceNow Cyber and Risk Services

----- Arcticle source ----- https://www.wipro.com/cybersecurity/servicenow-cyber-and-risk-services/ ----- What We Do What We Think Form Title Form Title Form Title Contact Wipro Please fill the required details to access the content ServiceNow Cyber and Risk Services Seamlessly adopt, architect, implement, and provide managed services globally. End-to-end security and risk solutions delivered through ServiceNow's Integrated Risk Management-Governance, Risk and Compliance (IRM-GRC), and Security Operations solutions. In the recent years, Wipro has seen a clear move from dedicated vertical solutions towards enterprise platforms that enable our customers to share a common data model, deploy a world-class enterprise-wide workflow engine, and enhance productivity. This is supported by our partner ServiceNow, a leading Cloud computing company. In the cyber and risk services world, ServiceNow has transformed the way our customers think and deliver security and risk management. We support our customers in their transformation journey by helping them design and implement ServiceNow IRM-GRC and Security Operation modules leveraging best practices. We also manage these solutions in the long term, and support customers in transforming their risk and security processes. With over 800 consultants, Wipro has dedicated a ServiceNow practice for risk and cybersecurity services. Automating your security operations while aligning security to information technology and the business Integrated risk management across lines of defense, from cyber risks to corporate compliance or, from operational risks to IT system of control. Experts in design and architecture of ServiceNow IRM-GRC and SecOps projects Cybersecurity Best Practices – Preparedness for a secure remote workforce, compliance, and building a cyber-resilient environment Disruptive situations force businesses to change the way they function. Amid the coronavirus pandemic, organizations have deviated from their standard operations to maintain some sense of business as usual – working from home, for example, rather than on site. ======================

Cloud, Zero-Trust & Enterprise Security Architecture

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-fullstride-cloud-security-services/ ----- ANALYST SPEAK: Wipro is recognized as a Leader in Everest Cloud Security Services PEAK Matrix® Assessment 2023 Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture

Identity & Access Management Data Security & Privacy Cyber Defense and Response Contact Wipro Cloud Security Posture Assessment Cloud Native Application Protection Platform (CNAPP) Secure Cloud Foundation Cloud Sec Ops Cloud Application Risk Governance Cloud Compliance Shield CSPT Solution Enterprise SASE Secure Digital Workplace Enterprise Protection Wipro's Secure Cloud Foundation for AWS Whitepaper True Zero Trust Should Mean VPN Retirement IDC Spotlight on Cloud Security: Multi-cloud Mastery Unveiled Wipro has been positioned as a Leader in the latest IDC MarketScape Wipro has been positioned by HFS in its report ranking the Top 10 Cybersecurity Service Providers for 2022 Wipro Launches Continuous Compliance Solution Built on Amazon Security Lake Wipro Launches Continuous Compliance Solution Built on Amazon Security Lake Wipro has been named Global GSI Partner of the Year (growth) by Netskope for FY24 Wipro Google Cloud Security Pack Please fill the required details to access the content Cloud, Zero-Trust & Enterprise Security Architecture Secure your edge-to-cloud with cyber resilience As enterprises adopt a cloud-first mindset, logical boundaries become fuzzy. Cloud security loopholes such as misconfigurations, blind spots, compliance gaps, shadow IT and lack of visibility are creating worrying challenges for CXOs. Wipro cloud security solutions are powered by and co-innovated with top cloud service providers and industry-leading strategic technology partners. Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers leading global infrastructure security solutions, including technology and AI-powered sustainable automation platforms that are optimized for cost efficiency so enterprises can accelerate business growth. Advisory and Strategy Review of existing cloud security architecture and controls and remediation roadmap. Transformation and Implementation Accelerate secure cloud migration using multi-cloud jump start and security guardrails. Managed Cloud Security Services Managed cloud-native security services, application security and threat detection and response. Our Offerings Cloud Security Get actionable recommendations to fortify your cloud security Automate security for your cloud applications Build a solid foundation to accelerate cloud adoption across the enterprise Transform your SOC journey with autonomous security operations Govern your business applications with a risk-based security approach Navigate complex multicloud environment compliance and security Strengthen your cloud security and prioritize remediation and risk treatment plans Infrastructure Security Secure internet, access to applications, enterprise resources for users Secure users and workplace for digital enterprise Unified security controls for enterprise Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers the best global cloud and infrastructure security solutions, technology, AI-powered sustainable automation platforms and highly-skilled talent—Cybersecurists—to accelerate growth that is both secure and optimized for cost efficiency. We offer a modern end-to-end framework for cloud and infrastructure security transformation — CyberTransformSM – that includes advisory and implementation, plus our industry-leading managed services — CyberShieldSM. Our recent acquisitions and key investments in this area have created additional value for our customers across the globe. As enterprises expand their cloud landscape, an increasing percentage of data are moving across traditional data center boundaries. Network infrastructure no longer has one clearly defined perimeter.

Partners The leadership position is a reflection of our differentiated capabilities, thought leadership and OneWipro values to help enterprises achieve cyber resiliency in an age of continuous disruption. Wipro End-to-End Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Contact Us

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Cloud Security Services

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cloud-security-services/ ----- Contact Wipro Please fill the required details to access the content Cloud Security Services Secure your Cloud environment against cyber risks Secure Cloud by design, migrate seamlessly, operate and govern Cloud environment against cyber threats Wipro's Cloud Security service is based on CloudTrust framework which acts as a guiding principle to help strategize and define adequate security for the enterprise's Cloud environment. Wipro's CloudTrust framework assists enterprises as they begin their Cloud journey and move their information, applications and workloads to the Cloud by providing an appropriate security guideline and complying to cyber security standards and Cloud security best practices.

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ServiceNow Security Services

----- Arcticle source ----- https://www.wipro.com/cybersecurity/servicenow-security-services/ ----- What We Think Contact Wipro Please fill the required details to access the content ServiceNow Security Services Automating your security operations while aligning security to information technology and the business ServiceNow SecOps uses the Now Platform to connect security incidents and vulnerabilities directly to the CMDB IT assets and leverage its enterprise workflow engine. ServiceNow SecOps covers Security Incident Response (SIR), Vulnerability Response (VR), Threat Intelligence (TI), and Configuration Compliance (CC). It proposes over 60 standard REST API integrations with leading security information and event management (SIEM) solutions, vulnerability scanners and security detection solutions. It supports the three leading cloud solutions as well (AWS, Azure, and Google Cloud). With over 800 consultants, Wipro has dedicated a ServiceNow practice for risk and cybersecurity services. Wipro leverages its deep and wide security and ServiceNow expertise to support customers in implementing and running ServiceNow SecOps. Our expert architects design solutions that maximize the value for business stakeholders. Please click here to go back to the ServiceNow Cybersecurity & Risk Services main

page Security teams today are inundated with alerts and information from a growing number of siloed point solutions. ServiceNow Vulnerability Response helps organizations understand the most common and severe threats from external sources and from their own application developments. Managing your ServiceNow SecOps solution by yourself is obviously an option. =====================

ServiceNow IRM-GRC Services

----- Arcticle source ----- https://www.wipro.com/cybersecurity/servicenow-irm-grc-services/ ----- What We Think Form Title Contact Wipro Please fill the required details to access the content ServiceNow IRM-GRC Services Integrated risk management across lines of defense, from cyber risks to corporate compliance or, from operational risks to IT system of control. ServiceNow IRM-GRC is a new generation integrated risk management solution, natively built on the cloud, under the SaaS model and leveraging an enterprise platform. Wipro's ServiceNow IRM-GRC is a unique solution that helps both legacy Governance, Risk, and Compliance (GRC) customers looking to migrate to a new generation solution, as well as new adopters of GRC looking to take leading IRM solutions to market. ServiceNow IRM-GRC supports companies embracing enterprise risk management and operational resilience. These aspirations require a single IRM solution processing all use cases and all Lines of Defense under a single solution supported by a single platform such as ServiceNow. Wipro's Cyber Security and Risk Services (CRS) is best placed in the market to support customers with this transition. With over 800 consultants, Wipro has dedicated a ServiceNow practice for risk and cybersecurity services. Wipro leverages its deep and wide security and ServiceNow expertise to support customers in implementing and running ServiceNow IRM-GRC. Our expert architects design solutions that maximize the value for business stakeholders. Please click here to go back to the ServiceNow Cybersecurity & Risk Services main page Legacy GRC solutions have been built on technologies and architectures that are now obsolete, with inflexible architecture. Managing risk and compliance with a manual, siloed and reactive work model is no longer effective as the global regulatory environment continuously evolves. Scarcity of resources and lack of appropriate skills are key challenges in managing your ServiceNow Integrated Risk Management (IRM)/ Governance, Risk and Compliance (GRC) solution. Continuous risk monitoring solution on an integrated risk management platform =====================

ServiceNow Security and Risk Advisory Services

----- Arcticle source ----- https://www.wipro.com/cybersecurity/servicenow-security-and-risk-advisory-services/ ----- Contact Wipro Please fill the required details to access the content ServiceNow Security and Risk Advisory Services Experts in design and architecture of ServiceNow IRM-GRC and SecOps projects Wipro's leading design and advisory capabilities,

linked to its unrivalled ServiceNow IRM-GRC and SecOps expertise, allow you to maximize business value from these modules. The success of ServiceNow IRM-GRC and SecOps projects depends on the traditional three dimensions of people, process, and technology. Unlike other projects, the people and process dimensions are critical. For instance: Wipro leverages its deep and wide business transformation expertise to support customers in implementing and running ServiceNow IRM-GRC and SecOps. Our accomplished process analysts and transformation experts engage with you on your projects and ensure lean and smooth transformation and adoption.
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Protecting critical infrastructure in today's hyperconnected age

----- Arcticle source ----- https://www.wipro.com/cybersecurity/protecting-critical-infrastructure-in-todays-hyperconnected-age/ ----- Contact Wipro Please fill the required details to access the content Protecting critical infrastructure in today's hyperconnected age The integration of Information Technology (IT) and Operational Technology (OT) in the Industry 4.0 transformation is revolutionizing the modern business landscape. By harnessing the power of OT for efficient and effective operations and incorporating cutting-edge technologies, businesses are experiencing growth, enhanced productivity, and improved customer experiences. However, these advancements also pose security challenges that organizations must address. Challenges in securing OT/IoT environments The current state of the operational technology landscape is being affected by legacy devices and networks. Many of the legacy Industrial Control System (ICS) devices in use today were designed before the current understanding of cybersecurity and may lack sufficient security measures. Legacy ICS devices may have vulnerabilities due to outdated software and hardware, increasing the risk to cyber-attacks. Furthermore, as these devices may no longer receive security updates, they remain exposed to known security threats. 20% of organizations have detected an IoT-based attack in the past three years. Source: Gartner Also, As the number of IoT devices continues to increase in the business landscape, enterprises must acknowledge the need to   modernize their security strategies to eliminate new threats and cyberattacks. IT teams must embrace novel technologies and methodologies to safeguard all critical data, regardless of its location. Bridging OT/IoT security gaps At Wipro, we understand the unique challenges and risks that come with OT and IoT systems. Our extensive portfolio of security solutions is engineered to help enterprises secure their OT/IoT environments. ======================

Wipro's Managed Security Data Lake Services

What We Think Our AWS Security Solutions Infrastructure and Workload Security Data Protection Secure Identity and Access Management Application Security Threat Monitoring and Detection Governance and Compliance Managed Security Services Contact Wipro Please fill the required details to access the content Wipro's Managed Security Data Lake Services Wipro is an official general availability (GA) launch partner for Amazon Security Lake, a service that centralizes security data from cloud, on-premises, and custom sources to improve security visibility and minimize threat landscape. With Security Lake, customers can get a more complete understanding of their data security across the entire organization. The collaboration with AWS will aggregate data from Wipro's Cloud Application Risk Governance (CARG) platform to provide a "single pane of glass," unified real-time view of cloud applications and compliance postures across the enterprise. Consulting, implementation and managed data lake services Wipro delivers security analytics for enterprises with hybrid and multi-cloud networks by leveraging the Amazon Security Lake solution. The security data lake acts as single source of truth for security and compliance data collected from multiple sources deployed on the network perimeter, end-user machines, and on SaaS/business applications. Wipro's holistic approach to MDR and security data lake management includes two offerings: 1. Security data lake consulting and implementation services 2. Fully managed security data lake services Amazon Security Lake benefits Plan, design, build, transform, and manage AWS native and third-party security controls with enterprise cloud security strategies and best practices. AWS solutions provide isolation and segmentation, secure landing zones, secure dedicated connectivity, DDOS protection, network and traffic load balancing, and building and maintenance of secure workload images. This service helps an enterprise protect its data and workloads from unauthorized access. Wipro's AWS data protection service continuously monitors and protects data and workloads through data discovery, classification, key storage management, certificate management, secrets management, and database security. Securely manage identities, resources, and permissions at scale. Manage access to workloads and applications through identity management, secure AWS resource sharing, encryption key management, single sign-on, multi-factor authentication, and directory service. IAM continuously detects and helps remediate over-permissioned identities. Stay on top of breaches and discover and control active threats present in your AWS environment. Application security protects against web attacks via rule-based traffic filtering and secures application development by employing best security practices in DevOps, along with robust vulnerability management. Identify threats by continuously monitoring network activity and account behavior within your AWS environment and quickly assess your high-priority security alerts and security posture across AWS accounts in one comprehensive view. TMD services offer predefined and custom use cases and playbooks for AWS environments. A single pane of glass view across multiple AWS accounts

covering various AWS services that provides enterprise the deeper visibility of their asset inventory, comprehensive view of compliance status, and continuous controls monitoring of your AWS environment using automated compliance checks based on AWS best practices and industry standards. It provides a consolidated compliance posture of business applications and their associated AWS services and helps fast track application migration to the web services your organization follows. AWS Managed Security Services provides 24/7 continuous security protection and essential AWS environment monitoring delivered as a fully managed service through Wipro's AWS security experts. MSS comes with the additional flexibility of either supplementing the enterprise's internal security team or performing an end-to-end managed service. =====================

Wipro's Managed Secure Access Service Edge (SASE) Powered by Zscaler

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-managed-sase-powered-by-zscaler/ ----- Contact Wipro Please fill the required details to access the content Wipro's Managed SASE Powered by Zscaler Securing users, workloads and device communication The combination of mobility and cloud technology is revolutionizing the way businesses operate. In today's hybrid environment, it is impractical to rely on conventional approaches to defend on-premises resources. To stay competitive, enterprises must enhance operational efficiency and build future-proof cyber resiliency. Enterprise challenges Wipro's SASE in partnership with Zscaler In collaboration with Zscaler, Wipro has developed a cutting-edge SASE (Secure Access Service Edge) framework that integrates networking and security capabilities into a single, globally distributed, cloud-native service. By emphasizing identity rather than traffic flow, SASE offers comprehensive security coverage for users, applications, and resources – regardless of their location or the transportation technology being used. With this innovative bundle of technologies, security is embedded directly into the global network fabric, always making it easily accessible. As a result, enterprises can ensure that operations are secure, efficient, and future-ready. The solution differentiators =====================

Wipro's Managed Zero Trust Security Powered by Zscaler

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-managed-zero-trust-security/ ----- Contact Wipro Please fill the required details to access the content Wipro's Managed Zero Trust Security

Accelerating secure digital transformation The migration of infrastructure to the cloud and Software-as-a-Service (SaaS), along with the rapid increase in users and connected devices, has greatly widened the attack surface, resulting in more sophisticated cyber assaults. In this scenario, the lack of visibility into user activity, data interactions, and resource utilization in a flat network poses challenges in detecting malicious actors. A lack of maturity in adhering to data privacy and protection requirements adds to complexities in safeguarding sensitive information. The Zero Trust framework operates on the principle that no communication is inherently trusted, especially when it comes to safeguarding businesses in the cloud and hybrid environment. Zero Trust enables fast and secure communication while allowing access to network resources for users, devices, and workloads in both IT and OT domains. Access is granted through a sophisticated combination of advanced identity, posture, and risk-based authentication mechanisms, ensuring a robust and comprehensive approach to network security. Controlled, secure access anytime, anywhere Wipro's Zero Trust framework, powered by Zscaler, utilizes cutting-edge security toolkits to establish a seamless and safe environment. By removing traditional point products from both inbound and outbound security stacks, the framework offers a practical and cost-effective approach. Users and workloads can connect seamlessly, benefiting from consistent, frictionless security across the board, and effectively mitigating threats. The Zero Trust Exchange architecture, enhanced by Zscaler's AI-powered innovations, prevents lateral movement within the organizational infrastructure, reducing risks and strengthening overall security.
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Wipro's Cloud Native Application Protection Platform (CNAPP) Powered by Zscaler

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-cloud-native-application-protection-platform-cnapp/ ----- Contact Wipro Please fill the required details to access the content Wipro's Cloud Native Application Protection Platform (CNAPP) Consolidate multiple security toolsets and prioritize risks for end-to-end cloud-native security A majority of new digital workloads are being deployed on cloud-native platforms. While this will let enterprises leverage instant scalability and limitless on-demand computing capability, it also presents new security challenges that traditional tools cannot manage. To overcome these challenges, security teams often deploy a mix of different security tools and technologies. These multiple platforms can present inconsistent capabilities, policies, and reporting, which may produce operational inefficiencies. Secure and protect cloud-native environments with confidence Wipro's Cloud Native Application Protection Platform (CNAPP), powered by Zscaler, is a simple, agentless approach to cloud security. The platform correlates multiple security engines across the entire cloud stack to prioritize risks caused by misconfigurations, threats, and vulnerabilities. Wipro's CNAPP provides end-to-end cloud native

security with Wipro-defined customized playbooks for cloud workload, containerized environment, secure cloud identity management, and more. Key elements of Wipro's CNAPP powered by Zscaler Discover how Wipro's CNAPP solution, powered by Zscaler, can secure your enterprise's cloud native journey.   =======================

Wipro's Cloud Security Posture Assessment (CSPA)

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-cloud-security-posture-assessment-cspa-powered-by-palo-alto-networks-prisma-cloud/ ----- Contact Wipro Please fill the required details to access the content Wipro's Cloud Security Posture Assessment (CSPA) Powered by Palo Alto Networks' Prisma Cloud Powered by Palo Alto Networks' Prisma Cloud Digital enterprises are facing an ever-expanding threat landscape, including: Safeguarding your networks, data and workflows requires a strategy-first approach to risk mitigation. And cloud security must be a fundamental part of the business strategy. Before you can address these challenges, you need to know where your cloud security stands today. Wipro, in partnership with Palo Alto Networks, offers a Cloud Security Posture Assessment (CSPA) tailored to your specific needs. The solution leverages the expertise of Wipro Cybersecurists and the technical power of the Palo Alto Networks' Prisma Cloud platform. Our agentless assessment process is designed for speed and efficiency. It takes just a few minutes for onboarding, providing you with a swift and comprehensive overview of your multi/hybrid cloud configurations. Comprehensive coverage of multi/hybrid cloud environments Actionable recommendations to strengthen your cloud strategy Ongoing support for remediation, control deployment and managed security services Select the service level you need Basic Assessment (up to 2 weeks): This package is focused on the major cloud service providers like AWS, Azure, and Google Cloud and covers the following areas: Take the assessment to proactively address cloud security challenges, mitigate risks and build a resilient cloud environment. Contact Us =======================

Wipro's CloudSecOps on Google Cloud

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-cloudsecops-on-google-cloud/ ----- Contact Wipro Please fill the required details to access the content Wipro's CloudSecOps on Google Cloud Transform your SOC journey with autonomous security operations As organizations embrace digital transformation, security leaders are challenged by traditional SOC environments that employ costly and complex manual investigations to manage high log volumes from a variety of sources, such as hybrid environments, IoT devices and microservices, spread across different cloud environments. This can lead to alert fatigue, investigative delays and a build up of false positive alerts. Enterprises need advanced

analytics and machine learning-based solutions to more effectively identify and prioritize security incidents and maintain compliance with evolving regulatory requirements. Wipro's CloudSecOps on Google Cloud – A shield for cyber threats Wipro's CloudSecOps on Google Cloud is a cloud-native SOC-as-a-Service solution that leverages the power of the Google Chronicle SIEM/SOAR platform. Wipro and Google offer a proactive operations suite to automate the SecOps. We construct a robust mechanism for threat management and handle routine security events and operations. Robust monitoring Compliance adherence Improved ROI and TCO Key features Wipro's CloudSecOps is built on the Google Cloud platform with 180+ custom YARA-L rules and 40+ custom playbook libraries. It is designed to be fully cloud-native, ensuring seamless integration, growth, speed and optimal performance. The solution features include: To learn more about how you can enhance your cloud security with Wipro's CloudSecOps, contact us. Contact Us =====================

Wipro's Cloud Security Posture Treatment - CSPT

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-cloud-security-posture-treatment-cspt/ ----- Contact Wipro Please fill the required details to access the content Wipro's Cloud Security Posture Treatment — CSPT Prioritized remediation and risk treatment plans Cloud adoption and digital service enhancements are empowering business transformation and global agility. But it's also opening doors to vulnerabilities and security gaps that can endanger enterprise cyber resilience. As organizations undergo assessments or audits, security gaps are revealed. The key imperative here is to promptly address these gaps, giving priority to and automating remediation for maximum risk mitigation. Strengthen your cloud security posture Wipro's Cloud Security Posture Treatment (CSPT) solution is designed to reduce risks and strengthen your cloud security posture. CSPT caters to primary enterprise needs by quickly addressing cloud security gaps, minimizing audit risks and bolstering cloud security compliance and threat resilience. Improved cloud security posture and compliance Reduced risk of audit violations   Adherence to industry and CSP security best practices   Automated remediation across multi-cloud environments Wipro's CSPT solution, delivered by our cloud Cybersecurists, offers a comprehensive approach to infrastructure security across multi-cloud environments. The platform includes: To learn how to take your cloud security to the next level, contact our Cybersecurists. Contact Us =====================

Wipro's Cloud Native Application Protection Platform (CNAPP) Solution

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-cloud-native-application-protection-platform/ ----- Contact Wipro Please fill the

required details to access the content Wipro's Cloud Native Application Protection Platform — CNAPP A unified cloud security solution In today's rapidly evolving digital landscape, traditional security tools designed for on-premises environments simply can't keep up with the agility and speed of innovation on the cloud. These legacy solutions lack visibility and can introduce new vulnerabilities, increase overhead and create security loopholes. To navigate the complex challenges of cloud security, many businesses are deploying a mix of cloud-native applications and security tools which creates a pressing need for a comprehensive and integrated cloud security solution. Streamline the deployment of secure cloud-native apps Wipro's Cloud Native Application Protection Platform (CNAPP) solution addresses this challenge by providing comprehensive security capabilities that enable security and DevOps teams to speed up the development and deployment of secure cloud-native applications from code to the cloud. CNAPP replaces multiple point solutions in cloud security with a unified, real-time visibility into your multi-cloud security posture and compliance to reduce risk and improve operational efficiency. Comprehensive cloud security Enhancing security of applications and workloads Compliance adherence Ensuring compliance with CSP-and industry-based regulatory requirements One-click visibility Providing real-time security

posture visibility Wipro maintains a cloud Center of Excellence (CoE) that drives a digital-first strategy. We leverage advanced labs for innovative pilot projects and build custom use cases and policies tailored to your specific security requirements. By combining user behavior data from the cloud and workloads, CNAPP provides leading-edge insights that can improve detection rates, reduce false positives and help your teams focus on what matters now. To gain insights into your current cloud security gaps and learn how CNAPP can enhance your security posture, please contact our Cybersecurists. Contact Us =====================

Wipro Cloud Application Risk Governance(CARG)

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cloud-application-risk-governance/ ----- 3 key benefits related to the solutions Featured Resources Form Title Contact Wipro Wipro CARG was named 2023 Cloud Computing Security Excellence Award winner, presented by TMC Wipro CARG was the Grand Globee award winner in the 17th Annual 2022 IT World Awards® Wipro Cloud Application Risk Governance (CARG) is now

available on the Google Cloud Marketplace Please fill the required details to access the content Wipro Cloud Application Risk Governance Visualize. Secure. Comply Enterprises need to evolve from a legacy security approach In today's dynamic cloud landscape, organizations must prioritize safeguarding the security and compliance of their cloud-hosted applications and workloads. Wipro's CARG solution simplifies your cloud journey with dynamic security and compliance visualization capabilities. Wipro CARG goes beyond traditional security measures. It seamlessly integrates with popular cloud hyperscalers, including AWS, Azure and Google Cloud Platform. Leveraging Wipro's Common Cloud Controls Framework (C3F), it offers comprehensive application risk profiling, performs thorough control gap assessments, and provides strategic insights to ensure continuous compliance standards adherence. With CARG, you get a comprehensive view of your single or multi-cloud environments. The solution offers a 'single pane of glass' view that combines the vital information you need to assess security threats, risks and compliance status. Wipro CARG continuously monitors and detects any risk-prone changes, providing you with real-time monitoring and remediation recommendations. Download our CARG End User License Agreement. Unified security and compliance adherence view across multi-cloud environments Contextualized stakeholder reporting and role-based access control Third-party integrations to provide contextual insights of cloud security risk Cloud application security is a patchwork of cloud services offered today through various providers. This IDC Spotlight intends to elevate awareness of new services that provide a single way to manage cloud application security. Contact Us

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Cyber Resilience for Medical IoT Devices

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cyber-resilience-for-medical-iot-devices/ ----- Contact Wipro Please fill the required details to access the content Cyber Resilience for Medical IoT Devices Wipro's IoMT security risk assessment program leverages AI and deep domain expertise to rapidly assess and improve the security of medical device networks. How secure is your medical device network? The connected Internet of Medical Things (IoMT) is providing precise, consistent, and barrier-free healthcare services to patients. A typical hospital IoT network includes surgical robots, remote ventilators, smart blood glucose monitors, infusion pumps, MRI and CT scanners, and much more. Because these medical devices hold sensitive
personal health information (PHI) that is transmitted over the internet, all IoMT networks also present serious cybersecurity challenges. High-profile cyberattacks routinely aim to compromise PHI. Without proper governance, malicious actions like ransomware, email phishing, and data exfiltration can cripple critical operations for two weeks or more and compromise sensitive patient information, leading to HIPAA violations and deep reputation damage. According to Gartner® "Many healthcare delivery organization (HDO) CIOs and chief information security officers (CISOs) do not have an

up-to-date, complete, and accurate inventory of the medical devices within their enterprises, undermining efforts to thwart continuous security threats."* Wipro's AI-powered risk assessment program Most IoMT data breaches can be traced back to four factors: Wipro's AI-powered 5-day IoMT security risk assessment program provides a rapid understanding of your IoMT landscape and the associated cyber-risks, then creates a proven remediation roadmap to secure your medical devices. During this program, our cybersecurity experts–Cybersecurists–will assess your IoMT environment with an AI-powered risk assessment tool to discover managed and unmanaged IoMT devices and identify default credentials and risk profiles. Based on the assessment report, we design a customized remediation roadmap to harden your IoMT security posture. We will also activate detection and response mechanisms to ensure that your medical device network is remains cyber resilient in the future. AI-powered risk assessment Quick understanding of asset landscape Secure PHI data boundaries Assessment program benefits Contact Us
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AI-Powered Security Management Center: Wipro SMC-AI

----- Arcticle source ----- https://www.wipro.com/cybersecurity/wipro-launches-ai-powered-smc-solution-smc-ai/ ----- Contact Wipro Enterprise Cybersecurity Solutions for Zero Trust Maturity Wipro SMC-AI Demo How to find and rationalize hidden tools that are costing you money The strategic paths to take on the complex Zero Trust journey Please fill the required details to access the content Wipro Launches AI-Powered SMC Solution — Wipro SMC-AI Intelligent Security Operations Solution Ever increasing security tools are adding to complexity and impacting cyber security operations Organizations continue to invest in security technologies to protect assets and data and to enhance their ability to respond to threats in a timely manner. The propensity to adopt new security technologies over time leads to the accumulation of tool sets. This creates complexities in the environment due to a lack of interoperability, lack of a coherent security posture view and inconsistent tools management, increasing operations overhead. The main reason for this is the missing "security hygiene" of the infrastructure and limited visibility of the environment and associated service effectiveness. Issues in delivering effective security operations Security operations teams are overwhelmed with managing complex environments and dynamic policies of security tools deployed in organizations. Even with adequate security controls in place to protect the enterprise assets, and efforts to manage infrastructure, the following gaps can occur: There is a definite need for a framework and tool that can ensure service effectiveness and fill the potential gaps in traditional security operations by leveraging the modern concept of intelligent operations powered by AI. A modern approach to simplify security operations Simplifying security operations and providing smart governance is a feature of the effective automation associated with AI. In addition, visibility is a key factor as described by the cliché "what you see and detect is what you can

protect." It is important to define the view which will meet the expectations of all stakeholders who are responsible for the organization's IT security. Wipro offers its customers an AI-powered Intelligent Security Operations solution–Wipro SMC-AI–built on the principle of "Beat Before Beaten." Wipro SMC-AI is an integrated approach to intelligent security operations based on automation and analytics. It ensures a 360-degree business-oriented view of security operations and objectives. The consolidated view is comprised of risk, reliability and efficiency posture of the infrastructure. Wipro helps organizations look at their security infrastructure through Wipro SMC-AI with the richness of correlated data, aggregated information and transparency of the services being offered. Wipro SMC-AI for intelligent security operations It is critical for enterprises to practice effective cyber hygiene and ensure that the core security technologies are working in the right manner. This can be achieved if the security and related tools are deployed appropriately and configured so they adhere to baselines and best practices. Effective security operations processes need to be sustained over time to protect enterprises from attacks and prevent exploitation of vulnerabilities. This requires visibility and insights into the environment, while continuously monitoring for any deviation or non-compliance so that issues can be identified on a regular basis. Enterprises going through their Zero Trust security journey need to rely on solutions and tools that enable visibility of their security posture and mitigate identified risks. Zero Trust security is also about integrated architecture, with security tools working in a cohesive manner to exchange information and respond to threats. Wipro SMC-AI provides insights into the enterprise environment and reports operational risks to orchestrate and remediate operational issues. It helps in intelligent security operations to sustain Zero Trust and move toward cybersecurity maturity. Benefits of Wipro SMC-AI Wipro SMC-AI helps improve operational efficiency by up to 40% while proactively identifying issues, analysing trends to identify patterns and performing root cause analysis. It protects enterprises from threats caused by a lack of infrastructure "security hygiene," limited security controls visibility and response ineffectiveness. Wipro SMC-AI encourages active involvement of stakeholders across the organizational hierarchy by providing a business view of the technologies and tools and simplifying cyber security wellness reporting. Wipro SMC-AI provides insights, reports risks, and helps remediate issues, supporting intelligent security operations and advancing cybersecurity maturity. One of the more harmful threats to enterprise cybersecurity (and cyber budgets) is the accumulation of excess security tools. The days of trusted hosts are long gone. The Zero Trust model is becoming an absolute necessity. When anything hits your environment — a user, a network, an app or a spider — the default assumption is that the interaction is hostile and the entity is an attacker. Contact Us ===================== ----- Arcticle source ----- https:// www.wipro.com/cybersecurity/digital-trust/ ----- Digital Trust   Digital Trust What We Do Emerging Technologies Identity and Access Management & Governance OT / IoT Security Zero Trust Data Security & Protection What We Think What We Think Contact Wipro Please fill the required details to access the content Next-gen Identity & Access Services to secure your digital transformation journey.   Digital Trust is the foundation for digital transactions and has become the new security perimeter. Digital Identity is a vital component for achieving Digital Trust. Wipro Cybersecurists accelerate

your Digital Trust journey by leveraging next-gen IAM solutions, and implementing zero trust architecture, smart data and OT/IoT security solutions. We provide a personalized and seamless user experience while ensuring compliance to evolving regulatory landscape. Cybersecurity offerings in advanced technologies and emerging areas like Open Source security, Blockchain and 5G Security. Digital Identity platforms and solutions that enable a well-defined, comprehensive, seamless and secure access. Developing, designing, and implementing security frameworks to safeguard your operational environment from cyber-attacks. Establish a zero-trust framework by leveraging security and automation tools to provide limited access to critical data, and the ability to visualize threats and respond in time. Apply latest data security controls to protect and safeguard your critical data. Risk based approach to data privacy can help businesses manage global data privacy risks, apply, calibrate and enforce controls based on the risk exposure, in a manner that is flexible and more agile. To achieve Zero Trust maturity, an organization will have to build the context, and develop continuous and adaptive authentication, authorization, device security state, resource criticality, application type and network information as part of the key decision-making process Why Wipro's Zero Trust Security Framework is Your Best Defense Strategy Traditionally, most manufacturing industries, whether process manufacturing or discrete manufacturing The ability to exchange cyber threat intelligence (CTI) in privacy preserving and in a secure manner is vital for enterprises to manage their security risks effectively. The safety of our clients' data is our utmost priority. At Wipro, we have an established GDPR compliance program and, in the aftermath of Schrems II, we have reviewed our own contracts and transfers by looking at the legal framework that applies in the receiving country. Open source is empowering organizations to pursue their business transformations with greater agility and control while avoiding vendor lock-in. Wipro and Microsoft recently hosted a joint CISO panel event on the topic of Zero Trust user access for a secure remote working environment. Disruptive situations force businesses to change the way they function. Stringent data security used to be an afterthought for some businesses, until privacy issues gave rise to GDPR regulations. 60% of organizations believe that a bad cyber security event will lead to significant fines or sanctions due to non-compliance A Quick Walkthrough of an ID Conversion Project for a Bank The biggest data privacy challenge in a cloud based analytics solution is "robust and scalable privacy, preserving data mining and analytics, that provides the required outcome to organizations, while adhering to all data privacy regulations. Meeting compliance requirements is not enough. It is critical that personal data is protected and privacy needs are addressed through sound governance. Security monitoring has always been critical to protecting IT ecosystems but with the rise in IoT-enabled devices and connected systems, the fear of cyberattacks has grown exponentially. There is an increasing pace in adoption of Internet of Things (IoT) by businesses globally as it has proven to open new revenue streams through new smart offerings. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/security-and-risk-advisory/ ----- Security and Risk Advisory   Security and Risk Advisory   What We Do Cyber Risk and Privacy Strategy Industry Security & Risk Advisory Security Architecture & Engineering Security Governance, Risk & Compliance Business Continuity & Cyber Resilience Third Party Risk Management Cyber and Risk Platform

Automation Services ESG Performance Management & Reporting What We Think Form Title What We Think Contact Wipro Please fill the required details to access the content Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere to regulatory compliances, and provide risk advisory. The transition to digitization of our lives and businesses accelerated at a baffling speed post pandemic. Today, CISOs are tasked with ensuring effective security controls and privileges to prevent cyber-attacks. Organizations are looking for end-to-end cybersecurity implementation practices to ensure a truly resilient enterprise posture when collaborating with both internal stakeholders and third parties. Wipro's team of Cybersecurists help protect your brand, business processes and data by neutralizing threats, and helping comply with tightening regulations — all the while being conscious of security investments. Help CISOs and CROs develop the strategies, operating models, metrics, governance and policies needed to manage cyber and privacy risk while empowering business growth. We provide advisory services to safeguard organization's critical assets ensuring real time threat detection and mitigation. Enterprise Security Architecture and Design Services aligned with organizational objectives, business imperatives, and technology blueprints for cloud and on-premises environments. Transformation Services to automate and orchestrate GRC processes to enable effective protection, detection and response. Help CXOs build and manage resilient cyber and IT programs supported by necessary tools and technologies to withstand and recover from natural disasters and adverse events caused by human actions. Wipro's Third-Party Risk Management (TPRM) is a fast and efficient automated process of collecting, validating, and continuously monitoring data with real-time visibility of threat and risk across your third parties aided by intelligent workflows. End-to-end security, risk and privacy digital transformation delivered through leading platforms ServiceNow, OneTrust, RSA Archer, MetricStream, etc. using unique Wipro accelerators and intelligent automation powered by Wipro HOLMES Augmented Intelligence Increasingly, a company's sustainability performance and ESG (Environmental, Social & Governance) profile has a direct bearing on its cost of capital, its cost of doing business, and ultimately--as proposed regulations come into force--its right to operate. Implementing third-part risk management (TPRM) is crucial for organizations that rely heavily on external partners or vendors to run its essential services and operations. In the post COVID-19 world, businesses are looking for ways to be more... Amid the coronavirus pandemic, organizations have deviated from their standard operations to maintain some sense of business as usual – working from home, for example, rather than on site. Why traditional risk management practices fall short In this age of hyper-connectivity, the face of the global healthcare industry To minimize biased outcomes, one must consider non-technical attributes of devices, in addition to technical specifications and controls. In the movie 'After Earth', Will Smith asks his son Kitai to "take a knee" whenever he is out of ideas during a crisis. CISOs face the tricky challenge of minimizing costs while also investing for growth The secure by design approach for business process controls helps the organization with cost savings and business benefits. An effective Risk Intelligence Solution framework helps businesses identify risks near real-time, enabling stakeholders to take actions & decisions based on priority. Risk based approach to data privacy can help businesses manage global

data privacy risks, apply, calibrate and enforce controls based on the risk exposure Public and private sector organizations in the US are under attack by nation states... Meeting compliance requirements is not enough. It is critical that personal data is protected and privacy needs are addressed through sound governance. =====================

State of Cybersecurity Report

----- Arcticle source ----- https://www.wipro.com/cybersecurity/cybersecurity-platforms/ ----- Fuel Your Growth with Cyber Resilience. Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response News, Awards & Recognitions Contact Wipro Cyber Defense Centers Why Leading CISOs are Adopting a Strategy-First Approach to Identity and Access Management (IAM) Modernize Your Enterprise Security Operations Center(SOC) Everest Group Names Wipro a Leader in Cybersecurity Services PEAK Matrix® Assessment 2024 – North America NEW PODCASTS: Cybersecurity by Cybersecurists Join Wipro Women in Cyber(WWIC) and Become the New Face of Gobal Cybersecurity Elevating multi-cloud security for a leading American bank You may be spending too much on the cybersecurity Enterprise Cybersecurity Solutions for Zero Trust Maturity How Security Leaders Should Evaluate GenAI Systems Please fill the required details to access the content We are cybersecurity specialists We are cybersecurists. 9,000+ Cybersecurists 600+ Clients 60+ Countries 8 Global Cyber Defense Centers CyberTransformSM starts with strategy CyberShieldSM keeps you running Wipro CyberTransform is our integrated risk and security platform that delivers strategy-first cybersecurity advisory and implementation services. CyberShield is our industry-leading suite of managed services that defend business operations with on-demand cyber resilience management.   Our Services Our Cybersecurity Advisory Services, part of our CyberTransform platform, include plan, build, run capabilities that assess and strengthen cybersecurity posture to safeguard brand reputation, business processes and regulatory compliance with cost-optimized security controls. Our System Integration and Managed Security Services, part of our CyberShield platform, defend business operations and enhance cyber resilience across clouds, networks, perimeters, endpoints, identities, data and apps. These integrated solutions and managed services increase business agility and secure the modern enterprise. We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Our expert Cybersecurists deliver managed and hosted services out of Cyber Defense Centers strategically located around the globe, ensuring we are always close to our 600+ customers. Expertise

Across a Broad Range of Industries Healthcare and Medical Devices Consumer Goods and Lifesciences Retail, Transportation and Services Communications, Media and Information services Technology Products and Platforms Banking, Financial Services Security, Investment Banking and Insurance Hi-tech Energy, Natural Resources and Utilities (ENU) Manufacturing Get your copy now! The 5th edition of Wipro's cybersecurity report presents the latest cyber trends and insights to tell the story of how modern enterprises are working to achieve cyber resilience. Over the past few years, major technological, geopolitical and economic disruptions have exposed enterprises to new and unexpected risks, and have forced security leaders to change how they approach cybersecurity threats and risk management. This report explains how enterprises are stepping up to meet new and unexpected risks and presents the serious challenges facing security leaders. Wipro routinely hosts and participates in CISO peer-to-peer events, with some events being private (CISO private summits) and others hosted publicly at industry events (roundtables, panel discussions). In this global assessment, Everest Group reviewed 30 leading cybersecurity services providers and found Wipro to be among the best Listen as Wipro Cybersecurists, customers from all industries and Wipro strategic partners dive into the latest trends. WWIC was founded in 2022 to focus on developing an inclusive and open culture that guarantees opportunities for women in CRS. Thought Leadership Partners Venture partners Connect with the Cybersecurists Rajesh Pillai Americas Leader for Healthcare and Medical Devices, Consumer Goods and Lifesciences, Retail, Transportation and Services, Communications, Media and Information services, Technology Products and Platforms Mark Vanston Americas Leader for Banking, Financial Services Security, Investment Banking and Insurance, Hi-tech, Energy, Natural Resources and Utilities, Manufacturing John Hermans Europe Leader for UK and Ireland, Northern Europe, Southern Europe, Germany, Switzerland Bharat Shetty APMEA Leader for India, Middle East, Australia and New Zealand, Southeast Asia, Japan, Africa Looking career in cybersecurity? Join our Talent Network and enhance your job search and application process. ====================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/cloud-and-infra-security/ ----- Cloud and Infra Security   Cloud and Infra Security   What We Do What We Think What We Think Contact Wipro Please fill the required details to access the content Fortify defenses both on cloud and data center against the most advanced cyber threats. Make your journey secure-by-design to deliver better business outcome by using defence-in-depth and zero-trust architectures. Wipro FullStride Cloud Services industry leading cloud solutions and our Cybersecurists will help you address challenges related to compliance, data exposure, threat detection and incident response. We fuel business growth by providing secure, rapid, and frictionless Cloud and Infrastructure Security Services. Today's business leaders want to achieve success through digital transformation. Leverage cloud, hybrid security solutions with Wipro and Microsoft cybersecurity partnership and reduce security threats through enterprise/consumer IoT security etc Securing Businesses and Digital Transformations on Google Cloud Securing the AWS landscape throughout the digital journey Adopt the most comprehensive solutions and enable a secure digital transformation journey A secure VDI environment demands periodic risk assessment, maintaining the controls, and a strong action plan to mitigate the impact of identified risks.

Healthcare technology strategy and Internet of Medical Things (IoMT) have become more pertinent than ever. Wipro and Microsoft jointly hosted a CISO panel discussion on "Overcoming Security and Compliance Challenges in a Hybrid/Multi-Cloud Environment". Wipro and AWS had a great interaction over a two-day round table.... DevSecOps as a practice is getting increasing popular as organizations look to tackle ever-evolving challenges in security. The recent increase in the frequency and impact of cyber-attacks have kept Critical Infrastructure companies on their toes. With increasing technology digitization, innovation and agility have become essential ingredients for competitive advantage; regardless of industry. Technology has become the pulse of every single interaction In recent times, the media & entertainment industry has become the prime target for ransomware. As digital journeys become the cornerstone of IT ecosystems, agile has become a preferred SDLC model, inviting an abundance of open source, third party solutions to the market, and making these journeys faster and smoother. With multiple tooling options, choosing the apt application security toolset can be a challenge. There are ways you can get the permutation and combination right. To effectively manage business continuity, enterprises are rapidly working to support a remote workforce, which has become a "New Normal" way of working remotely. Do these Security Orchestration / Incident Response Platforms address the challenge of shortage of resources and having to deal with an incident in the near future? Reports suggest that, over the last two years, more than 33 billion documents faced security breaches due to misconfigurations of cloud-native services, costing businesses worldwide nearly $5 trillion. Organizations around the world have been forced to rely on remote working due to the COVID-19 pandemic. The retail sector is currently witnessing an intense technological disruption. ===================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/application-security/ ----- Application Security Application Security   What We Do Mobile and API Security Platform Security (ERP, Salesforce, Workday etc.) Threat & Vulnerability Management What We Think Form Title What We Think Contact Wipro Please fill the required details to access the content Embed security into the SaaS platforms, enterprise and custom applications that support the business. As cloud becomes the ubiquitous and predominant technology platform for transforming business, it drastically increases the enterprise attack surface making applications vulnerable to cyber-attacks. Vulnerable applications serve as a backdoor entry for threat actors to access critical organizational data. Application security process imbibes developing and testing security features to protect organization's critical assets from threats. Wipro FullStride Cloud Services and our Cybersecurists follow a secure-by-design approach that involves embedding security into DevOps. We ensure optimum security by addressing security challenges that arise with the growing ecosystem of users and services. Using advanced cyber defense, applied cyber solutions, and managed security services, Wipro provides the end-to-end protection for mobile devices. Protect organization's mission-critical platform systems to ensure real time and inline identification and mitigation of risks specific to the platforms. We help the CISOs with 24x7 real time threat monitoring to evaluate, test, analyze and remediate gaps in the security and risk posture. Get a consolidated view comprising of risk, reliability and efficiency of the infrastructure to understand your security posture As the cyber-crime ecosystem evolves, cyberattacks are becoming

more complex, creative, and tailored to the industries and organizations they target. To do this, attackers must research, prepare and seek out information on their targets prior to an attack. While each attack may differ, the general types of information an attacker is required to have to succeed remain similar. A Holistic Approach to Application Security and Risk Management With ransomware attacks continuing to dominate media headlines, it's clear that a security approach centered on prevention no longer suffices. The dark web poses a risk to all organizations, but it also presents an opportunity. Start using dark web activity to inform a proactive security strategy, and gain an advantage over your adversaries. The endpoint is the best pivot point to start the journey towards adopting machine learning capabilities for threat detection.

Managed Security Services   Managed Security Services   What We Do Next Gen Cyber Command Center – AI MDR Managed Security Risk & Compliance Managed Application Security Managed Digital Trust Managed Cloud & Infra Security What We Think What We Think Contact Wipro Please fill the required details to access the content Seamless and cost-effective management of security operations provided in an as-a-service model. Wipro's managed security services include advanced cyber defense centres, cybersecurity platforms and managed security infrastructure and operations. Wipro's Managed Security Services (MSS) differentiates through a global scale augmented by localization and regional presence, where our highly experienced cybersecurity talent pool is backed by strong partnerships and venture investments. Wipro's Cyber Defense Centers, spread across 16 locations, is powered by cutting edge technology to provide scale and cost competitiveness. We make IT and operational choices that reduce costs and improve efficiency while enhancing security capabilities. Our MSS offers operations and management of IT security infrastructures for one or several customers through a security operations center (SOC). Typical services include security monitoring, behavior analysis, unauthorized access detection, advisory on prevention measures, penetration testing, firewall operations, anti-virus operations, IAM operation services, DLP operations, and all other operating services to provide ongoing, real-time protection without compromising business performance. Wipro's 24x7 SOC and Managed Detection and Response (MDR) Service provides cyber resilience using 360' degree threat detection and response coverage. End-to-end Managed Services to transform, automate and orchestrate Risk and Compliance processes enabling effective protection, detection and response. Create highly secure applications in compliant environments backed by deep industry expertise, best-in-class platforms and scalable processes. Managed Digital Trust services and platforms to improve time to market while uncovering cyber threats and reducing enterprise costs. Build Zero Trust and Digital Identity resiliency to establish trust at scale, while detecting and preventing unusual access to data, services, software, processes and intellectual property. Comprehensive Managed Cloud and Infra Security, Risk Management and Governance using Wipro's 24x7 Cyber Defense Center and 360-degree threat detection and response coverage. Often, enterprises fail in getting a holistic view of potential security risks in the AWS environment due to the complexity of the integrated security solutions. Key Takeaways from CISO Panel Discussion

Disruptive situations force businesses to change the way they function. Stringent data security used to be an afterthought for some businesses, until privacy issues gave rise to GDPR regulations. With increasing willingness to use wearables and share personal information over the web, patients want healthcare to be delivered as a service. Healthcare providers are catering to these expectations by building their digital ecosystem, with around 60% of them having made this a top priority. A Quick Walkthrough of an ID Conversion Project for a Bank ====================== ----- Arcticle source ----- https://www.wipro.com/cybersecurity/cybertransform/ ----- Wipro CyberTransformSM starts with strategy Wipro CyberTransformSM starts with strategy Case Study Driving cost savings for a multinational manufacturing business Case Study Driving cost savings for a multinational manufacturing business Why Leading CISOs are Adopting a Strategy-First Approach to Identity and Access Management (IAM) Why Leading CISOs are Adopting a Strategy-First Approach to Identity and Access Management (IAM) Edgile + Wipro: We Secure the Modern Enterprise Edgile + Wipro: We Secure the Modern Enterprise Contact Wipro Please fill the required details to access the content   The business world has entered an era where cyber challenges are more frequent and more likely to significantly impact business operations. This is creating a huge demand for transformational cybersecurity and risk consulting services focused on modernizing and securing global enterprises. Wipro's recent acquisitions of leading strategy consulting
firms Ampion, Capco and Edgile enabled us to accelerate the development of Wipro CyberTransform to meet this demand. CyberTransform includes strategy and implementation services that will help organizations take a modern approach to security, embrace a transition to the cloud, and allow internal employees, customers and external third parties to operate in virtual, digital supply chains—all in a highly secure manner. Wipro's expert CyberSecurists bring a unique understanding of the risk and compliance trends driving digital transformations and the need for a strategy-first approach. This includes Quick Start solutions enabled by IP accelerators, along with automated regulatory compliance subscription services to help customers enhance boardroom governance of cybersecurity risk, maintain compliance in an evolving regulatory environment and embed cyber resilience into their business DNA. Our client had on-premises legacy systems that required ongoing maintenance and limited its ability to support digital and cloud transformation. Our client had on-premises legacy systems that required ongoing maintenance and limited its ability to support digital and cloud transformation. Optimize business outcomes with a strategy-first approach. Optimize business outcomes with a strategy-first approach. Optimize business outcomes with a strategy-first approach. Optimize business outcomes with a strategy-first approach.
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Become the New Face of Global Cybersecurity

Contact Wipro Please fill the required details to access the content Join Wipro Women in Cyber (WWIC) Join Wipro Women in Cyber (WWIC) Be the change The world of cybersecurity — as with other parts of the Wipro global portfolio — is rapidly evolving and diversifying. Wipro Cybersecurity & Risk Services (CRS) is boldly leading the way. You can also be a part of the effort and reinforce a culture of diversity and inclusivity that enables innovation. We are inviting you to join Wipro Women in Cyber (WWIC), where top leaders from various functions across CRS have come together with a mission—to build a workplace where women can lead, inspire, and become cybersecurists of the future. We work with diverse, young, and motivated individuals to drive change and make this mission-critical journey successful.   What is our mission? WWIC was founded in 2022 to focus on developing an inclusive and open culture that guarantees opportunities for women in CRS. We do this through engagement, training, and enablement efforts. Our work with women helps them identify the key areas of growth and opportunity in the cybersecurity space and enhances their leadership qualities by leveraging the skills of professionals. The process ensures that women represent cybersecurity, our clients, Wipro, and themselves successfully. The WWIC strongly emphasizes four essential areas that promote awareness, encourage advocacy, and increase brand value. The four key pillars include: These components are crucial to the purpose of the WWIC. The WWIC has different programs that focus on the following: Our vision is to sustain talented women in cybersecurity The WWIC is driven by the vision of utilizing leadership and technology to shape the future of women in cybersecurity by acquiring, nurturing, and sustaining talented women within the cybersecurity workforce. In turn, we know this will support Wipro's leadership and long-term success. Our purpose Joining the WWIC is easy Email us at WomenInCyberCallToAction@wipro365.onmicrosoft.com, and we'll send you the information to join WWIC. Listen to the full episode of Conscious Connections Senior Partner - Ventures, GTM and Channels Cybersecurity & Risk Services Client Engagement Partner & Account Delivery Head WEF-Cybersecurity & Risk Services ====================

Wipro Cybersecurity and Risk Services

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AMERICAS EUROPE ASIA PACIFIC/MIDDLE EAST/AFRICA Contact Wipro Please fill the required details to access the content CISO Community Collaborate with global CISOs and Wipro Cybersecurists at industry events Wipro is offering CISOs unique opportunities at premier industry shows to come together and share the latest cyber insights and trends. Our events are built on the power of peer collaboration and include roundtable discussions, speaking panels, CISO dinners and private CISO summits. You will engage with a global network of CISOs to gain fresh perspectives on how to solve today's cybersecurity challenges through: Wipro recently launched its CISO-in-Residence program offering peer-to-peer meetings with top industry CISOs. You can discuss topics most relevant to you with world-class professionals in a private, one-on-one setting. Contact Us Connect with Wipro to secure your modern enterprise. ======================

Cyber Defense and Response

Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response Shortage of Qualified Critical Incident Response Professionals Continues to Plague Organizations Contact Wipro Global Cyber Defense Centers (CDCs) Threat Intelligence Threat and Vulnerability Management Critical Incident Response Incident Response as a Service Next-Gen Threat Hunting Next-Gen Threat Intelligence Unmasking the Illusion: Are Your Threat Feeds Truly Intelligent? Please fill the required details to access the content Cyber Defense and Response Wipro's Cyber Defense Centers (CDCs) act as vigilant hubs, providing real-time monitoring, detection and mitigation of cyber threats. Our expert Threat Intelligence teams collect and analyze intelligence from diverse sources, proactively identify emerging threats and enhancing client preparedness. The Threat and Vulnerability Management teams bolster defenses by assessing vulnerabilities, pen-testing environments and recommending remediation strategies. Wipro's Incident Response (IR) sub-practice offers Critical Incident Response, including retainer services and rapid responses to high-impact incidents like ransomware and malware attacks. Additionally, Incident Response as a Service offering streamlines incident handling through a managed service approach focusing on proactive protection engagements for clients with existing IR retainers. Advisory and Strategy Review of existing cloud security architecture and controls and remediation roadmap. Transformation and Implementation Accelerate secure cloud migration using multi-cloud jump start and security guardrails. Managed Cloud Security Services Managed cloud-native security services, application security and threat detection and response. Our Offerings Cyber Defense Our teams provide 24/7 real-time monitoring and rapid response capabilities

to detect, analyze. Our teams gather and analyze data from diverse sources to proactively identify emerging threats. Our teams assess vulnerabilities, conduct penetration testing, and recommend effective remediation. Incident Response Our Critical Incident Response service ensures swift containment and recovery in high-impact cyber incidents. Incident Response as a Service streamlines incident handling, providing a fiscally responsible proactive. Our proactive Next-Gen Threat Hunting identifies and mitigates threats early in the environment, enhancing detection. Next-Gen Threat Intelligence offers strategic insights to proactively anticipate and mitigate emerging Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers the best global cloud and infrastructure security solutions, technology, AI-powered sustainable automation platforms and highly-skilled talent—Cybersecurists—to accelerate growth that is both secure and optimized for cost efficiency. We offer a modern end-to-end framework for cloud and infrastructure security transformation — CyberTransformSM – that includes advisory and implementation, plus our industry-leading managed services — CyberShieldSM. Our recent acquisitions and key investments in this area have created additional value for our customers across the globe. Partners Wipro End-to-end Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Featured Resources Contact Us =====================

Cloud, Zero-Trust & Enterprise Security Architecture

----- Arcticle source ----- https://www.wipro.com/cybersecurity/services/cloud-zero-trust-and-enterprise-security-architecture/ ----- ANALYST SPEAK: Wipro is recognized as a Leader in Everest Cloud Security Services PEAK Matrix® Assessment 2023 Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response Contact Wipro Cloud Security Posture Assessment Cloud Native Application Protection Platform (CNAPP) Secure Cloud Foundation Cloud Sec Ops Cloud Application Risk Governance Cloud Compliance Shield CSPT Solution Enterprise SASE Secure Digital Workplace Enterprise Protection Wipro's Secure Cloud Foundation for AWS Whitepaper True Zero Trust Should Mean VPN Retirement IDC Spotlight on Cloud Security: Multi-cloud Mastery Unveiled Wipro has been positioned as a Leader in the latest IDC MarketScape Wipro has been positioned by HFS in its report ranking the Top 10 Cybersecurity Service Providers for 2022 Wipro Launches Continuous Compliance Solution Built on Amazon Security

Lake Wipro Launches Continuous Compliance Solution Built on Amazon Security Lake Wipro has been named Global GSI Partner of the Year (growth) by Netskope for FY24 Wipro Google Cloud Security Pack Please fill the required details to access the content Cloud, Zero-Trust & Enterprise Security Architecture Secure your edge-to-cloud with cyber resilience As enterprises adopt a cloud-first mindset, logical boundaries become fuzzy. Cloud security loopholes such as misconfigurations, blind spots, compliance gaps, shadow IT and lack of visibility are creating worrying challenges for CXOs. Wipro cloud security solutions are powered by and co-innovated with top cloud service providers and industry-leading strategic technology partners. Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers leading global infrastructure security solutions, including technology and AI-powered sustainable automation platforms that are optimized for cost efficiency so enterprises can accelerate business growth. Advisory and Strategy Review of existing cloud security architecture and controls and remediation roadmap. Transformation and Implementation Accelerate secure cloud migration using multi-cloud jump start and security guardrails. Managed Cloud Security Services Managed cloud-native security services, application security and threat detection and response. Our Offerings Cloud Security Get actionable recommendations to fortify your cloud security Automate security for your cloud applications Build a solid foundation to accelerate cloud adoption across the enterprise Transform your SOC journey with autonomous security operations Govern your business applications with a risk-based security approach Navigate complex multicloud environment compliance and security Strengthen your cloud security and prioritize remediation and risk treatment plans Infrastructure Security Secure internet, access to applications, enterprise resources for users Secure users and workplace for digital enterprise Unified security controls for enterprise Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers the best global cloud and infrastructure security solutions, technology, AI-powered sustainable automation platforms and highly-skilled talent—Cybersecurists—to accelerate growth that is both secure and optimized for cost efficiency. We offer a modern end-to-end framework for cloud and infrastructure security transformation — CyberTransformSM – that includes advisory and implementation, plus our industry-leading managed services — CyberShieldSM. Our recent acquisitions and key investments in this area have created additional value for our customers across the globe. As enterprises expand their cloud landscape, an increasing percentage of data are moving across traditional data center boundaries. Network infrastructure no longer has one clearly defined perimeter. Partners The leadership position is a reflection of our differentiated capabilities, thought leadership and OneWipro values to help enterprises achieve cyber resiliency in an age of continuous disruption. Wipro End-to-End Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs.

Seamless and cost-effective management of security operations provided in an as-a-service model. Contact Us =====================

Risk & Compliance Transformation

----- Arcticle source ----- https://www.wipro.com/cybersecurity/services/risk-and-compliance-transformation/ ----- Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response Contact Wipro Tackling AI and Risk in Financial Services Quick wins to optimize HIPAA compliance management using ServiceNow IRM Automated Regulatory Compliance (ArC) Q2 2024 Update Double Materiality & Mandatory ESG Reporting in the EU Transforming TPRM: Leveraging AI for Faster, Accurate Assessments World-class Cyber Risk Programs at Warp Speed with ServiceNow Risk Solutions Please fill the required details to access the content Risk & Compliance Transformation In today's complex and dynamic regulatory landscape, organizations face significant challenges in managing risk and ensuring compliance. Traditional approaches often fall short. The need for real-time insights, proactive risk management and seamless compliance is more critical than ever. Wipro Cybersecurists bring deep expertise in risk and compliance transformation. We help organizations turn risk challenges into opportunities for growth and resilience through service offerings tailored for specific industries. Advisory Define goals that align with strategic business operational requirements. Transformation and Implementation Drive transformation with automation, accelerators, and comprehensive services. Managed Services End-to-end capabilities—from licensing to implementation and support. Our Offerings Manage the risk, compliance and organizational assurance capabilities. Enhance risk and security posture monitoring and reporting for service providers and the extended supply chain. Manage operational resiliency by leveraging the business and operating environment through CMDB and related configuration items. Enable faster time to value through automated compliance tracking and reporting. A proactive, automated approach to third-party risk management Insights on industry dynamics and technology for enhanced productivity and compliance Practical insights to remove friction from healthcare provider compliance programs Edgile, a Wipro company, announced the Q2 2024 release of its Automated Regulatory Compliance (ArC) Content Service for ServiceNow. Implement effective strategies and technology to simplify reporting obligations A proactive, automated approach to third-party risk management Hear from ServiceNow and partner, Wipro/Edgile, on how they helped accelerate automation for their client's IT, cyber risk, and security programs. News, Awards & Recognitions Wipro and ServiceNow Join Forces to Improve Risk and Compliance Outcomes Onapsis Announces Collaboration with Wipro to Remove Security as a Digital Transformation Roadblock Wipro Enters into a Five-Year Business Partnership with ServiceNow Wipro End-to-end Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's

Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Contact Us =====================

A Logistics Firm Improves IT Reliability with Full-Stack Observability

----- Arcticle source ----- https://www.wipro.com/cloud/a-logistics-firm-improves-it-reliability-with-full-stack-observability/ ----- Contact Wipro Please fill the required details to access the content A Logistics Firm Improves IT Reliability with Full-Stack Observability Ambitions Traditional IT monitoring techniques are not enough for today's complex cloud environments. As cloud-based IT systems become more powerful and complex, companies need precise round-the-cloud monitoring and observability services to identify and resolve problems. An industry-leading logistics company recognized how valuable cloud computing could be for its parcels division, providing the flexibility and accessibility necessary to provide end-to-end support for a growing customer base. But as the client began migrating operations to the cloud, it also recognized that its business ambitions were outpacing the capabilities of its IT monitoring system. Lack of real-time visibility into IT issues was making proactive incident response difficult. IT alerts were basic and reactive, lacking the in-depth analysis that IT teams needed to fully understand and resolve IT issues. These challenges contributed to long resolution times that ultimately jeopardized the experiences of both consumer and employees in the parcels division. The client wanted to increase the strength and reliability of its IT system without sacrificing the momentum of its cloud migration. The company partnered with Wipro to incorporate observability services that would provide greater insight into the performance of applications throughout the system, including applications that managed crucial tasks like package tracking and sorting scans for trucks. The client also wanted a better connection between the IT and business teams. Action Wipro identified gaps in monitoring program and recommended a transition from traditional application-level monitoring to full-stack, business-level observability. Moving to a full-stack, business-level observability would provide a more unified view of performance across applications and business processes, allowing teams to identify incidents more easily, root causes and potential solutions. Wipro also suggested migrating from Broadcom (Introscope) to AppDynamics and implemented a single dashboard to provide real-time analytics and unified monitoring for servers, applications, infrastructure and networks, including data centers and the cloud. The new dashboard is compatible with the full technology stack and capable of integrating advanced automation tools for

critical tasks like ticket creation in Pulse/Jira. Every time the system detects parameters or KPIs that are trending towards a possible down time or anomaly, AppDynamics automatically logs a ticket for the incident, notifying the team. The client worked with Wipro to establish an Observability Command Centre (OCC), a managed service provided by Wipro to help assess, establish and manage the observability program. Together they developed a roadmap that aligned the client's IT and business team priorities, ensuring seamless end-user experience. They configured over 150 applications, created more than 800 health rules (flagging parameters) to enable alerts, installed over 300 agents and continue to monitor more than 50 critical business processes. Wipro continues to manage the OCC, providing constant observability to eliminate IT blind spots and support in-depth data analysis across each layer of IT architecture. Ambitions Realized Wipro's approach provided effective KPI metrics, eliminated rudimentary alerts, and provided data analysis for better insight for all stakeholders. This enabled real-time tracking of critical business events, improving coordination between IT and business stakeholders. Proactive monitoring helped reduce ticket volumes by 26% with zero downtime for business-critical applications. By ensuring IT reliability, the client improved customer retention, leading to increased brand reputation and business revenue. Real-time tracking improved end-to-end visibility across each event transaction, creating better coordination between IT and business stakeholders and increasing workforce optimization by 17%. Total number of orders increased by 10% and weekly revenue increased by 5% on average. Performance of other key applications like package tracking and vehicle scans also increased. Truck drivers reported better user experience for PDT devices (99.05%, up from 95%), which helped reduce shipment delays by 15%. False positives on the package tracking app reduced by 50% and overall failures decreased by 10%. Through proactive incident response, the client's IT teams were able to reduce hardware overload on servers by 20%. By establishing an observability command center, Wipro was able to help the client become more efficient and enhance its response – providing customers with a more well-rounded and positive experience.
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SaaS Delivery –

A Growing Opportunity

----- Arcticle source ----- https://www.wipro.com/cloud/saas-delivery-_-a-growing-opportunity/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content SaaS Delivery – A Growing Opportunity SaaS Claims the Future, Changing the Playing Field Introduction With cloud and mobile technologies taking root, Software as a Service (SaaS) is mushrooming. Wipro's research indicates that more than half of the business software acquisitions by 2014 will be cloud or SaaS basedi. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership (TCO). SaaS implies zero upfront investment in IT infrastructure, making it attractive.

Applications such as CRM, financial accounting and management, marketing and demand generation, lead and order management, web analytics, digital content creation and ERP are among the early movers to the SaaS model. Estimates suggest that the global SaaS market was $16.7 billion in 2013 growing to $21.3 billion by 2015ii. The latest industry projections indicate that the global spending on SaaS applications will increase significantly over the next two years. In this article, we will discuss the key challenges facing Independent Software Vendors (ISVs) in their SaaS journey. The ISV Imperative: Adapt to SaaS or Die Independent Software Vendors (ISVs) must move fast to get in front of this trend if they are to retain their clients and protect revenues. The challenge for them is evident. For decades, ISVs have focused on creating and selling software. Now, given the SaaS model, they must run it too. This implies being on top of the customer's business and creating an ecosystem around products. It is interesting to note that the traditional leaders in global software markets have quickly jockeyed into position with financial engineering providing an op-ex model to clients. They have hastily invested in smaller companies offering SaaS products so that their clients can leverage SaaS models. However, these large ISVs are now in the unenviable position of selling disparate solutions to retain clients. The end result is growing complexity. It makes it very difficult for their clients to on-board and get off just as easily – which is quite the opposite of what SaaS is meant to enable.   There are five key SaaS delivery related challenges before ISVs today: 1. Product Evolution The SaaS model is as promising as it is challenging for ISVs. The primary challenge is product evolution. ISVs are not very keen to re-engineer their products because they still contribute to the bottom line. Their clients need to use their core solutions which have been built over years if not decades. To align themselves with evolving customer needs is an uphill task for most ISVs. They have either multiple products acquired inorganically or products that have been developed by diverse teams. The skills required to re-engineer these products may no longer exist within the company, thus hampering the ISVs' ability to remain competitive. Typically, an ISV may take anywhere between 18 and 36 months to re-engineer a package. This is an unacceptable time frame in an era where cloud and mobile technologies are changing businesses overnight. What about the fact that ISVs have bought smaller companies to meet the SaaS demand? Doesn't this solve the problem? To an extent it does; but each of their products is a different business line. The challenge before them is to integrate these heterogeneous products in an easy-to-consume op-ex model. 2. Customer Retention Customer retention in a SaaS delivery model is possibly the biggest nightmare before an ISV. Customers don't want to get locked in by an ISV. They want solutions that make it easy for them to switch products as well as migrate from a provider when necessary. This means an ISV must adhere to standards that enable a quick switch or migration. In such an environment, how can an ISV retain customers? The only way is to demonstrate continuous improvement in the service and to guarantee product and service innovation. For ISVs, long used to selling entire technology stacks with all components and licenses, this is a dramatic change. On one hand they need to ensure that if a customer wants to switch, the cost is extremely low, and on the other, they must continuously add value to the product and force customers to continue with their service. 3. Building Customer Insight ISVs develop solutions through a wide understanding of industry needs. They don't have access to individual

customer usage patterns and therefore they are unable to build customer insights. This has left them feature-focused rather than business-focused. In a SaaS universe this handicap doesn't exist: ISVs can track customer usage patterns and make rapid adjustments to their product and service to match customer needs. This means building real-time analytics capabilities. However, analytics may not be their core competency. In such cases, the ISV needs assistance from an SI – in fact, SIs build their business through an understanding of clients' needs.   4. Business Agility SaaS is not about selling a product; it is about service delivery. Traditionally, ISVs have been used to selling features and product upgrades. In a SaaS model, they must contend with stringent SLAs to be successful. How do they respond to customers quickly? What kind of tools do they need to support customers instead of assigning people to each customer? What kind of automation do they need to effectively service clients? In other words, how do ISVs become more agile in a SaaS model for their products? For pure play SaaS providers this is a volume game. They sell faster to customers, on-board faster and boost margins by keeping costs in control. Larger players are unable to match these characteristics. 5. Customer Experience ISVs have, for long, depended on product features to entice clients. They have to work continuously to improve client experience. The ISV must maintain a high level of transparency so that the client knows what was used, how much of it was used and at what cost. In addition, the ISV must provide the necessary services (support, maintenance and upgrades) and ensure that clients want to come back for more. In the SaaS model, an ISV sells subscriptions and pay-as-you-go solutions. Therefore, revenues are tied to returning clients. A customer's experience can spell the difference between success and failure. The Inevitable Transformation for ISVs The solution for an ISV is to bundle products effectively for different markets. SIs have been traditionally bundling products to create holistic solutions. They know how to package technologies so that features tie in to customer-specific values. How these bundles are delivered to the client is a business and not a technological problem. It is obvious that SIs can play a decisive role here. A good SI partner can be the stepping stone to a great customer experience. However, there are three distinct reasons why an ISV should partner with a competent SI to create effective SaaS models: 1. Service delivery: With data management and analytical capabilities, an SI is able to map customer needs and create a service that fits in well with business needs. The SI can then ensure smooth on boarding of customers; deliver easy-to-use self-service models through appropriate tools, mechanisms and automation; and create the appropriate subscription models. 2. Customer experience: The key to customer retention in a SaaS model is customer experience. Underlying great customer experience is the ability to build insights into how a customer uses an application, innovate around those insights and deliver value through domain-specific expertise for the 'wow' factor. An SI is well-positioned to deliver the kind of experience that is central to retaining valuable customers. 3. Maximize profit: An ISV doesn't need to build the complete SaaS infrastructure. Instead, ISVs should leverage the expertise and infrastructure of an SI to keep service delivery costs low and maximize profit. Conclusion ISVs are beginning to realize that selling a service is vastly different from selling a product. The entire ecosystem around a service comprises client needs, building business intelligence, bundling products, managing SLAs and improving customer experience. For SaaS

success, an ISV must innovate around this ecosystem. One of the ways to address the challenge is to partner with an SI who specializes in automation and has the tools and point solutions to deliver a service. The lines between product, licences, implementation, integration, upgrades, suppor t and other ser vices are being blurred by SaaS. ISVs that recognize this change and work with SIs at being service oriented will find that they are able to tap into the growing SaaS opportunity. References i. ISV-to-SaaS Business and Technology Success: Partnering for Speed and Innovation, research report by Saugatuck Technology/ publishing sponsor Wipro ii. http://www.centerbeam.com/news/Cloud-Computing/U.S.-leads-in-SaaS-adoption-CBOID122491912-GRPOID50590013/View.aspx DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. What is Virtual Desktop Infrastructure (VDI)? A technology that enables your global workforce to securely access company data on their personal devices without sacrificing security. =====================

Continuous Delivery Platform for DevOps

----- Arcticle source ----- https://www.wipro.com/cloud/continuous-delivery-platform-for-devops0/ ----- Related Articles Contact Wipro Please fill the required details to access the content Continuous Delivery Platform for DevOps Accelerate Application Release Cycle through Cloud To survive and succeed in an uncertain economic environment, business models and processes must be agile and flexible. The IT organization must align itself to business priorities and adopt some bold changes to deliver business value. Today, the application development life cycle is often bottle-necked by environment availability issues: Wipro's Continuous Delivery Platform for DevOps Limited availability of environments and dependence on legacy systems drastically reduces the number of projects that can run simultaneously in your enterprise. DevOps on Cloud infuses agility and speed into IT, enabling you to react faster to your business needs, accelerate your project timelines and quickly respond to change and continuous development. Wipro's Continuous Delivery Platform orchestrates the on-demand provisioning of environments on different types of infrastructures like public cloud, private cloud or hybrid infrastructure for DevOps. DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. The on-demand provisioning of environments within this infrastructure, with all the software and application deployed and configured on it, is the key enabler for DevOps. Key features With Wipro's Continuous Delivery Platform, you can achieve Success Story Wipro saved 65% costs for a leading UK-based publishing & information provider with the Continuous Delivery Platform for DevOps. A leading UK-based publishing and information provider operating in the science, medical, legal, risk & business sector, selected Wipro for

their application transformation on public cloud (AWS). Wipro's Continuous Delivery Platform for DevOps enabled the client deploy environments across the application life cycle, in an on-demand basis, reducing both project costs and time savings up to 65%. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. What is Virtual Desktop Infrastructure (VDI)? A technology that enables your global workforce to securely access company data on their personal devices without sacrificing security.
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The OSS Cloud Opportunity

----- Arcticle source ----- https://www.wipro.com/cloud/the-oss-cloud-opportunity/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content The OSS Cloud Opportunity Exploring the challenges and benefits of cloud-based operational support systems 1. Introduction OSS plays a critical role in shaping the service portfolios of CSPs. OSS not only impacts a CSP's agility to rollout new services; it also impacts their ability to measure the quality of services (QoS). However, due to exponential growth in data consumption in recent years, CSPs have prioritized investments in network upgrades over OSS/BSS transformations. Legacy OSS systems pose many challenges to CSPs, including: In addition, large carriers and wireless operators have a vast array of products in their OSS landscape consisting primarily of silos of OSS stacks to manage different network technology domains. This approach is inefficient and costly from an OPEX perspective. Although CSP revenues are growing, growth in margins is not keeping pace. In fact, for some CSPs, OPEX constitute ~60% of revenues (see figure 1), pushing margins to unsustainable levels. Network & OSS Managed Services Providers (MSPs) have gained significant popularity in recent years as CSPs outsource their network operations for cost savings. However, MSPs are also facing similar OSS challenges and are under cost pressure due to the network and OSS diversity of their clients. These OSS challenges are equally relevant for Tier 2 and mid-market operators and OSS on the cloud presents an interesting value proposition potentially addressing these challenges. Figure 1: CSP's expenditure by geography, Source: Wipro estimates based on Infonetics Research, 2011 2. The OSS Cloud Opportunity OSS solutions deployed over cloud platforms can address many of the business and technical challenges faced by the communications industry today. In this section, we explore the business potential for OSS on the cloud and consider how industry participants can deploy this opportunity. 2. 1. OSS Cloud for Tier 1 CSPs Tier 1 CSPs have multiple OSS applications. This is because of their heterogeneous technology and vendor landscape. One of the key challenges CSPs face is the management of software patches and upgrades. Due to the abundance of legacy systems, scaling up operations on an on-demand basis is another big issue. Cloud-based infrastructure offers an efficient and easy way to enable resource sharing, automation and monitoring. We propose a cloud hosted OSS solution for Tier 1 CSPs. In this model, CSPs host the OSS

solutions within their private cloud (see figure 2). It provides the flexibility to scale operations on-demand and simplifies software upgrade procedures, reducing costs considerably. Figure 2: Reference Architecture: OSS Cloud for Ti Business Benefits for CSPs Although, the OSS on the cloud model presents some challenges, it can provide significant business benefits to Tier 1 CSPs, including: 1. Reduced Costs 2. Improved Operational Agility 3. Analytics Capabilities 2. 2. OSS Cloud for Managed Services Providers Today, CSPs rely upon MSPs to improve their operations and reduce costs. One of the key challenges for MSPs is that CSPs have an array of OSS products from multiple vendors. These systems use different hardware and middleware and also have different upgrade cycles and change management processes. The overheads of managing the OSS applications prevent service providers from achieving economies of scale, significantly limiting their value proposition. We propose a cloud hosted OSS model specifically tailored for MSPs. Moving to a cloud model (see figure 3) reduces both the CAPEX and OPEX for MSPs and provides much needed business and operational agility. Figure 3: Reference Architecture: OSS cloud for a MSP, Source: Wipro Technologies   The model presented in Figure 3 includes some adoption challenges that are described below with possible solutions. Business Benefits for MSPs The key benefits of an OSS cloud model for MSPs are described below. 1.Reduced Costs 2. Operational Agility 3. Simplified Vendor Management 2. 3. OSS as a Service OSS services delivered over the cloud in a SaaS model (see figure 4) offers small-to-medium sized CSPs a unique combination of technology and business flexibility – at a fraction of the cost of traditional licensed software. This model is more relevant for Tier 2 or 3 operators in emerging markets with limited budgets. On-demand cloud services can provide the same level of business maturity to Tier 2 and 3 operators that large CSPs enjoy while also reducing OPEX.   The model presented in Figure 4 includes some adoption challenges which are discussed below, along with a recommended remediation strategy: Business Benefits of OSS as a Service OSS cloud in a SaaS model provides numerous business benefits to CSPs, discussed in more detail below. 1. Best of Breed Solutions 2. Reduced CAPEX and OPEX 3. Flexibility 3. Recommendations There are different options for delivering OSS through the cloud. Identification of systems that can be migrated to the cloud requires an examination of architectural readiness, maturity and priority of the OSS product, in conjunction with an evaluation of the OSS landscape of the CSP. The deployment approach will also depend upon the scale of operations of the CSP. We propose a step-by-step approach for migrating to OSS on the cloud for the following three stakeholders: 3.1. Tier 1 Communication Service Providers: Tier 1 CSPs typically have a large legacy system footprint and large network and IT operations. They must consider a phased approach towards cloud. IT Roadmap and Strategy IT-OSS Planning Procurement Strategy 3.2. Tier 2, 3 Communication Service Providers: Tier 2 and Tier 3 CSPs have more limited network and IT operations budgets than Tier 1's. Greenfield operators can also be considered part of this category. IT Roadmap and Strategy IT-OSS Planning Procurement Strategy 3.3. OSS Software Vendors Recommendations for OSS vendors are discussed below. Product Roadmap and Strategy Product Architecture 4. Conclusion With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. To keep pace with market demand,

CSPs will have to continue to make significant network investments. But the network is only as powerful as the operational systems that support it – OSS helps CSPs better leverage their networks and enables them to develop a portfolio of automated, high quality, secure services and applications. CSPs should carefully consider the benefits of OSS on the cloud which offers much needed scalability and flexibility that will help them keep pace with rapidly evolving market requirements. The benefits for OSS vendors and MSPs are equally important as a SaaSbased model can provide recurring cash-flows and improved operational efficiency. This decouples OSS software sales with network upgrades or rollouts. It will enable OSS vendors to quickly rollout new features in OSS solutions to a larger segment of customers. Raghavendra Tadepalli works as a Senior Consultant for Wipro's telecom equipment vendor business unit. He has more than 10 years of experience in OSS/BSS solutions and works with the Telecom Research & Development Consulting practice that offers product strategy, architecture and technology consulting to major telecom software vendors. Jayanta Dey is Vice President and Head- Consulting, Solutions and Practice for Wipro's telecom equipment vendor business unit. Jayanta is Vice President and Head- Consulting, Solutions and Practice for Wipro's telecom equipment vendor business unit. Jayanta has over 23 years experience in the telecommunications industry managing complex transformational deals and advising clients on various strategic issues. His areas of specialty include fault tolerant operating systems, network and service management and wireless technologies. Jayanta has held various leadership roles at Wipro and in the past he was also the Business Head for Wipro's Wireless Network services The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. What is Virtual Desktop Infrastructure (VDI)? A technology that enables your global workforce to securely access company data on their personal devices without sacrificing security. ====================== ----- Arcticle source ----- https://www.wipro.com/cloud/accelerate-your-transition-from-office-to-remote-work/ ----- Contact Wipro Please fill the required details to access the content With so many employees working from home for the first time, enterprises are scrambling to provide anywhere, anytime access to increasingly diverse workforces. While remote work has been a hot topic and has been gaining traction across industries for several years, it's become a necessity now, earlier than expected for many of us. So how do enterprises who might lack a standard remote work strategy or have only limited work-from-home capabilities suddenly onboard their entire workforce to a digital workspace? With the help of Virtual Desktop Infrastructure (VDI). What is Virtual Desktop Infrastructure (VDI)? VDI is a technology that enables a virtual desktop environment. In traditional server setups, an operating system is installed right on top of the hardware of a physical server. With virtualization, an additional layer is created between the hardware and an operating system, enabling the operating system to run inside each virtual machine. How does VDI work? A virtualization layer is an abstraction layer between network and storage hardware that creates a virtual version of a desktop, operating system, network, or server. A connection broker enables users to connect to a remote virtual desktop without sacrificing security across the devices allowed within your enterprise technology and mobile

policy. With VDI, users can securely access company data on personal desktops, laptops, tablets, and smartphones, and changes on a parent desktop can be easily mirrored to virtual desktops in a desktop pool. Why VDI? VDI integrates with your existing corporate IT infrastructure for effective business continuity and to support workflows and processes already in place. It can help you reduce costs by eliminating travel and storage costs in today's high-risk infection environment. VDI also increases the agility and responsiveness of your IT through cloud infrastructure and next-generation hardware, positioning you for future growth as things normalize around the world. Most importantly, in today's resource-strapped enterprises, it enables cost-effective self service, real-time desktop management. The benefits of VDI for enterprise: VDI can pave the way to a connected global workforce that's well-informed, productive, and empowered to act with confidence in uncertain times. VDI is a fast, flexible, cost-effective solution to getting your enterprise up and running even if your physical offices remain shuttered for an extended period of time. Most importantly, this technology lays the foundation for future work-from-home policies as we flatten the COVID-19 curve and resume operations in a post-pandemic world. From ensuring business continuity to managing crises: When does VDI make sense? Most enterprises have continuity plans, but even the best prepared could not have anticipated the weeks (potentially months) of disruption from coronavirus. Many businesses are still in crisis-management mode and are struggling to maintain operations, sustain employees, and continuously pivot to meet the requirements of a rapidly changing situation. Wipro's VirtuaDesk™ enables existing desktop application suites to be deployed in a cloud-based computing model without the common compatibility or performance problems encountered when deploying a vast number of applications. Wipro offers unrivaled deployment flexibility. We have deployed over 1.4 million virtual desktops for global customers and are experienced in delivering VDIs with Citrix and VMware as well as hosted VDIs to our customers. Additionally, we offer comprehensive monitoring tools to track infrastructure health and user experience. Wipro's "Cloud Ecosystem" enables businesses to offer up to an additional 10,000 desktops globally within a short timeframe. Business as usual is possible in the new normal. Enterprises can lay the foundation necessary in our COVID-19 reality with minimal disruption and upscale when needed as things begin to normalize. To learn more about how to onboard your remote workforce to a fast, flexible, and cost-effective digital workspace, get in touch with a VDI specialist.
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Cloud Risk Confusion: Are you evaluating cloud migration risks effectively?

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content Cloud Risk Confusion: Are you evaluating cloud migration risks effectively? December | 2020 This blog post is part 1 of a 3-part blog series on taking the journey to the cloud and understanding how to approach the risks involved.   When it comes to the Cloud, security remains the biggest concern for IT leaders[i]. While the cost and flexibility offered by the Cloud are appealing, the risk of data breaches and downtimes have CIOs thinking twice about moving to the Cloud. But risk is an unavoidable aspect of business. Any project you undertake has a risk element – will it be delivered on time, aligned to your strategy, and within scope and budget? Well, Cloud adoption is no different. However, in the case of Cloud, what most CIOs end up doing is focusing too much on certain aspects of the technology risk and externalized security controls. They fail to pay enough attention to all the other risks in the aggregate ecosystem they are carrying today that may indeed be even larger.   Behind the scenes: A comprehensive look at Cloud risks As they say in compliance, you can be secure without being compliant, and you can be compliant without being secure. Similarly, you can be secure in your Cloud technology without eliminating risks related to cost, schedule, attrition, service, data loss etc. When looking at risk elements for Cloud adoption, other than the usual suspects of technology, data, and security risks, CIOs need to also consider the risks associated with the Cloud strategy, operating model, economic model, service resiliency, etc. (See Fig. 1) and the various obstructions that could hinder their ability to move forward in various ways. Fig 1: Cloud Risk Elements   For instance, overspending is a risk when it comes to the Cloud economic model. You could achieve the most elegant IT implementation, but what it would cost could break your business. Spending more than planned is a frequent occurrence with as many as 69% of companies reportedly overspending on their cloud budget by 25% or more[i]. Wasted cloud spend runs into billions of dollars every year! Managing this risk is not just a financial but also a career-level discussion for many leaders. When it comes to data, there are security risks that raise questions like - Who holds the encryption keys? Where is the data? Where is the data being replicated to? Are the services externally contactable? Are we using Zero Trust? The truth is that while there are many things that are perceived to be risks on data in Cloud, a well-architected Cloud Data Platform is no more risky than any global enterprise data platform today. Creating an app migration strategy also comes with its share of risks that are a part of any transformation and not specific to Cloud. For instance, migration of applications from legacy code to new code may not duplicate functionality and result in risky/unpredictable behavior. Then there are operating risks during implementation. If you aren't geared to do it right and move too many things at the same time or too quickly, you could tip the balance. An organizational ability and maturity to manage a process, which is poorly planned and ends up partially on Cloud and partially on-prem, may end up increasing the number of Cloud to non-Cloud handoffs. This could put too much strain on existing IT resources and processes. And a botched implementation could mean unhappy employees and attrition that could further damage operational stability. These risks have nothing to do with Cloud as a platform! In essence, risks to Cloud Adoption are absolutely complex and multi-dimensional and managing them, like managing Cloud adoption, requires an integrated strategy.   An integrated approach for cloud risk management For successful Cloud adoption, the planned initiatives must have a balance of risk vs. reward in a specific timeframe. For example,

you may want to consider: A good approach would be to map out what is the risk to business, what are the potential benefits, and what will be the cost to achieve these (See Fig 2). For example, let's say you've planned 7 initiatives A, B, C, D, E, F, and G over three quarters. In Q1 when you go ahead with A, B, and C the aggregate risk and cost is acceptable, but benefit is insufficient. Similarly, in Q2 when initiatives D and E roll out, the benefit is high, and the cost is ok, but the risk is too high. This mapping can be done for all initiatives planned for the entire journey and optimized accordingly. For example, in Wipro Cloud Studio, we have a methodology to classify projects and programs in a standardized way, which helps consistent treatment of these within an enterprise's overall risk posture and level of comfort. Is the Cloud really worth it? All of these elements of risk are not unique to the Cloud and externalization of services is certainly nothing new to organizations. And indeed, material outsourcing (as defined by the regulators) is also nothing new to organizations. So, where does the Cloud come in? Talking about mitigating and managing all these risks that could come in the way of successful Cloud adoption could sound like a lot of work. And honestly, is that effort worth it? Well, the short answer is YES. We believe that the benefits of Cloud far outweigh these risks, and that with a strategic approach and partnerships like Wipro's Cloud Studio, it's quite possible to manage them. In fact, we will go so far as to say that the reverse is true and that adopting Cloud has the potential to not only improve your overall security but also reduce your level of risk across all the axes mentioned. In the next article, we'll continue this discussion and talk about how Cloud actually cuts down cost and risk significantly.   Please click here to read part 2 (Balancing the Cloud risk equation) of the blog series. Refrences   Gavin Williams Senior Partner, Cloud Consulting, UK and Europe Gavin has 25 years of experience with enterprise customers, helping them drive business success through innovative technology solutions. He works with different customers throughout the UK and Europe to understand their business needs and help them set technology strategy and direction. He also has in-depth and extensive knowledge of customer business challenges with board-level messaging. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Balancing the Cloud risk equation

----- Arcticle source ----- https://www.wipro.com/cloud/balancing-the-cloud-risk-equation/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Balancing the Cloud risk equation The fallacy that change is always more risk, and why Cloud makes a better business case January | 2021 This blog post is part 2 of a 3-part blog series on taking the journey to the cloud and understanding how to approach the risks involved.   I mentioned in my last post the need to assess many types of risk. Security is often highlighted as one of the primary ones.

Let's start with a well-acknowledged fact: Cloud Service Providers (CSPs) are the most cyber-attacked entities on the planet. Therefore, they have the greatest single conglomeration of security experts, who know the ins and outs of security, which you'll find anywhere (with the possible exception of government agencies). For example, even back in 2016, Microsoft invested $1Bn on security alone – a spend non-CSP companies cannot match or justify. And since then, all CSPs have continued to invest and grow their security capabilities in a similar fashion and will continue to do so in 2020 and beyond.   While arguably, Cloud may introduce some new risk to you, the total value from working with these hyper-scalers in Cloud is unparalleled. They are solving problems that non-CSP companies haven't even begun to conceive. Going Cloud native with a CSP has a much lower level of overall risk because you are leveraging the experience and expertise that comes from building Cloud infrastructure, fabrics, and security on a global scale. Since their solutions affect millions of customers with a presence across multiple countries all around the globe, and in different jurisdictions, hyperscaler CSPs put in an enormous amount of engineering effort that is just not possible in one-off builds. Therefore, when you use just for example in Data services such as AWS Aurora, or Google BigQuery, or Azure Synapse, you know that it works – and that it works much better than anything you could build in-house. You can rest easy knowing that they have been designed based around the accumulated challenges and lessons of those millions of customers around the world, in aggregate. This focus and investment makes Cloud safer and more reliable than on-premise models with the added benefits of cost effectiveness, manageability, stability, predictability, reliability, and transparency. Why is Cloud risk such a big decision factor then? Well, mostly because companies are looking at risk through the wrong lens. Risk needs a multidimensional lens As we mentioned in the previous post, most companies make the mistake of looking at Cloud risk like they look at Cloud cost. Cost is two-dimensional – you have the number of applications, you have the average cost per application, you multiply that, and you get the total cost of applications. Similarly, if you reduce the number of applications or reduce the cost per application, your total cost goes down proportionately. I will talk more about cost implications of Cloud in my next article. Risk on the other hand is three-dimensional and even a small reduction in risk in one area can have a significantly higher impact on the overall risk exposure (See Fig. 1). Total organizational risk is often based around complexity. When you move applications to the Cloud using Cloud services built on a global level, the complexity and the risk of your environment goes down. In a multi-dimensional model, tackling one area and reducing it by half through cloud, can reduce total risk/complexity exposure by 4x-8x. A 25% reduction in application risk factors can lead to a 75% reduction in operational risk. In addition, the operational risk you reduce by moving to Cloud outweighs the risk of lock-in and portability. As mentioned above, one of the biggest challenges in assessing risk is using the right lens to look at it. Based on my personal experience in dialogue with CSPs, clients and other parties, when 10 risks are called out, then usually, out of every 10 risks for Cloud: So only one or two risks remain. And even in that, the biggest risk we see is not the Cloud itself but the successful transition of the organization into a Cloud-powered organization. Think of it this way – you are driving on a highway and want to change lanes. Both the lanes are safe by themselves, but the

change may come at some risk. Now imagine if you make this change while changing your steering console AND changing the driver! That is the risk that organizations should really focus on – the risk that comes with a combination of technology improvement, process improvement, operational improvement, and upskilling and cross-skilling of existing resources for a migration. It is all simply about change and there is nothing inherently risky or different on cloud versus legacy - the risk is the organizational journey. Please note: We are not saying that the cloud is riskless or that any journey is riskless, but rather that the unreliable/unknown dependencies and failure items have had much more engineering into their reduction/elimination. Are you making the right decisions? A click down on risks A typical application landscape in an organization is often a big ball of mud of organically grown legacy. This is not a criticism but a reflection of the well-known truism that technical debt increases over time. Let us not forget, for example, that COBOL turns 60 today, and some applications in your enterprise may not be much younger. The total number of things that interact with each other inside a major enterprise application platform can be almost mindboggling. Everything is touching everything and connected in a complex way in all directions. What you have here, is change risk. If you change anything, you have no idea what it might impact. It could affect code stability and create security, latency, or people risks. Terrified of what might happen if they meddle with the system, organizations resist change, and that costs them in terms of strategic growth – which is a higher cost to pay. This was happening to one major financial client of ours. They had a host of legacy applications and the bank's change budget for them was surprisingly low and didn't present a lot of saving opportunity. But when we dug deeper, we realized that the change budget was low because they didn't want to open that can of worms. Every time that they had tried to make changes in the past, it had cost them millions of dollars while messing up other parts of this complex ecosystem. So, all this while they chose to not change, accepted that limitation, and instead ended up risking business growth. Another aspect organizations often consider is business knowledge. They believe they know more about their systems, processes, and their complexities than an external provider ever will. This leads them to believe that moving to Cloud will mean a loss of this knowledge. This was a concern that yet another major bank voiced when discussing Cloud transition. They had people with over 30 years of experience on their systems, who knew their application processes inside out. And they were reluctant to let go of this control. But what they failed to consider was that they were dealing with a much greater risk, this is particularly (and tragically) relevant in today's COVID-19 world. If you have a high people dependency, you have higher risk. What if the key people you depend on retire, resign, or meet with an unfortunate accident? What is your fallback option? It's much less risk to move key applications away from terribly complicated environments to the Cloud. It doesn't help that people are also resistant to change. Change is inconvenient. It means they have to learn to do things a new way. If they have been working on something a certain way, they don't want to change it no matter how great the new option is. On the other hand, the transformation to Cloud involves one of the most exciting opportunities for enterprise application owners and developers to not only improve the stability of their applications but also to stand on the shoulders of giants in terms of automation and service innovation. This also allows them to spend

their time on business improvements and on learning new (and highly market valued) skills instead of mitigation activities that have already been solved by CSPs. Break the mould to unlock business gains Traditional decision models are not suitable when it comes to evaluating a move to the Cloud. CIOs need to adopt multi-dimensional thinking and look at the impact of each scenario on the business KPIs. Isn't it worth investigating whether you can trade 10 old risks for three new ones? Either way, you are dropping seven of them! In the next article, we'll talk a little more about these models and how a right approach can fast-track your business toward achieving ambitious goals.   Please click here to read part 3 (The key to achieving ambitious Cloud goals, bringing Costs and Risks together) of the blog series.   References: Gavin Williams Senior Partner Cloud Consulting Gavin has 25 years of experience with enterprise customers, helping them drive business success through innovative technology solutions. He works with different customers throughout the UK and Europe to understand their business needs and help them set technology strategy and direction. He also has in-depth and extensive knowledge of customer business challenges with board-level messaging. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. ======================

The key to achieving ambitious Cloud goals, bringing Costs and Risks together

----- Arcticle source ----- https://www.wipro.com/cloud/the-key-to-achieving-ambitious-cloud-goals-bringing-costs-and-risks-together/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content The key to achieving ambitious Cloud goals, bringing Costs and Risks together January | 2021 This blog post is part 3 of a 3-part blog series on taking the journey to the cloud and understanding how to approach the risks involved.   In my previous articles, I focussed on the risk areas of a cloud ambition, but what happens when you tie this into the economic cost model as well? In the post-COVID era, businesses are very cost conscious. But innovation and growth cannot be side-tracked for cost constraints. In times like these, a strong Cloud migration strategy can not only fund itself but also open floodgates of opportunities for companies trying to make sense of the new normal. Cost and value are not always aligned In any organization, there are usually thousands of business applications running and their cost vs. value equation looks something like the one shown in Fig 1. A few applications will have very, very high cost, but likewise also have very, very high strategic needs. On the other hand, there will be apps that are adding to the cost but have no discernible business value. For example, one of the major clients we were working with had a

portfolio of 3,000 business applications. Of these, the top 25 applications controlled 25% of the total cost, top 150 applications controlled 33% of the total cost, and the top 500 applications controlled 50% of the cost. Often, for decision making, particularly in a "material outsourcing" discussion such as cloud, businesses tend to look at the total cost of applications or the average cost of applications. That could be misleading because the true business value and cost are not really aligned. Tackling the cost challenge There are two ways to reduce the total application costs of a business (See Fig 2): These two activities together result in fewer, more strategic applications that are more modern and can be run at a lower cost per application. Here's how it happens. Cloud allows you to select the price you want to pay by opting for services you would like to avail. This is a typical Starbucks model - if the only thing you want is a Straight Black Americano that's going to cost you £2. If on the other hand you want a Venti Soy Chai Latte with Almond milk then you pay £5.80 – a premium for all the add-on services. The same model works for Cloud. To arrive at a Cloud price, you look at what your core application complexity is and what your non-functional requirements are, what SLAs you need, and then what is the Cloud model you are looking at. In an on-prem model, you buy for the peaks and worry about returns, whereas Cloud gives you the flexibility to buy for the valley (the lowest requirement) and scale to the peaks as needed. This way, you can adjust for changes in core complexity, non-functional requirements, and SLAs for each application. For instance, one of my clients was a leading credit-rating company and had a data centre in the UK. It was an exceptionally robust, secure, and resilient data centre and cost a lot to maintain. And so, any application that was hosted there, no matter how trivial, had super resilience and cost a fortune. The question is, do you want all your applications at this level of resilience, or could you move the non-strategic ones – like facilities management, conveyance etc. – to the Cloud? Usually, in an Enterprise environment, there isn't in-depth granularity on how apps are managed. Mostly with a "pack the rucksack" model of bundling as many applications and workloads together as possible, which is heavily influenced by traditional capital asset- utilisation considerations, low-value applications get clubbed together with high-value applications. And as a result, they get the same level of service as a strategic app. This additional service is expensive and not required for a low-value app. Breaking this model and getting to a hyperscaler Cloud can ensure application services much better tuned to the value and needs of each application without the added consideration of infrastructure or middleware expenses. The ambitious vision: a low cost, low risk, future-ready application landscape Which CIO wouldn't want an over 30% reduction in application costs while retaining the app performance and reducing risk? The two-pronged approach outlined above, along with the risk discussions in the previous articles makes this ambitious vision possible. At Wipro Cloud Studio, we have developed expert capabilities to help our clients achieve this ambitious vision, and we do these transformations routinely. One of our clients had an application landscape with 810 apps that cost $62 million to manage – this meant their average cost per application was $76,000. We helped them analyze all their applications and identify low value, duplicate, and zombie apps. By eliminating these apps and deploying microservices, they were able to cut the long tail by 15%, bringing down the total number of apps to be addressed to 688. This reduced the total potential cost of applications by

20%. In addition, by moving to the Cloud and using the model discussed above, we showed them how they could reduce their cost further, bringing the total cost to $42.2 million and the average cost per application down to $61,000 – that's a 32% reduction in cost. Creating a continuous working capital fund for Cloud initiatives We've seen how it's possible to significantly reduce application costs. These savings can be reinvested to fund new initiatives. However, like any other initiative, Cloud migration also requires initial investment before it can pay for itself. If you don't make the initial investment, you don't realize any savings that could fund further changes. To ensure this initial investment, CIOs need to build the business case and work together with business leaders, technology partners like Wipro, and CSPs to establish a starter fund. Once the savings are realized, a portion of the savings goes back to the business and the remaining portion continues to get reinvested for more improvements (See Fig) Supporting all of this is the crucial consideration discussed in the previous POVs- POV1 and POV2, which is that by moving onto a Cloud fabric which has been built on a planetary scale with SKUs, continually tested on their service reliability and resilience, where every piece of code has been tested by millions of services on millions of clients, you significantly reduce your risks. In this instance, the client's operational risk reduced by a high double digit %. Don't be misled by the myth of Cloud being risky. It is the only way to build an agile, future- ready IT platform. And the time to make this shift is now. If you want to know how Cloud can benefit your business, write to me at gavin.williams@wipro.com . Please click here to read part 1 and part 2 of the blog series.. Gavin Williams Senior Partner Cloud Consulting Gavin has 25 years of experience with enterprise customers, helping them drive business success through innovative technology solutions. He works with different customers throughout the UK and Europe to understand their business needs and help them set a technology strategy and direction. He also has in- depth and extensive knowledge of customer business challenges with board-level messaging. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Extending cloud journeys by migrating VMware workloads to the cloud

----- Arcticle source ----- https://www.wipro.com/cloud/extending-cloud-journeys-by-migrating-vmware-workloads-to-the-cloud/ ----- About the Author(s) Related Articles Contact Wipro Please fill the required details to access the content Extending cloud journeys by migrating VMware workloads to the cloud January | 2022 Background and motivation: Over the last few years, enterprises across the globe are embracing digital. The

COVID-19 pandemic has accelerated this trend to enhance customer experience, explore innovative cash flow models, mitigate supply chain disruptions, and explore M&A opportunities. Cloud technologies enabled these business goals by paving the path for innovation, automation, and cost optimization. Classical cloud adoption for many companies has been a green-field approach. Enterprises created many new cloud-native applications as a part of digital-readiness initiatives. These applications are often add-ons to the existing core business solutions, focusing on customer-facing areas where innovation was most urgently required. As a result, many enterprises still run their core business solutions on virtualized infrastructure1. Virtualization has helped reduce operating and capital costs and increase information technology (IT) productivity and agility. However, these infrastructures often lack multi-site failover capabilities and do not meet the business's elasticity. They run in a single data center and might have a failover site where they plan to resume business in case of failures, but this is very constrained in most circumstances. Additionally, despite an apparent demand for 24×7 business and zero downtime, it is expensive to make workloads available in multiple global regions close to the customers. Furthermore, the existing central data centers introduce latency issues. Infrastructure designs that solve these problems require a significant budget, time, and effort from IT and business departments. Hence enterprises are looking at options to continue to run their core business solutions with minimal investments while remediating the technical debt and optimizing the costs. Wipro FullStride Cloud Services2 partners with enterprises to migrate applications to the cloud to help customers achieve the scale, intelligence, and agility required to stay competitive and generate value. Wipro is a cloud innovator and expert in cloud strategies that balance the efforts, investment, and risks of migrating workloads to the cloud. In the past, Wipro has partnered with virtualization technology companies, like VMware and other cloud providers, to provide thought leadership on the migration approach. First, this article discusses business and IT considerations for migrating existing core business solutions lying on virtualized infrastructure, specifically VMware, to the cloud. Later, it reinforces the importance of adopting the correct planning and execution method for such migrations.   Extending VMware workloads to the cloud: Considering the significant budget and IT efforts required to migrate core business solutions to the cloud, enterprises are now adopting the strategy of expanding on-premises VMware infrastructure to manage VMware in the cloud. All major cloud providers offer fully or partially managed VMware services with the required components like vSphere, vCenter, vSAN, NSX-T, and HCX that companies can govern within a cloud provider management console. Compared to classical cloud migrations, one of the significant reasons for moving on-prem VMware workload to the cloud is the ability to execute zero downtime 'vMotion' based migrations while preserving IPs and hostnames of the migrated VMs. This advantage allows for totally new cloud migration concepts compared to classical approaches, as migrated VMs can continue to provide their services on their own IPs and network names even during and after the migration. In such a migration, enterprises gain the most relevant benefits: elasticity, scalability, and move to a pay-as-you-go model that converts CAPEX to OPEX for business. Companies can now execute a scale-out of adding new nodes to a cluster in 20 minutes and eliminate managing underlying hardware infrastructure

components by consuming a managed service. VMware resources can spin up in any geography following business requirements without the need to book into a data center in that geography. In addition, enterprises can continue to use the existing management stack and team skillset on the ground without the need to up-skill everyone within the organization during a cloud migration. Planning and execution: Even though consuming managed VMware services in the cloud eases the migration journey by setting up and running the infrastructure, migration of VMware workloads to the cloud comes with its challenges. A case in point is a Layer 2 stretched network that extends on-prem networks to the cloud, introducing network latencies that must be analyzed and considered before migration. Also, preserving and enhancing the current level of security is crucial when cutting over the network gateways to the cloud. This transition is an important step that requires existing on-prem packet filtering firewall capabilities and IDS/IPS systems built in the cloud. "Despite a zero-downtime lift-and-shift migration by nature, successful migration of VMware workloads to the cloud requires technical expertise and collaboration from multiple disciplines, e.g., networking across the entire VMware stack, backup services, security, and program management.", says Tim Lapawa, Technical Lead for VMware Compute Enterprise at Wipro. Enterprises often miscalculate ROIs because the economics of cloud migration involves several costs over and above cloud consumption and server depreciation. "Such a migration involves specialized tools for discovery, assessment and migration, backup and disaster recovery tools, several other systems and subsystems to inter-operate, and several execution teams to collaborate," says Pramod Nair, Head of Architecture at Wipro. Wipro works with clients in designing a proper migration strategy and planning, orchestration, integration, and simplification across the cloud partner ecosystem towards a successful migration of VMware workloads to the cloud. Wipro proposes a 7-S framework while planning a migration of VMware workloads to the cloud: Wipro helps enterprises discuss the right questions and evaluate the technical aspects of a successful VMware workloads cloud migration. We also work with clients to provide thought leadership and technical solutions to add modernizations like software-defined networking, distributed firewalls, modern IDS/IPS concepts. Wipro advises conducting MVPs and POCs to have an incremental approach to perform partial workload migrations and testing for complex architectures with no prior migration history. As the cloud migration and post-migration phase requires a proper balance of team comprising of infrastructure, application, and cloud experts, the 'structure' component of 7S becomes crucial. Hence, skilling them and defining their roles is essential. Wipro works closely with clients to provide end-to-end support in their cloud migration journey, including designing cloud excellence centers, governance models, and operating team structures. Wipro's capabilities: As companies typically execute VMWare migration within the context of a general cloud adoption strategy, it is essential to be supported by a partner that can cater to all technical, security, operational, and financial challenges aspects of cloud migration. Wipro delivers transformative cloud migration journeys to clients across geographies and industries with highly skilled teams to strategize and implement cloud migration. Wipro FullStride Cloud Services leverages proprietary tools and frameworks from our Cloud Studios and our partner ecosystem to deliver cloud migration engagements. In the case of VMware

workload migration to the cloud, Wipro FullStride Cloud Services brings together its partnerships with VMware, the partnerships with the hyperscalers, and the associations with the core business systems vendors. We work closely with the customer stakeholders such as the application teams, infrastructure teams, security, and operations teams for a successful migration. Reference: Heiko Onnebrink is a principal domain architect with 25+ years of experience running production systems worldwide at scale, is a speaker at large tech conferences and advocates technology that helps businesses to be more productive. Ankan Guria is a business manager managing digital transformation programs in the manufacturing and retail industry. He has been working for Wipro since July 2021, after completing his MBA at ESMT Berlin. Prior to Wipro, Ankan was engaged in initiatives across business strategy and product management. Ravindra Balija leads the cloud transformation charter for Benelux, Nordics, and Germany to help customers modernize and migrate the applications to run on the public cloud. He has 25+ years of experience in solution and enterprise architecture. Pramod Nair heads enterprise architecture globally. He has 20+ years of experience in the information technology business across domains. His areas of interest and specialisation include mergers and acquisitions, cloud transformation, digital transformation, and new age technologies. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Redefining Application Modernization:

An iterative approach leveraging Strangler Pattern on AWS Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/re-defining-application-modernization-an-iterative-approach-leveraging-strangler-pattern-on-aws-cloud/ ----- About the Author(s) Related Articles Contact Wipro Please fill the required details to access the content Redefining Application Modernization: An iterative approach leveraging Strangler Pattern on AWS Cloud March | 2022 Business imperative As organizations continue to look for ways to increase business agility, reduce costs, and improve business resilience, accelerating the move to the cloud and modernizing their legacy apps are high on CIO agendas to help their business achieve those objectives. Cost and risk are chief among the modernization challenges faced by organizations. Cost: Complete refactoring of applications using microservices architectures can be a costly exercise, as companies have to pay a premium to hire staff with experience in modern software

development tools, re-skill their workforce and possibly outsource to speed up development effort. Risk: Organizations already saddled with technology debt are often fearful of venturing into full-scale modernization projects due to potential cost and schedule over runs, that could impact benefit realization and return on investment (RoI). Current strategies Organizations embarking on cloud migrations have a number of choices – including rehosting and/or refactoring their on-premises monolith applications. Rehosting is often the easiest, as they can quickly lift and shift their monoliths to AWS with minimal effort, resulting in quick time to value. With rehosting onto AWS, Wipro FullStride Cloud Services has seen clients immediately start taking advantage of the benefits of the cloud – such as getting access to elastic, on-demand scalable infrastructure; high availability of applications; and migrating managed database services. The other choice they have is to refactor their applications into modern, microservices-based, cloud native architectures and then bring them across to AWS. While this approach will drive higher agility for the organization, it will require significantly more effort resulting in longer time to value realization. Wipro FullStride Cloud Services Framework for Application Modernization and Monolith Refactoring leveraging Strangler Pattern on AWS cloud Wipro FullStride Cloud Services has a robust framework for Application Modernization that covers various modernization levers and initiatives. Typically, application modernization has multiple dimensions and a few of them are depicted in the figure below. A more specific guided approach for application modernization on AWS is elaborated further below. Modernizing Applications on AWS An alternative approach to modernizing applications— called the strangler (or fig) pattern—is increasingly being adopted by organizations. The strangler pattern offers a cost-effective, middle-of-the-road option to incrementally modernize your monoliths once they have been rehosted on the AWS Cloud, delivering incremental value along the modernization journey. Strangler pattern strategy Let's see how the strangler pattern can be put into practice to modernize a monolith. Step 1: Rehost-application The first step is to rehost your application using Amazon EC2 Auto Scaling Groups and Elastic Load Balancers in a multi-AZ design with a managed database service such as Amazon Relational Database Service (RDS). Step 2: Façade with Amazon API Gateway API Gateway can act as a proxy to your application, creating the façade and allowing you to safely rearchitect your application. Step 3: Detect and measure hot spots Using observability services like AWS X-Ray or Amazon CloudWatch, you can identify hotspots to help you locate potential seams or domains to decompose the monolith. Step 4: Create AWS Lambda for top hot spot The parallel system functionality can be built using AWS Lambda for compute and Amazon Dynamo DB for transactional databases. To migrate data from the Amazon RDS to the new DynamoDB tables, Amazon Database Migration Service can be utilized. Step 5: Canary release You can use API Gateway Canary release to redirect a portion of traffic to the new service to test the functionality, before cutting over fully. Step 6: Iteratively strangulate Repeating steps 3-5 you can identify and decompose areas of the monolith, using the appropriate services. Step 7: "Not with a bang but with a whimper" When you have completely decomposed and modernized the application you can remove the monolith resources, not with a "big bang" cut-over, but quietly and without any disruption to your end-users. Wipro FullStride Cloud Services and AWS Cases for Application Modernization

Wipro FullStride Cloud Services and AWS have assisted several customers for application modernization that has resulted in incremental business value, cost reduction and increased feature agility. Some of examples are as below: Summary/Conclusions For organization wanting to modernize their legacy apps but have little or no appetite for big-bang refactoring due to cost and risk considerations, iterative app modernization using the strangler pattern offers a compelling value proposition. Once functional decomposition of the monolith has been performed, use observability data to find components which have scalability requirements and offer high modernization value to the business. Apply the strangler pattern to modify these components first to showcase time savings/realized business value of iterative app modernization to stakeholders. AWS services like API Gateway and AWS Lambda are accelerators and they don't require you to "spend to save" – no extra infrastructure is required. Gautam Nadkarni Chief Architect, Wipro FullStride Cloud Services, leads the Enterprise Architecture and Application Cloud Services for the APMEA region. He assists the Wipro customers in technology transformations and architecting technology solutions for business problems. Ian Hughes Ian Hughes is a Sr. Partner Solutions Architect at AWS based in Perth, Australia. His area of depth is in Serverless Architecture, and he works with partners in Australia to help them modernize workloads in the AWS cloud. Senaka Ariyasinghe Senaka Ariyasinghe is a Partner Solutions Architect at AWS based in Sydney, Australia. In his role, Senaka supports Wipro's cloud migration and app modernization teams in the APJ region.   The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/industry-cloud-innovation/ ----- Contact Wipro Please fill the required details to access the content Industry Cloud October | 2022 The evolution of cloud: The growing use of industry-specific clouds The value that cloud technologies deliver has grown exponentially over the last few years, providing greater business agility and new ways of working that have been greatly accelerated in response to the pandemic. Remote or hybrid workforces have become common, with people gaining access to real-time information from anywhere, anytime, on any device. Business teams are also gaining vital market insights and processing huge amounts of data, thanks to cloud-based applications, AI/ML platforms, and automation tools. In this hyperconnected ecosystem, the increasing benefits of cloud as the transformational platform to build businesses are undeniably clear, and with cloud capabilities evolving, the business opportunities are expanding. For many enterprises, continuing this trajectory of growth requires finding innovative ways to stand out from their competitors and ensure they're getting the most from their cloud investments. Due to increasing data loads, access to information, and the rapid pace of change in today's volatile landscape, brands will have to adjust their cloud strategies and not remain locked into a static approach that will fail to deliver business value. Industry cloud: The next wave of cloud innovations Cloud advancements and a cloud development mindset have ushered in a new era, and among the new fields and advancements is the

creation of industry-specific clouds. These custom-built cloud solutions are specifically designed to address unique industry challenges and nuances to provide greater advantages than standard cloud platforms, which are limited in their ability to provide industry-focused advantages. The speed of competition and growing customer demand require that brands have a fast, scalable cloud platform that can handle the latest market trends and meet changing customer expectations. In response to these challenges, industry clouds provide opportunities to enhance workflows bespoke to the specific industry requirements, resulting in optimized processes, operations, and cost reductions. By adopting a full-stack, cloud-native platform custom-built according to industry needs, a brand can quickly build new data architectures and cloud-native applications, and for enterprises planning an end-to-end cloud transformation, industry-specific platforms provide an effective path forward. Whether an organization is looking to make its supply chains more resilient, its healthcare portals more customer-focused, or its retail operations more agile, industry cloud solutions can put these opportunities in reach. Industry transformation: Driving new advantages As organizations refocus their cloud operations with industry-specific strategies, they create a foundation for receiving new benefits from them. Becoming an intelligent enterprise is a primary goal for most businesses, and they can make progress toward achieving this with the range of advantages industry clouds put in reach: Developing a strategy for cloud innovations Putting these benefits in reach requires a business-led and technology-enabled strategy for adopting industry-specific solutions, and major industries have developed bespoke cloud strategies for realizing these advantages. Among them is the automotive industry, which is transforming its engineering processes to offer software-defined vehicles (SDVs) with embedded features built on AI, ML, and IoT capabilities. It's expected that within the next decade fully connected SDVs will be what the majority of people are driving, and cloud technologies are powering these engineering breakthroughs. Cloud-enabled SDV algorithms can deliver valuable information to drivers and provide seamless software upgrades, allowing a next-generation driving experience while empowering an automotive cloud ecosystem. By adopting industry cloud solutions, auto brands can completely reimagine the possibilities of vehicle software and create opportunities for business growth. The cloud is the center of any digital transformation, and now industry transformation is the next big driver for cloud as the essential component for business growth. While cloud has enabled companies to reinvent their operations and customer engagements, now industry cloud can go one step further to fuel new business value unique to the special needs of the most demanding industries. In today's Industry 4.0 era, being able to thrive hinges on defining a cloud strategy and platform tailored to an organization's needs and goals. Industry cloud expertise and solutions can evolve what is no longer the purview of IT executives alone, but a critical responsibility for most of the C-Suite, allowing enterprises to leave their legacy systems behind to develop a comprehensive strategy for driving innovation and positioning them to face the challenges of tomorrow.
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Retail Industry Cloud: Innovate retail operations and customer experiences with industry cloud

Retail Industry Cloud: Innovate retail operations and customer experiences with industry cloud The changing retail landscape Being customer focused is a constant priority for any retail brand, and now that omnichannel engagements have completely changed the shopping experience, it's vital that retailers have a modernized infrastructure in place. Supply chains continue to pose challenges for retailers as disruptions continue, and hybrid shopping experiences that blend digital and in-store interactions are now here to stay. The digital transformations that enabled retailers to remain competitive in the past mustn't remain static. Being able to continue serving customers effectively requires a continued focus on enhancing engagements across each touchpoint and utilizing data effectively to prevent gaps in inventory and stay in step with market trends. To become more customer focused and meet omnichannel expectations, retail brands are developing transformation roadmaps around a series of crucial goals: Achieving these business goals allows a business to prepare for future challenges, create innovative business models, and remain competitive, yet the key is having the right tech solutions in place. Through cloud-based tools, retailers can strengthen inventory tasks, create new business models, and reduce their environmental impact.   Delivering retail transformations with Wipro's Retail Experience solutions   Designed to help retailers evolve their businesses, Wipro's Retail Innovation Experience offers a portfolio of industry-specific solutions built on Microsoft Cloud covering the range of retail challenges. These solutions further expand the retail-focused offerings that Wipro provides to optimize and modernize retail operations and customer engagements.   iShelf Insights Our AI-driven solution, iShelf Insights, enables brands to deliver reliable customer experiences. It provides an effective way to monitor store shelves in real-time and detect incorrectly placed or missing items. Teams can reimagine their planogram management, ensuring that products are properly showcased, in stock, and priced according to specifications. Keeping all those factors in alignment can drive positive customer experiences and drive sales opportunities.   Unified Customer Intelligence Knowing how to best engage with customers depends on having a unified, data-driven view of them. Unified Customer Intelligence allows retailers to create a single source of truth for their engagement efforts, allowing them to better understand a customer's shopping journey and develop targeted engagements. It unifies data from various touchpoints (including points of sale, customer relationship management systems, and MarTech platforms) to gather intelligence on customers' preferences and perceptions on various topics based on reviews and feedback. Using the solution's capabilities, brands can better predict

customer churn and create omnichannel experiences with personalized recommendations that drive strong conversion rates.   Smart-Track   For supply chains to work as expected, products need to be kept from damage due to temperature changes, improper handling, or tampering. Wipro's Smart-Track enables high visibility across the transportation process to strengthen security and reduce cold chain waste. Using the solution's IoT-enabled tools, retail brands can track and monitor transit operations in real time, and consumers can be assured they'll purchase quality products.   Endless Aisle   As a "buy anywhere, fulfil anywhere" solution, Endless Aisle enables customers to find products from a global inventory via in-store kiosks, providing access to inventory across stores, data centers, inventory-in-transit, and suppliers. Through these kiosks, retailers can offer merchandise that isn't physically present at the stores, take orders, and fulfill them from anywhere in the supply chain. As a result, brands can avoid lost sales from out-of-stock scenarios, expand business opportunities, and reduce inventory carrying costs.   Realizing greater business value with industry cloud solutions By adopting these cloud solutions in conjunction with Wipro's other retail-specific solutions and expertise, retail brands can work toward meeting their business goals, overcome industry challenges, and gain a range of benefits: The retail industry has seen unprecedented change over the last few years, and as cloud technologies have become a key asset in maintaining customer engagements, further advancements are necessary to staying in step with consumer demands. Creating a multidimensional store requires cloud-driven solutions that can handle the industry challenges and enable brands to fully modernize operations. With Wipro's Retail Innovation Experience and our other industry-specific solutions, retail brands can strengthen their ability to know their customers and expand their tech maturity to become more resilient and future ready.
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Energy Industry Cloud: Cloud modernizations are driving energy industry innovations

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-modernizations-are-driving-energy-industry-innovations/ ----- Contact Wipro Please fill the required details to access the content Energy Industry Cloud: Cloud modernizations are driving energy industry innovations The need for continuous innovation has become a business imperative in the energy sector due to a range of challenges. The fundamental issue impacting both energy suppliers and consumers is the development of innovative pathways toward the energy transition and meeting net-zero targets. Other factors increasing the urgency of transition are various geopolitical events and economic uncertainties. Energy demands are increasing exponentially each year, and energy suppliers are researching how to mass-produce sustainable energy products. As product research picks up, new entrants in the energy products market are sensing the larger growth opportunities. Faster innovation requires on-demand infrastructure provisioning, industry

common data models (CDM), and APIs to build working prototypes of new ideas and then market those prototypes for faster customer/end-user feedback. To meet these innovation needs, industry cloud, which is a layer of CDM and a collection of industry-specific APIs on basic cloud services, is getting more and more popular.   The energy transition, as a major industry goal, involves various initiatives. These include cloud-native development of digital value chains, leveraging industry cloud and exploiting heritage IT to increase reuse and drive efficiencies in the existing infrastructure. Enhancing operational capabilities with an industry-specific solution can enable organizations to gain a range of advantages that result in improved customer experiences and new levels of growth.   The cloud-driven opportunities in reach   At one point in time, cloud platforms were seen solely an IT asset, but today cloud technologies provide a foundation for data-driven market insights, greater business agility, and improved resiliency. As a result, organizations are recognizing that data-driven cloud platforms are vital to achieving business goals. By modernizing cloud infrastructures, energy enterprises can reimagine their service delivery and business models through a series of cloud-based advantages.   Creating digital value chains with data aggregation   Energy transition pathways need new digital value chains, both natively built on cloud and existing value chains transformed to exist on cloud. As an example, let us look at hydrogen as a low carbon fuel. With time, hydrogen is becoming more and more viable, transforming the heavy surface transport sector. The adoption of hydrogen requires new digital value chains in production and retailing, while transportation capabilities will be developed largely by reusing the existing liquified natural gas (LNG) infrastructure, a classic example of repurpose and modernization. Developing new value chains and modernizing the existing ones will require the efficient use of digital technologies, enabled by relevant insights coming from the vast amount of data being generated at every point of the value chains. Cloud solutions, both basic cloud services and industry cloud solutions, can help bring data sitting in silos to a common repository and run analytics on it to extract relevant insights.   Energy teams can then evolve their data operations through greater data access and visibility, allowing them to literally visualize how operations are performing and whether business value is being achieved. Adopting advanced analytics platforms featuring AI/ML capabilities can help optimize service processes, improve productivity, identify new revenue streams, and lower the total cost of ownership (TCO) of a cloud infrastructure. The overall result is a digitized value chain that enhances collaboration among teams, accelerates decision-making, and improves resiliency.   Becoming more customer-focused   Based on the advantages a digital cloud-driven value chain can deliver, energy providers can work toward a constant goal: becoming more customer-centric. Using data effectively is the foundation for achieving it, and once valuable insights have been gathered, organizations can commit to ensuring that the energy products and services they provide are meeting customer needs. This requires a shift from a product-focused mindset to understanding people's expectations around reliability, costs, and sustainability.   Since the arrival of the pandemic, the importance of personalized engagements has greatly increased, and maintaining customer loyalty is now tied to treating customers as individuals, rather than in monolithic ways. To drive hyper-personalisation, AI/ML-based solutions are available natively on cloud

platforms, which can be used to keep customer-centric communications relevant and focused on their needs. As an example, customers can be made aware of their ongoing energy usage and its commercial impact, based on their historical usage and demand curve, so that consumption and costs can be controlled in a more informed manner. Offering these customer-focused services can open new business opportunities and build brand loyalty. Innovating operations, products, and services Any kind of stagnation in terms of business strategy or offerings will inevitably lead to falling behind the competition and losing customers. Staying relevant depends on continually innovating energy services and products that provide seamless customers experiences and streamline internal operations. Cloud-enabled research and development efforts are fueling industry transformations, and with the greater customer focus mentioned above, energy providers can devise a game plan for revitalizing services to fit customer expectations. Cloud technologies are also allowing energy enterprises to improve their compliance initiatives and ensure they're meeting industry regulations. Monitoring operations, gathering data, and producing compliance reports can be simplified to reduce the time and effort of meeting industry mandates.   Devising an effective cloud transformation strategy   The first step in gaining these cloud-driven advantages requires developing a customized roadmap. A large-scale enhancement should be based on a company-wide commitment with buy-in from all stakeholders and an organizational change management (OCM) plan to help realize business value quickly. To avoid any pitfalls, an organization should have a clearly defined vision for their business transformation and business outcomes, one that can be delivered through a comprehensive cloud transformation project leveraging a data-driven intelligent infrastructure. Creating a series of short- and long-term goals will keep the efforts on track, and a company will need to verify it has the ability to stand up programs to be executed on time in alignment with budgets and business objectives.   An effective way to execute a customized cloud modernization strategy is through a phased approach aligned with a company's business goals. Partnering with a cloud expert can ensure a transformation initiative achieves the intended results and drives business growth, and selecting a cloud partner should be based on certain fundamental criteria: Preparing for future opportunities Companies across the energy sector are facing a defining moment as crucial changes are taking place that require new approaches to staying competitive. With more startups entering the market, disruptions are frequent, forcing established brands to reassess their established approach to product development, innovation, and the monetization of legacy systems, as well as standing up new capabilities using cloud and industry cloud solutions. All the major cloud service providers (CSPs) provide a set of industry cloud solutions based on industry needs, starting with the most important use cases: sustainability and carbon reduction.   The evolution of the energy industry, as it develops new low-carbon energy products, has an impact on all other industries. Given their strategic importance to the overall industrial economy and the need to innovate and build scalable energy products, industry cloud solutions are a game changer for the energy industry. Launching a cloud-driven business modernization can help energy providers prepare for unpredictable economic trends and develop greater agility and an improved ability to innovate. Whether energy firms are just beginning their cloud initiatives or are already seeing a strong ROI, an

industry cloud solution will be essential to building native digital value chains, using data more effectively, and driving future growth.
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Financial Services Industry Cloud: Prevent financial sector crime with a full-stack industry cloud

----- Arcticle source ----- https://www.wipro.com/cloud/prevent-financial-sector-crime-with-a-full-stack-industry-cloud/ ----- Contact Wipro Please fill the required details to access the content Financial Services Industry Cloud: Prevent financial sector crime with a full-stack industry cloud The sophistication of fraud attempts in the banking, financial services and insurance (BFSI) industry is becoming more advanced, resulting in the need for updated security strategies to prevent the latest threats. Likewise, money laundering and other crimes become greater concerns, enterprises also face the necessity of complying with expanding industry regulations. To reduce vulnerabilities and improve compliance approaches, enterprises require a unified, comprehensive strategy for modernizing legacy platforms, eliminating data silos, and enabling greater access to data. The prevalence of criminal activity is one major area within the financial services industry that is driving the demand for more efficient system alerts that better pinpoint suspicious activities and decrease redundant efforts. Financial institutions are also seeking effective ways to reduce their dependence on manual processes while standardizing resolution times and accelerating security investigations. Wipro FullStride Cloud Services' full-stack industry cloud approach offers an effective answer to these challenges, allowing BFSI enterprises to evolve their operations with a cloud-native, customized infrastructure built to comply with the heavy regulatory and compliance requirements of the industry. Designed to specifically address the unique BFSI challenges and requirements, Wipro helps organizations maximize cloud architectures that are scalable and agile enough to handle the latest market trends and meet changing customer expectations. Wipro FullStride Cloud Services' industry cloud expertise Wipro delivers a comprehensive approach to building and maximizing cloud infrastructures and enhancing fraud prevention strategies. Our cloud and industry experts work closely with financial institutions to redefine their business models and create cloud-native, digital value chains that enable them to lay the groundwork for a range of achievements, such as: Our BFSI team also provides two specific fincrime cloud-based solutions for mitigating risks: Wipro FullStride Cloud Services success stories Enterprises that adopt industry clouds in partnership with Wipro are optimizing their security operations for improved performance, as evidenced by these real-world examples: Protecting against criminal activity and complying with industry regulations are ongoing tasks that require continual reevaluation, adjustments, and up-to-date approaches. Wipro FullStride Cloud Services' Industry-specific cloud transformations enable financial firms to modernize their security and

compliance initiatives while developing business innovations that drive future-ready resiliency.   =====================

FinOps and the New Path to Cloud Success

FinOps and the New Path to Cloud Success Organizations often begin migrating applications to the cloud believing that doing so will save money on IT expenditures such as data centers. While cloud migrations can help reduce costs and deliver value, they require careful management of cloud expenses focusing on what will work for the business now and down the line. By incorporating FinOps into a cloud economics strategy, companies can increase transparency to improve the management of cloud costs and expenses. FinOps also provides a strategic framework that supports stronger cloud financial management, helping businesses go from moving to the cloud to running in the cloud. What Is FinOps? FinOps, a portmanteau of "finance" and "DevOps," is an approach to cloud financial management that aims to maximize the business value of cloud programs through close collaboration of finance, IT and business teams. The decentralized nature of consumption-based cloud programs can make them difficult to manage across an organization. Spending can vary by business function. So can reporting. FinOps aims to address these challenges by bringing cloud finance management under the control of a centralized FinOps team of leaders from IT, finance, business, and even executive functions. This cross-functional team helps increase visibility into cloud spending throughout the organization, align the various functional areas around shared cloud finance goals, and empower teams to take the necessary actions to achieve those goals. How Does FinOps Do This? After the FinOps team aligns on the cloud finance goals of the business, they set about building the capabilities necessary to achieve those goals, using three guiding principles: 1. Identify Relay all necessary information to the stakeholders so they can make informed decisions about cloud usage. 2. Optimize Look for opportunities to reduce spending and increase savings. 3. Operate Continuously monitor performance, evaluate the progress of business objectives, and look for new ways to improve. Capabilities include cost allocation, budget management, data analysis and show back, and managing anomalies or unexpected costs. The FinOps team works together, or with a strategic partner, to identify what capabilities will deliver the most value. Whether that's advancing their goals, reducing spending, or reinvesting in other areas, information is gathered and analyzed to determine the changes with the greatest potential value (what's necessary, the potential impact, etc.) and then enact those changes and monitor the progress. These stages are not linear, meaning an organization can be in multiple stages at once. The intent of the FinOps process is repetition. The more businesses implement changes, evaluate those changes, and refine their operations, the stronger and more mature their cloud program will be. How to Build a Mature FinOps Practice FinOps follows the crawl, walk, run

approach, designed to encourage small, focused efforts that gradually expand in scope and complexity as the program matures. This strategy helps FinOps teams trace the true impact of their efforts and assess what additional actions might be necessary. Figure 1: Path to Unlock the Power of FinOps. The goal is not to get to the Run stage as fast as possible in all areas of the cloud program. FinOps encourages teams to consider what actions will deliver the most value for the business. For example, a FinOps team may focus on maturing chargeback and finance integration capabilities. They move from Crawl to Walk, creating a tagging strategy for greater visibility of expense allocation and implementing that strategy, but stop short of automating that strategy (Run phase) to focus on other critical capabilities like budget management and forecasting. The automation would be helpful, but the FinOps team realizes that establishing a firm foundation of capabilities first is more important for the business. Automation is critical to FinOps' success. Repeating the three phases — Identify, Optimize, and Operate — refines operations, trimming unnecessary cloud costs while maximizing value. The key is knowing when and how to implement it. Achieving Success in the Cloud Through FinOps A team armed with timely, accurate, focused information is best suited to optimize decisions. Collaboration is crucial — among internal teams and with external technology partners. Experienced technology partners bring experience with the tools associated with FinOps, such as automation and data analysis, along with the strategic knowledge to know how those tools can best serve the business goals. Reporting, for example, can be a complicated challenge to overcome in FinOps. Bills for cloud usage are massive files. Breaking these down across business functions is time-consuming, with many businesses doing so manually. On top of this, each business function might format its reporting a different way, slowing down the process even further. A technology partner can help identify the most efficient way to standardize reporting across the organization and the right automation to streamline the process. Technology partners can even support FinOps teams from the beginning of their FinOps journey, working with teams to develop tools supporting their ambitions. When one of Wipro's clients set out to create a FinOps strategy, it tapped Wipro for support. The two companies conducted a current-state assessment which was used to inform the clients' FinOps strategy. Based on their goals, Wipro suggested opportunities for optimization, conducted feasibility studies on those opportunities, and created custom reports to help with the show back. Those savings were reinvested into the FinOps program, funding more proactive approaches, further refining cloud spending and maximizing business value. Success and thriving in the cloud require each enterprise to define its own FinOps strategy based on its unique needs. An experienced technology partner can help advance these efforts. But that partner should be flexible enough to support the needs of the business rather than force them to fit a standard approach. About the Author Santanu Kumar Patro General Manager & Practice Head – Cloud Economics, Wipro FullStride Cloud Advisory and Consulting Santanu Patro has about 20 years of experience in IT and close to 15 years' experience in Advisory & Consulting. Being a techno-evangelist, he has been developing future ready solutions/services to meet the ever-changing requirements of an enterprise and leading a team of IT therapists to solve enterprise challenges. =====================

Monetizing Your Data Center Exit Strategy

Monetizing Your Data Center Exit Strategy By 2025, Gartner estimates that 80% of businesses will have decommissioned some or all of their on-premises data centers and moved operations to the cloud. This is a significant shift considering how much businesses have invested in data centers over the years. But when you consider the growing costs of data centers – on the business, its customers, the environment – it might seem surprising that more haven't left them already. In fact, most businesses have already adopted some form of cloud computing, recognizing the tremendous value it can bring. Moving applications to the cloud can help reduce a company's carbon footprint while increasing flexibility, allowing the business to easily scale up and down as needed. It can increase accessibility for developers, fostering collaboration and innovation, and cut costs, switching spends from CapEx to OpEx. What many companies may not know is that by monetizing their data center exits they can also make money by switching to the cloud, offsetting the upfront costs that may be standing in the way. The Costs of Exiting a Data Center There are a lot of logistical and financial hurdles to exiting a data center. Companies may be contractually bound to their facilities and face high penalties for early termination. Hardware must be decommissioned in accordance with regulations to avoid fines. And what are companies to do with this equipment afterward? Is it possible to recoup their expenses? Addressing all these concerns can take time, but the longer businesses wait to exit their data centers, the more pressure they may feel to make the switch to get ahead of the curve, resulting in rushed timelines, missed opportunities, and more avoidable expenses. Meanwhile, the business must also transition its applications from the data center to the cloud – a tremendous task that is often more complex and time-consuming than companies anticipate. The dreaded double bubble scenario, in which businesses find themselves stuck, mid exit, between the data center and the cloud, is an unfortunately common occurrence. Businesses underestimate the complexity of exiting a data center and assume their internal IT teams are the best ones to manage the shift. As the project progresses, applications become more complex, the data sources get harder to trace, and the project stalls out, increasing costs, decreasing efficiency, and exposing the company to security risks. A hasty data center exit can be more trouble than its worth. It also paints a misleading picture of legacy modernization, suggesting that moving from data centers to the cloud is an expensive, time-consuming project likely to severely disrupt business operations before showing returns on the investment. But with proper planning and a monetized exit strategy, businesses can essentially get paid to make the best decisions for the organization. Monetizing Your Data Center Exit A monetized data center exit strategy is one that pays companies for things like hardware and facilities. These programs free companies to start exiting their data centers and provide an immediate influx of funds so they can do so more confidently. For example, the company

avoids the double bubble by working with an exit partner that specializes in data center exits to strategize the shift, liquidate any legacy assets, and seamlessly transition the desired applications to the cloud. Monetizing the data exit also frees companies to set their own timelines, helping them avoid hasty decisions that might set them back. Being bought out of their leases frees companies from the pressure of falling behind their competitors while waiting for the terms to end, and the additional funds up front can help satisfy the demand for quick return on investment. Some exit partners will even be able to work with companies to design interim capabilities that ease the transition from data centers to cloud. These interfaces are not officially the cloud, but they're more cloud-like than data centers, and they allow the modernizing company to begin reaping the benefits of a hybrid cloud program while they strategize the best path forward. Monetize and modernize programs, for example, buy businesses out of their existing contracts and legacy assets, and immediately set them up with a cloud-like infrastructure, making the company asset-light and cloud-like from Day One. Such programs are a collaboration between the strategic partner and the client, along with leading cloud service providers (CSPs), original equipment manufacturers (OEM) and hosting partners. These organizations work together to help the client safely decommission and sell its legacy assets, then combine those funds with additional investments from the partners to finance a stronger cloud modernization program and eventually reach a hybrid cloud state. Through such programs, businesses are also able to set their own pace for modernization, which is tremendously beneficial. Rather than rush into a one-size-fits-all approach that may not actually fit the business, the client works with the strategic partner to devise a strong exit strategy in line with its immediate needs and long-term goals, then phase out implementation appropriately. This extra time to strategize helps ensure a more successful, efficient data center exit. At the same time, the business is already experiencing some of the benefits of IT modernization – such as an automation layer and enhanced user services to improve efficiency – by being cloud-like from the start. Programs like these empower businesses to start making the changes they need to grow stronger, smarter, and more sustainable. Faced with rapid innovation and near-constant industry disruptions, businesses need to be able to adapt. Exiting their data centers for the cloud is an important first step, and with the right guidance it can be a successful, seamless transition. This article was originally published on Forbes.com Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. =====================

The Secret to Cloud Success: A CXO's Guide to Business-Driven Cloud Strategies

----- Arcticle source ----- https://www.wipro.com/cloud/the-secret-to-cloud-success-a-cxos-guide-to-business-driven-cloud-strategies/ ----- Developing A Proactive, Business-Driven Cloud Strategy About The Author Contact Wipro Please fill the required details to access the content The Secret to Cloud

Success: A CXO's Guide to Business-Driven Cloud Strategies In 2020, a certain life insurance company began its cloud transformation, quickly migrating applications and building new ones on the cloud. The company launched a cloud-native platform in 2021, which went on to win an award. Later that same year, it put its cloud migration on hold, citing issues with its lift-and-shift that kept sending the program over budget. This is a familiar story. Many cloud transformations fail to deliver the intended results on the first attempt. Executives recognize that the cloud holds tremendous potential for their businesses, and over the past several years they've made significant investments in enterprise cloud transformations. But what hinders so many of these efforts is a lack of alignment between business strategy and cloud strategy. While many businesses look to migrate to the cloud as a way to cut costs, that ambition is not enough to carry them through the challenges of a large-scale cloud transformation. Businesses need to go deeper. What are the changes that will help the organization cut costs or increase efficiency, and is the cloud the best technology to support those changes? What changes need to be made to support a cloud migration? What kind of impact will a move like that have on the organization? To be truly successful in their cloud migrations, businesses need to take a more proactive, business-driven approach to technology. This begins with identifying the business challenges they want to address and developing a technology strategy that will do just that. Cloud Transformation As Business Transformation Cloud strategy and business strategy are becoming synonymous. Today's business challenges are going to be solved by a technology underpinning. AI and machine learning can help process huge volumes of customer data and generate insights that can be used to improve operations or customer experience. The cloud can increase the scalability of data stores and make them more accessible. Technology holds the key to many business challenges. But like any good business solution, technology—especially the cloud—needs to be implemented strategically to avoid unexpected risks down the line. It's common for businesses to embark on their cloud migrations only to find out too late that certain applications are impossible or too complicated to move, leading to delays, costs, inefficiencies and even risks. These could all be avoided with greater upfront planning and a more business-driven technology strategy. Similarly, if a business only approaches cloud migration from a technology perspective—if the CIO is involved but not the CFO or business managers—the migration is likely to hit a wall. Because moving to the cloud is a journey, not a destination, it must always include organizational change management to align business goals, priorities and calendars with technology capabilities and implications. What does the business need? What do the business managers want, and what kind of support will they need throughout the transition? If business owners do not feel supported in the transition, and if the move to the cloud is more trouble for them than it's worth, they may stay where they are and progress will stall. So how do business leaders anticipate and address these challenges? To start, they need to align on the strategic priorities for the business—increased resiliency and agility, for example, or more data-driven operations. The cloud can bring tremendous value to a business, and it can do so in many different ways. The key is to identify the specific value and the specific applications that will be most helpful to the business in achieving its goals. Consider a business that is interested in becoming future-ready—more

adaptable, resilient, agile and efficient. The cloud can help achieve these ambitions by offering as-a-service models that lower capex and refocus opex. Data center management can be outsourced to cloud service providers (CSPs), increasing security monitoring and infrastructure management while bringing IT teams closer to the business for increased attention to and efficiency of internal business operations. Meanwhile, the business is only spending money on the services it uses and is suddenly able to scale up and down as needed without investing in physical data centers, reducing technical debt and carbon footprint. This scenario may seem similar to investing in the cloud as a way to cut costs, but the difference is critical: The scenario above offers guidance for how to best implement the cloud throughout the organization, while a strictly cost-focused scenario does not. By focusing on future-proofing operations, the business has a road map for its business and technology program. Teams can start assessing what operations are most critical to moving to the cloud and what it will take to do so, then develop a phased approach, making incremental changes to reduce disruptions to the business while increasing ROI. This return on investment might be cost reductions, or it might be increased efficiency or user experience. Business leaders can define what value means in that moment and at various stages throughout the cloud migration to be sure they stay on track while adapting to new challenges as the migration progresses. Infrastructure changes cannot happen in a vacuum. To be successful, organizations need to consider the bigger picture—the long-term goals, the potential challenges and what it will take to address them. After pausing its cloud transformation, the insurance company spent another year revising its cloud migration strategy to one that is now almost indistinguishable from its business strategy. The company is using business outcomes to guide its modernization, ensuring that the cloud migration adheres to the company's business principles and that the workforce is supported throughout the transformation with necessary training. This kind of holistic approach will require more time and commitment to implement, but the payoff will likely be more significant and sustainable. By approaching cloud adoption from a business perspective and by taking a proactive approach that is guided by business ambitions and organizational change management, organizations can lead more successful cloud transformations that go well beyond expectations. This article was originally published on Forbes.com. Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. =====================

The True Value of Gen AI for Quality Engineering

----- Arcticle source ----- https://www.wipro.com/cloud/the-true-value-of-gen-ai-for-quality-engineering/ ----- Contact Wipro Please fill the required details to access the content The True Value of Gen AI for Quality Engineering Quality engineering and testing offers practical applications to expand existing AI capabilities QET teams tend to be at the forefront of technology adoption, so it should come as no surprise that they are leading the way with generative AI. What stands out is the opportunities it's unlocking. Quality

engineering and testing (QET) are critical to an enterprise digital strategy. They can also be some of the most overlooked and underdeveloped elements. In the early stages of digital transformation programs, enterprises focus a lot of their attention on big-ticket items like modernizing key assets or moving core systems and processes to the cloud. Upgrades to the testing process tend to come much later, sometimes too late, putting the company at risk of service disruptions, regulatory violations, fines or worse. Modernizing QET is essential, and it may be easier than enterprises perceive it to be. QET teams have been using advanced technologies like AI for some time now to assist with tasks like data generation, validation, risk-based and model-based testing. Advancements in generative AI promise even greater support for QET and can be tremendously valuable for the entire organization, even helping to accelerate the overall digital transformation initiative by enhancing critical capabilities like synthetic data generation, unstructured data processing and automating the test lifecycle. As organizations across industries scramble to find the best use cases for Gen AI that will help them stand out from their competitors, QET offers plenty of practical applications that will expand existing AI capabilities and lay a solid foundation for successful, low-risk digital transformation throughout the organization. Autonomous Testing Generative AI is well suited to assist with key elements of the testing process such as creating test scenarios from user stories, creating scripts, optimizing regression test suites, scaling test executions, conducting result analysis and detecting anomalies. Bringing Gen AI in the loop for the software testing lifecycle can help automate processes and reduce manual intervention to accelerate time to market. While traditional approaches might take weeks or months, Gen AI can enable autonomous script migration from older to newer tech in a fraction of the time. Beyond core test activities, Gen AI can play a critical role in integrating tools (especially with the CI/CD or DevSecOps pipelines), optimizing test dependencies, enabling faster test execution cycles, reducing redundancies and roadblocks that can hinder productivity. Gen AI can also help clients modernize their tech landscapes and test architecture faster. While traditional approaches might take weeks or months, Gen AI can enable autonomous script migration from older to newer tech in a fraction of the time. And because these capabilities are easier to use through generative AI than through traditional AI models, teams may not need to invest as much time and money in building technical skills to adopt and implement an AI program. Synthetic Data Generation Synthetic data generation is one of the most effective and low-hanging use cases for generative AI. To ensure adequate test coverage, QET teams need adequate data. In many programs, this can be difficult to obtain with production data alone due to challenges with regulatory compliance or insufficient data masking. QET teams turn to synthetic data generation to supplement production data and acquire test data for scenarios the business has not yet encountered but is likely to encounter in the future. For example, in the insurance industry, policy and claims systems require information on customer demographics such as age, gender, location, prior health issues, to recommend the right insurance policies. Because the data combinations needed for testing such scenarios is exhaustive and extremely complicated, production data alone may be insufficient, leading to gaps, oversights or skewed testing results. Generative AI can help produce the necessary test data to supplement production data. It's important to note that while

generating synthetic data using large language models with generative AI may make sense for early-phase testing, this approach will need tweaks to make it cost-effective for large-scale projects due to the tokenization Gen AI uses to monitor and monetize data. Companies may consider hosting their own Gen AI model or infrastructure or incorporating alternative approaches such as generative adversarial networks (GANs). Modernization and New Technology Adoption To keep pace with technology advancements and beat off competition, many banks have been acquiring fintech companies for specific processes, such as retail loan processing, and migrating only those specific processes. Decoupling features like this allows banks to adopt new technologies and modernize faster because they don't have to overhaul the entire core system. Still, these changes require major reworking from a testing perspective. The bank would need to modify the loan-oriented test cases, assess the impact of changes, create new test cases for modifications in the workflow, grade new tests for the new product and match release cycles. QET teams can use generative AI to expedite these tasks by prompting Gen AI to generate test cases, scan code for anomalies and predict potential issues. Advanced natural language processing of generative AI can help streamline technology migrations by assisting with translation. If a bank is migrating from a mainframe to a newer Java-based system, for example, the process typically involves migrating technology as well as testing assets. Testing teams can feed the old scripts or assets into a generative AI platform, which will then translate those scripts, speeding up the process significantly. Test teams can also use Gen AI to automate these tasks for greater efficiency and ongoing refinement. Improved User Experience Generative AI's sentiment analysis is better equipped than traditional AI to analyze text such as customer reviews and emails and pick up on the nuances of language. Traditional models struggle to identify sarcasm, for example, and might mislabel a negative review as a positive one. Gen AI, on the other hand, can make those distinctions. When combined with other AI capabilities, models can even trace those comments to potential root causes in an application and suggest corrective action. Generative AI also helps increase observability in the production environment. Securities and capital market (SCM) organizations, for example, are always on the lookout for quality interventions which can improve test coverage holistically for their trading platforms. Gen AI can help autonomously reverse engineer customer journeys into UI test cases and automation scripts. It can also analyze API logs and autonomously generate test cases and scripts relating the front-end user journey to the relevant navigations through the back end. These capabilities ensure that critical financial transactions are not impacted, which could lead to heavy regulatory fines. The Importance of Validating Generative AI Models Due to information security restrictions, many organizations are planning for either open-source models or building their own large language models. But before any organization can incorporate generative AI into their testing programs, they need to be sure the model is secure, reliable and compliant with regulations. This requires a thorough validation process that considers the various challenges and characteristics of the model such as biases and errors, complexity, and scale. The validation process should clarify the intended use of the model and what is needed to support those functions, help develop tests to evaluate the model's performance, compliance, and suggest corrective action. Validating an AI model and supervising the

outcomes given by the model is an ongoing process that requires a robust quality engineering strategy to ensure constant monitoring and updating based on changes in performance, business goals, industry demands, regulations. Engaging stakeholders throughout the organization to work with the quality engineering team can help develop a stronger program that meets the shared goals of the firm. For larger, more ambitious projects, a technology partner can help by working with the various stakeholders to align on a vision for generative AI in the business and develop a realistic implementation strategy. The true value of generative AI is likely to vary from business to business depending on the specific needs of the organization, its employees, and its customers, but the potential of this new technology cannot be understated. Ongoing investments are leading to rapid development, and savvy enterprises are finding new opportunities to combine Gen AI with other advancements in automation, data analytics, IoT and cloud. This is a boom time for innovation, and QET teams can make the most of it by exploring Gen AI strategically, with business value top of mind. About the Authors Rituparna (Ritu) Ghosh Ritu has more than 20 years of experience and leads Wipro's Quality Engineering and Testing practice. Throughout her career, Ritu has nurtured and developed high-performing teams, fostering a culture of collaboration, creativity, and continuous learning. Ritu is a strong believer in building diversity and inclusiveness at the workplace. She is also a mentor to several budding young leaders across Wipro and believes strongly in sharing her learnings with others. Ritu has an MBA in marketing and strategy, and a certified Black Belt in DMAIC, trained in Lean, CMM®, CMMI®, ITIL® and Agile and DevOps. Dr. Abhijit Ranjekar Dr. Abhijit is an experienced practitioner and researcher with over 20 years of work in the fields of software architecture, engineering and quality engineering. He currently heads the Gen AI COE for Wipro's Quality Engineering and Testing practice, globally, and heads consulting for Wipro clients' transformation journeys across next-gen themes such as digital and cloud. Dr. Abhijit is passionate about industry academia and is a frequent speaker at leading industry forums. ======================

How Observability Improves Customer Engagement

----- Arcticle source ----- https://www.wipro.com/cloud/how-observability-improves-customer-engagement/ ----- Contact Wipro Please fill the required details to access the content How Observability Improves Customer Engagement Pave the way for greater returns on investment with complete controllability across cloud ecosystems. To keep customers coming back, businesses need to prioritize the customer experience – not just in physical stores but virtually and throughout the entire value chain. If a website fails to load, customers can easily take their business to another platform. A negative review about user experience can impact the reputation of the business, creating a ripple effect if not addressed quickly and adequately. Cloud assurance teams have the herculean task of preventing these scenarios from playing out because they have the in-depth knowledge of the application stack and how it works with various businesses processes. And

while monitoring technology has made their jobs easier, other advancements — including increased cloud adoption and the rise of hybrid cloud environments — have created new and more complex challenges. Today's customers have come to expect seamless user experiences. An IT pitfall such as an application or website being down for too long could severely impact sales and customer spend. Yet the various microservices of hybrid cloud environments can make identifying the root cause of an issue extremely challenging. It's no longer enough for teams to know an issue has occurred. To deliver quality service and remain competitive, companies need to quickly identify the cause and implement the right solution, whether the issue resides in their on-premises or cloud environments. Central to this shift from being reactive to proactive is a focus on observability in production environments. Observability Is Key Traditional monitoring focuses on a single element in the vast system of an organization. One program might monitor servers or virtual machines, while another monitors applications, and still another monitors business transactions. This siloed approach presents an incomplete picture of incidents that can delay resolutions. Does an application crash affect only the end user? Or, does the issue also involve back-end operations and a third party? The effects might span multiple areas of the business, but teams need to quickly identify the root cause. Observability, on the other hand, approaches incidents from a customer-journey perspective, focusing on the business processes and the various IT components they cut across. By shifting the focus to business processes rather than single elements, observability connects the dots between various applications and microservices. A single business process might cut across 20 applications, 50 services and hundreds of servers. Observability provides a unified view of these various elements, making it easier for teams to see what's happening, where it's happening, and how to solve it. In other words: with observability comes controllability. Valuable Insights, Powerful Actions Consider a typical eCommerce transaction. A customer places an order, which triggers actions from item allocation, the fulfillment center and dispatch, which involves associates scanning items and coordinating with trucks for shipment. If a business were monitoring all these operations in siloes, tracking incidents and coordinating responses would take too much time and shipments would be delayed left and right. Observability services monitor all these operations and their corresponding endpoints simultaneously, collecting data and processing it to provide a holistic view of business operations. Traditional monitoring services might only show that response time for a website is taking longer than usual, or that virtual machines hosting order services are maxing out. Observability services can go a step further, connecting those incidents to an increase in check-out pages and delays in third-party tokenization. With these insights, solutions become clearer: If the team can filter only the customers at the check-out stage and direct them to the edge, they can divert all other traffic to the static shopping pages, relieving the bottleneck without disrupting the shopping experience. Observability services take stock of the entire value chain, from servers and virtual machines to the scanners used by warehouse associates and the trucks used for distribution. They collect data throughout these elements, process it and present a single coherent picture of what's happening throughout the business, enabling teams to make more informed and timely decisions based on those insights. Advanced data processing also allows cloud assurance and quality engineering (QE) teams to be more

proactive. By integrating other technologies like AI and machine learning, teams can automate data analysis and pattern detection to anticipate incidents and prompt responses before they interrupt service. Don't Underestimate Brand Affinity To make the most of these capabilities, businesses must develop the infrastructure to collect and process data and convert it into actions. Organizations often overlook this point, especially in the early stages of their cloud migrations and digital transformations. But doing so can cost the organization down the line — not just in missed opportunities, but also poor customer experience. Observability and controllability help cloud assurance teams ensure business operations not only run smoothly but remain relevant by offering improved services and continuous tech iterations, improving the customer experience. Services can be automated to ensure regular updates and testing for an error-free product. Keeping Customers Technologies like cloud and automation can increase adaptability and enable new and improved ways of connecting with customers. But many digital transformations have been followed by a spike in cybercrime and service disruptions due to businesses moving too quickly and overlooking critical testing and quality engineering services, impacting the customer experience. Working with cloud assurance teams to make observability and controllability services an integral part of the transformation strategy can help ensure a more successful integration, strengthen operations, increase quality service, bolster the customer experience, and pave the way for greater returns on investment. About the Authors Saket Bihari Saket leads Wipro's Observability practice as part of the Quality Engineering and Testing unit. He has more than 18 years of experience in non-functional quality-specifically performance engineering, chaos engineering and observability. He focuses on innovating and rolling out solutions for clients looking to improve business resiliency in their cloud journey. Rachna Trivedi Rachna is a results-oriented, highly accomplished site reliability engineer (SRE) leader with over 18 years of experience in IT. She has consulted and implemented full stack observability, chaos engineering and site reliability engineering initiatives for clients across multiple domains including retail, banking, manufacturing and insurance. ========================

How software defined test environments are revolutionizing testing

----- Arcticle source ----- https://www.wipro.com/cloud/how-software-defined-test-environments-are-evolutionizing-testing/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content How software defined test environments are revolutionizing testing October | 2023 Are you juggling between multiple test environments to ensure right configurations at the right time? Are you spending days of effort in setting up a new test environment? Are you underutilizing your test environments

and resources? Are you compromising on your test coverage due to unavailability of test environments? Experience from traditional test environment service shows that at least 30% of testing time is compromised due to test environment issues. There are numerous gaps preventing higher availability of test environments. Few of these gaps are To cater to these perennial problems, industry is moving towards 'Next Gen Test Environments', wherein 90% of test environment lifecycle is automated by software defined services of compute, storage and network. Software defined test environment model As the name explains, software defined test environments (SDTE) is the concept of managing your test environments the same way that we manage applications or any such software code. SDTE is the major evolution of next generation test environments. It provides a complete set of software defined services for compute, storage, security and network to provision the test environments in public or private Cloud infrastructure. The basic principle of SDTE is that the test environment engineers can write and execute code to provision the test infrastructure, deploy the application and configure with right parameters. This means a test environment engineer can bring up 100s of servers with a single click and with a couple of clicks, the engineer can install all the applications properly with the right configuration. In this journey, all the benefits of Cloud architecture (i.e. elasticity, flexibility, security etc.) can be fully leveraged from software-defined services of the Cloud service provider. As depicted in figure 1, SDTE model is broadly categorized into two parts - Software controlled environment provisioning and environment services (or operations) Figure1 : Software defined test environment service Container based rapid provisioning On demand environments on Cloud, with end-to-end test environment support helps to simplify the process of creating and managing complex test environments. In this simplification journey, container-based provisioning is emerging as a revolutionary technology and industry is responding very positively. Figure 2: Traditional Vs Auto provisioning As depicted in figure 2, test environment setup is optimized further by leveraging containerization, which is an alternative to machine virtualization. Container technology is simpler and faster as it abstracts the application and platform in easy-to-use, re-usable and manageable containers. However, before taking the advantage of container-based test environments, a significant amount of refactoring is required for the applications in test environment. Container orchestration tools such as Kubernetes are emerging rapidly to manage the clusters efficiently. These Kubernetes clusters eliminate lengthy deployment processes and improves the environment readiness by on-demand provisioning, scaling, and patching with CLI interface. More and more network, storage and security features are evolving to ensure higher efficiency and security. Fully automated environment management In the current DevOps world, test environments are built, and live fast, most of the times, die fast as well. Continuous deployments and continuous monitoring helps the testing team to achieve higher availability of the environments, thereby ensuring higher test coverage. With minimal manual intervention, these test environments can be made auto-scalable and ready to meet the ad-hoc demands. All the assets information and the relationship is available at a single place so that the environment team can control the assets and environments efficiently. Using this information, environment maps can be easily defined and reused to move assets from one virtual environment to other. Once the environment

usage is over, a complete backup will be provided to the testing team for future re-use purpose. Environments will be de-commissioned at the same speed as provisioning and all assets will be released along with billing and usage details. The next gen test environment SDTE is a unique work model designed for DevOps world where all the low-level environments are defined and controlled by the software. This model consists of specifically selected tools and pre-packaged infrastructure components with the flexibility of service utilization on Cloud. It will enable enterprises to get easy access on Cloud based test environments supported by monitoring and ITSM tools. This work model is designed to help the test environment team to create and access all low-level environments with few clicks and shorter turnaround time. Other key advantages of this model are: Peri Narasimha Practice Head for Test Environment & Infrastructure Testing at Wipro Ltd. A postgraduate in Computer Science with over 18+ years of IT experience, Peri has designed and patented Unified Test Environment Model. Currently, Peri is working on Next Gen Test Environments for DevOps world by leveraging Cloud and Containerization technologies. Peri has led and executed many integrated and standalone testing projects for various clients in the retail, telecom, and insurance domains. Peri has developed a tool called the TE – Manager that automates the operations layer of environment activities. He has also defined best practices and standardized test environment activities at an enterprise level and has helped organizations achieve highest maturity level in managing test environments. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Adopting the Hybrid Habit for Agile Quality Assurance

----- Arcticle source ----- https://www.wipro.com/cloud/adopting-the-hybrid-habit-for-agile-quality-assurance-qa/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Adopting the Hybrid Habit for Agile Quality Assurance October | 2023 Today's enterprises are constantly looking to maximize benefits reaped from their Quality Assurance (QA) function, both on speed and costs. This is easier said than done. Today's QA industry is volatile and success in such a landscape is defined by how quickly an organization is able to seamlessly adapt. Organizations need to ensure that their multiyear QA strategies withstand upcoming disruptive technology and consumer trends. Let's rewind to a few years back... Traditionally, QA teams were aligned to lines of businesses or Business Verticals - a decentralized operating mode. However, as IT priorities shifted to having the customer 'at the core of everything', the role of QA took on a strategic nature and the concept of a Testing Center of Excellence (TCoE) was born. TCoEs offered a string of benefits including

process standardization, reusable domain centric templates and accelerators and incubation and development of specialized QA competencies. The disruptive onset of digital however, has exposed the TCoE model. The flexibility and complete independence from lines of businesses / business verticals clashes with the scrum team powered Agile development way. Organizations are looking again at the decentralized QA model, however the older drawbacks of the model have not disappeared. Understanding the drawbacks: To better understand how to address this challenge, let's compare the pros and cons of the Centralized and Decentralized models. These have been broadly classified into 5 major themes - Governance, Center of Excellence (CoE), Delivery, and centralized repository and cost. The Solution: Hybrid Operating Model The solution to this dilemma is to have a model that integrates the best of both the centralized TCoE and the decentralized agile model: a hybrid operating model. This model would comprise the beneficial horizontal governance components of the TCoE approach and the vertical governance processes from the decentralized approach. The hybrid operating model would be in the form of an Inverted T having two major components: Rupali Agarwal - Consultant, Test Advisory Services (TAS), Wipro Ltd. Rupali Agarwal is a Consultant with Test Advisory Services (TAS) in Wipro. She is currently instrumental in conducting QA assessments for test consulting engagements and also contributes to thought leadership. She has an overall experience of 4+ years and has worked extensively across different phases of software development lifecycle. After completing Engineering in IT from BIT Mesra, Rupali worked with TCS for two years and then went on to pursue an MBA from Symbiosis. Rupali enjoys playing sports like basketball, badminton, likes reading and listening to music in her leisure time. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

How has DevOps Impacted Quality? How is Customer Pressure Shaping Testing?

----- Arcticle source ----- https://www.wipro.com/cloud/how-has-devops-impacted-quality-how-is-customer-pressure-shaping-testing/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content How has DevOps impacted quality? How is customer pressure shaping testing? October | 2023 We have a unique report on the state of quality and software testing that will answer those questions - and several others - waiting for you. The report has two distinguishing features: one, it is based on over 1,500 quality engagements; and two, it has been

created by quality practitioners. But more than anything else, the report serves as a handbook, providing you the opportunity to benchmark practices within your organization with what is happening outside, across peers and competitors. The genesis of this report is interesting. After successfully completing over 1,500 quality engagements with more than 400 global organizations in the last few months, we could not resist asking ourselves the question - what is the real value delivered by quality today? Are organizations spending too much on quality or too little? What is the right amount to spend? How has the practice of testing changed in the light of DevOps, Agile and Continuous Delivery? How has it evolved under the pressure of impatient customers? What has been the impact of technologies like mobile and cloud? These questions consumed us - just as we are sure they consume you. So we began looking for real answers - from customers. We sat down with our analytics team and began making our way through data from more than 1,000 quality related RFPs and RFIs and over 50 advisory and consulting engagements (there is a lot more, but we'll leave you to go through our freshly-released quality report and see the astonishing depth of detail we had access to). We fed the data into our proprietary intelligent quality platform, IntelliAssure, and waited for the results. So what did we see? We'll give you the good news first. We saw that quality had gone from reactive testing to a proactive discipline of Quality Engineering and Assurance. Testing had evolved from a humble caterpillar to a beautiful butterfly. Everything about the practice, from the speed, structure and skills (what we call S3) had changed. There really is no bad news that the report holds. What it tells us are the imperatives of digital transformation that are sweeping across industries. It tells us why strategically interleaving test solutions at the right moments in the lifecycle of a product enhance speed of delivery. It looks why the luxury of a separate test window and a central test organization are evaporating and what your most reasonable alternatives are. It delves into when you should use central testing capabilities and when you should use decentralized capabilities. It examines the skills required for testing that have undergone a massive transformation. Today, testers need to be skilled programmers and programmers need to be skilled at testing. This is giving rise to new roles like Quality Engineers, substantially changing the game of quality testing. The report has insights into several other aspects of quality. Importantly, it reveals the developing trends in Automation, Performance Engineering, End Customer Experience, Test Data and Environment Management, and the Emergence of Quality Engineering. Test professionals will appreciate the depth and breadth of insights. Actually, the report may hold some bad news after all. If your organization is still stuck with traditional testing methodologies, your peers may be getting ahead. It is time for you to catch up. Arun Melkote - General Manager And Global Head, Testing Services, Wipro, Ltd. Arun is the Global Head of Testing Services at Wipro where he is responsible for business growth, delivery, operations and Client relationship management. He is an acknowledged leader in the Quality Engineering and Assurance Space with 20+ years of industry experience. As a core member of the team that set up Testing Services Practice at Wipro, Arun has seen Testing Services evolve in his career. He has led Quality Assurance and Engineering practices at multiple Business units and has forged strong customer relationships, deep technical expertise and tremendous employee orientation as a leader. The speedy SaaS momentum can not only be attributed to a tight economy but

also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified.
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Mobile Testing

----- Arcticle source ----- https://www.wipro.com/cloud/mobile-testing/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Mobile Testing Preparing for a fast-changing mobile world October | 2023 Introduction Mobile phones are becoming the equivalent of the Swiss Army knife. They are being designed for the needs of urban warriors who want to do everything with a single device. The 'always-on' mobile ecosystem has gone beyond the boundaries of telephony. It records activities, provides event alerts, keeps users in touch with their personal lives and assists in business processes like closing transactions and completing payments. These sophisticated smartphone capabilities are giving rise to novel ways in which to address the needs of customers, employers and partners. As a result, mobile adoption is on a steep adoption curve. A Cisco study suggests that by the end of 2013, the number of mobile-connected devices will exceed the number of people on earth. By 2017 there will be almost 1.4 mobile devices per person. The most obvious inference that can be made from the growth of mobility is that access to alerts, data, intelligence and applications on the move will filter down to the lowest levels in industry and enterprise. The corollary to this is obvious: businesses will begin to mobile-enable their web presence. Mobile applications are already becoming a natural extension of web applications. While this sounds simple, it presents a major engineering challenge to mobile developers. This is because what is not immediately obvious is the fact that the mobile landscape is vastly different from that of the desktop / laptop landscape. Mobile devices are built on a variety of fragmented platforms that include multiple versions of iOS, Android, Windows, BlackBerry, Symbian, Bada, Brew and dozens of others (as of today, there are 17 versions of Android alone published since its beta release at the end of 2007). Mobile devices themselves come in a vast variety of form factors, resolutions, processing capabilities and with a diverse range of sensors and interface options. Within this environment, bristling with differing hardware, software and connectivity capabilities are applications in three distinct flavours: Mobile Web Apps: These are server side apps that bring together the vast capabilities of the web and the functionality of touch-enabled smartphones. These apps are quick to deploy since they don't need to go through approvals as they don't depend on a mobile app store or marketplace for distribution. Native Mobile Apps: These are platform-specific applications designed for a device's OS and firmware. They leverage the device's sensors and capabilities. Typically, a native app developed for one mobile device will have to be re-worked and adapted for another device. Native apps may enjoy a higher level of security than web apps. Hybrid Mobile Apps: These apps are designed using web technologies (HTML5 being amongst the most

popular) but run inside the device's native container. A hybrid app is powerful because it exposes the device's capabilities (say a camera or an accelerometer using an abstraction layer) to what is essentially a web app. This is not good news from a business point of view as usability, capability and security of hybrid mobile apps can be different across devices. For businesses this means an exceptionally large burden on testing mobile applications across devices and device versions. Let's consider some of the key questions (see figure above 1.0) thrown up when testing mobile applications to understand the complexity of mobile testing: Mobile Application Testing It shouldn't come as a surprise to discover that for adequate coverage with respect to mass markets, an application might have to get tested on 15 to 20 device combinations [Platform-Version-Device Type]. It is evident that testing applications for mobile environments calls for a completely different approach, infrastructure and expertise. The Complexities of Testing There are several areas that need attention when creating a strategy for mobile application testing. Functionality Testing: Functionality testing is essential across all valid use cases and boundary / special conditions because it ensures a good user experience. Some of the critical factors to evaluate include ease of navigation and screen transitions, response speed of the device and application, ability to customise and personalise the application and the intuitiveness of the touch interface. Such testing must be done among various user groups against benchmarks to ensure adaption and quality feedback about the application's functionality. Performance and Usability Testing: While application stability and performance are of prime importance, they are dependent on a variety of other factors ranging from the mobile device to load and application response, server utilisation and network conditions. A number of test tools such as Shunra, Keynote, Neotys, Gomez, SDK Tools and LoadRunner are available for performance testing. Selecting the right tool based on the scope of the test and costs is critical. Automation: Test solutions should be platform agnostic. In order to ensure that testing time is reduced, the solutions should be reusable and scalable. Automation leads to shorter test cycles and productivity improvements of around 25 to 30 per cent. Security Testing: The mobile and personal nature of smartphones makes it a very vulnerable device to security threats. Security testing for mobile applications comes in three tiers – physical end-point device security, enterprise level security for devices (Mobile Device Management - MDM) and application security. Security check lists include password locked keypads, policy enforcements via MDM solution, remote data wipe in the event of non-compliance / theft / accidental loss of the device, application security checks via tools and vulnerability exploitation exercises. Security testing requirements of the mobile application includes evaluating OS specific vulnerabilities, application specific vulnerabilities, network vulnerabilities, storage vulnerabilities, data vulnerability and physical security of devices. Device Proliferation: With such severe fragmentation in the device space, application testing has to be done across a variety of devices. This means having a very large inventory of handsets available for tests. Upgrades: Rapid platform upgrades means keeping pace with them and validating the impact of the upgrades on the applications as soon as possible. Though platform owners don't wish to impact any public application interfaces leveraged by 3rd party developers, at times there could be impact on the application due to an upgrade. It is a good practice

to check the release notes of the platform upgrade to look for any potential impact / enhancement opportunity for the application. For businesses this means identifying the core regression suite to validate the impact of the change. This must be executed every time there is a platform / application upgrade. Tests should be based on upgrade release notes that identify the impact areas. Finally, this calls for automation of core regression suite for quick execution with increasing coverage to include more features. Infrastructure and Connectivity: Mobile testing requires dedicated infrastructure. To function, most mobile applications require connecting to the application servers. This creates the need for having Wi-Fi connectivity to the enterprise backbone (limited to application servers). There are several other ways to gain connectivity to application servers and it is important from a scaling perspective to ensure that test environments can be leveraged by geographically distributed testing team. This, in turn, may impact compliance to IT security policies and require intervention from the IT department. Addressing the Complexities of Testing Mobile application testing requires several sophisticated tools to ensure comprehensive and reliable test management. The most common tools required are for test automation, performance testing and security testing. Test automation is a must for mobility testing. This is evident from the fact that the same use case has to be run and validated on a growing number of devices and platforms. A reusable and scalable automation solution can help optimise the test effort. This significantly reduces the time required for testing and also the cost of testing. Automation solutions can be broadly classified in two categories – cloud based and desktop based. Tools must be selected for reusability across platforms and devices while keeping in mind the entire application portfolio. For a majority of the enterprises selecting and maintaining test automation tools can be a confusing task prone to expensive errors. This is one reason why it is best to partner with a technology provider who has a deep understanding of mobile test automation and who also has an understanding of your specific test needs and priorities. Another way to manage mobile application testing is to set up an in-house mobile test automation lab. This means equipping the lab with devices (various platforms and form factors), mobile infrastructure (secure Wi-Fi, internet, backend, automation stations, PI servers), tools (test, performance, security) and data (test data, benchmarks etc.). This is an expensive exercise. Most enterprises also find it difficult to retain the skills and expertise required to manage and maintain such facilities that are not core to their respective business. The Solution and the Benefits In today's highly fragmented, fast growing and dynamic mobile market it is tough for enterprises to own and operate mobile application testing infrastructure with high utilisation levels to justify the investment. It is best for businesses to work with a partner who can deliver testing as a service. Such a partner would ideally have the required skills and experience and also the infrastructure to deliver a reliable testing service. As an example a partner must offer the following to its customers: The benefits of such a partnership mean that an enterprise can remain platform agnostic and focus on the application rather than on the device. Rapid automated testing of applications across platforms and versions will ensure faster time to market, with a high degree of functional and security assurance in addition to deep test coverage - all this without the headache of managing the test infrastructure or making CAPEX investments with uncertain ROI. Summary

It is inevitable that your business will adopt mobile technologies to improve efficiency and become an 'always available' business. However, in a fast-changing mobile environment, application testing must be done in days instead of weeks, to ensure that your business remains agile, productivity is not lost and customer satisfaction is not impacted. How your business overcomes these challenges will determine how mobile it is and how competitive it remains. One of the best approaches to mobile testing, therefore, is to engage with a technology partner that offers mobile testing as a service. Sudheer M, Practice Head – Mobility Testing and Automation Sudheer has 12 years of experience in Wireless Technologies & Mobility and is currently working as the Practice Head for Wipro Mobility Testing. He handles Enterprise Mobility Testing and is also responsible for Mobility Test solutions. He has developed automation solutions for Smart Devices, Android Platform and Chipset Validation The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Automation Checkerboard - What moves my Benefits?

----- Arcticle source ----- https://www.wipro.com/cloud/automation-checkerboard-what-moves-my-benefits/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Automation Checkerboard - What Moves my Benefits? October | 2023 Across industry verticals, enterprises are moving towards test automation. It has been observed that there are a lot of investments into test automation but not every initiative has been able to provide the desired benefits. How many times have we heard the project sponsor say – "I have invested into automation, but I don't see the benefits and automation has not been able to add significant value." What moved the benefits away? The answer lies on the Automation Checkerboard. Test automation has characteristics similar to the news we read in a newspaper or watch on television. It keeps changing every day, and it needs to be refreshed regularly, lest it loses its intrinsic value. Usually, test automation is an afterthought largely driven due to schedule slippages in upstream development. The typical approach to automation is an ROI computation that compares the investments against the effort savings brought in by automation. Developing an automated test upstream is cheaper than developing the same script much later in the development lifecycle. Due to this dynamism, the traditional ROI model will not predict the benefits correctly. Every enterprise believes that it can derive significant benefits from automation. However, there is no structured model or approach, which defines where to start and when to end the investments into automation. The complexity of the problem is aggravated due to the fact that test automation activity is highly dynamic in nature. Any

task that gets automated will always be affected due to a business change, process change or technology change. Hence a simple ROI model will always fail, and will be inadequate to drive the strategy for automation. Understanding the problems with test automation Let us look deeper into the problems of test automation at an enterprise level. Here is the story of a test team – Team GodSea which is performing the testing of a suite of applications in a leading investment bank. The classical problems with test automation are brought out. GodSea - the test team has been writing regression tests and executing them manually across many releases. The regression pack has grown, and the test assets have changed many hands. It has reached a stage where the regression pack is large, and cannot be executed entirely for the next release as manual manpower is not sufficient. The team selects a subset of tests for regression based on the risk and priorities. The regression pack is not fully executed, and the test coverage is limited. The natural fallout is that some bugs slip into production. GodSea test team figures that the best way to solve the problem is to automate the regression test pack. Performing an automation assessment yields the following results A new test automation team MountainGod is setup to address the issues in testing. Their objective is to bring in cost benefits along with increased quality. Once the automation team starts, it faces the following challenges:- A periodic review of the MountainGod team reveals that the automation is far behind expectations and the confidence of the application teams on the overall testing is low. Additional efforts have gone in to make the automation work, making the automation more expensive and the ROI weaker. The automation scripts that have been built so far are being A new test automation team MountainGod is setup to address the issues in testing. Their objective is to bring in cost benefits along with increased quality. Once the automation team starts, it faces the following challenges:- subject to continuous maintenance. The GodSea team is scampering as testing schedules are crunched and they have to finish up in the reduced timeframe. The benefits from automation are being questioned. This is the classical story with every enterprise on an automation journey. The Solution- Automation Checkerboard The benefits derived from automation for an enterprise needs to be looked at in two dimensions. The first dimension is the 'Quantum of Automation' and this drives the classical ROI model. The quantum of automation achieved resulting in effort savings compared against the absolute manual effort determines the cost benefit achieved through automation. The second dimension often neglected is the 'Effectiveness of Automation'. In the purest sense, effectiveness of automation is a misnomer, as it tends to define the effectiveness of the tests itself than the automation per se. However, automation without this relationship to the defined tests is quite meaningless and hence it is imperative to keep this dimension into consideration. Automation has evolved from being an efficiency lever into a two dimensional plane where the effectiveness of automation also needs to be measured. This can be best visualized as a simple two dimensional checkerboard. The starting point on the grid is the current state of automation in the project. If a project has moved from 20 to 80% automation achievement (X axis), it is highly possible that due to maintenance considerations, the effectiveness can be near zero (Y axis). Using the two dimensional automation checkerboard Automation Checkerboard gives a clear answer to the question – Where and how the benefits move. The Automation Checkerboard is a useful tool to define the

automation strategy and roadmap for an enterprise – the plane on the x axis defines the quantum and the y axis defines the effectiveness. The right moves by an enterprise will deliver on both planes – efficiency and effectiveness, and hence deliver maximum value from automation. To be able to effectively use the Automation Checkerboard, it is important to understand the positioning and the moves towards realizing the benefits. The aim would be to move from the current position to the top right corner to derive the maximum benefits. Starting on the grid The first step for any project is to position itself on the checkerboard. This is based on the current state of the project. If the project is just about starting and in its infancy, then the left most corner is the starting position. However, if the project is already in progress, and some percentage of automation has already been developed, then the squares on the right would be the starting position. Knight's move At the start of the automation initiative, it is very intuitive to start building on the quantum of automation for early benefits. At this level, we need to address the aspects of technology stack based on the needs of the test suite. The right choice of the automation toolset as well as the framework is required to implement automation. A good automation framework provides an abstraction layer that removes the technical nuances of the automation tool and provides with higher productivity of automation. This move will attempt to move the effectiveness north by one position while the quantum of automation produced will move it east by multiple positions. A classical Knight's move delivers the horsepower to gain on the pace of automation development and deliver effectiveness even with smaller percentage of automation development. Rook's move The design of the components and their reusability is the key to success. Each test scenario needs to be analyzed and the business process components need to be defined. Doing this early in the testing lifecycle enables proactive and progressive automation. The right design and underlying framework enables development of automation scripts even while the application development is in progress. This is most beneficial in Agile projects and is probably a true implementation of 'Shift left'. By designing the business process components well, each component can be automated once, and reused across multiple test scenarios as well as across multiple phases of the testing lifecycle, increasing the overall effectiveness with the same quantum of automation development. A classical Rook's move looks at moving north by improving the maturity of automation and delivering higher benefits. Bishop's move The Bishop's move is to move diagonally and bring in continuous improvements. This move is required to improve the performance and speed of execution. Improving the speed of execution and enabling unattended execution helps in continuous refresh of the regression pack. This requires integration with the test management tool, typically HP's ALM. The other aspect that needs to be taken care of is the preconditions for each test execution to be automated and creation/organization of test data required for execution. In this way, the tests can be scheduled to run automatically at a predetermined time, and the results of the execution are auto-populated back into ALM. Continuous integration into the development environment helps improve the effectiveness, right from code build to smoke and regression tests done in an automated and unattended way. Queen's move The Queen's move is the most critical action towards the success of automation. It is used to address regular maintenance. The automated test suite should be run regularly (nightly, unattended) and analyzed for failures.

By running the automated pack regularly, the maintenance needs are caught much early and provide sufficient time for the team to make updates to the automated regression pack. This is most beneficial in an agile environment when things can change on a daily basis and the automated executions can catch issues very early in the lifecycle. Having a continuous running regression engine will enable tests to be pushed in and out, and the results continuously monitored. The outdated tests can be purged out on a regular basis and newer tests should be defined, automated and added to the existing pack. This will ensure that the automated regression pack is at all times up-to-date and most-effective. Conclusion Automation is dynamic by nature. It can get outdated in no time. For it to deliver benefits, it needs to be constantly monitored and refreshed. Design of components ensures reusability. Choice of tools and frameworks enables speed and agility. Continuous integration helps increase the benefits and at the same time keeps the automation relevant. Ensuring early maintenance gives the desired long-term benefits. The automation checkerboard provides a structured mechanism and gives a two dimensional view towards deriving the maximum benefits from the investments into automation. The checkerboard and starting point is representative of the current state of the project and at what time the investments into automation have begun. The different moves on the checkerboard are metaphors for levers that need to be engaged to derive maximum benefits. There are multiple openings for a game. It's the right set of moves that make you win. Girish Kulkarni is the Global Practice Head for Test Automation, Testing Services. With two decades of experience in Software development and testing, he has played various leadership roles at Wipro. A business leader with successful results in delivering projects for global Financial Services customers, he has rich and diverse experience – from driving transformation programs through automation to Program management, Product development, Business enablement and Global Account management. Being an avid reader, creative thinker, painter, sculptor, cook and a gardener, he likes to indulge in various hobbies and activities. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Digital Assurance: Reaching a Seamless Customer Experience

----- Arcticle source ----- https://www.wipro.com/cloud/digital-assurance-reaching-a-seamless-customer-experience/ ----- Contact Wipro Please fill the required details to access the content Digital Assurance: Reaching a Seamless Customer Experience October | 2023 As digital technologies envelop all spheres of business operations, the need for assurance of near-flawless performance in user experience and security has taken center

stage. The practice of digital assurance aims to meet that demand, and has elevated the testing function to being a critical piece in the design and development process for digital services. Wipro's head of testing services, Kumudha Sridharan, and Wharton professor Shawndra Hill discuss the latest challenges in this Future of Industry series white paper, produced by Knowledge@Wharton and sponsored by Wipro Technologies. On October 6, 2014, technology badly let down Bangalore-based Flipkart, India's largest e-commerce retailer and Amazon's biggest rival in the country. Flipkart's expectations for its big sale event that day came crashing down when its website couldn't handle the unprecedented volume of customers looking for deep discounts. Also, its promotional pricing programs went haywire, leading to massive order cancellations, angry suppliers and of course, upset customers. Flipkart apologized, and promised to make its systems fail safe. In the U.S., data security has been the victim of technology imperfections. Retail chain Home Depot in September said thata breach into its in-store payments system may have compromised up to 60 million credit cards; making it the worst such case so far (no debit cards were affected). It eclipses a similar breach at the Target retail chain, which has so far affected 40 million credit cards. Even the U.S. government healthcare website, which was built on a whooping budget of $500 million, faced technical glitches, during its launch in October 2013. Most of the people were unable to sign up and enroll to the website to purchase health insurance for themselves and their families. These are a few instances of the technology snafus that highlight the growing impact of digital assurance, a function that basically tries to ensure that technology works as it is supposed to. The practice has outgrown its earlier testing role to become a front-end function influencing product design and development now that digital technology has reached every aspect of business. "More and more software is coming online and people are sometimes using the software in ways that they weren't intended. The risks are greater as numerous mobile and web apps are written by freelance developers who lack the foresight — or the budget resources — to test and control how their creations are used." - Shawndra Hill Digital assurance services focus on the interplay of devices and apps on the web or mobile platforms. Ideally it provides superior navigability and content on those channels, and ensures a seamless customer engagement before, during and after a purchase, and across multiple touch points that could start with an online visit and end at a physical store. Through that process, digital assurance is designed to provide a smooth and relevant experience while protecting their financial and other data from hackers, according to Kumudha Sridharan, vice president and global head of testing services at Wipro Technologies. Shawndra Hill, Wharton professor of operations and information management, says retailers' online crashes under volume loads or security breaches underline digital assurance's increasingly critical role. "More and more software is coming online and people are sometimes using the software in ways that they weren't intended. The risks are greater as numerous mobile and web apps are written by freelance developers who lack the foresight — or the budget resources — to test and control how their creations are used." Thus, digital commerce with smooth user experiences is a high priority for many businesses, along with data security. Digital assurance will become more and more important for businesses because "fundamentally, companies want to ensure that their end-customer experience is good and that their digital channels enable them to achieve a

higher reach," says Sridharan. She offers the example of a large North American retail chain that effectively used digital assurance. The retailer wanted to increase the number of prospective customers browsing its offerings on web and mobile channels who ended up making purchases. It hired a digital assurance provider to develop new apps and improve the user experience on mobile, tablet and online channels. That helped the retailer increase the so-called "conversions" of prospective customers to actual purchasers from 8% to 11%, she says. Sridharan cites the experience of online shopping network Shopzilla as another example of how digital assurance can enhance the customer experience. When Shopzilla invested in improving the performance of its website and related applications, it gained a five-second speed increase (from seven seconds to two seconds) as its pages loaded. That increased page views by 25% and revenues by 7%- 12%, while costs were slashed by 50% and performance improved overall. Digital assurance services to improve user experience also brought gains to some firms polled in a recent survey by research firm Econsultancy and digital technology services provider RedEye, both of London. And the gains are not always strictly IT related. Veeam Software, a Swiss IT services firm, found that changing a single word can bring seemingly magical results. It replaced the words "Request a quote" on its website's sales inquiry form to "Request pricing" and found the click-through rate soared 161%, according to the survey report. Companies that do not invest in digital assurance do so at their peril, says Sridharan. For example, retailers must test their systems for potential crashes ahead of festive seasons such as Black Friday (the Friday following Thanksgiving Day) when sales volumes soar, Sridharan added. "If they crash, the retailers could lose heavily." Sridharan pointed also to Amazon, which found that even a one-second slowdown in webpage load time could cost it $1.6 billion in lost annual sales, according to a report in Fast Company magazine. Investments in digital assurance could also pay back through reduced risk premiums on insurance coverage against business disruptions caused by technology glitches. "Companies want to ensure that their end-customer experience is good and that their digital channels enable them to achieve a higher reach." — Kumudha Sridharan Digital Assurance for New Age Digital Marketing Digital marketing is another area which has undergone a massive change towards end-to-end assurance. The marketing effort has moved beyond simply placing ads or campaigns on various digital channels to recasting the digital production ecosystem, which executes campaigns across geographies more cost effectively. Now many multinational companies are implementing "digital decoupling," using one advertising agency to create their core brand message, which is then customized to suit different markets or business units. Sridharan says this approach ensures higher brand consistency and lower costs as creative work is separated from cheaper, repetitive and non-creative work. One example of this approach is Nokia. In 2008, the company was looking reduce global digital production costs (60% of Nokia's total digital budget) while improving consistency in marketing campaigns. While Nokia had one central creative AOR (agency on record) responsible for creating its global brand message, it also had sixty-four local agencies implementing that message, each operating in significantly different ways. As a result, the global message was often changed or lost in its local implementation. Nokia consolidated its local digital production to a single organization, providing more global control. It also consolidated global

digital production to five time-zone hubs, each serving five to 15 local markets, and all operating on a single platform. The result: Nokia cut production costs to their target — 20% of the digital marketing budget. In addition, the new model dramatically corrected inconsistency issues and improved campaign performance across all markets. Nokia benefitted from faster campaign time to market as well as real-time visibility of local market activities. Digital assurance no longer works best as an in-house service at companies, and they typically outsource it to third party providers. Using multiple products and software in an ever-changing mix of permutations and combinations brings complexity that extends beyond the testing of any one supplier, says Hill. She also notes that there have been several startups popping up recently to create test software for the user experience, such as one working on mobile apps to track user's pain points. Unlike in the past, companies today want to build agile, fully automated systems where these kinds of more thorough testing are part of the initial blueprint, says Sridharan. Consequently, companies can no longer afford to be reactive. They have to do what is called "progressive, in-sprint automation." Digital assurance is still "an evolving space, and no perfect formula has arisen" as yet for how to go about it, says Sridharan. End-consumers drive much of the changes in digital technology, making it dynamic and therefore difficult for companies to keep pace. "Companies today want to build agile, fully automated systems where these kinds of thorough testing are part of the initial blueprint." — Kumudha Sridharan The field faces several hurdles. First, even as devices or apps are tested for performance under various conditions, there is no guarantee that all possible scenarios will get covered. Second, when companies source apps from different vendors, they might fall short in their ability to maintain or enhance them. Hill notes that digital assurance cannot work in a silo and must have a collaborative setting – and a keen eye on human error. "Digital assurance is also about educating companies and consumers on how they can keep their data secure." She points to human intervention as a risk factor for digital assurance, such as in breaches caused by weak passwords or by disgruntled employees. That last aspect highlights the role for human resources, she adds. "If your database administrator is somebody whom you haven't fully vetted, there could be leaks of sensitive data." Businesses are willing to make the necessary investments in digital assurance, but the challenge is in meeting their expectations of performance guarantees, says Sridharan. "It's an iterative journey, towards meeting consumer expectations especially when so much in the digital world is user driven and dynamic." But she adds that despite the challenges, digital assurance can go a long way towards helping organizations reach the goal of providing a fully integrated and seamless customer experience. "Digital assurance is also about educating companies and consumers on how they can keep their data secure." — Shawndra Hill
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The Burgeoning need

for Big Data Assurance

The Burgeoning Need for Big Data Assurance October | 2023 Executive Summary Over two-third of enterprises, across industry verticals, who are currently planning or implementing Big Data analytics projects stated that their projects have not progressed past the pilot stage. One of the primary reasons identified for this lack of success appears to be the lack of a holistic Big Data Assurance Strategy to address issues related to data quality and rein in the cost of quality and delivery on projects. Big Data has been a key focus area for enterprises in the information technology landscape for many years now. Industry analysts across the globe agree that Big Data is a multi-billion dollar industry. However, despite the buzz and spending on implementing Big Data technologies, only a few understand what the term really means. Moreover, there is a lot of uncertainty around implementing Big Data projects globally across industries due to the lack of credible market intelligence in the subject. To find out more, Wipro conducted a market research study to gain insights into the state of current enterprise Big Data projects. Our survey of senior executives and leading analysts based in organizations in the US, Canada, Europe, and Asia – captures a vivid snapshot of the various drivers and flavors of the current enterprise Big Data project implementations across a few industries. Our research findings also provide a strategic outlook into some of the critical elements in the market such as the most favored Big Data tools and technologies, investment interests of enterprises, hurdles in current project implementations, as well as the gaps that exist in today's Big Data ecosystem. A quick synopsis of the survey results show that: Introduction Fueled by plummeting data storage costs, Big Data technologies have grown exponentially over the past decade. Big Data platforms, which started out as batch-processing platforms, are now evolving to handle near real-time processing. These platforms allow continuous access and processing of data at a large scale to aid datafication – the ability to discover previously unknown/unseen trends and relationships using data. This trend has further accelerated with the explosion in the number of connected devices collecting data. As data collection increases in scale and scope, there will be a larger need to assess data processing agility and data quality. New processes and policies to measure the speed and efficiency of capturing, managing, and analyzing data will come into effect, which in turn will help consolidate standards and policies for data management and analysis. In order to support this trend, there will be a rise in the number of self-servicing Big Data applications and platforms based on PaaS (Platform as a Service) and SaaS (Software as a Service) models. As a result of, the exponential generation of data, managing the volume, velocity and variety is posing a herculean challenge to businesses worldwide – which has resulted in issues related to data quality. Gartner estimates that

poor quality of data costs an average organization $13.5 million per year, and yet data governance problems — which all organizations suffer from — are worsening.1 Wipro believes that the key reasons for poor data quality include: Can Big Data Assurance help minimize losses associated with bad data quality? To answer that question, let's look at some of the current Big Data needs of organizations. The State of Big Data Implementations Today We found that most customers today appear to be taking their first steps towards creating a data processing engine for their various data processing needs. This is evidenced by the fact that 80% of our respondents stated that their biggest spend on Big Data technologies were on the three leading Hadoop platforms (Cloudera - 32%, Hortonworks – 17%, MapR – 17%, and the base version – Apache Hadoop – 10%). After setting up their platforms to store and archive data – typically called Data Lakes – organizations seek to create data models that allow them to derive value from their data. This process of value creation from data requires the creation of data models. Data models typically govern the following processes for organizations across industries: Figure 1 – How Big Data will be used in enterprises by industry ? Once organizations create a data model, they are able to proceed into the next phase of their Big Data projects – Data Processing to provide value. Our survey finds out that enterprises are primarily adopting Big Data technologies and solutions to pursue projects that will provide business intelligence (92%), predictive/prescriptive analytics (88%), fraud detection (79%), and customer behavior and customer sentiment analysis (77%). To address their technological needs, most organizations appear to be using standard solutions (81%) rather than working on creating custom solutions/ services in-house. A large part of this may have to do with the fact that organizations are currently focused on enhancing their talent pools (79%), and still defining processes and solutions by working with third parties (75%). The survey results also indicate that only a smaller percentage of organizations have reached a point where they have proceeded past the data integration phase into the data processing phase as there are no data processing tools other than Splunk (20%) that figured in the top Big Data spends for enterprises. Figure II- What are the primary tools used in Big Data implementation? What is Big Data Assurance? Big Data Assurance is about providing a strategy, deriving a process, and aligning the right tools and resources required to address the problem areas outlined above. However, in order to create a Big Data Assurance strategy, it is not only important to understand the pain points observed in current implementations, it is also critical to understand the nature of Big Data implementations seen across enterprises. We have observed that there are currently two primary flavors of enterprise implementations that handle Big Data: Each flavor of implementation requires a different Assurance strategy to address the issues that will be faced. For Big Data platforms used as data repositories (such as Data Lakes), the primary area of concern relates to the correctness, completeness, and timeliness of the data stored from various sources. To ensure this, two primary tasks need to be performed – first, ensure that each data source provides data that is correct and complete (compared to the source),What is Big Data Assurance? and second, ensure that the quality of data on the system meets the standards that meets governance and timeliness policies required. Assuring quality on high performance Hadoop platforms require a slightly different approach in addition to the tasks associated with the first type of implementation. In

order to assure quality on this type of implementation, it is not only critical to ensure the quality and correctness of data that is stored on the data system, it is imperative to test (functional and non-functional such as performance) the various algorithms that are written to cleanse, process, and transform the data that will ultimately provide the metrics, dashboards, reports, and, other consumables required. Moreover, given that Assurance tasks in Big Data implementations involve working with large and varied amounts of data, it is imperative to have an automation strategy to ensure that resources don't spend too much time and effort performing mundane, yet, critical tasks. Despite this, most implementations today primarily perform all testing tasks in the Big Data world manually. Current State of Assurance in Big Data Implementations The level of maturity in current Big Data implementations show that there is a huge scope for Data Wellness/ Data Assurance in current Big Data implementations. This is further proven by the fact that over 52% of respondents cited that the market currently lacks good Assurance tools and services. Only the lack of data analysis tools and services (62%) was featured as a bigger service/tool-related gap for enterprises. The demand for professionals with Big Data Assurance experience coupled with the lack of tools and services has resulted in over 77% of the respondents to the survey struggling to find individuals who have the required skills to perform Assurance using Big Data technologies. Across verticals, Utilities (40%) have taken the lead in hiring third parties for Big Data Assurance, whereas Hi-Tech (67%), Banking and Insurance (50%) companies display a high preference in keeping Assurance activities in-house. Results also indicate that enterprises are on the lookout for testers who have expertise in data analysis (88%), Hadoop development (58%), and tool-specific work experience (52%). The profile of individuals who will perform the role of testers is skewed towards those who can develop as well as test. Although only 29% of our respondents stated that all Big Data Assurance will be tightly coupled with development, 49% believed that there will be a role for testers who have development and scripting skills as well. Only 22% of our respondents believe that there will be standalone Assurance opportunities on Big Data projects. Enterprises today appear to be in splits about how to fulfill the assurance resource requirements on projects. Only 29% of our respondents are either currently working with third-party service providers or considering an engagement with third-party providers whereas, 32% of our respondents expect to hire professionals outright from the market. Almost 39% of our respondents are unsure about what strategy they need to adopt at the moment. Although organizations are not planning to look for people resources for their Big Data projects, it appears that enterprises will look at engaging third-party tools and consulting services. This can be inferred by the fact that 80% of our respondents will engage with third parties for their Big Data Assurance requirements over the next three to five years. Overall, companies with budgets between $50M and $100M are most likely to outsource Big Data Assurance to third-party vendors. This shows that there is a lot of scope for Big Data Assurance tools and services (especially Big Data Assurance as a service) in the near term for third-party vendors. Benefits from Implementing a Holistic Big Data Assurance Strategy From the results mentioned above, it is clear that organizations are unable to implement a holistic Big Data strategy. This situation could have arisen due to a lack of understanding on how to integrate an Assurance strategy into current

implementations, along with a paucity of skilled resources, services, and tools available to address the specific challenges posed on current Big Data implementations. The best method to integrate a Big Data Assurance strategy – into existing implementations – would be to understand the essentials of what it involves, and how it will help organizations overcome current challenges. A Big Data Assurance strategy helps enterprises derive maximum value from their Big Data implementations. A holistic strategy should primarily deal with: Conclusion Despite the abundance of technologies and processes in the market today, there is a need for consolidation and industrialization throughout the entire Big Data lifecycle. Currently, there are no solutions available that provide a holistic approach to handle the various challenges faced by enterprises implementing Big Data. Moreover, there is clear need to identify a technology stack that will allow enterprises to aggregate, ingest, analyze and process, and consume data effectively. But not all is hazy. There are solutions available that help organizations create value in their Big Data implementations. These solutions establish a measurable and repeatable methodology for various technical and process-related challenges and help identify the key activities that require maximum attention. Validation and verification of these activities will ensure that enterprises can extract value from their Big Data implementations that are also imperative for any solution. Enterprises need to identify the right solution that fits their Big Data implementation strategy. This will ensure that they find light in the chaos. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Digital Assurance

----- Arcticle source ----- https://www.wipro.com/cloud/digital-assurance-difference-business-performance/ ----- Related Articles Contact Wipro Please fill the required details to access the content Digital Assurance By Kumudha Sridharan, Vice President & Global Head of Testing Services, Wipro Ltd October | 2023 In an Everything-Digital environment, businesses must stress on operations that provide accurate, rich and engaging digital content, and distribute it satisfactorily across channels to improve accessibility coupled with a high-end user experience. This translates into an inordinate focus on infrastructure and application performance, process optimization and stability, usability, design, functionality and security. Together, these deliver what every organization wants: digital assurance. Digital assurance is vital. It makes a morethan-significant difference to business performance. For example Shopzilla, one of the largest online retailers, unlocked a 7-12% increase in revenue through a 5 second speed up in page loads. The speed up resulted in a 25% increase in page views, leading to improved revenues and a 50% reduction in hardware deployments. Staples redesigned its website to make it easier for customers to place orders, thereby increasing the likelihood of repeat purchasers. Staples reported that repeat customers

had increased from 180,000 to 300,000 over a single quarter after the new design had been tested. In addition, speed is of the essence. In 2013, during a 34-minute blackout at the Super Bowl, Oreo sent out a Tweet that said, "You can still dunk in the dark." Some believe that the Tweet resulted in better customer response than the actual Oreo Super Bowl ad that had a multimillion dollar budget2 For Digital Marketing to be agile, systems need to be continuously tested and kept on the ready for a response on scale, else opportunities can be lost. What this tells us is elementary but often overlooked: digital businesses can achieve considerably more with greater ease than traditional businesses -- but they are also vulnerable to multiple points of failure. Today industries across the globe are leveraging innovations in digital technology to reinvent and transform their businesses. They bank on an omni-channel strategy for deeper market penetration. And they use digital content to effectively market their services and products and provide great customer engagement through digital user experience. The challenge is to do this seamlessly and consistently across platforms, operating systems and device form factors – all of which continue to evolve. In addition, content itself is growing in velocity and formats. Today, rich streaming content is the norm, digital decoupling is being employed for effectively managing digital marketing operations, and devices and consumer actions are unleashing a flood of data that must be assimilated, validated, crunched and put into the feedback loop of businesses. There is no room for error. Testing infrastructure, applications, process, usability and design, functionality and system security using standardized tools is an effective and essential method to create digital assurance. This insulates systems from unexpected failure. The strategy of rigorous testing is relevant to internal, employee-facing applications as much as it is to external customer-facing applications. Businesses must therefore ensure they have a 360 degree test strategy that prevents failure at both levels. References The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified.
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Have you Started your Big Data Journey in the Right Direction?

----- Arcticle source ----- https://www.wipro.com/cloud/have-you-started-your-big-data-journey-in-the-right-direction/ ----- Related Articles Contact Wipro Please fill the required details to access the content Have You Started your Big Data Journey in the Right Direction? October | 2023 Despite the abundance of Big Data technologies and processes in the market today, enterprises are looking for a holistic Big Data strategy to generate value from the data Enterprises today are leveraging Big Data technologies for: However, only a few out of the planned bug data implementatons have

progressed past the pilot stage. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. ======================

How to Provision the Right test data for Business Events

How to Provision the Right Test Data for Business Events October | 2023 For any given organization to succeed, irrespective of its size, area of expertise and customer base, an awareness of the end user needs, and adapting to meet those is of utmost importance. In addition adapting to the changes promptly is equally important to achieve competitive advantage. Test Data Management plays a key role in ensuring quality roll out of applications at the right time. As a service/practice, it has matured in most organizations. The predominant activities include sub-setting, masking, data refresh and synthetic creation standardized through Test Data Management (TDM), Extract Transform Load (ETL) or Database (DB) tools. However, domain and platform specific test data provisioning still remains a challenge as this needs deep knowledge of the entire business processes. Data preparation for business events across domains is still in its infancy with organizations devising their own methods to address these challenges. This paper summarizes the various approaches available for effectively preparing Test data sets for business events. Introduction In any organization, approximately 40% of a tester's time is spent on waiting for the right kind of test data. To add to it, 20% to 25% of defects found in UAT and production phase are directly or indirectly attributable to the quality of test data used. Organizations have realized the impact of test data on the three pillars of Cost, Quality and Schedule. Hence, investments are being made in Centralizing Test Data as-a-Service (TDaaS) and automating test data provisioning through implementation of sophisticated Test Data Management (TDM) tools. These tools play a key role in: And all this needs to be achieved while retaining data integrity at an application level across applications. Data integrity across applications is a critical requirement for testing end-to-end business scenarios. The TDM tools also have capabilities for generating synthetic data for new functionalities where data does not exist in production databases. Preparing test data for business events like End of Day (EoD) process in the banking sector or holiday season in the retail domain are complex scenarios where out-of-the-box solutions don't exist. Various dimensions like volume of data, dependencies across applications and time sensitivity adds to the complexity of preparing data for business event testing. The Challenge Consider a scenario where

the taxation rules for interest earned from bank deposits in US changes from 1-Jan-2015 and we are currently on 1-Jul-2014. In this case, the software changes may be developed in Sep-2014 and the modified programs may be implemented in production by 31-Oct-2014. However, the new tax calculation program will not be actually executed till say, the night of 31-Jan-2015. In order to test this scenario, we will have to simulate the data for 1-Jan-2015 to 31-Jan-2015 in the test environment. A typical bank will have in excess of 20000 batch jobs for the month-end processing. Now, if a data model change impacting these batch jobs has to be implemented, it is imperative to test the entire month-end process. A copy of data from production cannot be used directly for testing as there will be at least two shortcomings: Similarly, in the retail industry, let us take the example of a situation where a new piece of code needs to be implemented for calculating and applying discounts to purchases made between the discount period of 25-Nov-2014 and 5-Jan-2015. This cannot be addressed completely by just advancing the date on the database and application servers. There will be many scenarios that will actually need data that spans before, during and after the discount period like: Hence, organizations have to carefully strategize their approach towards test data management, to ensure the quality of application and deliver excellent end user experience to safeguard their brand image. Solution Approaches Let us now focus on the approaches available for provisioning data for Business events like the ones mentioned above. Selective Updates Scenario 1: Suppose a telecom service provider gets a new customer request and the Customer status is initially "New" and the status changes to "Active" only after 48 hrs. This is a typical scenario where a small volume of data is required for testing the scenarios. For this we can use employee selective updates where the table columns that are impacted are first identified and then updated with values for the records that will be used in that particular test cycle. So, in this case we can create a new customer from the application frontend with "New" status and then wait for 48 hours for it to change it to "Active" status. Only after that can they further test cases associated with this customer. Alternatively we can also update the "Customer creation Timestamp" column for the new customer to 48 hrs in the past and then run the "Customer Status Update" program. This will set the customer status to "Active". The latter approach is most commonly used by organization as it is quick and least disruptive. But the following factors need to be considered while employing this approach. Mass Update Scenario 2: An organization wants to simulate entire data in their Test environment from 31-Jan-2015 while current date is 1-Jul-2014. For this, data backup from production is loaded into the test environment and all date columns are advanced by a preset number of days. The process that would be needed to be followed will include: This approach should be treated like a software development project. The complete process has to be designed developed and tested. It has to be maintained on an ongoing basis to take care of: Mass Update with Look up One of the drawbacks of the Mass Update approach is that when the data is updated by a fixed number of days, the date in production may map to a wrong day in the Test environment. Scenario 3: 1-Jul-2014 is a Friday. If it is advanced by 7 months to 1-Jan-015 it will be a Thursday. However, 1-Jan-2015 is a holiday where 1-Jul-2014 is a working day. If it is desired that data of a weekday is mapped to a week day, that of a weekend is mapped to a weekend and data of a Holiday is mapped to a Holiday, a lookup table will have to be used. The lookup table

will contain three columns at a minimum. The table below shows sample data for a look up table: The steps involved in this process are very similar to the Mass update approach. Only the Update step will be different, wherein the lookup table will be used instead of a formula. This approach gives the flexibility of generating data for specific dates based on the project needs. If we have to simulate a scenario where sales on an e-Commerce application shoots up by 400%. All we have to do is map 4 days in the Source to 1 day in the Target. Also, by using a single look up table across application, we can easily ensure data integrity is maintained. Holiday Calendar Many organizations maintain a Holiday calendar which can be accessed by one or more applications. This Holiday calendar is used by the scheduler to determine if a particular job needs to be run on that date or not. If this feature is available in an environment, the Holiday calendar can be used for ageing data sets. Scenario 4: Suppose a new business rule comes into effect from 1-Jan-2015 and we need to test this business rule on 21-Dec-2014. This approach has a dependency on Holiday Calendar being a part of the application design. This is generally applicable in the Banking domain. This is effective if data has to be aged by a few days and might not work if data has to be aged by a month or more. Incremental Data Sets The Mass update and Mass Update with look up approaches require that a separate data set is created and maintained for each business cycle (daily, weekly, monthly and so on). Maintaining multiple data sets could be painstaking if there are too many cycles. And, if the data is not masked, there could be potential data security risks with multiple data sets. In the Incremental data sets approach, data is extracted at a lower granularity level from production and updated separately for each incremental set. Example 1: In an e-Commerce environment, data can be extracted for every hour. Each hourly data set is updated (using the steps mentioned in the mass update approach) and data can be provisioned in the Test environment using combinations of hourly data sets. Example 2: Suppose we need to prepare data for a month-end job in Jan-2015. We extract data from production on a daily basis from 1-Jul-2014 to 31-Jul-2014. Each day's data is updated as per our need (following steps mentioned in the Mass Update approach). All the 31 data sets will be loaded sequentially into the Test environment. Suppose we need to provision data for an end of week job, we can identify 7 days' worth of data from our data repository and load them. Conclusion To sum up, while Test Data Management tools and processes have matured in the last few years, there are still many areas across domains where processes are still not standardized. Hence, Businesses are not deriving the maximum benefits that a robust TDM function can deliver. Multiple approaches are available to overcome this and the right one for a given scenario depends on the quality, quantity and quickness with which data is required. In some complex situations, a combination of these approaches can also be adopted to solve the Test data challenge. Implementing a standardized Test Data solution for business events can significantly reduce risk, improve quality and reduce cost for Businesses. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Critical Success Factors

for a Successful

Test Environment Management

Critical Success Factors for a Successful Test Environment Management October | 2023 Test Environment Management is about controlling, steering and managing the enterprise level test environments. It consists of multiple components like hardware, software, databases, middleware, applications and test data managed by tools, procedures and resources effectively. However with the number of tools increasing by the day, managing test environments is becoming more of a challenge than ever before. It has now dawned upon businesses that managing multiple slow, inconsistent and unreliable test environments will result in higher operational costs and lower test coverage. Some of the key test environment challenges are as follows: Doing business in the midst of these unreliable test environments have made organizations wary of their higher operations cost and lower test coverage. Most organizations today have recognized these challenges and are initiating best practices to transform the current operating model to best in class test environment model This whitepaper highlights key recommendations for best - in - class enterprise test environment management and also gives an insight on the pre requisites for successful testing. Key factors for a successful test environment management: Test Environment is a necessary pre-requisite for successful testing and many organizations are setting up a dedicated service to manage the test environments effectively. The key factors for a successful test environment management are summarized below: 1. Efficient Resource Management 2. Strategic Planning and Robust Program Governance 3. Process Optimization and Operations excellence 4. Automation 1) Efficient Resource Management a) Complete Ownership – Establishing a dedicated Enterprise Test Environment Management team To transform to a best – in – class test environment model the first step is to establish a dedicated test environment team at the enterprise level. This team will serve as the single point of contact for all test environment related activities and will be held accountable for enterprise Test Environment Management as a fully functional and mature enterprise service. Challenges faced in distributed Test Environment Management model can be overcome by adopting the Test Environment Management Enterprise model with a few initial difficulties. Once these difficulties have been attended to with a perfect transformation plan, then the rest of the operational level challenges can be addressed quickly. b) Speaking the Same Language - Maintaining common terminology at enterprise level. Another essential aspect of best in class Test Environment Management is maintaining the same terminology at the

enterprise level. Most of the times people create and use their own words which would lead to misapprehension on test environment issues. Eventually this leads to a delay in resolution and impacts the overall quality of test environment. The Program Governance team will have to define the terminology and ensures that the team adheres to it. Standardization leads to better understanding and efficiency in collection and dissemination of information. c) Sharing the Wisdom - Knowledge Management Knowledge management implementation at the enterprise level will be a challenge when there is no centralized test environment team. The program governance team will have to plan and implement a well-structured knowledge base for Test Environment Management and must ensure that all information is available to end users and stakeholders. The test environment team will have to develop and maintain a library for all Test Environment Management activities, including test environment solution documents, schedules, test environment plans, status reports, recovery procedures, incident management and others as defined by the governance and audit requirements 2) Strategic Planning and Robust Program Governance a) Improving viability - Defining the Test environment strategy Given the test environment challenges most organizations face today, it has become essential for an organization to define the test environment strategy at enterprise level. The strategy document serves as a master reference manuscript for the organization to implement Test Environment Management as a fully functional service and to evolve release (or project) level test environment strategy. While defining the test environment strategy, it is important to be aligned with enterprise test strategy, IT infrastructure strategy and release pattern. The strategy should be directed and governed by the 'Program Governance Office' by working closely with all relevant stakeholders. For better rationale, alignment and control, another key aspect that organizations would have to keep in mind whilst defining their test environment strategy would be to build and manage their End - to - End test environment rather than testing applications in fragmented environments. b) Creating a Perimeter – Defining the Test Environment lifecycle and its scope At its highest level, Test Environment Management contains four activities Design, Build, Manage, and Refresh & Reuse. Organizations have realized that each and every activity plays a critical role and ensures the availability of the right test environment at the right time. The Enterprise Architect team designs the test environment based on the production environment blueprint and future test requirements. Designing and building a new test environment exactly like production would not be feasible for the Enterprise Architect team given the amount of burden it would have on the overall infrastructure and operations costs. All the stakeholders would have to discuss and take a judicious call on this activity. The support team performs day to day operational activities and aims at maximizing the overall value of the quality by ensuring maximum availability of test environments to the testing team. Test environment support team should always follow the process standards and look for continuous improvements. c) The Good, The Better and The Best – Program Governance & Continuous Improvement The success of an enterprise level test environment is based on how robust the program governance model is. The Governance team will have to understand the business requirement at the early stage of the release and plan accordingly. An effective program governance team will understand the business requirement better and align

the test phases with test environment proactively. The key activities for program governance team are to - 3) Process Optimization and Operations Excellence a) Consolidation, Simplification and Reuse – Test Environment Assets Utilization The traditional approach of adding more and more hardware and software without exploiting the existing capacity and requirement burdens an organization with both cost and operational issues. Consolidating environment estate is an exercise which consists of working information of all assets, owners, contact details, vendor details, physical location details, etc This is a tedious exercise and till date one of the biggest challenges at the enterprise level. However this is a 'one-off' activity, after which test environment team would have to perform the review periodically. After consolidating the assets, the organization will have to focus on creating application constellation based on patterns and should know how to simplify the test environment landscape. Sharing test environments and ensuring that resources, skills knowledge and assets are reused will minimize the operations cost. b) Improving efficiency – Process optimization and standardization In most cases, the reason for a poor quality product is because the Test Environment Management wasn't given the highest priority. Another important reason for poor output is due to the undefined process that the Test Environment Management goes through. This is unlike the Production Environment where processes are defined and thus implemented efficiently. To efficiently manage the test environments, it has become necessary to define, implement and adhere to the best practices. Few organizations have reached the highest level of maturity by replicating best practices adopted from production environments and measuring the performance of the Test Environment Management service by using metrics and enforcing SLAs for continuous improvements and better accountability. c) Thinking Ahead – Demand Forecasting and Capacity Planning Demand forecasting and capacity planning are big challenges for most organizations since there is no visibility on the test environment estate and the availability of environment usage trends. In most cases, environment unavailability is due to poor or no assessment on demand forecasting and capacity planning. The central program governance team will have to take ownership and assist the other stakeholders by providing the right information like - d) Working together – Orchestration through Collaboration In many organizations, cross team collaboration is the biggest challenge that affects the on time environment provisioning, incident resolution and results in multiple environmental conflicts and delays. The test environment team will have to maintain skilled resources to orchestrate test environment activities by collaborating with other teams and business units. The support team has to - e) An Early Bird Catches the Worm – Involve the Test Environment Team early on The test environment team has to be involved at the earliest stage of the project and would have to collect the detailed requirements. Otherwise lack of time, incomplete requirements and deficiency of owners would lead to the collapse of the team and thereby creating a chaotic situation. f) The Right Test Data at The Right time – Managing Test Data Test data management is an essential activity and occupies a vital role in managing test environments successfully. At an enterprise level, test data requests are not always limited to component or platform level. In most cases, the test data is a necessary requirement for E – 2 – E test case planning and generation. In such situations, fragmented test data cannot fulfill the test data requests. The centralized test data management team

should have specialists who are proficient in security compliance, business domain, database and overall knowledge on test scenarios. These specialists should also have the expertise in generating test data as per test requirements. The key functionalities of a successful test data management are to - 4) Automation a) Minimizing Dependencies – Automating Test Environment Activities. Most of the activities across test environment lifecycle can be automated by using a single tool or through multiple tools. Well proven tools are available for auto provisioning, auto deployments and test data management. To improve the turnaround time for test environment provisioning, few organizations have put their money on automation strategies like Cloud technology and Service Virtualization. By automating the provisioning process on cloud, the organization can fulfill ad-hoc environment requests and ensure 'on – time' test environment availability with lesser cost and effort. A new organizations have succeeded in automating day to day Test Environment Management activities like test environment booking, incident management, asset management, knowledgebase management and service request fulfillment. Automation of design, build, manage and refresh test environments is a key enabler for the organization to manage the test environments effectively. Conclusion Having understood the challenges of test environment, it becomes essential for an organization to establish a best in class practice at the enterprise level; thus marking the onset of the transformation. The recommendations mentioned earlier will ensure that the organization achieves an elegant Test Environment Management model and in the long run, will enhance quality. It guarantees effective utilization of assets and resources with the availability of the right test environment at the right time. This will not only help in reducing the cost to operations but also improve quality. As organizations embark on a journey of establishing a dedicated test environment management service; they will have to perform due-diligence and follow the above recommendation in a phased manner. To ensure success, organizations will have to invest more on test environments so as to implement the best practices and automate activities. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Dynamic Risk Based Testing

----- Arcticle source ----- https://www.wipro.com/cloud/dynamic-risk-based-testing/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Dynamic Risk Based Testing October | 2023 Risk-Based Testing (RBT) is a universal approach used to determine the right and optimal set of test cases that should be executed while assuring maximum coverage. It is observed that the existing approaches towards RBT define the risks in a static manner, i.e. the current approach does not take into consideration the factor of re-assessment of risk on a periodic basis, influenced by real-time test results. There has been

widespread acknowledgement, within the testing landscape, towards the necessity for re-assessment of the risk factor. This is based on recent observations that highlight the point that the quality of different modules of an application under development, tend to change frequently due to several variables. Hence during the course of testing, the risk needs to be reassessed on a frequent basis, based on the actual results of the test cases being executed. The current approaches lack efficient techniques to calculate risk dynamically, reassign the risk level, and execute the optimal set of test cases for best results. This white paper focuses on an alternative approach to Risk-Based Testing, based on dynamic reassessment of risk and its benefits. Industry Trend There is a paradigm shift in terms of expectation on the value of Testing and it is a common trend that Testing/Quality Assurance is now shifting towards Business Assurance. Testing is seen to have a direct impact on the brand value, market share and topline of organizations. Operationally this leads to completion of projects within a much shorter time and also at an optimal cost. From a service provider's perspective, the questions customers ask are: All these queries point towards performing the right amount of testing, at an optimal cost and high levels of quality, and enable a shift towards a business assurance dimension. This trend has necessitated the need to re-engineer the focus towards optimization, which should aim at: enhancing traditional approaches like Risk-Based Testing to address varying application quality and stability and a statistical approach aligned such as to achieve cycle-time reduction. The end outcome is to assure service/business resilience. Recommended Approach The concept considers two key parameters for assessing the risk. The first factor is the business impact, which is based on criticality of a component or module in the application, and identified based on application-specific knowledge. The second factor is the probability of failure that is continuously reassessed based on the actual test results. There are three identified levels for each of these factors; high, medium and low, thereby resulting in nine different riskprofiles. A test case can be associated with any of these risk profiles based on the weightage for each of these factors. The risk appetite would vary across different applications and modules, depending upon the project phase or type of release. Definition of this varying risk appetite is handled via a rule-based approach. This approach advocates specification of the optimization levels associated to each of the nine risk profiles. This definition is considered during the selection of a test suite for the execution phase. In addition to this, depending on the pass rate of high risk profile test cases during execution, the decision on when to conclude the test execution phase can be taken, again through a configurable rule-based approach depending on the risk appetite. Methodology 1. Assess the Business Impact: Assessment of business impact of a test case on the application under scrutiny can be done based on defined guidelines and the knowledge of the application landscape. This factor once defined for a particular test case is usually static. 2. Compute the Failure Probability: Assessment of probability of failure is done by analyzing the history of test execution results. Based on the extent of actual failures observed, the failure probability can be assessed. This probability is re-assessed periodically so that the influence of actual quality, revealed via the failures, gets reflected in concurrency of the risk of a particular test case. 3. Identify the Risk Profile of the test case: Based on the level of the above two factors, a test case can be associated with nine different risk

profiles as depicted in the table below: Fig: Test cases can be categorized under a risk pr Of these profiles, profile 6 carries the highest risk and profile 4 carries the least risk. 4. Select optimal set of test cases: An application release is usually associated with changes to existing test requirements. The choice of test cases for the test suite should be based on three key parameters: The above three parameters can be associated with different levels as shown in the table below: The extent of testing / the set of test cases, that are to be chosen for a particular requirement is dependent on a combination of levels of the above three parameters. Based on the risk appetite and the combination of the levels of the above three parameters, a set of rules shall be defined, which would be referred to for selecting the optimal set of test cases. A sample risk table is shown below: Depending on the risk appetite, the rules table can be included to Select or Eliminate more of lower risk profile test cases, thereby optimizing the set of test cases that would be selected for execution. 5. Dynamically Decide Test Completion: After choosing an optimal test suite for execution, a second level of optimization can be decided at run time based on the actual quality of the build being tested. This can be defined through a set of rules that would enable dynamic decision-making on test completion. A sample set of rules is shown in the table below: Fig: A system for dynamic risk-based testing The system would include: Conclusion This approach provides a realistic method for dynamic risk assessment. Instead of an approach of risk identification using the two components of risk i.e. business impact and probability of failure as intuitive, applying a deterministic approach to probability of failure makes the risk level concurrent and well-aligned to the quality of the application being tested at any point of time. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Reimagining Quality Assurance for the Digital Enterprise

----- Arcticle source ----- https://www.wipro.com/cloud/reimagining-quality-assurance-for-the-digital-enterprise/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Re-imagining Quality Assurance for the Digital Enterprise October | 2023 Consumerization and digital adoption are leading to polarization of Enterprise IT strategy. Today systems of engagement are transforming faster than ever with speed and experience as the driving factors. However, the slow evolution of systems of record are weighing down this transformation Ramesh Pai, Director and Head of Wipro's Digital Assurance practice, talks about how Quality is helping bridge this gap. Traditionally considered as the weakest (read slowest) link in a software development process, QA today is leading from the front to enable Digital Transformation.

Q: Is Testing really dead as some say it is? A: Testing in the conventional sense is dead, but addressing quality in a Software Development Life Cycle (SDLC) today (for digital enterprises) requires an engineering approach rather than a Testing approach. Addressing quality today is about enabling quality development rather than validating a work product post-facto. It starts with automating Tests and is in parallel to development. It is also about validating Application Program Interfaces (APIs) for function and User Interfaces (UIs) for form factors as well as time to market, as much as about quality itself. As a corollary – Testers in their traditional form with traditional skills are dead too. An engineering approach in digital IT requires Testing aptitude to be married with development skills. Hence, the need for Software Development Engineer in Test (SDET) rather than a Tester. Q: What is changing in this new approach to quality? A: The asks from QA are changing. In traditional QA, time (whatever time remains after development is done), cost (as low as possible) and quality (got to be perfect out of the door) were the key asks. Whereas today, digital channels are enabling enterprises to reach end consumers faster than ever with innovative products and services with experience at the core. Hence in Digital QA, Speed (Test as you build or even before), Experience (for personalized and omni-channel experience) and iterative development (building a Minimum Viable Product) is what both IT and business leaders are striving for. Test Automation is moving beyond regression to enable parallel development via progressiveTest automation approaches. Behavioral Development Driven (BDD) methodology is one such approach where user expectation of behavior in natural language constructs is the premise for automated Testing. Enterprises are embracing more and more Open Source tools, not-yet-established frameworks and are open to experimentation more than ever and the skill requirements are changing too. Q: By virtue of its very nature or where it falls in the lifecycle, isn't it counter intuitive to think of QA as a function that enables speed or influences experience or effectively delivers Minimum Viable Products (MVP)? A: It was, but not in today's digital world. Digital products and services are evolving at a rapid pace which has led to consumers demanding these services with least possible delay. Shorter releases have meant that the priority of quality assurance has moved towards Test-as-you-build, with customer experience as the key. In Continuous Testing approaches, Tests are automated before products are developed and then integrated with Continuous Integration pipelines. New age tools and accelerators like EggPlant, JBehave, Appium, SeeTest etc., enable Tests right at the development stage and crowd platforms (internal & external) enable early user experience feedback. All these are enabling QA to lead the Digital Transformation from the front rather than being the slowest link in the SDLC chain as in the past. Q: The above mentioned trends are certainly true about greenfield digital development projects, but how do you support a large part of Enterprise IT that is still migrating from legacy architectures and infrastructure? A: Digital Transformation today is not just about overhauling the UI, but about transforming the entire ecosystem, including infra (cloud) and software stacks (as a service). Quality Assurance, thus, is about supporting such transitions and is achieved through techniques like virtualization and, in many cases, SDETs, building custom tools for validation. Remember, engineering is an approach to QA for today's digital enterprises. Q: What benefits do large enterprises draw from QA initiatives in the digital age? A: With competition at an all-time high,

digital age enterprises strive for faster time-to-market with enhanced user experience. The end result: higher conversion rates and customer loyalty highlighted by a positive Net Promoter Score (NPS). These benefits are derived today by reducing cycle time through QA approach like Continuous Testing. This approach also provides much-needed flexibility and enhanced user experience by incorporating user feedback early in the iterative development. This eventually results in cost savings through early bug fixes. It is estimated that by 2020, customer experience will overtake price and product as the key brand differentiator. The ideal way forward is a user-centric and Continuous Testing approach for QA in digital. To know more about Quality Assurance, write to digital.contact@wipro.com The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified.
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Cut the Clutter, Join the Big Data Wellness Club

----- Arcticle source ----- https://www.wipro.com/cloud/cut-the-clutter-join-the-big-data-wellness-club/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Cut the Clutter, Join the Big Data Wellness Club FIs, Retailers aiming to derive business value from Big Data need to ensure data correctness, Srinivasagopalan Venkataraman timeliness and completenes October | 2023 John Doe*, Vice President of Fraud Operations of a leading financial services institution, was disappointed with the latest Fraud Resolution report. The effort metrics for detection of fraudulent claims did not show any improvement from the previous report despite assurances from the Analytics team that introduction of Big Data technologies would help reduce these metrics by at least 50%. For an organization that had invested heavily in Big Data technologies, the impact on ROI seemed minimal. To find fixes, John called in a meeting with Rani*, Program Manager of the Analytics program. During the tempestuous meeting that followed, John learned that the Analytics team had not been able to proceed past the pilot stage of the project due to a number of data-related issues. Rani spoke about a whole list of challenges that were preventing her team from achieving their goals. The challenges primarily stemmed from lack of data quality from the source systems, causing issues with data processing. This included non-compliant, inconsistent, inaccurate and untimely data from an unmanageable plethora of sources that ranged from databases to large flat files. Rani's team tried to find a strategy to overcome these difficulties since the issues were getting detected late in the data lifecycle.   The one thing that was now clear was that the team needed a data assurance strategy to ensure the quality of data that was being pulled into the system was as close to the source as possible.

The assurance strategy needed to be comprehensive as well as easy to implement, especially given the volume and variety of data that needed to be tested. Data wellness is critical throughout the Data Analytics lifecycle. However, to ensure this wellness, issues with data such as completeness, correctness, timeliness, etc. need to be captured as close to the source of the data as possible. Ensuring data wellness requires an assurance process based on a Test strategy that expedites the detection and weeding out of bad data in the lifecycle. The Test strategy should also enable the enterprise to dissociate itself from the technology aspect and focus solely on creating value. This would require a methodology that accurately identifies, verifies and validates all the key activities in the data lifecycle. For maximum effectiveness, the methodology would need to be measurable, repeatable and should address various technical and process-related challenges. Retailers, too, are working on ways to wiggle out of data messiness as they cut through the clutter of business complexities. The Chief Data Officer of a leading multi-national retailer, Lucie Hall*, was at a loss to explain to the CEO as to why her team was again not going to deliver the bi-weekly Consumer Behavior Report required by Strategy, and Sales and Marketing teams worldwide. Despite a fruitful recruiting drive where the company had hired the best data scientists and done a successful data integration with various social media platforms, her team could not release the report on time. Lucie was constantly reminded that the company management had spared no expense in setting up a world class infrastructure and the team, and thus expected to see some quick results. As Lucie took stock of the situation, she realized the first key challenge was the exceedingly long time and effort required to ensure data quality and value throughout the data processing lifecycle. Although the team had integrated every data source correctly, the validation of the data at each stage was still performed manually due to the large number of tools used for a particular task The other challenge was the time the team spent in creating, executing and maintaining a suite of scripts and algorithms that did not integrate well with the tools used at various stages of the lifecycle. Furthermore, there was a lack of uniformity in the design and creation of the various scripts and algorithms used to run the entire system, which became a nightmare for the team to manage. Lucie realized that a lack of a holistic assurance approach to data lifecycle management was at the root of all problems. The assurance process required elucidation of an effective Testing strategy to Test both the data and the technology on which work was performed. This required the inception of a robust automation strategy that stitched together the various tools and workflows that were performed by the team. This would not only eliminate inefficiencies within the team, but also would expedite the execution of the report building process. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Digitized Platform for

One View of Quality

Digitized Platform for One View of Quality October | 2023 When it comes to things you can do online, the world is your oyster. Over the past decade, we have witnessed the dramatic emergence of the online channel. Amongst industries, retailers have capitalized on this the most - one can purchase almost any everyday item such as clothes, electronics, software products, or even food at the click of a button. But what about IT services like Quality Assurance (QA)? Can these be productized and sold online as well? Careful analysis of the market reveals that that there is indeed a business need today that supports this case. However, one would think that to deliver QA-as-a-service, the existing e-tailing/ecommerce models would need to be customized or tweaked to a high degree. However, not really. Let's take a look at what the basic requirements of the innovative new channel would be: For QA, a platform with the above features would be extremely powerful and address a number of unfulfilled needs, in addition to the above. By serving as a gateway for a unified view of quality across the engagement, it would address the most important need of large QA engagements today - transparency. In addition, it would define and digitize the entire QA process/ workflow right from onboarding of new services to execution and defined closure. Let's look at some of the major components or modules that would form the key pillars of the proposed system. To summarize, a digitized platform serving as a unified governance platform providing a 360-degree view of the entire QA engagement will immensely benefit customers by enabling better decision making. Aditya Tanwar - Consultant, Testing Advisory Services (TAS), Wipro, Ltd. Aditya Tanwar is a Consultant with Test Advisory Services (TAS) group in Wipro. He has an experience of nearly 4 years in different areas from testing advisory and test solutions consulting to development and support. After completing his Engineering in IT, Aditya worked with Accenture for some time and then went on to do his MBA in Marketing and Operations. Aditya is an avid Movie buff with his favorite genre being SciFi and Thriller. Aditya also likes to read and listen to music in his free time. Chink in the armor While smartphones with sensors have made biometric technology more accessible and mainstream, giving passwords a run for their money, the transition does come with its share of challenges. One such challenge is the security risk associated with data leakages. The uniqueness and the immutable nature of biometric data, which is its USP, can also turn out to be its biggest Achilles' heel. A stolen password can always be changed by the user whereas a user's biometric data is permanently compromised. There have been many instances where the fingerprint (widely accepted biometric option) data has been either replicated or stolen by hackers. "The 'non-perishable' nature of certain biometrics is driving serious concern in security circles," says CEB

Executive Advisor, Jason Malo, "While biometrics are easier to use than passwords, when they are compromised they cannot satisfy the security role for which they were implemented." The Iris recognition technology is, thus, becoming more widely accepted and may soon replace fingerprints since it is not only cheaper to implement but also difficult to replicate, and, thereby, more secure. The other challenge relates to the overall customer experience and makes it as seamless as possible across all mobile devices. For instance, not too many smartphones offer fingerprint sensors. If banks can offer both fingerprint and the facial recognition options, customers can use a wider range of devices. In fact, smartphones with as little as a 1 mega-pixel front-facing camera can offer the facial recognition option and this covers probably the entire smartphone market. Yet another challenge is the need for standardization of biometric data when multiple vendors are involved in the process. Often, banks need to decide whether to offer uni-factor biometric options or go for multi-factor authentication (refer figure 2). The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified.
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Assuring Quality for

Internet of Things

----- Arcticle source ----- https://www.wipro.com/cloud/assuring-quality-for-internet-of-things/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Assuring Quality for Internet of Things October | 2023 Internet of things (IoT) has become one of the most frequently used terms in the IT industry today; but what does IoT really mean? The answer to this question is not set in stone and everybody has a different view. Personally, I define the term IoT as smart objects that can interact and communicate with each other via the internet. The object here can range from the thermostat in our houses to a bedroom lamp, from a car to a mobile phone and even the egg tray in our refrigerators. Any physical object that you come across in your day to day life can be injected with intelligence and be made part of a smart, self-aware eco system by connecting it to the internet. So what is IoT capable of? We can be extremely imaginative since the possibilities are limitless. On the flipside, implementation does come at a high cost and a ROI is never promised. Why Quality Assurance (QA) is critical for IoT based systems? In an IoT based system, any small malfunction can have unfavorable or even disastrous outcomes such as security lapses, physical accidents, unexpected outcomes and non-optimal use of resources. And therefore, it is very critical to test for service availability under various conditions as well for optimal performance. And to do, enterprises should focus on the essential components of a QA strategy for an IoT based system. The simplest

architecture for any IoT based system will have the following functionalities: A Quality Engineering (QE) team will be required to certify the system against requirements which includes both flavors, that is, functional as well as non-functional specifications. Along with these aspects, IoT Assurance requires certain other factors to be considered that are usually absent from the conventional Application Testing agenda: What are the best practices for executing this strategy effectively? Sudheer Mohan - Director And Head, Mobility & Cloud Quality Engineering, Testing Services, Wipro, Ltd. Sudheer has 14 years of experience in Wireless Technologies & Mobility and is currently the Practice Head & Director for Wipro's Mobility & Cloud Quality Engineering Practice. He is responsible for Business growth, Delivery, Operations and Customer Relationship management. He has setup a Mobility Test Centre of Excellence which has developed a gamut of "state of the art" automation solutions specific to Smart Phone applications, Video Quality, Android Platform and Chipset Validation. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Demystifying Testing in the Agile and DevOps World - Part 1

----- Arcticle source ----- https://www.wipro.com/cloud/demystifying-testing-in-the-agile-and-devops-world-part-1/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content Demystifying Testing in the Agile and DevOps World - Part 1 October | 2023 The world of Information Technology (IT) today is flooded with acronyms and terminologies which add to the enigma around our already mysterious sphere of work - 'Software'. If you have tried explaining 'Software' to a farmer as I attempted once, you might empathize with this sentiment. Quality Assurance (QA) and its subset - Testing - encounters similar buzz words doing the rounds in every industry domain. If you ask me, 'Agile' and 'DevOps' are two such confounding words in QA currently. In this post, I will attempt to address some key questions related to these two topics with respect to QA and highlight the value-add they deliver to the software life-cycle. 'Faster, cheaper and better' - factors referred to as Time to Market, Cost and Quality in the industry - enjoy no letup in today's competitive business landscape. In the software leg of this race between organizations, the benefits gained via collaboration, continuity and agility in QA are emerging as clear factors for differentiation. Most enterprises today, aim to push their products out quicker than their competition, and more consistently into the market; being unable to do so could easily harm, or even kill a company and its products. The Agile methodology aims to address this concern. DevOps - a concept which originated in an Agile environment - with its two key components - 'Continuous Integration and

Continuous Delivery/Deployment (CICD)', attempts to take agile processes and best practices to the next level by minimizing time to market and optimizing cost and quality. Here is a brief context of the history and market for Agile & DevOps before looking at their impact on QA: Here are some key aspects: Agile and DevOps have impacted all teams in the software lifecycle, including QA. Testing is viewed as one of the main levers for reducing time to market within the Agile and DevOps world. The ask for QA in this new approach is greater agility (reflected in the agile term 'test velocity'), continuity (reflected in the DevOps terms 'Continuous Testing' and 'Continuous Monitoring') and collaboration with developers, operations staff, release engineers, system admins etc. In addition all stakeholders need to put on their testing hat more frequently and continuously to ensure success in this approach. The key challenges for QA in this world are how to deliver value while testing in these shorter timeframes how to manage environment challenges and to how to shift left (predictive testing with developers) and shift right (testing with Ops and real time monitoring). The traditional QA TCoE is evolving into a distributed (as against co-located), co-managed (as against pure managed services by vendor), collaborative (with all teams in SDLC interacting) and hybrid (agile along with traditional waterfall) model. Is a separate role for performing testing justified? Very much so, when we look at the role of person who is primarily a tester, though his/her basic responsibilities remain the same, the requirements in terms of skillsets have increased. Testers need to better understand development, business operations and customer expectations. Following an Agile and DevOps approach does not mean that a tester is no longer required. As specified above, every team in the lifecycle is required to perform testing due to the continuous nature of integration and delivery. In addition to this, the QA cycle which features 'System Testing' (among other forms of dedicated testing), is still very much required. Once the build is certified in the QA environment, it can be deployed into production (Additional delivery to Acceptance and Staging environments for tests by users and Ops teams respectively are advisable however). Testers in this world need to be able to understand the application, prioritize their testing using predictive analytics where necessary, understand tools including virtualization tools better, use automation effectively and enable continuous delivery and strive to assure quality beyond testing. This explains the emergence of the 'Software development engineer tester' (SDET) or Developer-tester role in some organizations. In this world the roles for testing include core testers, developer testers (with skills like 'test- driven development' (TDD), and 'behavior-driven development' (BDD)), automation testers, specialized (performance, security, data and infra) testers, operations testers and business user testers assuring Quality throughout the Agile and DevOps lifecycle. Will Manual Testing die as fallout? Due to the nature of integration, continuity and agility involved in the Agile and DevOps life-cycle, repeatability of tests is an expected fallout, and that coupled with shorter timeframes render testing more towards automation. Right from unit tests to integrated build, smoke, acceptance, system and regression tests etc., automating the tests helps teams in each stage to ensure benefits in terms of Cost, time and quality, helps detect defects earlier in the cycle and gives greater control over testing. Shift left techniques for automation testing such as TDD, BDD, API testing are emerging as key levers for agile delivery. This however does not mean manual testing has no role in this

model. Exploratory manual testing is still required at every stage of the Agile and DevOps lifecycle and by every team to uncover potential issues. In the System Test phase, traditional manual tests as earlier, are the basis on which functional and non - functional automated tests are decided and executed. Similarly, acceptance tests run by users are still primarily performed in a manual manner, as earlier. The answers to these questions are not set in stone and are evolving, across organizations, even as you read this blog. In my next post I will touch upon the various approaches to testing in Agile and DevOps adopted by organizations around the world today. Srinivas Abhinav Raj- Consultant, Testing Advisory Services (TAS), Wipro Limited Srinivas Abhinav Raj is a Consultant from the Test Advisory Services (TAS) group in Wipro. He has an experience of nearly thirteen years in different areas from testing to business analysis and development. After completing his B.E. in Computer Science from the National Institute of Engineering in Mysore, he began his career with a campus placement in Infosys Technologies Ltd., where he worked for the Independent Validation Services group for more than three years, and then moved on to pursue his Masters in Information Systems Management from Carnegie Mellon University, U.S.A. Post this, he took up another campus placement in New York with an AXA group company Alliance Bernstein L.P., Where he worked till last year in various roles including Business Analyst, Developer and Senior Test Lead. Abhinav began his journey in Wipro with the TAS group in December 2014. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Assuring a Mobile Future – Part II

----- Arcticle source ----- https://www.wipro.com/cloud/assuring-a-mobile-future-part-ii/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Assuring a mobile future – Part II October | 2023 In my previous post, I discussed the industry trends impacting an organization's mobile strategy and the need for Quality Assurance (QA). In this post, I will cover what would be the ideal steps required to be taken to ensure a holistic mobility assurance strategy. As in the case with web applications, mobile application testing also started out in a manual manner. But gradually, as their complexity increased, so has the associated QA strategy. Following are the key points to be kept in mind to ensure success: Large Automation Footprint Test automation should be an integral part of a mobility QA certification strategy and is no longer a novelty but a must have. It should be initiated in the life-cycle early and encompass as much functional testing as possible. With advanced technological capabilities, even non-functional QA tasks could be automated to an optimum extent. The time saved through automation also allows test engineers to carry out additional value added tasks such as exploratory and ad-hoc testing, in-depth analysis on social media feedback from reviews, app

store comments, etc. This helps to better understand the customer's ailments and to accurately map those to the associated defects. So how does one start their automation journey? While some enterprises start with identifying the appropriate automation tool, the right way is to first build the automated testing vision and then selecting tools that best fit into the strategy. Ideally, the tool should have the following features: Continuous Integration & Continuous Deployment (CI/CD) As a testing programmer matures, best practices should be implemented to maximize return on investment and to increase productivity. In the case of mobile programmes, "do it right first time" is vital for success. This can best be achieved via Continuous Integration & Continuous Delivery (CI/CD) in a DevOps environment. Most enterprises in partnership with leading, technically sound, independent QA organizations orchestrate mobile projects via DevOps from day one. This enables the project to leverage powerful toolchain options the service provider has to offer. In summary, the development environment should integrate with CI/CD, automation tools, test environment, device clusters and test management systems to mature at a rapid rate and reap maximum benefits. Non-Functional Testing This is one of the most significant aspects of Mobility Testing. Enterprises that are worried about poor app store ratings (also read as poor sales/revenue from mobile channel) should restructure their non-functional testing strategy to address this concern. From our experience, we observed the following results from an in depth analysis of app store review comments: A holistic non-functional testing strategy for mobile should ensure that the following aspects are taken into account: Device Conditions Successful execution of the strategy would require a good mix of experienced engineers, well defined test cases and an appropriate tool set. A thorough understanding of the telecom landscape also helps testers develop the most appropriate test cases which form the building block of any engagement. Developer Skills for Test Engineers A majority of testing activities today are being automated; either in part or total. This requires a mobile application tester to evolve into a mobile quality engineer who has: Organizations with a strong talent pool of mobile quality engineers have the ability to develop custom mobile specific frameworks and are able to tap into the complete potential that off the shelf/open source tools have to offer. Sudheer Mohan - Director And Head, Mobility & Cloud Quality Engineering, Testing Services, Wipro, Ltd. Sudheer has 14 years of experience in Wireless Technologies & Mobility and is currently the Practice Head & Director for Wipro's Mobility & Cloud Quality Engineering Practice. He is responsible for Business growth, Delivery, Operations and Customer Relationship management. He has setup a Mobility Test Centre of Excellence which has developed a gamut of "state of the art" automation solutions specific to Smart Phone applications, Video Quality, Android Platform and Chipset Validation. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

Bots Offer 'Self-Healing' Touch to Correct Quality Errors

About the Author Related Articles Contact Wipro Please fill the required details to access the content Bots Offer 'Self-Healing' Touch to Correct Quality Errors October | 2023 Aditya, a Test engineer who is working on a customer experience-focused mobile app, finds that the automation scripts written to Test the new login screens and the Test automation framework have failed overnight. Aditya, who works for a leading retailer in the US, takes the help of a Test automation bot. The bot – an autonomous program – that underlies the automation framework put together by developers and Testers has already taken screenshots of the failed logins. It has also recorded key environment and application parameters at the time of the failure and mailed the location of these files to Aditya for review. Upon further examination, Aditya finds there is a bug in the application. He makes the required entries into the organization's defect management tool in natural language. A defect management bot analyses Aditya's findings and intervenes to inform him that another such problem may have already been detected earlier. Based on past actions, the bot also provides Aditya a list of potential resolutions that mirror this error and also offers "self-healing" options to resolve the issue. Some of the options provided to Aditya are: unauthorized user names and passwords used by the scripts, critical Test Data services not running at the time of the Test execution, the Web server going down due to excessive traffic. After evaluating the options, Aditya realizes the problem at hand was similar to an earlier one where two important Test data services required for execution of his scripts were not running. He clicks on the "fix" button next to the solution provided and waits for the Defect Management bot to communicate with the required Infrastructure Resolution bot to bring back the stalled services. Once the services are brought back, the Infrastructure Resolution bot passes along the success message to the Defect Management bot, which then informs him about the resolution of the issue. The bot then prompts the user to check whether the self-healing helped resolve the problem along with questions around what exactly he was doing. The Test Engineer re-runs the scripts and finds they are working. He then confirms the same to the Defect Management bot and provides information to the bot on what scripts he was running along with what actions led to the detection of the error. The Defect Management bot cross references the new information along with the "self-healing" solution to "learn" about the current problem and indexes it for future use. Any future entries that would be similar to this issue would be presented with this set of information and resolution. Delivering quality @ speed The scenario above is a great example of the marriage between man and machine through Cognitive Process Automation (CPA), Analytics, Artificial Intelligence (AI) and Machine Learning (ML) in the field of Quality Assurance (QA). We can see that the human was required only to make key decisions and fill in the gaps/intelligence required to resolve a real world

problem. Organizations across the board – be it retailers, banks, insurance providers, utilities or energy companies – are pulling out all stops to embark on the Digital journey and embrace software development. However, many of these organizations seem to lack the infrastructure (people, process and technology) needed to ensure that the outcome of Digital Transformation programs, such as omni channel initiatives (Web/mobile/connected device apps), are successful. Often organizations find that they are saddled with sluggish software development programs that are plagued with cost and time overruns and low quality products. These products have far-reaching consequences for organizations that require substantial outflows to rectify. For example, a large retailer recently spent a great deal of time and effort to correct quality issues of their mobile app which was making them lose out in the mobile shopping race. New beginnings for QA Typically, organizations have attempted to fix these issues by throwing more money and bodies at the problem. This results in the various project bulges in terms of cost and efforts. However, the remedy for this issue is to be smart about how the entire process is engineered. Although, many organizations today have embraced Agile and the use of practices such as DevOps, QA is an area that is often neglected. Although, software Testing,as it was done over the past two decades is possibly on its last legs, the practice of continuous validation in the software development process needs to be done more often. The scenario described above is one example of what can be done to provide the velocity and structure required to ensure quality throughout the software development process. It sure is time to brace for new beginnings in Quality Assurance. The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified.
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Digital Assurance for the real World

----- Arcticle source ----- https://www.wipro.com/cloud/digital-assurance-for-the-real-world/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Digital Assurance for the Real World October | 2023 1.0 Abstract Digital is the new Black. It seems to have taken over our lives, both personal and professional - smartphones, tablets, eBooks, digital newspapers, digital storefronts, doctors tweeting from operation theatres, digital ecosystems in our living rooms, digital notes, mobile commerce, digital media libraries, digital payments and even digital supply chains! This transformation has been set in motion by a greater adoption of the internet by the general public on a global scale, which has forced organizations to develop e-commerce strategies and incorporate the multi-channel approach into their business models. The number of internet users has increased dramatically over the past two decades. From 16 million

internet users which accounted for 0.4% of world population in 1993, the figure has increased to over 2.7 billion people in 2013 which corresponds to 39% of the world's population. Mobile-broadband subscriptions have climbed from 268 million in 2007 to 2.1 billion in 2013. This reflects an average annual growth rate of 40%, making mobile broadband the most dynamic ICT (Information and communication technology) market1 Organizations are fast aligning themselves to keep pace with this transformation. From Digital Lines of Businesses to optimize product service/development & mobile first product strategies, to Digital marketing, every function in the organization is getting a makeover in an attempt to reach out to today's connected consumer. Assurance though is still being looked at in silos with emphasis on "testing" an application or a channel. Testing for new world realities continues to be "best-effort" and at the mercy of ever shrinking IT budgets, resulting in inconsistent customer experience across channels, loss of market, and negative brand perception. What organizations need to realize is that a holistic assurance strategy not only ensures successful digital transformation but can also help in optimizing IT budgets. This whitepaper will walk you through the key considerations for such a strategy and will help you answer the following questions - What are the various points of assurance to be considered in a digital strategy? What are the enablers you can use for leveraging process efficiencies? Which tools and strategies should be employed to validate the technology used? 2.0 Points of Assurance - Challenges of a Digital Organization vs Needs of a Connected Consumer Digital has evolved from being just another channel to becoming "the preferred" channel for both consumers and organizations. The intersection of the needs of today's Digital Consumer and challenges for a Digital organization throws up common Points of Assurance (PoA) to be considered Figure 1 Digital Points of Assurance To better understand Points of Assurance, let us consider a real world scenario of a user looking to buy a product on the web: 3.0 Points of Assurance – Key Considerations Each of the above aspects has its own nuances to be considered for a robust digital assurance strategy. Here are few pointers on how to approach each of these and also identify opportunities to optimize: 3.1 Omni - channel Assurance Digital assurance strategy should focus on optimizing functional testing across channels. It is more likely to mimic a user's behavior in today's world where a customer browses for a product on the web, adds to a cart on a mobile device, completes the purchase on the web again and picks up the product in the store. An end-to-end regression strategy with test scenarios spread across channels (and not repeat regression for each channel) can save upto 30% of efforts and resembles user behavior closely. Remember, consolidating testing across channels in not Omni-channel testing. Designing a test strategy with a view of all the channels and real user behavior is! 3.1.1 Users on multiple devices With proliferation of devices, a new category seems to be originating every now and then. From phone to tablets to phablets to ultra-books, every new category brings with it the nuances of ensuring that the applications run fine on each of the devices in each of the categories. Smartphones accounted for 51.8 percent of mobile phone sales in the second quarter of 2013, with a growth of 46.5%, resulting in smartphone sales surpassing feature phone sales for the first time – Gartner (Aug 2013)2. In spite of this, according to a research conducted by Interactive Advertising Bureau, 45% of Fortune 500 enterprises lack fully Mobile-Optimized corporate websites, due to the steep costs associated with

implementation on a wide range of mobile devices. A digital assurance strategy should build in Risk-Based sampling strategies across devices and also employ automation for repeated tests on various devices3 3.1.2 Users on multiple platforms Given the rate at which a new combination keeps getting added with every new version of a browser (browser wars) or OS getting introduced, it is not only important to ensure testing is done on all possible browsers and operating system stacks, but it is also necessary to optimize testing across these combinations by using statistical sampling methods and automation framework to reuse tests 3.2 Users in multiple geographical locations 3.2.1 Enable Multivariate testing Organizations would want to test for multivariate behavior to seek feedback on instances getting most attention or to market different promotions based on geography. Digital assurance should focus on optimizing tests along with automation, to reduce effort in functional validation of multiple instances of application 3.2.2 Localization testing Internet users are spread worldwide with Asia accounting for 44.8% of internet users, followed by Europe (21.5%), North America (11.4%), Latin America (10.4%), Africa (7%), Middle East (3.7%) and Oceanic (1%). The top ten languages i.e. English, Chinese, Spanish, Japanese, Portugese, German, Arabic, French, Russian and Korean account for 81% of the world internet users.4 Are the users, spread across different geographies and cultures, speaking different languages finding the same functionality, similar semantics or more holistically perceiving the same brand experience? A digital assurance strategy should include testing for Localization and Globalization as well 3.2.3 Performance Performance tests emulating users across geographies – To model real-time behavior, tests should take in to consideration the load pattern distribution across the geography 3.3 Functional validation of end-to-end Business Scenarios By far the most important aspect in the entire assurance strategy is to ensure that an application is validated against Business expectations & functionality, as documented by the Business Process Models. Does the strategy require involvement of the Digital BAQAs (Business Analysts and Quality Assurance engineers) early in the ideation phase? Does it include creation of Business Test scenarios based on business processes beyond the functional test cases? It is important to have the right answer to these questions to ensure the recommendation engine is working right and the promotions are visible at all the right places, along with the shipping calculator working right with the new free shipping promotion for certain categories 3.4 Customer Experience and Social Integration The digital assurance strategy needs to be guided by User experience and uniform brand experience goals: Colors, grids, layout, positioning of labels & buttons, fonts, fat finger testing & number of user hops are all considerations one must test to ensure a good user experience and uniform brand experience irrespective of the channel the customer uses. Ford was one of the pioneers in the automobile industry to realize the potential of engaging customers through social media which was evident in the way they went about promoting their Fiesta model over social media almost 18 months before reentering the US subcompact car market. One of the initiatives was to award 100 social media influencers with the car and asking them to complete a set of tasks and to document their experience across various social channels. The result was astounding with more than 6.5 million views on YouTube and more than 50,000 requests generated from non-Ford drivers5. In an increasingly social world, the ability of users to seamlessly share can directly and many a times instantly

influence organizational success or failure. Recently, McKinsey Company released data which indicated that one of their telecom clients suffered an 8% loss in sales based upon negative sentiments in the social media space. In another recent survey6 71% of executives surveyed rated social media as one of the technology trends, having a significant impact on their business along with mobile and online shopping assurance strategy needs to take in to consideration social integration across channels. Digital assurance in the social world needs to go beyond the traditional boundaries of testing. Does the organization's assurance strategy take in to account what's being said in the social world about a brand and its digital readiness while testing for user experience? Does it validate an organization's social media strategy? 3.5 Assurance for Digital Assets and Content Quality From digital brochures for marketing, to digital products requiring a secure digital supply chain and voluminous digital content for web, digital assets can be of varying types. Does the organization have a robust Enterprise Content Management strategy? Are digital assets catalogued right? Is there a quality assurance checklist for digital properties to ensure consistency and standards across sites? Is the content validation process and workflow standardized to reduce review cycles with creative agencies and asset review teams and increase overall quality? 3.6 Security Assurance Applications managed by organizations are ever increasing (running in to thousands); from increasingly diverse sources (built in-house, COTS, SaaS) and hosted on multiple platforms (in-house network, cloud, web, mobile). This has raised the risk profile necessitating security testing across all these potential vulnerabilities, focusing on application profiling, authentications, authorizations, session management, data validation and encryption algorithms. Security assurance strategies can range from Vulnerability assessments to Penetration testing 3.7 Lifecycle Automation Continuous Delivery and Agility: Assurance for the multitude of channels, devices and platforms, frequent iterations for churning out builds with new features can be cost and time-intensive without a right automation framework. Traditional automation approaches of – Design a scenario, build the software, write a test and then automate, can only mean high maintenance and little ROI. Consider automating the entire life cycle with continuous integration tools, behavioral automation frameworks and business process testing methodologies. What if you can generate automated test cases right from your business processes? What if these can be triggered automatically on a code check-in and can generate a report for you to see without any manual intervention? A large retailer was able to successfully cut down release cycle time (from 3 months to a 15-day release cycle) by revamping their development & build strategy, adopting continuous integration approach and virtualizing a lot of environment requirements to increase the organization's agility and to better respond to today's connected consumers requirements 4.0 Digital Assurance across Industries Digital commerce set digital transformation in motion, but aspects like Digital Marketing, Digital Supply Chain, Digital Health, Digital Channels for customer engagement and Digital Manufacturing are all taking center stage today across the industries, like in the case of Health care where issues of traditional cost, quality, access and regulatory challenges are addressed through digital means like channels for remote delivery of care, health apps for self-monitoring, online initiatives for patient engagement, analytics on clinical data and online public health campaigns7. Similarly introduction of smart

technologies like grids, meters, and smartphones in the Utilities Sector has transformed the traditional Utility into Digital Utility. Firms target enhanced operational efficiency through remote collection of meter data and enablement of onsite work force with mobile devices which ensure better collaboration with offsite employees. End consumers have access to online portals where they manage their consumption needs, view their consumption data in real time and through forums for promoting energy efficiency programs or to aid in outage management. Manufacturing is another sector where the need for cost management, better quality and faster time-to-market have led the firms to globalize their operations through digital supply chains. It enables companies to dynamically integrate all their external suppliers and to outsource entire functions of the value chain if need be. Processing and exchange of big data generated through m2m interface, real time order confirmations to optimize production operations, advanced planning and scheduling to optimally allocate production capacity are bringing in never before seen operational process efficiencies to stay ahead of their competition. With more than 1 Billion mobile phone users expected to use their device for banking transactions by 2017, innovative offerings such as marketing services, sophisticated authentication mechanisms, location-based personalization, enhanced digital security etc. have given mobile and internet banking a completely new dimension in the Financial Services sector. Firms are providing remote advice capabilities by offering investment advice and information on complex products like mortgages via smart-phone, web chat, or video call functionality. Leveraging innovative digital capabilities such as a digital wallet for loyalty cards, spending analysis tools, third-party offers and virtual vaults to store documents are helping the Financial services sector differentiate themselves better. To add to this, firms also look to leverage internal big data and advanced analytics to introduce tailored marketing and product offers. Bottom line is that the digital transformation of banking processes are helping the firms to enhance customer satisfaction resulting in increased loyalty and wallet share from their end customers. 5.0 Conclusion The number and complexities of PoAs in today's digital world are beyond the reach of traditional quality assurance practices. Understanding of the business dimension, ability to maneuver technology challenges, access to right tools and enablers are invaluable in building and executing a robust assurance strategy. To ensure success, it is important to engage with the right technology partner who has both the breadth and depth of expertise along with the experience of being on this journey before. 6.0 References Ramesh Pai is the Practice Head for Wipro's Business Assurance Practice. Responsible for the Technology, Enterprise and Financial services verticals he has worked with various customers for organizational assurance strategy development, managing large QA program and QA CoE blueprinting with focus on Business Assurance. To know more about Wipro Assurance Services, write to digital.contact@wipro.com The speedy SaaS momentum can not only be attributed to a tight economy but also to the associated low Total Cost of Ownership DevOps enables the IT organization to break out of silos, embrace collaboration, and inject that elixir of agility to drive business success. With OSS becoming a complicated and critical function for CSPs, the benefits that can be realized by migrating OSS on the cloud has also significantly amplified. =====================

The Quality Engineering Imperative in a Cloud Transformation

----- Arcticle source ----- https://www.wipro.com/cloud/the-quality-engineering-imperative-in-a-cloud-transformation/ ----- Contact Wipro Please fill the required details to access the content The Quality Engineering Imperative in a Cloud Transformation Wipro and Zurich address quality concerns in cloud journey More companies than ever are migrating to the cloud, motivated by the opportunity for business growth and innovation. In the rush to adapt to a cloud-centric world, they are realizing that even with all its benefits, the cloud has more potential failure points than traditional business and production environments. An effective cloud system depends on a well-designed quality engineering (QE) program, one capable of predicting and preventing pitfalls. The benefits of an effective cloud system and QE program are clear. A recent global research report from Wipro FullStride Cloud Services highlights that driving cloud transformation beyond migration alone can help organizations achieve a 12 percent improvement in their bottom line and a tenfold increase in ROI on cloud investments. By implementing testing across the software development lifecycle, organizations can achieve better output and significantly improve product quality, speed to market, and the customer experience. This business potential underscores the urgent need for companies to transform their QE programs to align with digital and cloud technologies and protect their cloud investments. QE Is Not One-Size-Fits-All As they seek to adapt quickly, many organizations look for a single QE silver bullet. Incorporating quality practices early in the development lifecycle is critical, but that alone is not enough to solve today's problems. Given the complexity of modern cloud systems, enterprises must invest in strategic QE initiatives for production environments along with predictive and preventative maintenance. A robust QE strategy leverages anomaly prediction in addition to anomaly detection. Knowing what could go wrong and where it could go wrong is critical to preventing a catastrophic outage. And although many organizations believe the key to success is an automation-first approach to QE, the reality is thornier. An effective approach to automation requires investment in intelligent platforms that can "automate the automation," removing the human test engineer from the picture completely. Transforming QE with a 4M approach As business needs and underlying platforms continue to evolve, organizations must embark on QE transformation journeys to fully address quality concerns. A 4M approach — Method, Model, Machinery, Mindset — can empower organizations to launch a successful cloud migration and transformation. Method: Observability for production and nonproduction environments With the shift to the cloud, the number of latent failure points and modes of failure across apps, products, and infrastructure increases significantly, and it is vital that app owners proactively monitor for and mitigate failures at any point in time. Conventional monitoring techniques, however, provide a limited view of bottlenecks. Organizations must instead proactively engineer the quality of design deployment and operations by moving from monitoring to observability. Enabling observation of the entire IT landscape introduces an

element of controllability. It becomes possible to identify the external factors that influence what has gone wrong and to simultaneously pinpoint the faulty internal systems or components that are the root cause. Observability allows teams to ensure that site reliability engineering (SRE) principles are built with quality at the source. Model: Pod-based delivery A pod-based delivery is a federated delivery of QE that aligns with products (front-end, client-side systems) and platforms (back-end core systems), resulting in self-sustaining pods with minimal dependence on shared services for delivery. This type of delivery allows for meaningful, shared services for specialized testing enablers — namely in the management of test environments and test data — rather than for testing delivery. Pod-based delivery should also be complemented with gig economy enablers: as-a-service-based delivery for handling surges in workload with dependence on internal crowds (employees), public crowds (global crowd-sourcing platforms), or a combination of both (hybrid crowds). To succeed, this model must be supported by a QE transformation team with strong expertise in infrastructure, apps, and products to effectively create a QE strategy aligned with digital and cloud migration. Machinery: AI-based platforms for advanced test automation AI/ML-powered QE has allowed for the formation of virtual personas to execute day-to-day testing tasks with minimal human engineer intervention, an approach that aligns with continuous testing and DevOps ecosystems. Importantly, AI/ML (especially generative AI) has permeated far beyond the test design and maintenance phase. It now covers the entire end-to-end testing lifecycle, and provides significant technology coverage, spanning beyond web and API toward mobile-native and commercial off-the-shelf (COTS) products deployed in a software-as-a-service (SaaS) model. In terms of test types, generative AI-powered QE enables coverage across activities such as defect triaging and logging, unit-test scripting, test-failure analysis, defect prediction, test-data generation, and test-environment healing. The highest degree of "automating the automation" has been achieved in SaaS-based COTS products, wherein new tools can now scan the entire product instance from end to end, identifying customizations, communicating between app modules, generating test cases, and handling execution and maintenance. Mindset: Hiring QAOps engineers with a shift-right mindset A well-designed QE program cannot be built with only functionality and performance in mind. It is also vital to prioritize system availability, stability, robustness, and reliability. To drive a broader shift in mindset toward QE objectives, companies must start by hiring and developing QAOps engineers with shift-right mindsets. QAOps engineers enable organizations to create more effective QE programs and achieve better results. Their expertise means a finger on the pulse of production instance feedback, prioritizing elements such as resilience and production testing to build a QE program that is more reliable and robust. The Path Forward for QE Optimization The distributed, cloud-centric world offers unprecedented business opportunities, but its complexities come with new hurdles that modern organizations must overcome. As companies continue to embrace the cloud, they can reduce the risk of failure by making QE a top priority within the broader digital transformation of their business. For that to happen, organizations must look at testing not just as a way to deliver bug-free applications, but as part of an infrastructure that supports the rapid delivery of high-quality products and services. Such an approach ensures that QE initiatives can enable enterprises to respond more quickly

to fast-changing market dynamics, deliver a superior experience, and build brand loyalty. Moving away from the traditional dimensions of speed, skill, and structure toward becoming an integrated QE and testing organization will be the path forward for modern companies looking to drive measurable growth and innovation. For more insights, see the Wipro report, Quality Engineering in a Cloud-Centric World. About the Authors Simon Strickland UK Head of QA & Test, Release Management, Zurich Insurance Company Ltd With over 20 years of experience, Simon is a thought leader committed to high standards and dedicated to maximizing new opportunities to further evolve QE in a highly competitive and demanding world. Rituparna (Ritu) Ghosh VP & Global Head Quality Engineering and Testing, Wipro Ritu has more than 20 years of experience and leads Wipro's Quality Engineering and Testing practice. Throughout her career, Ritu has nurtured and developed high-performing teams, fostering a culture of collaboration, creativity, and continuous learning. =======================

How Changing Workplace Dynamics are Driving a New Employee Experience

----- Arcticle source ----- https://www.wipro.com/cloud/how-changing-workplace-dynamics-are-driving-a-new-employee-experience/ ----- Contact Wipro Please fill the required details to access the content How Changing Workplace Dynamics are Driving a New Employee Experience For years, businesses have focused on providing a seamless customer experience. But the 'Age of the Employee' has arrived, and companies need to take note. Changing dynamics are aloft that will significantly impact the employee experience. A job has become part of the employee's value system, and employees want to have a say in shaping their work experience. This new dynamic means that companies will need to pay more attention to the importance of the employee experience, as it has become a critical element in choosing a job. Companies must adapt to the needs and preferences of this new workforce and find ways to provide smoother employee experiences, secure remote working and more flexibility. Emerging Dynamics that Will Differentiate the Employee Experience A new generation of employees is redefining what they want from their jobs and how they want to work. This evolving employee experience is starting to impact recruiting. Companies that invest in employee experience are 4.4 times more likely to be listed on LinkedIn as North America's most in-demand employers and 2.1 times more likely to be listed on Forbes World's Most Innovative Companies. These are more desirable and succeed in attracting and retaining top employees. Multiple dynamics are reshaping the new workplace experience. Companies must recognize these preferences and respond with expanded benefits to provide a differentiated employee experience. 1. Emphasis on Diversity and Inclusion: With a more diverse workforce, companies are beginning to recognize the importance of creating an inclusive workplace culture that values and respects differences, including policies and practices that promote diversity and inclusion. 2.

Flexibility and Work-Life Balance: Younger generations, millennials and Gen Z, emphasize work-life balance and flexibility. Companies are responding by offering more flexible work arrangements, such as remote work options, flexible hours, and unlimited vacation policies. A 2022 FlexJobs Career Pulse Survey found the top two reasons employees seek new jobs are lack of work-life balance and no remote/hybrid work options. 3. Technology and Digital Transformation: With the rise of digital natives, companies are embracing technology and digital transformation to create a more seamless and efficient workplace experience. New technologies like cloud computing, artificial intelligence, and automation will streamline workflows and increase productivity. As the boundaries of traditional computing get redefined with these new technologies, it makes sense that workspace tools will also change. 4. Employee Engagement and Empowerment: As younger generations enter the workforce, they are seeking opportunities for growth, development, and empowerment. Companies are providing opportunities for professional development, leadership training, and employee engagement initiatives to foster a sense of ownership and purpose among employees. These employees have higher expectations for technology and collaboration. Companies should promote a sense of purpose and give employees a say in defining their work experience, including their technology experience. The technology experience significantly impacts the overall employee experience. Cumbersome technology and processes increase the risk of worker burnout, leading to higher turnover. For a tech-savvy generation, technology tools can make or break their work experience, efficiency levels, confidence in the role and opinion about a company. One initiative that can improve employee experience is a device choice program. Device choice programs allow the employee to choose the type of computer (and other devices). A Wipro survey found that employees with device choice programs were 71% more productive due to high levels of engagement, 73% more loyal to the company and 74% responded they were proud to work for their employers. Device choice provides the connection to values and a sense of empowerment. For companies that offer this benefit, one device is rising to the top – Mac. A global technology company with a device choice program reported that 59% of new hires chose a Mac computer and 65% of existing employees would switch to Mac given the opportunity. What is behind this growing trend? 1. Design and User Experience: Mac computers are known for their sleek and modern design, intuitive user interface, and ease of use. Many millennials and Gen Z employees appreciate these features because they value aesthetics and a good user experience. In a Wipro survey, 60% of existing PC users responded that their productivity would improve with a Mac, and 41% believe Mac devices are easier to use. Many new and existing employees want a choice of computers, and Mac computers have the same seamless experience they already know with their personal devices. 2. Creativity and Innovation: Many millennials and Gen Z employees view Mac as a tool to help them express their creativity and innovation. It should be no surprise that 84% of the world's most innovative companies use Mac. 3. A Familiar Platform: Many millennials and Gen Z employees prefer using a Mac because it is the device they have used for years in middle and high school and college. When employees start working on a tool they know, onboarding and learning curves are reduced, getting a new hire to productivity faster. 4. Compatibility and Integration: Many workplaces use other Apple products, such as iPhone and iPad which seamlessly integrate

with Mac, making it easier for employees to access and share information across devices to streamline their workflows. As a result, more employees want to use them. Ten years ago, Mac represented only 12.86% of desktops. That number has increased to 31.34%. In 2022, the Wipro Executive Committee embraced employee choice and offered new associates a device choice program. The committee anticipated an overwhelming number of candidates would choose Mac. And they did. While Wipro estimated positive impacts on company economics, employee recruiting efforts and sustainability goals, the results were astounding. The total economic impact was 55,000 hours saved in two months by the IT department, deploying 7800 Mac devices that did not require Windows imaging. The effect on recruiting was stunning. The campaign results are below. As expected, moving to Mac improved our sustainability goals. We achieved 1,428,000 KG CO_2 emissions savings, equivalent to eliminating 5,752,604 miles driven by gasoline-powered passenger vehicles. These results overlapped the findings of a 2021 Forrester Consulting study, Total Economic Impact™ (TEI), analyzing the impact of adopting Mac devices in the enterprise. The study found that organizations chose Mac because they prioritized the employee experience, Mac devices were easy to deploy and manage and leaders believed Mac to be more secure than PC. Some companies may hesitate to offer device choice due to a lack of in-house skills supporting macOS. However, support for Mac is easy. Apple and others have proven device management solutions and service programs. Mac computers are more stable than PCs because Apple controls every aspect of building and assembling their systems. Due to its UNIX roots, Apple has tight control over its software, making it more difficult to exploit. These tight controls lead to lower support costs. An Effective Strategy to Address the Changing Employee Experience Companies can no longer put every employee in the same box. Employees want a say in their work experience. Adopting a new set of benefits, like a device choice program, gives them just that. Technology choice is a good way to address employees' needs and desires to express their individuality and creativity. Device choice programs will also improve several corporate metrics like a shorter and streamlined employee onboarding experience, a lower overall cost of ownership, a better company reputation as viewed by current and potential employees and a better employee experience. And great employee experiences lead to higher employee engagement. In the age of the employee, companies that adapt to changing priorities will attract and retain top talent and be more competitive in the modern workforce. In device choice programs, Mac is emerging as the computer of choice. For the younger generations, a Mac provides a seamless transition from their personal experience with technology to their work experience. The Apple brand appeals to employees' identity and values. It has always symbolized individualism and creativity and now is becoming an effective strategy to give employees more control in defining their employee experience.   About the Author Timothy Lydon Global Apple Partnership Leader Wipro FullStride Cloud Tim Lydon is Wipro's Global leader of the Apple Partnership. Tim has executed several of largest enterprise deployments of Mac Device Choice programs. Tim advises enterprise executives on how they can improve the employee experience, reduce costs and improve sustainability by expanding the adoption of Mac. ====================

Cloud Economics Delivers More Bang For The Buck

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-economics-delivers-more-bang-for-the-buck/ ----- About The Author Contact Wipro Please fill the required details to access the content Cloud Economics Delivers More Bang For The Buck With cloud investments continuing to make up a bulk of enterprise technology budgets, leaders need to be sure they're making the most of those investments. Maximizing ROI on cloud investments not only supports stronger cloud growth, but it also promotes stronger business transformation programs by laying a more solid, innovative foundation on which the business can build a future-ready enterprise. Unfortunately, this is often easier said than done with cloud. Many enterprises are seeing cloud costs skyrocket due to the unique nature of cloud spending. This is attributed to the additional processing and computing scale required to take advantage of emerging technologies like AI, generative AI and machine learning, as well as creating testing sandboxes and accommodating new user adoption. Cloud spending is also based on consumption and, therefore, is constantly variable—unlike a fixed-cost model such as a non-SaaS ERP system. However, like an ERP system, many departments and business functions use the cloud, meaning a single enterprise can have multiple functions accumulating their own cloud costs. Such siloed management can lead to duplicative spending, inflating the cost of cloud and diluting the ROI for the business. How can businesses get the control they need over cloud spending without limiting innovation or the new technologies only truly enabled through the cloud? The answer lies in cloud economics. What Is Cloud Economics? Cloud economics is becoming an increasingly popular discipline among business and IT leaders because of the clarity it brings to cloud spending. This collaborative, pragmatic process engages leadership throughout the organization (IT, operations, finance, development, business units) to define what value means in terms of cloud investments and then develop a strategy that will deliver that value to the business. In doing so, the various business functions are encouraged to look beyond optimizing costs in order to make decisions that will maximize the business value of the cloud. The shift in focus from cost to value is key to a successful cloud program. So many first-time cloud migrations deliver lackluster results because the business is focused primarily on moving to the cloud as a way to cut costs. While moving to the cloud can absolutely help make some processes more cost-effective, doing so will likely require time and money upfront. If a business is only focused on cutting costs, making those investments might seem like a failure. However, if a business is focused on saving money in the long run by incorporating AI and automation throughout its operations, for example, or enhancing data processing capabilities to become more data-driven, teams can feel confident investing time and resources in specific areas of cloud development knowing that those investments will lay the groundwork for capabilities and advancements critical to the larger business goals. Cloud economics can help businesses identify their unique cloud goals and the actions necessary to achieve them. In doing so, the businesses learn how to optimize cloud costs and maximize the value of cloud by aligning the various business

teams around shared investment goals. This is an organizational change management endeavor that requires the business to act in concert to achieve like-minded goals. As the cloud program progresses—as the spending models for these investments change or the needs of the company evolve—other tools such as FinOps can help business managers further optimize cloud spending and business value. FinOps: A Valuable Addition FinOps is a component of cloud economics that focuses on the operational aspects of cloud economics. Now that the business has moved to the cloud, how does it best manage its cloud spending to achieve its cloud goals? What are the areas of extraneous cloud spending? What areas need greater investment? How can teams focus or redirect their cloud investments without disrupting business operations? To answer these questions, FinOps uses a three-phase iterative approach: inform, optimize and operate. Through FinOps, businesses can identify areas of overspending, corrective actions and the best way to reinvest those savings. For example, through FinOps, a company may learn that it's paying for much more storage space than it needs based on average usage. Downsizing the storage could free up funds that the company could reinvest in other avenues based on the cloud goals outlined through cloud economics. FinOps is an ongoing process. Teams focus on small sections of a cloud program at a time, making changes that will deliver the most value to the organization. Low-hanging fruit investments like downsizing storage space are great starts because they can offset the costs of more significant changes with minimal disruption to the business. As the company starts making bigger, costlier changes, working in stages will make it easier to monitor success, strategize corrective action and implement those actions effectively. By implementing FinOps as part of a centralized cloud cost center of excellence (CoE), cross-functional finance, technology and business teams can collaborate more effectively to maximize business value. A cloud cost CoE governs cloud adoption and spending throughout the organization to ensure teams are making decisions that align with the organization's larger cloud goals. FinOps is integral to these decisions and can help the CoE establish a single source of truth for cloud spending, breaking down cultural silos and institutionalizing cloud economics management to promote a stronger, more successful cloud program. The value of a strong cloud program cannot be overstated. Investments in AI and other advanced technologies that require the support of the cloud are on the rise, making cloud capabilities key differentiators. Cloud economics and FinOps can help enterprises make more informed decisions about how they advance their cloud programs and feel more confident making the kinds of bold investments that will help them stand out among the competition. This article was originally published on Forbes.com Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. =======================

Industry Clouds Become Catalyst for Transformation

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required details to access the content Industry Clouds Become Catalyst for Transformation A Harvard Business Review Analytic Services report in association with Wipro FullStride Cloud An industry cloud ecosystem can unlock the potential of data residing within the enterprise and thereby accelerate innovation not just for a single business but for an entire industry. Industry clouds are uniquely positioned to accelerate cloud adoption, because they appeal directly to the needs of business users and provide industry-specific features and benefits that companies have found lacking in commodity clouds. While industry clouds are more complex and require more effort in terms of integration and management than commodity versions, the potential payoff they offer in terms of agility, flexibility, cost savings, and increased innovation is so high that they are poised to inevitably become an essential element in most companies' cloud strategy. This Harvard Business Review Analytic Services report focuses on the continued evolution of the cloud and the often discussed yet seldom truly defined rise of industry cloud. The stories demonstrate how the combination of industry cloud and a strong cloud strategy can help even the most risk adverse businesses in highly regulated industries obtain the assurances they need to embrace cloud, become cloud-native enterprises and drive business value. Some key dimensions of the report are: Download report ======================

How The Industry Cloud Is Changing The Game

----- Arcticle source ----- https://www.wipro.com/cloud/how-the-industry-cloud-is-changing-the-game/ ----- Contact Wipro Please fill the required details to access the content How The Industry Cloud Is Changing The Game By now, most organizations have begun moving key workloads and applications to the cloud, leading cloud services providers to shift focus from generalized offerings that work for most businesses to vertical offerings tailored to the specific needs of businesses within a single industry. The industry cloud, as this approach is known, is not new. In fact, analysts from Allied Market Research predict that the market for these industry cloud solutions and platforms will exceed $350 billion by 2031. But, recent advancements have made it more powerful and practical. Today's industry clouds are capable of handling the very specific demands of highly regulated industries like financial services, manufacturing and healthcare. They can also accommodate advanced digital capabilities like analytics and AI-powered algorithms to improve monitoring, observability and operability. By converging industry-specific applications with the technical capabilities of the cloud, the industry cloud enables IT teams to deploy and manage specialized software, helping ensure it aligns with business goals. It also empowers business leaders with a deeper understanding of the technology, as well as its potential impacts and opportunities—insights that are critical to ensuring successful digital transformations. Understanding The Industry Cloud In effect, industry cloud platforms turn cloud platforms into business platforms. They do this by taking a tailored data model with customer profiles, order history or inventory levels and overlaying security guardrails

specific to an industry, enabling clients to deliver value against specific business outcomes while maintaining data integrity. For example, security guardrails such as role-based access control (RBAC) policies, multifactor authentication (MFA) and 256-bit encryption as part of the industry cloud platform can help a healthcare organization handle and store patient records in compliance with the payment card industry (PCI) and Health Insurance Portability and Accountability Act (HIPAA) regulations. Traditional cloud services have not been designed with these kinds of regulations in mind, leaving businesses in sectors like finance services, healthcare and manufacturing to build their own solutions and find ways to ensure compliance. This can be costly and risky, and it has discouraged businesses in highly regulated industries from embracing the cloud. The industry cloud helps reduce those risks and encourages greater cloud adoption by providing services specifically designed to meet regulations and accommodate new features such as advanced data processing or compatibility with AI and machine learning. By addressing the security concerns of the banking and financial services sector, for example, the industry cloud allows businesses to use more cloud applications more confidently, unlocking new opportunities for digital transformation. There Is No One-Size-Fits-All Solution Although the industry cloud provides prebuilt offerings specific to a given industry, it is not a one-size-fits-all solution. These offerings serve as composable building blocks for further innovation. Businesses use them to quickly develop core capabilities that are standard throughout the industry, freeing time and resources that can be reinvested to develop business-specific solutions. A large healthcare provider, for example, might use prepackaged industry cloud services to get the capabilities it needs to safely and securely transfer medical information, paving the way for more efficient communication and record management across all its locations. Meanwhile, a small clinic might use the same prepackaged services to enable it to develop a more intuitive patient portal. An Innovation Ecosystem The industry cloud also creates greater opportunities for connectivity and collaboration, encouraging enterprises to work together while sharing applications and services to refine solutions or create entirely new ones. Standardized offerings mean enterprises are more likely to be operating at similar levels: compliant with regulations, capable of integrating new technologies and free to explore new solutions to their own unique business challenges. As they start developing their own applications through the industry cloud, they can monetize those applications or share them with other businesses to expand their capabilities. Cloud services providers can also build on these offerings, identifying industry trends and developing new services to deliver greater value. In this way, an industry cloud ecosystem can accelerate innovation not just for a single business but for an entire industry. In today's digital economy, a strong cloud strategy is critical to making the most of advanced data processing, AI and other powerful technologies. With verticalized offerings and greater alignment of business and technology goals, the industry cloud is helping even the most risk-averse businesses in highly regulated industries have the assurance they need to embrace the cloud and become cloud-native enterprises. This article was originally published on Forbes.com About the Author   Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. With over two decades of industry experience, Jo is known for his expertise in leading complex transformation

projects for large global organizations and for driving consistent growth for the businesses he leads. Most recently, Jo was the Global Head of Cloud Infrastructure Services. =====================

From Consumer to Value Creator, Unlocking the Power of Generative AI

----- Arcticle source ----- https://www.wipro.com/cloud/from-consumer-to-value-creator-unlocking-the-power-of-generative-ai/ ----- Contact Wipro Please fill the required details to access the content From Consumer to Value Creator, Unlocking the Power of Generative AI In this era of digital abundance, Generative AI promises to be a transformative force, capable of enhancing service quality and user experience across industries and value chains. Early use cases have revealed opportunities to automate processes, improve customer support, and empower workers to be more efficient and creative. However, the most valuable applications are likely to require creativity from the businesses themselves. Currently, many businesses are consuming AI passively through off-the-shelf applications, chatbots, HR portals, and transcription services. For maximizing the value of Generative AI, organizations must transition from being passive AI consumers to proactive AI value creators, adapting foundation models to fit the unique needs of their business. The Transformative Power of Foundation Models Foundation models are AI models trained on very broad, vast datasets, enabling them to be easily applied to a wide range of use cases. Generative AI makes it easier to train and adapt foundation models for diverse downstream tasks. This versatility is tremendously valuable. A single model can underpin chatbots, HR self-service, marketing email generation, and legal document summarization, enabling innovation across a full spectrum of applications. The key is to see the model not as the final form of AI but a foundation on which to build. However, this can only occur if businesses are actively engaged in AI innovation and take a platform approach to AI consumption. There are three main approaches to AI consumption: Each of these approaches has its pros and cons, and most businesses should use a mix of all three. But the platform approach is where the magic happens. Rather than using another company's pre-built solutions, businesses are in control of the entire AI creation process. The platform approach makes it conducive to aggregating business data from diverse sources. Over the period with an accumulation of business data, the richness of context increases, making the output of LLMs both contextually relevant and factually accurate. Hence, the businesses can accumulate value over time giving them a competitive advantage. The platform approach uses Retrieval Augmentation Generation (RAG) to act as a bridge, connecting large language models (LLMs) to vast enterprise knowledge sources. Platform (Your Data + Your Model) = Your Unique Value Other key advantages of the platform approach include the following: As businesses navigate the evolving landscape of Generative AI, recognizing the transformative potential of foundation models is key. Shifting from the traditional task-

centric AI approach to a versatile platform approach heralds a new era where businesses don't just use AI but actively create value, defining the future contours of the AI landscape. Crucially, the platform approach focuses on creating and owning value unique to businesses, transforming them into AI value creators. In essence, the platform approach empowers businesses to be their own AI architects, tailoring solutions to their specific needs and creating a sustainable and valuable AI ecosystem in the process. It's the route to not just participating in the AI revolution but leading and shaping it. About the Author Gaurav Parakh Global Head of Hybrid Cloud Strategy & Emerging Offerings, Wipro Gaurav is a Senior Hybrid Cloud Strategist at Wipro with over 24 years of experience in IT consultancy and advisory services. He specializes in digital transformation, go-to-market and business development. At Wipro, Gaurav engages with Fortune 500 clients and partners at the leadership level, drawing on his experience designing and implementing cloud solutions, operating models, and strategies for FinOps, open source and generative AI to drive success. He also has a background in entrepreneurship, having built tech startups in 3D printing, education and AI from inception to exit. =====================

Six Cloud Evolution Predictions For 2024

----- Arcticle source ----- https://www.wipro.com/cloud/six-cloud-evolution-predictions-for-2024/ ----- Contact Wipro Please fill the required details to access the content Six Cloud Evolution Predictions For 2024 Cloud continues to be the foundational transformation platform for organizations that want to be industry leaders and adopt the most impactful emerging technologies. From GenAI and automated shop floors to software-defined vehicles and smart meters, the technology innovations promising to revolutionize industries require strong cloud capabilities and an understanding of how the cloud is evolving. The following predictions about the evolution of cloud are based on Wipro client interactions throughout 2023 and insights into the cloud space. 1. Multicloud and hybrid cloud will overtake single-cloud models in popularity. In 2024, multicloud and hybrid cloud models will become critical for organizations—not only for competitive advantage but also for regulatory compliance. Regulatory measures such as Europe's Digital Operational Resilience Act and the U.S. Treasury's risk guidelines require financial institutions to demonstrate robust cloud service failure management and disclose any concentration risks associated with their cloud providers. To maximize the advantages of a multicloud approach, businesses must establish a comprehensive set of protocols. This includes stringent data management practices, advanced security measures, seamless workload mobility and overarching governance. Strategies will increasingly focus on cross-cloud interoperability and the deployment of cloud-agnostic tools, steering away from rigid IT infrastructures to more responsive systems. 2. Interactive AI will lead a revolution in customer service with zero-touch call centers. Heading into 2024, "interactive AI" is poised to lead a customer service revolution, leveraging the expansive power of cloud computing to enhance GenAI's interaction capabilities and

more efficiently orchestrate complex interactions between AI systems and humans. By the end of the year, businesses will likely unveil the world's first zero-touch call centers, a testament to the strides made in GenAI. These centers will be equipped to perform tasks that surpass the abilities of traditional chatbots, such as handling customer histories, inventory management and sensitive communication tasks, all enhanced by advanced natural language processing. 3. Focus on sustainable cloud and offerings from hyperscalers will multiply. AWS has committed to powering its operations with 100% renewable energy by 2025 and is investing in wind and solar energy projects worldwide to achieve this goal. Google has been carbon-neutral since 2007 and aims to operate on carbon-free energy 24/7 by 2030. By 2030, Microsoft plans to be carbon-negative, and by 2050 seeks to remove all the carbon it has emitted either directly or by electrical consumption since its founding in 1975. Sustainability is becoming a prime focus in every industry, including cloud computing. Businesses now consider a cloud provider's sustainability initiatives as a critical factor in the decision-making process. In response, hyperscalers are working to optimize compute power and storage and increase the overall sustainability of energy systems throughout data centers through the use of renewable energy sources and more efficient cooling systems. AI and machine learning are already being used to optimize energy consumption in data centers. Businesses will likely continue to invest in technologies to monitor and manage the environmental impact of their cloud programs, even leveraging cloud technology to power these solutions, such as cloud-based decarbonization and carbon modeling. 4. Cloud will take edge computing to the next level. With the advent of ultra-low latency computing, particularly through 5G technology, edge computing is undergoing a renaissance. More than a technological trend, this strategic shift leverages the economies of scale inherent in cloud infrastructure, magnified at the edge. By decentralizing data processing, enterprises can significantly reduce cycle times, enabling real-time analytics and decision-making. The synergy of edge and cloud capabilities means that investments in cloud infrastructure can be leveraged more efficiently and at scale, offering businesses the dual benefits of agility and economic efficiency. Examples include the ability for automakers to incorporate more computing capabilities into their vehicles and real-time processing on factory floors to help manufacturers streamline operations and improve safety. Retailers can personalize shopping experiences through instant data analysis, while logistics companies can optimize route and supply chain management. 5. Growing interest in cloud economics will lead to more tailored cloud portfolios for enhanced ROI. In 2024, CFOs and COOs will increasingly steer the cloud consumption narrative, instilling a cost-conscious yet value-driven approach to cloud adoption. As enterprises continue to scale up their cloud infrastructure, the focus will be on optimizing ROI with a keen analysis of spending versus gains to ensure cloud investments translate directly into enhanced operational efficiency and competitive advantage. Growing interest in GenAI will play a central role in this shift. GenAI's advanced analytics and automation can help drive down costs while propelling innovation. The embrace of GenAI, facilitated by flexible cloud platforms, will help refine cost models and unlock new revenue streams, empowering businesses to harness the full potential of their cloud endeavors for superior financial outcomes. With business and technology strategies increasingly relying on each other, businesses can't afford to overlook their cloud

programs and investments. In 2024, the cloud will continue to be a strong value driver for enterprises seeking to increase their speed of innovation, harmonize their data and deliver new forms of value to customers. 6. Accelerated industry cloud adoption will transform healthcare, finance and highly regulated industries. Industry cloud is expected to revolutionize technology within industries like healthcare and finance, which are often bogged down by regulatory burdens. These specialized cloud solutions enhance data security, ensure compliance and modernize IT effectively, says Kate Leggett from Forrester Research in a Wipro-sponsored HBR report. Dilip Venkatachari of U.S. Bank echoes this in the same report, noting the cloud's potential to advance technology and enrich customer interactions. The convergence of industry-specific clouds with broader tech ecosystems marks a shift toward a more agile, targeted approach to digital infrastructure that promises to accelerate innovation and operational efficiency across the board. This targeted approach is rapidly becoming a linchpin for businesses seeking to harness the full potential of digital transformation. By 2027, Gartner's VP Analyst, Gregor Petri, predicts that over 70% of enterprises will leverage these platforms to propel their business initiatives, underscoring the growing interest in and importance of industry clouds. This article was originally published on Forbes.com About the Author   Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. With over two decades of industry experience, Jo is known for his expertise in leading complex transformation projects for large global organizations and for driving consistent growth for the businesses he leads. Most recently, Jo was the Global Head of Cloud Infrastructure Services.
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Comprehensive Look on How to Ready Your Company for the Cloud Revolution in 2024

----- Arcticle source ----- https://www.wipro.com/cloud/comprehensive-look-on-how-to-ready-your-company-for-the-cloud-revolution-in-2024/ ----- Contact Wipro Please fill the required details to access the content Comprehensive Look on How to Ready Your Company for the Cloud Revolution in 2024 Cloud continues to be the foundational transformation platform for organizations that want to be industry leaders and adopt the most impactful emerging tech. Jo Debecker, Managing Partner and Global Head of Wipro FullStride Cloud, outlines the six trends that shall shape the future of cloud and set the stage for business transformation and innovation. Some key excerpts include: Articles were originally published on Forbes.com
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From data centre to cloud

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content From data centre to cloud How a data centre exit strategy can prove to be more valuable than you might think The benefits of the cloud are no secret to businesses. What can often be a mystery, however, is how to adopt it smoothly. Almost all companies have a cloud strategy, aiming to capture improved operational flexibility, cost savings and innovation opportunities. The rewards for a successful migration are huge: cloud transitions can reduce total cost of ownership by 20-45%+. This process has been accelerated by the pandemic, with capabilities from data backup and disaster recovery to software development and testing becoming even more vital. Cloud can also help to reduce a business's carbon footprint, and allows for both flexibility and scalability, so that companies can scale up and down where necessary. Businesses generally accept that migrating from on-premises data centres to the cloud can be a complex, purely practical, and sometimes even painful exercise. But, what many companies might not know is that by monetising their data centre exits, they can also make money by switching to the cloud, offsetting the upfront costs that may be standing in the way. Not always simple, but worth the cost It is understandable that once the decision has been made to migrate to the cloud, businesses are anxious to move fast, and rely on tried and true internal teams. However, this underestimates the size and specific knowledge needed to complete the task in an efficient manner. Many logistical and financial barriers exist around exiting a data centre. For example, fees may apply to those who try to break their contract early, and hardware must be decommissioned correctly and within regulation in order to avoid more fines. There is also the question of where the equipment goes and whether or not companies can recoup their expenses. Addressing all these concerns can take time, but the longer businesses wait to exit their data centres, the more pressure they may feel to get ahead of the curve, resulting in rushed timelines, missed opportunities and further costs. In addition to these challenges, companies also have to transition their applications from the data centre to the cloud—a complex and time-consuming process. For example, a typical retail bank might have four data centres running over 3000 applications and 50,000 servers. Alternatively, applications might be spread out over multiple business units, regions, or thousands of virtual machines, with little coordination between them. When the migration of vital applications goes wrong, it can too often result in a 'double bubble' scenario, in which businesses find themselves stuck, mid-exit, between the data centre and the cloud. Applications tend to become more complex as the transition progresses, the data sources become harder to trace and the project can stall out, increasing costs, decreasing efficiency and exposing the company to security risks.   Similarly, any lengthy downtime for servers can be highly costly, restricting key business functions and leading to unexpected revenue shortfalls. Add to this strict regulatory requirements for certain industries, and the importance of managing the situation expertly becomes clear. All of these scenarios highlight that cloud migrations can be complicated, and working with an experienced partner can prevent issues from piling up and overwhelming an internal team's resources.   Profiting from your exit strategy Cloud migration experience can also make a surprising difference in other ways: not just avoiding unexpected costs and delays, but monetising the process too. Partners are adept at liquidating legacy assets such as hardware and facilities. Further, they can help businesses to be bought out of data centre lease commitments, meaning they aren't stuck with continued

and unnecessary costs. When large migration projects can involve cutting down twelve data centres to two, that is a lot of potential cost savings on the table. Facing the dreaded 'double bubble' problem, there are even temporary cloud-like interfaces that exit partners can equip companies with as they transition, so that they can begin to see the benefits while planning next steps—an especially important element as it means businesses can move at their own pace and work within timeframes that suit them best. By providing companies with interim solutions, these programmes free businesses from assets that are weighing them down and help them to reach a hybrid cloud state until the switch is complete. Meanwhile temporary 'single pane of glass' reporting solutions can shed vital visibility on the migration process, allaying leadership fears until the programme is complete. A successful, seamless transition There is no doubt that transitioning from the data centre to the cloud can be challenging. It can be costly, and without the right expertise, a slow and arduous process, leaving companies in a difficult position. But the rewards for getting the process right are huge. From greater cost savings, to increased flexibility and operational agility. Working with the right partner can alleviate some of the pressures associated with exiting the data centre—including costs and the technological expertise required with switching to the cloud—and empower businesses to start making the changes they need to grow stronger, smarter and even more sustainable. Cloud migration can be expensive, but it doesn't have to happen en masse, nor does it have to be handled by a company's IT team alone. In a rapid period of digital transformation and innovation, companies need to adapt; but start the transition now and you'll reap the rewards right away, as well as for years to come. This piece was developed and originally published on Technology Dispatch About the Author Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. With over two decades of industry experience, Jo is known for his expertise in leading complex transformation projects for large global organizations and for driving consistent growth for the businesses he leads. Most recently, Jo was the Global Head of Cloud Infrastructure Services.
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AI Is Here: How Do You Control Your Cloud Spending?

----- Arcticle source ----- https://www.wipro.com/cloud/ai-is-here-how-do-you-control-your-cloud-spending/ ----- Contact Wipro Please fill the required details to access the content AI Is Here: How Do You Control Your Cloud Spending? Business technology leaders are expecting their cloud spending to grow in 2024 due to the growth of AI. Cloud economics is an intelligent management strategy that can better manage these costs as generative AI inevitably pushes spending higher. AI applications are only as good as the data they use. The more high-quality data that algorithms have access to, the more accurate and reliable their results will be. But just how much data do machine learning and large language models require? As AI use cases become more complex and resource-intensive, the expenses associated with supporting them—and particularly the cloud infrastructure for AI workloads

are increasing. Unfortunately, there's no hard-and-fast rule when it comes to forecasting what's needed to run AI models. Workload requirements and computing power vary depending on the size and complexity of the project. Natural language processing, for example, is a complex task that typically requires a lot of data for training. It also happens to be one of the more popular use cases, with companies using it for everything from email generation and document summaries to customer service. These tasks can quickly become even more complex if a business wants highly contextualized responses, such as employee self-service for a global company or help handling sensitive information in a highly regulated industry such as healthcare or finance. These generative AI models can run "10 to 100 times bigger than older AI models"; meanwhile, use cases and user bases are growing. AI's data demand is having a major impact on cloud costs at a time when many companies are scrutinizing cloud budgets. Early lift-and-shift approaches to cloud adoption have led to bloated cloud budgets, with many companies paying for cloud services that they don't need. Now that the dust surrounding these migrations is settling, companies are taking stock of their cloud consumption and taking steps to reduce overspending. However, with the explosion of AI, these cloud infrastructures must now be redesigned to handle large-scale AI use cases. This might seem like terrible timing: A promising, data-intensive technology goes mainstream just as companies are tightening their data and cloud infrastructure belts. But growing interest in cloud economics is showing companies how to maximize the value of new technology investments rather than cutting them out altogether. Applying Cloud Economics To Manage AI Costs Cloud economics is a strategic approach to managing cloud spending that goes beyond simply cutting costs or increasing efficiency. It involves conducting a thorough cost-benefit analysis to ensure that cloud investments align with business priorities and will maximize overall business value. This same approach can be applied to managing AI costs. To effectively manage AI costs using cloud economics, businesses need to consider the potential impact and business value of the new technology. It's crucial to align AI investments with broader business objectives and understand the accommodations required for successful implementation. Instead of investing in AI use cases based solely on perceived value, teams should work to understand what "valuable" means for the business and set clear expectations for how to achieve that value. All business teams that intend to leverage AI models should collaborate within a shared framework and process for approving AI-driven projects. When teams work independently to make decisions about cloud and AI investments, it becomes challenging for the business to assess the costs and benefits of those decisions. Establishing a centralized cloud economics team or a group within a cloud center of excellence (COE) can help coordinate these efforts, establish best practices and guide teams on spending, experimentation and investment. Additionally, innovation COEs can play a key role in helping businesses understand the requirements and value of new technologies, including AI. With AI advancing rapidly, businesses must grasp the potential impact and opportunities these advancements bring. By leveraging cloud economics to manage AI costs, businesses can help ensure that their investments align with strategic objectives and deliver maximum value. Optimizing AI Workloads With Cloud Economics With a solid cloud economics program in place, businesses can delve into usage data to truly optimize performance across AI and the cloud. Initially, this involves

reducing wasted spending by shutting down underutilized resources. Cloud economics can help businesses take advantage of variable cost models to support AI investments. AI data requirements tend to be high, but they're also variable. Businesses stand to save a lot of money by accurately forecasting cloud requirements and adjusting as needed. This requires a strong data analytics program capable of generating timely insights. These adjustments can free up resources, which can then be reallocated to fund more critical (AI) investments. Teams can further utilize performance data to determine the optimal cloud environments for their enterprise, incorporate intelligent workload management to automate resource scheduling and adjust cloud services based on AI demand. Using cloud economics to manage AI costs not only helps ensure effective cost management but it also enables businesses to optimize the AI workload performance. By leveraging usage data and variable cost models, businesses can make informed decisions to maximize the value of AI investments while aligning them with broader business objectives. This strategic approach will help reduce overspending and allow businesses to reallocate resources effectively, realizing the full potential of their cloud and AI investments. This article was originally published on Forbes.com About the Author   Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. With over two decades of industry experience, Jo is known for his expertise in leading complex transformation projects for large global organizations and for driving consistent growth for the businesses he leads. Most recently, Jo was the Global Head of Cloud Infrastructure Services.
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How AI Unlocks Human Potential

----- Arcticle source ----- https://www.wipro.com/cloud/how-ai-unlocks-human-potential/ ----- Contact Wipro Please fill the required details to access the content How AI Unlocks Human Potential The integration of artificial intelligence (AI) in the workplace signifies a shift toward augmented human performance in which automation complements rather than replaces human labor. Harvard Business School professor Karim Lakhani sums it up: "AI is not going to replace humans, but humans with AI are going to replace humans without AI." Partial automation is becoming the norm, enhancing human capabilities and efficiency. This evolution isn't just about automating routine tasks but also about leveraging AI to augment human intelligence, creativity and decision-making processes. As machines take on more automatable activities, humans are freed to focus on higher-value work, fostering innovation and driving business growth. But what, exactly, does that look like? In the age of AI, demand for new skills and roles such as data scientists, digital transformation specialists, big data specialists and business intelligence analysts is expected to rise sharply. But what about other areas, such as marketing and IT support, in which routine tasks are already outsourced to AI? This shift underscores the importance of reskilling and upskilling initiatives as workers transition from declining occupations to emerging ones. Embracing AI and automation is beyond mere technological adoption—it's about preparing the workforce for the future, ensuring that employees are equipped to work alongside increasingly capable machines.

By prioritizing the human touch in AI adoption, businesses can harness the power of technology to enhance, rather than replace, the workforce, creating a more dynamic, innovative, efficient and competitive future. How Professionals Are Reshaping Their Roles With AI IT support agents, to give one example of a role already intertwined with AI, are leveraging AI to transform the way they manage and resolve issues. Through AI-powered information retrieval and artifact generation, these professionals can analyze device and application data, knowledge-base articles and known issues more efficiently. AI facilitates dynamic insight generation and summarization, improving troubleshooting by correlating key information and providing step-by-step guidance to accelerate the resolution process. Through implementing low- and zero-touch remote automation-based remediations, IT support agents can significantly reduce their manual workloads (which includes the actual resolution) while improving the quality of support they provide. Marketing professionals are also harnessing the power of AI to gain a competitive edge. By utilizing AI to collect market research data and identify trends and outliers, they can develop more informed, effective marketing strategies. AI assists in drafting marketing plans, pitchdecks that highlight product features, promotional emails, videos and social media posts, streamlining the content creation process. This enables marketers to focus more on creative and strategic tasks. Similarly, HR professionals are using AI to transform the human resources function within organizations. Streamlined automated workflows powered by AI boost enterprise HR productivity by efficiently managing employee journeys. This includes tracking employee requests and cases and providing easy access to HR resources and information. AI can also help reduce biases in the hiring process by anonymizing resumes, analyzing job descriptions for biased language and ensuring diverse candidate pools by reaching out to a wide range of backgrounds. Hiring teams can use AI's predictive analytics to identify and rectify patterns of bias in historical hiring data and standardize the questioning process to minimize personal biases. In each of these use cases, the narrative is clear: AI isn't a replacement for human workers but a powerful ally that supports and enhances their capabilities. The importance of human involvement remains paramount, as it's the insights, creativity and strategic thinking of professionals that prompt AI, review its outputs and guide its responses to ensure relevance and accuracy. With AI handling routine and data-intensive tasks, employees are freed to focus on more complex, creative and strategic aspects of their roles, leading to a more empowered and fulfilled workforce. This empowerment can result in increased productivity, engagement and innovation. Ultimately, investing in the well-being and empowerment of the human workforce is a moral imperative and strategic decision that can positively impact the bottom line. How To Ensure AI Has A Human Touch Promoting a human touch throughout AI programs requires coordination across the executive, managerial and employee levels. At the executive level, leaders need to establish a clear strategic vision for AI that anticipates market trends and aligns with the organization's goals while addressing human elements such as employee and customer experience and training, as well as effective talent recruitment. This helps ensure that the integration of AI technologies is successful on both the business and employee levels—focusing on boosting performance while paving the way for greater productivity, higher quality and growth. At the management level, an innovative mindset

becomes crucial. Leaders must envision new AI use cases, lead implementation and foster a collaborative environment that empowers the human workforce to make the most of AI tools. Continuous learning about the latest AI developments equips leaders to handle uncertainties, and efficient management and collaborative engagement are vital as AI applications evolve and new ones are adopted. For employees, digital literacy is indispensable, and this will increasingly include a more advanced understanding of AI concepts. Employees must also be vigilant about eliminating unconscious biases in AI tools and making ethical decisions about their use, especially as AI systems assume greater decision-making roles. This focus on ethical decision-making and advocating for responsible AI implementation helps ensure that AI technologies are developed and used safely and successfully and are aligned with company policies and compliance. Balancing AI Advancements With Human Potential AI isn't just a tool—it's a catalyst for unlocking human potential. The human touch in AI adoption is crucial, guiding this powerful technology to enhance how businesses operate and teams collaborate. Embracing AI with a focus on augmenting human skills and creativity helps ensure that organizations can harness the full value of both AI and their workforces, paving the way for a future in which technology and human ingenuity thrive together. This article was originally published on Forbes.com About the Author   Jo Debecker - Managing Partner and Global Head of Wipro FullStride Cloud. With over two decades of industry experience, Jo is known for his expertise in leading complex transformation projects for large global organizations and for driving consistent growth for the businesses he leads. Most recently, Jo was the Global Head of Cloud Infrastructure Services.
===================== ----- Arcticle source ----- https://www.wipro.com/cloud/joint-report-with-forbes-how-to-master-cloud-economics-and-harness-the-power-of-ai/ ----- Contact Wipro Please fill the required details to access the content Joint Report with Forbes: How to Master Cloud Economics and Harness the Power of AI We are thrilled to announce our collaboration with Forbes on a groundbreaking joint report. This report delves into the latest insights and trends shaping the business landscape, particularly focusing on the critical intersection of cloud computing and the burgeoning field of artificial intelligence (AI). Data from the 2024 Forbes Research CxO Growth 4.0 Survey, shows that more than one-third of CIOs are actively deploying more cloud solutions as part of their digital transformation initiatives, underscoring the pivotal role of cloud technology in driving organizational growth and innovation. Cloud computing serves as the foundational bedrock for cutting-edge technologies such as AI. The unparalleled computing power and data storage capabilities offered by the cloud are indispensable for the existence and advancement of AI technologies. Without access to the cloud's resources, the potential of AI would be severely limited. The focal point of the report is the concept of cloud economics—a comprehensive framework designed to elucidate the manifold benefits of cloud computing, its organizational impact, associated costs, anticipated advantages, and the imperative measures for safeguarding data. The meticulous understanding and application of cloud economics are identified as indispensable prerequisites for executives seeking to harness the transformative potential of GenAI, the next generation of AI technologies. Our collaboration with Forbes aims to provide an in-depth exploration of the future landscape of cloud and GenAI,

shedding light on the pivotal role of cloud economics in driving organizational success and technological advancement. This joint report serves as an indispensable resource for executives and industry leaders seeking to navigate the evolving terrain of cloud computing and AI, equipping them with the insights and strategies necessary to thrive in the digital era. This insightful report unveils the future of cloud and GenAI, and explains why cloud economics stands as a critical linchpin for achieving sustainable success in the dynamic business environment. Download report ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/genai-drives-accelerated-cloud-investment/ ----- Contact Wipro Please fill the required details to access the content GenAI Drives Accelerated Cloud Investment Cloud continues to be the primary transformational platform for the enterprise, empowering organizations to innovate and stay competitive. "The Pulse of Cloud," presented by Wipro FullStride Cloud, is a quarterly survey series that delves into the current state of cloud adoption and digital transformation strategies. Each edition features insights on business technology topics that matter most to global enterprise executives. The Wipro FullStride Cloud Pulse of Cloud: Q1 2024 insights are drawn from a survey of over 500 business leaders in US and Europe across sectors to offer a detailed look at the latest trends and how companies are navigating the dynamic landscape of cloud computing and artificial intelligence. Below are some findings from our first report: Download the Report =====================

Accelerating Business Assurance: Strategies for SAP S/4HANA Transformation

----- Arcticle source ----- https://www.wipro.com/cloud/accelerating-business-assurance-strategies-for-sap-s4hana-transformation/ ----- Contact Wipro Please fill the required details to access the content Accelerating Business Assurance: Strategies for SAP S/4HANA Transformation With the 2027 deadline looming, strategic assurance practices offer businesses a roadmap to SAP S/4HANA migration success. In 2023, a leading retail company incurred losses of more than €78 million due to a poorly executed SAP transformation. With SAP ending support for ECC after 2027, businesses must transition to S/4HANA, but a successful migration requires more than upgrading technology. It also requires a strong assurance strategy — embracing a cultural shift towards quality that aligns with business goals, transforming testing processes well before the migration starts, and rethinking operational models. Such a comprehensive approach ensures that the migration not only meets the technical needs but also propels the company forward, supporting its strategic objectives and enhancing operational efficiency. The Role of Assurance in Migration Given how critical assurance is to a successful S/4HANA migration, it should be an integral part of every transition plan. However, many businesses focus heavily on the technical side and functional aspects of the migration, such as the system upgrade and business data migration, leaving less time for non-functional

aspects like performance, operational stability, and security. Neglecting these aspects can lead to significant disruptions, including downtime, data loss, or performance issues, which in turn can affect customer satisfaction, revenue, and compliance with regulations. A mindset shift is therefore essential to keep business objectives in mind throughout the migration. Assurance in SAP S/4HANA migration should support and enhance the company's strategic aims (e.g., mergers and market expansions, operational efficiencies or supply chain optimization), positioning quality assurance as a strategic partner rather than a mere procedural step. This involves a transformation of testing processes before migration, moving away from traditional methods to accommodate S/4HANA's modern technologies. Quality engineering (QE) leaders play a critical role in this transformation, preventing defects from reaching the production environment and ensuring a smooth transition. For organizations deeply integrated with SAP, migrating to S/4HANA might also require a significant transformation in operational models, particularly in the organization and delivery of quality engineering services. Adopting a Testing Center for Enablement model that is aligned with agile methodologies, for example, ensures the assurance process is adaptable and efficient, meeting the rapid demands of modern business and technology landscapes. Accelerating the Transition with AI and Other Technologies Artificial intelligence (AI) and machine learning (ML) are playing a pivotal role in transforming how businesses approach the migration to S/4HANA. These technologies serve as key enablers, streamlining the migration process and introducing efficiencies that were previously unattainable. AI can automate repetitive tasks, predict potential issues before they arise, and provide insights to inform decision-making, ensuring the migration process aligns with company goals. Machine learning algorithms can analyze historical data from past projects to predict outcomes, which can be used to optimize the assurance strategy. By leveraging data from past migration projects, AI develops effective testing strategies that are tailored to S/4HANA's modern technologies. This shift from traditional methods is a critical aspect of the mindset change and testing transformation emphasized in the assurance strategy, ensuring a smooth transition that minimizes risks and maintains business continuity. For example, Wipro worked with a major Australian utility company that sought to elevate its customer experience by transitioning from an outdated system to SAP S/4 HANA. Our teams utilized ML-powered intelligent test automation to ensure the migration was completed efficiently and without major disruptions. This approach not only ensured the project was delivered on time but also resulted in a 30% reduction in test cycle time, directly contributing to improved customer service and operational efficiency. Similarly, a North American Energy company, dealing with the complexity of multiple ERP systems due to past acquisitions, aimed for better system integration and data consistency by migrating to SAP S/4 HANA. Its collaboration with Wipro introduced a future-ready quality engineering model and an automation-first strategy, leading to a 30% reduction in quality engineering costs and a significant decrease in regression test cycle time. This move streamlined operations and enhanced decision-making processes, showcasing the direct value of a focused migration strategy. Other valuable use cases for AI/ML in assurance include: Adopting AI/ML not only reduces the time and resources required for migration but also significantly enhances the accuracy and effectiveness of the migration process. Wipro's

proprietary frameworks and tools, which integrate AI and machine learning, have consistently led to a 98% success rate for client migration projects, underscoring the effectiveness of leveraging advanced technologies. These tools are a direct result of hands-on experience with over 200 successful SAP S/4HANA migrations and are powered by GenAI for tasks such as test case generation, data validation, performance analysis and predictive analytics. Through its client work, Wipro has found that AI-driven DevOps introduces advanced methodologies and tools that enable faster SAP S/4 HANA migrations with reduced time-to-market (TTM). For instance, using automated test scripts, intelligent monitoring of system performance, and predictive analytics for migration risk management. Navigating Challenges and Embracing Opportunities Adopting AI and other technologies for migration assurance presents several challenges, including concerns around hallucinations and biases in AI models, data security, and the need for solutions tailored to the specific context of each business. Data security is a critical concern, as the migration process involves handling sensitive and proprietary business information. Businesses must ensure that the technologies they adopt comply with stringent data protection standards to safeguard against breaches and data loss. Despite these challenges, the strategic use of AI and other technologies in migration assurance offers significant opportunities for businesses. To navigate these challenges successfully, companies must prioritize selecting the right technology partners — those with proven expertise in AI and a deep understanding of the migration process. Early and strategic planning for migration, with a focus on incorporating these technologies from the outset, can also play a crucial role in overcoming potential obstacles. As the 2027 deadline approaches, businesses must prioritize their migration to S/4HANA, with assurance playing a critical role in this transition. Effective assurance will ensure smooth operations while mitigating risks and preventing costly disruptions. Partnering with experienced firms that excel in SAP assurance and leveraging innovative technologies like AI/ML can turn this challenge into an opportunity for growth, setting the stage for enhanced efficiency and a competitive edge in the market. About the Authors John van Geel SVP and Global Head, Wipro Digital and Cloud John is a seasoned business leader with over 30 years of experience, known for strategic leadership and business acumen that have propelled growth and success across organizations. Rituparna Ghosh VP and Global Head, Quality Engineering and Testing, Wipro FullStride Cloud With over 25 years at Wipro, Ritu leads the Quality Engineering and Testing Practice, leveraging her expertise in emerging trends and technologies to steer the practice towards the future of software development. =====================

Microservices and Cloud native Testing

----- Arcticle source ----- https://www.wipro.com/cloud/microservices-and-cloud-native-testing/ ----- Contact Wipro Please fill the required details to access the content Microservices and Cloud native Testing Go beyond interface testing and holistically assure headless/distributed architecture

performance on the cloud Wipro offers an innovative approach to testing a distributed architecture on the cloud, whether it be microservices or rehosted on-prem applications. Our approach involves an E2E testing framework for both applications and their interactions with the infrastructure they're hosted on. We provide a framework for testing microservices closer to the container orchestrator and take into account the many complexities that are part of cloud-native development. Additionally, our cloud-native testing ensures that microservices interact as expected with their underlying infrastructure, with a procedure that includes testing high availability, disaster recovery, and deployment/rollbacks. Wipro believes QAOps should work in tandem with DevOps, rather than relegate QA to unit testing only.   ======================

Quality Engineering Consulting Services

----- Arcticle source ----- https://www.wipro.com/cloud/quality-engineering-consulting-services/ ----- Contact Wipro Please fill the required details to access the content Quality Engineering Consulting Services Designing quality blueprints aligned to business outcomes Wipro's Quality Engineering Consulting Services is driven by the 'consulting crew' which acts as the thought leadership engine designing blueprints for QA imperatives for Nextgen technologies and overhauling traditional quality assurance construct to compliment 'New Ways of Working' in a digital ecosystem. Created with an objective to bring an engineering mind set to quality assurance; the 'consulting crew' advises clients on how to transform from quality assurance to quality engineering, along with solutions that addresses the shift required in machinery, methodology and mind set. Our experts' insights, backed by exhaustive research are highly valued in the industry and published as 'State of Quality' report, providing clear trends that can help CXOs and QA directors envision their approach to deal with any disruptive change. Our wide range of expertise varies from process to quality engineering techniques such as, Service Virtualization, Performance Engineering and Test Data Management. To know more, write to digital.contact@wipro.com ======================

Performance Testing & Engineering

----- Arcticle source ----- https://www.wipro.com/cloud/performance-testing-engineering/ ----- Contact Wipro Please fill the required details to access the content Performance Testing & Engineering Peak performance, extreme reliability Deploy best-in-class application performance testing to overcome the challenges of high data volumes and changing technology dynamics Wipro's Performance Testing and Engineering service provides clients with early assurance on application performance, scalability, reliability, security and user experience. This is achieved by moving QA into the early stages of

development and taking it right across the Software Development Life Cycle (SDLC) phase. The service includes consulting, strategy, assessment, capacity planning and testing along with end-to-end performance engineering, performance maintenance, code profiling and optimization. Clients using the service gain an edge through uninterrupted service, predictable and consistent application performance and optimized infrastructure usage. =====================

Quality as a Service

----- Arcticle source ----- https://www.wipro.com/cloud/quality-as-a-service/ ----- Contact Wipro Please fill the required details to access the content Quality as a Service Accelerate returns with fast flexible QA on demand Enable enterprises to achieve desired quality business/IT outcomes by providing consumption based, integrated, scalable, flexible quality assurance services. The fast-evolving landscape of technology ecosystems fuelled by disruptive technologies is revolutionizing the space of IT consumerism. This is leading to immense pressure on businesses to keep up with the rising expectations of the digital consumer, thereby creating a need for embracing smart QA services. Our Quality-as-a-Service offering, brings together the expertise of Wipro and Topcoder, ensuring that customers consume quality engineering and testing services in the "as-a-Service" model. It empowers enterprises with virtually unlimited QA capacity and flexibility in environment, infrastructure, and localization support to help speed up test cycles, expand QA coverage, resolve bugs and ensure real-world application readiness. Our QA services leverage a ready-to-work global community of vetted professionals, supported by an ecosystem of intelligent platforms. This helps in driving better agility and innovation in service delivery, ultimately driving the QA projects to success. =====================

Test Environment Management & Data Assurance

----- Arcticle source ----- https://www.wipro.com/cloud/test-environment-management-data-assurance/ ----- Contact Wipro Please fill the required details to access the content Test Environment Management & Data Assurance Efficient test environment and data management Enhance QA outcomes with holistic test environment and test data services. Our fully managed model of service offerings for test environment and data assurance areas provides end-to-end business value, ranging from consulting, provisioning, and support to the administration of tools as a service (TaaS). From a test data perspective, we deliver solutions not only for masking production data, but generating synthetic test data as well, ensuring nearly 100% test coverage. Our offerings ensure automated provisioning and the availability of test data in a self-service model, allowing test engineers to focus on more critical release tasks. Our test environment management offerings ensure complete transparency and predictability, so teams can

accordingly plan their testing tasks. Supported by automation, we provide organizations with a single pane of glass (SPoG) view of their test environments' status, along with analytics capabilities that can predict and prevent downtime.   Wipro's services can significantly improve operational efficiency and reduce data defects, leading to accelerated time to market for any production changes along with added stability. Enterprises can benefit from reliable, highly available, and fit-for-purpose test environments, built on Wipro's AI/ML-driven solutions and expertise, providing seamless experiences whether on the cloud or on-premises/hybrid hosting scenarios. =======================

intelliassure

----- Arcticle source ----- https://www.wipro.com/cloud/intelliassure/ ----- Our Expertise Contact Wipro Please fill the required details to access the content intelliassure Transforming Organizations to think Quality First! Build effective quality systems by leveraging HOLMES platform Wipro intelliassure is an intelligent quality platform powered by HOLMES to empower you to embark on a journey to build self-healable quality systems, by leveraging artificial intelligence, machine learning and advanced data analytics. Key features such as predictive quality analytics help standardize the QA Governance in a mobility enabled platform to enable IT stakeholders with actionable insights and drive transformation. Cognitive automation optimizes the test assets and reduces the test execution effort substantially. Autonomic healing optimizes the effort involved in defect life cycle management. =======================

Digital Assurance

----- Arcticle source ----- https://www.wipro.com/cloud/digital-assurance/ ----- Contact Wipro Please fill the required details to access the content Digital Assurance Digital Assurance De-risk your digital transformation journey with quality engineered at speed Wipro's Digital Assurance practice enables scalable and accelerated digital transformation driven by a quality approach that improves engineers' productivity and enhances developer experience. The above are based on key tenets of speed, experience and user analytics. Our transformation offerings consist of two key pillars - strengthening the Digital Core and expanding the Digital Boundaries. Our 'Strengthening the Digital Core' focuses on Omni- channel assurance with flavors of localization, accessibility, compatibility and visual testing, supported by application performance management and service virtualization. Whereas our second pillar, 'Expanding the Digital Boundaries' focuses on quality of next generation disruptive technologies such as Internet of Things (IoT), Cloud, GAFA and Block Chain. With a strong focus on thought leadership and innovation, we have invested in labs dedicated to Usability, IoT, Artificial Intelligence (AI) and Mobility Quality Engineering – making us a leader in our industry.   Our above state-of-art offerings are powered by digital labs and skilled digital work force, with our SDET (Software Developer Engineer in Test) professionals having delivered over 250 global engagements,

combining development, domain and technology skills. To know more, write to digital.contact@wipro.com =====================

Test Automation

----- Arcticle source ----- https://www.wipro.com/cloud/test-automation/ ----- Contact Wipro Please fill the required details to access the content Test Automation Test automation—change the rules of the game Use intelligent and cognitive processes to disrupt old world QA practices Wipro provides clients across industries with Test Automation services, a key lever in driving efficiency, effectiveness and cost reduction in test organizations. As a pioneer in the Test Automation space, we have developed open source tools and competencies to provide improved coverage, early defect detection and cycle time reduction. The service is focused on: Intelligent and cognitive automation using IntelliAssure, powered by Wipro HOLMESTM, our Artificial Intelligence platform, to achieve accelerated speed. To know more, write to digital.contact@wipro.com =====================

SaaS Application Assurance

----- Arcticle source ----- https://www.wipro.com/cloud/saas-application-assurance/ ----- Contact Wipro Please fill the required details to access the content SaaS Application Assurance More organizations are migrating towards software as a service (SaaS) models for their core, business-critical systems for reduced maintenance and overheads. Yet this requires a differentiated quality engineering and assurance approach, which traditional methodologies may be unable to keep up with.   Wipro's SaaS application assurance offering ensures that software products meet an organization's specifications and functional requirements with an automation-first approach that positions quality as an accelerator, instead of a bottleneck. We offer tailored QA offerings for various SaaS applications, such as Salesforce, ServiceNow, Microsoft Dynamics 365, Workday, PEGA, and Adobe Experience Manager. We infuse our solutions with domain expertise and process knowledge, and we test accelerator packs with a special focus on configurations, modules, and functionalities specific to low-code/no-code (LCNC) ways of development. Our offerings holistically cover test lifecycle activities as well as various types of testing, including functional, regression, and end to end, which are aimed at improving tester productivity and ensure transformation/upgrade/integration programs are delivered on time and with high quality.   ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/cloud-infrastructure-testing-infrastructure-as-code-kubernetes/ ----- Contact Wipro Please fill the required details to access the content Cloud Infrastructure Testing- Infrastructure as Code (IaC) & Kubernetes Testing infrastructure should be no different or unimportant as testing application code. Wipro conducts E2E testing on infrastructures to ensure seamless performance in distributed architectures on cloud. Infrastructure as code (IaC) is critical to ensuring a single source of truth for networking, storage, virtual machines, and more. Infrastructure is expensive, and it becomes critical to ensure that enterprises receive

critical feedback from their infrastructure. Wipro IaC Test frameworks emulate the application interaction with the infrastructure to ensure the correctness of IaC. Testing IaC can also ensure conformance and compliance with domain, industry and technical standards, such as ensuring RBAC on Kubernetes clusters operate as configured and traffic flows as expected. Additionally, beyond merely scanning the dockerized applications running on Kubernetes, we can ensure how and what is exactly running. We believe that testing should not remain agnostic, but rather be tailored to the expected business workflows. Our team tests enterprise systems to ensure antifragility and agility, allowing us to mitigate errors, rather than remediate them. ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/mlops-assurance/ ----- Contact Wipro Please fill the required details to access the content MLOps assurance The maturity of any ML pipeline depends on automation – not just in data analysis and modelling, but also the quality assurance process. Wipro ensures the quality of AI/ML applications through our state-of-the-art testing methodologies. Our ML pipeline testing not only ensures that the deployed AI/ML endpoint works as expected, but also that the underlying infrastructure triggers as per defined configurations. This can range from simple API triggers to changes in data or models. Additionally, monitoring and observability play key roles in AI/models, ensuring a smooth performance versus a speedy trade-off between models as per specifications. We believe that testing ML applications purely as black boxes won't be sufficient enough to bring agility to the MLOps pipeline. Wipro ensures that the three core tenets of AI/ML testing are covered: functional tests (features and data), MLOps, and infrastructure. We ensure quick deployments through A/B and canary testing on production variants. ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/observability/ ----- Contact Wipro Please fill the required details to access the content Observability Conventional monitoring techniques and processes aren't well suited for multifaceted cloud environments. The duality of observability and controllability can assure businesses of their systems' reliability and resiliency. In today's cloud-first world, the number of potential failure points and modes of failure across apps, products, and infrastructures has exponentially increased. Conventional monitoring techniques fail to help businesses de-risk IT platform issues, as they are passive and provide a limited view of the issue/defect. Wipro's observability offering gives organizations a proactive approach to not only identify what has or will go wrong (the external factors) but also pinpoints the faulty system/component, along with the right root cause (the internal factors). It cuts across each IT layer of every user journey: endpoint devices and interfaces, business processes, web pages/application screens, services, data integrations, infrastructures, and networks. Compatible with all leading cloud platforms, our observability offering provides a single pane of glass view of dashboards, issues alerts to key stakeholders, and delivers customized reports in formats relevant to the stakeholder. It also provides site reliability engineering (SRE) capabilities to ensure quality performance and dependability, resulting in approximately zero down time, improved end-to-end visibility and transparency across each event and transaction, and increased confidence in IT to drive business resiliency in adverse conditions. =====================

Customer Service BPaaS

----- Arcticle source ----- https://www.wipro.com/cloud/customer-service-bpaas/ ----- Contact Wipro Please fill the required details to access the content The only Customer Service Hack you'll Need to Know ======================

Product Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/product-cloud/ ----- Contact Wipro Please fill the required details to access the content Product Cloud Smart and Delightful Connected Products ======================

Wave 365

Transformation Platform (WTP)

----- Arcticle source ----- https://www.wipro.com/cloud/wtp--wave-365-transformation-platform-/ ----- Contact Wipro Please fill the required details to access the content Wave 365 Transformation Platform (WTP) Optimize Existing Tech Investments Wipro's Wave 365 Transformation Platform (WTP) is used by clients to migrate to Microsoft SharePoint®, Microsoft.NET®, OneDrive, Exchange and drives cloud adoption. We customize our IPs to match client application complexities. This delivers predictable outcomes across the four phases of migration: Discovery, Prototyping, Delivery and Sustenance. WTP for Collaboration manages migration of portals to Microsoft SharePoint, OneDrive & Exchange. The platform provides automated tools for portal assessment, rationalization, validations, and scalable architecture to support multiple portal data sourcing. WTP for Legacy offers migration from legacy codebase to Microsoft .NET and transition of databases and business intelligence tools to Microsoft SQL server. It also helps upgrade Microsoft products to newer versions including Microsoft Biz Talk server. WTP for Cloud facilitates migration to Windows Azure cloud environments and Office 365 SharePoint online, OneDrive. The platform has a cloud based archival engine to support archival and retrieval of contents. Businesses, such as a pharma client, have migrated and archived 2,300 Lotus Notes applications eliminating redundant applications and reducing cost of maintenance. ======================

Digital Services Hub

----- Arcticle source ----- https://www.wipro.com/cloud/digital-services-hub/ ----- Contact Wipro Please fill the required details to access the content Make

the Diversity of Cloud work to your Advantage
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CRM Modernization

----- Arcticle source ----- https://www.wipro.com/cloud/crm-modernization/ ----- Contact Wipro Please fill the required details to access the content Meet Customers on Cloud with Exceptional Engagement
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Wipro Cloud Migration

----- Arcticle source ----- https://www.wipro.com/cloud/wipro-cloud-migration-studio-and-platform/ ----- Contact Wipro Please fill the required details to access the content Wipro Cloud Migration Studio and Platform Wipro Cloud Migration Studio is a one-stop shop for migrations leveraging AWS Cloud. It focuses on delivering secured, reliable and accelerated migrations across workloads and enterprise applications. The Studio promises to be our next generation Cloud acceleration capability that industrializes and automates Cloud adoptions. It is a highly automated industrialized capability that combines Wipro IP and best of breed tools to bring together the following in a single delivery model: Wipro's Cloud Migration Studio leverages Wipro Cloud Migration Platform that uses AWS Service Catalog to productize the application deployment templates. This platform helps in organizing and managing templates. The application/product templates are secured using AWS IAM[WU1] ([SV(2] Identity and Access Management) and usages are tracked using AWS budgets. The Continuous Integration (CI) and Continuous Delivery (CD) process are accomplished using AWS DevOps Service for rapid and reliable releases. It also helps the customer in attaining "faster go to market". ======================

Wipro Cloud Data Warehouse Readiness Solution (CDRS) on AWS

----- Arcticle source ----- https://www.wipro.com/cloud/wipro-cloud-data-warehouse-readiness-solution-cdrs/ ----- Contact Wipro Please fill the required details to access the content Wipro Cloud Data Warehouse Readiness Solution (CDRS) on AWS Migrate oracle databases using AWS Schema conversion tool and Wipro's Cloud data warehouse readiness solution (CDRS) Wipro CDRS is an end-to-end self-service Cloud migration solution thatautomates the entire data warehouse migration as well as data offloading from on premise to AWS Cloud, across analytical platforms. It offers platform agnostic solution supporting Teradata, Vertica, Sybase, IQ, Oracle, DB2(and many more, with scalability and optimization on target platform. This automated solution helps customers to achieveimproved total

cost of ownership by around 40-50% through optimized license and around 40-55% reduction in time-to-market through rapid provisioning of new data warehouse platform. =====================

Wipro Data Discovery Platform (DDP) on AWS

----- Arcticle source ----- https://www.wipro.com/cloud/wipro-data-discovery-platform-ddp/ ----- Contact Wipro Please fill the required details to access the content Wipro Data Discovery Platform (DDP) on AWS An exploratory analytics platform deployed on AWS offered as 'insights-as-a-service' model to accelerate the data to decisions value chain Wipro DDP works at the confluence of the technology and business nerve of data-driven organizations. It is an exploratory analytics platform hosted on the AWS Platform and is offered in an insights-as-a-Service model, making it easy for organizations to consume insights without worrying about the tools, technologies involved in getting there. DDP offers a set of open source and Cloud technologies in a single platform architecture to accelerate data-to-decisions value chain by leveraging the suite of services offered by AWS. Its modular, 'app (use case)-driven' model, enables flexibility and scalability to meet the growing needs of a data-driven enterprise. ===================== ----- Arcticle source ----- https://www.wipro.com/cloud/wipro-aws-launch-pad/ ----- Experience Zones Benefits What We Think Form Title Contact Wipro Please fill the required details to access the content Wipro-AWS Launch Pad A futuristic co-innovation center for customers to turbocharge their success leveraging the joint expertise of Wipro and Amazon Web Services! Wipro, a premier consulting partner of Amazon Web Services (AWS), is proud to announce its cutting-edge experience center that will enable joint customer conversations and engagements, in a whole new way. Wipro and AWS will jointly deliver enterprise-scale migrations at this multidisciplinary co-innovation center where specialized teams will craft innovative solutions leveraging AWS offerings. This center is an immersive environment where customers from a broad range of industries will collaborate to envision and drive their digital transformation journey, jointly with Wipro and AWS. The center located at Wipro Campus Kodathi, Bengaluru was inaugurated on August 1 at 10.30 AM IST. Features   Engineering innovative solutions Six areas in which we engineer and showcase solutions at the Wipro - AWS Launch Pad: Wipro – AWS Launch Pad is a facility that enables an integrated approach to enterprise-scale Cloud adoption that is: Better: Our assets leverage industry-best practices while ensuring minimal business disruption and lowering risk with higher predictability Faster: Our specialized subject matter experts accelerate cloudification of complex workloads. Optimized: Our smart approach to automation, economies of scale, and well-architected solutions help reduce Cloud costs sustainably. To know more write to: cloud.marketing@wipro.com   Winning with AWS Cloud: Wipro is an innovation-led Cloud partner for clients in their digital transformation journey. Our 'Business First' approach enables Cloud transformation for our customers with innovative solutions at the intersection of AWS with cloud

native, AI-enabled, data-aware, secure applications. Our integrated blueprint for Cloud migrations, deep expertise, and proven execution approach accelerates their transformative journey. As a Premier Consulting Partner of AWS, we have a growing list of AWS competencies, 200+ AWS professional / specialty certifications, 2600+ AWS certifications, over 75 customers and 20+ solutions engineered on AWS. Our rich repository of industry specific and technology solutions empower clients to gain true value of the 'as-a-service' economy. Wipro helps organizations envision the future and create transformational solutions. DevOps has evolved from 'breaking the silos' between operations and developers to enabling automated and streamlined processes. Wipro – AWS Launch Pad is a futuristic co-innovation center for customers to turbocharge their success leveraging the joint expertise of Wipro and Amazon Web Services. This cutting-edge experience center that will enable joint customer conversations and engagements, in a whole new way. Wipro and AWS will jointly deliver enterprise-scale migrations at this multidisciplinary co-innovation center where specialized teams will craft innovative solutions leveraging AWS offerings. With rapid advancements in robotic innovation, organizations are increasingly looking at transforming their working environments by utilizing more and more robots to work intrinsically as human collaborators.
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Wipro Wins 2020

----- Arcticle source ----- https://www.wipro.com/cloud/wipro-ibm-novus-lounge/ ----- What We Think Contact Wipro Please fill the required details to access the content Wipro IBM Novus Lounge Innovate together with Wipro and IBM at the Wipro IBM Novus Lounge Wipro helps businesses accelerate their enterprise-wide digital transformation journey through innovative Cloud solutions in partnership with IBM Cloud. Our co-innovation center called the Wipro IBM Novus Lounge at our campus in Kodathi, Bengaluru will foster innovation and bring together the combined strengths of Wipro and IBM for Hybrid Cloud and Open Source solutions The Wipro IBM Novus Lounge marks our continued commitment to developing innovative solutions that span across the IBM technology stack and provide exceptional customer experiences with new solutions across all industries. The center, with Wipro's skilled team of IBM-certified employees, helps our clients assess, strategize and accelerate Cloud adoption and serves as a co-creation center allowing both Wipro and IBM to build innovative new solutions with our joint customers and showcase demonstrable digital transformation outcomes. Accelerating innovation with IBM Cloud The Novus Lounge enhances Wipro's Cloud transformation services portfolio to help clients accelerate their hybrid Cloud adoption and application modernization journey with an integrated delivery approach that improves agility and security and optimizes costs to drive superior business performance. Wipro, a platinum business partner with IBM, helps enterprises increase the pace of innovation adoption and deliver on the digital promise with differentiated services and solutions that have IBM technologies at their core. Enabling an integrated approach to Cloud adoption With leading companies embracing Hybrid Cloud and AI as a means to drive meaningful and substantive change within

their business, IBM's open approach to Cloud computing, coupled with Wipro's deep industry expertise, provides the flexibility and services enterprises need to grow and transform. Features and benefits Speed is of the essence in this interconnected world. The Wipro IBM Novus Lounge helps customers innovate faster and rapidly build and deploy solutions. Write to cloud.marketing@wipro.com to Learn more about the Wipro IBM Novus Lounge A co-innovation center from Wipro and IBM to inspire enterprises to reimagine their cloud journey.
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Wipro's Intelligent Contact Center

----- Arcticle source ----- https://www.wipro.com/cloud/digital-contact-centre-practice/ ----- Contact Wipro Please fill the required details to access the content Wipro's Intelligent Contact Center Offering powered by Amazon Connect The AI-Powered Transformation Creating excellence in customer experience through transformed contact center performance The Wipro Intelligent Contact Center solution empowers organizations with a fully-operational contact center that can be accessed from anywhere, virtually. Powered by AWS AI Services (like CCI platform), Wipro Intelligent Contact Center solution can help an existing contact center setup to continue with their daily tasks while taking advantage of advanced AI and analytics. It helps: The omni-channel cloud-based contact center solution provides a digital experience for users through self-help, self-heal and self-remediation of queries with the option of seamless data for better customer experience. Schedule a discussion with our experts to understand how we can support your organization in building an intelligent contact center. Contact Us - Wipro AWS Business Group   =======================

Wipro Cloud Applications Risk Governance (CARG) on AWS

----- Arcticle source ----- https://www.wipro.com/cloud/wipro-cloud-applications-risk-governance/ ----- Contact Wipro Please fill the required details to access the content Wipro Cloud Applications Risk Governance (CARG) on AWS Wipro's Cloud Applications Risk Governance solution offers an integrated AWS cloud adoption approach by enabling application risk assessment and recommendation of native AWS security controls to protect an application based on various parameters including regulations and compliance considerations. The solution analyzes AWS security controls health, impact of various events, incidents associated with applications on continuous basis and provides a dynamic application risk view for business and technical stakeholders to take faster decisions. To learn more, click here
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Google Cloud Application Migration & Modernization

Our Application Development specialization Wipro's Google Cloud Solutions Contact Wipro Please fill the required details to access the content Google Cloud Application Migration & Modernization Accelerating cloud journey by modernizing applications The most agile organizations are meeting today's challenges by ramping up their use of the cloud. Cloud transition has been further accelerated by the COVID-19 crisis and application modernization is an essential part of the overall transformation journey. According to Gartner, in comparison to every dollar invested in digital innovation, three dollars are spent on application modernization. However, every company is facing several big concerns: As a trusted Google Cloud partner, Wipro is helping customers leverage the best of Google Cloud platform as they develop and manage cloud native business applications, enabling faster time to market, increasing scalability of applications, and integrating them with external and internal systems in the IT landscape. Wipro's team of certified professionals help accelerate the customer modernization journey, increase agility, and adaptability with a razor sharp focus on business outcomes. The Application Migration Toolkit (AMT) allows you to create cloud native applications The Safe Passage SAP facilitates SAP migration to Google Cloud The Anthos accelerator accelerates the Anthos platform's usage devNXT is Wipro's Next-Generation Development Platform BLCP helps organizations achieve 10X faster release cycles =====================

Application Migration Toolkit (AMT)

Contact Wipro Please fill the required details to access the content Application Migration Toolkit (AMT) Toolkit for a risk free & accelerated migration Automated assessment & migration of applications The Application Migration Toolkit (AMT) allows you to create cloud native applications and cloud-compatible applications that can be moved quickly from on premises infrastructure to Google Cloud Platform (GCP). The Digital Refractor, which is at the center of AMT, has three parts: Key Features Benefits =====================

Safe Passage SAP

Contact Wipro Please fill the required details to access the content Safe Passage SAP Safe Passage for SAP migration to Google Cloud Robust framework for nondisruptive & risk free migration The Safe Passage SAP

facilitates SAP migration to Google Cloud in a systematic and efficient manner. There are five steps for this: Overall Benefits ======================

Anthos Accelerator

----- Arcticle source ----- https://www.wipro.com/cloud/anthos-accelerator/ ----- Contact Wipro Please fill the required details to access the content Anthos Accelerator Accelerating the Anthos platform usage Accelerating application modernization, the Anthos way The Anthos accelerator accelerates the Anthos platform's usage by providing a centralized configuration management solution to support efficient management of the various features that come with the Anthos platform, including multi-cluster management, Ingress, Service Mesh, and so on. Key Features- Cluster and repo onboarding: Policy Setup and Configuration Benefits ======================

devNXT

----- Arcticle source ----- https://www.wipro.com/cloud/devnxt/ ----- Contact Wipro Please fill the required details to access the content Wipro's Next-Generation Application Development Platform Product development success requires a platform that integrates workflows from inception to implementation. Wipro's next-generation developer experience platform, devNXT, enables organizations to deliver seamlessly, faster, and with the highest possible quality. The devNXT developer experience platform uses pre-defined building blocks, scaffoldings, templates, everything-as-code pipelines and integrated intelligent bots. This robust combination maximizes software development velocity and drastically minimizes effort. devNXT includes AI capabilities for augmented development and maximized composability, democratizing engineering by bringing assets and capabilities together into a unified experiential stack. devNXT empowers enterprises to conceive, build and launch disruptive solutions at warp speed by amplifying and pre-emitting feedback loops in the delivery pipeline. Meanwhile, its left-shift quality, security and complexity inference help developers create sustainable, secure code. This platform comes with in-built integrations for several open-source tools and Wipro internal assets like holmes, Intelliassure, Topcoder and the Digital Rig, delivering on the promise of engineering-driven efficiency and new ways of working powered by Digital Pods and Cloud Studios. Teams leveraging this platform can realize potential benefits up to: ======================

Boundaryless Container Platform (BLCP)

----- Arcticle source ----- https://www.wipro.com/cloud/boundaryless-container-platform/ ----- Contact Wipro Please fill the required details to

access the content Boundaryless Container Platform (BLCP) Model to accelerate transformation efforts Offers leading strategic platform for transformation across tribes through innovation and research BLCP helps organizations achieve 10X faster release cycles, with the ability to provision Kubernetes clusters, VM to container migration, cluster, and application life-cycle management, and workload mobility across platforms. BLCP Anthos Lighthouse is a model to accelerate transformation efforts. Key Features It involves the following steps: =======================

Wipro FullStride Cloud Services API Marketplace on Google Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/wipro-full-stride-cloud-services-api-marketplace-on-google-cloud/ ----- Introduction Services/ Capabilities Contact Wipro Please fill the required details to access the content Taking advantage of emerging API ecosystems Global economies are embracing open API ecosystems, through either regulations or innovation programs. The new ecosystem emerging in banking includes Fintech companies and other financial institutions, as well regulators and standards bodies. It is imperative for banks to embrace organizational strategies that drive value from this trend. There are several key challenges facing the industry as it adapts to this change: Wipro FullStride Cloud Services API Marketplace on Google Cloud helps the industry meet those challenges by providing: Wipro FullStride Cloud Services API Marketplace provides a range of services and capabilities that help companies take advantage of open API ecosystems: ====================== ----- Arcticle source ----- https://www.wipro.com/cloud/modernization-and-migration/ ----- Services Success Stories Form Title Partners News/Awards & Recognition Contact Wipro Transformation Consulting Business Aligned Transformation Cloud Transformation NextGen Application Services Legacy exit to Target In-place Modernization Data & Database Modernization Experience Transformation Cloud Conversations Data Center transformation Please fill the required details to access the content Modernization and Migration Modern enterprises require business and IT applications that are nimble and intelligent. Organizations that rely on legacy software frequently encounter obstacles such as system incompatibility, high expenses, and a lack of legacy programmers. This hinders their capacity to properly integrate new technology and procedures to meet current business needs. This translates into a pressing need for enterprises to transition from outdated technology to cloud-based solutions. However, the majority opt for the simplest "lift-and-shift" methodology to shift their workloads to the cloud. Eventually, businesses have begun to recognize that cloud computing has much more to offer than lift-and-shift, and that most of the value is created through modernization. Application technical debt can inhibit high-priority activities such as fostering innovation, increasing engineering velocity, and minimizing developer onboarding time. Wipro offers distinct end-to-end modernization solutions and intellectual property to provide quicker and risk-free transformation. Additionally, our application modernization and migration services enable businesses to erase their technical debt by

modernizing and remediating to the cloud via rehosting, replatforming, refactoring, and rearchitecting applications to set the groundwork for digital transformation. Learn More ISG Provider Lens Everest Forrester Contact us ======================

Cloud Economics

Services News/Awards & Recognition Thought Leadership Form Title Contact Wipro FinOps Application business architectures Cloud Assessment Organizational strategies Automatic scaling & power scheduling Discount instances Please fill the required details to access the content Cloud Economics As more enterprises embrace cloud as the foundation for their digital transformations, business leaders are looking for ways to maximize the return on their cloud investments, optimizing cloud consumption to increase efficiency and avoid unexpected costs. Cloud economics is a strategic approach to managing technology investments that emphasizes cost-benefit analysis as a way to deliver real business value rather than simply cut costs. With cloud economics, businesses still identify key ROIs and metrics, but the focus is on learning new ways to manage resources, teams, operations to maximize business value. Wipro FullStride Cloud has been partnering with business leaders to employ cloud economics as a strategic discipline throughout their cloud programs, enabling them to run better and more effectively in the cloud. Wipro's deep infrastructure and consumption experience, coupled with this proactive approach, empowers enterprises to drive innovation while building the necessary infrastructure to increase predictability for more complete cloud optimization. Implement well-architected services to not only ensure that cloud consumption is efficiently managed, but also effectively leveraged. Examine and reconstruct application architectures according to a "Design for Economics" principle to improve business value and outcomes. IDC Spotlight: Managed Multi-Cloud Services: Accelerating the Journey to Hybrid Cloud and Agile Business Operations Wipro is Named a Leader in 2023 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services Wipro positioned as a Leader in System Integrator (SI) Capabilities on Amazon Web Services (AWS) PEAK Matrix® Assessment 2021 Wipro positioned as a Leader in Everest 'System Integrator (SI) Capabilities on Google Cloud Platform (GCP) Services PEAK Matrix® Assessment 2021' With cloud investments continuing to make up a bulk of enterprise technology budgets, leaders need to be sure they're making the most of those investments. Contact us ======================

Cloud Operations

Our Offerings Wipro Named a Leader in 2023 Gartner® Magic Quadrant™ for Data Center Outsourcing and Hybrid Infrastructure Managed Services, Worldwide Contact Wipro Full Stack Observability Cloud Governance Operations Management Cloud Financial Management Operations

Transformation with Agile & SRE Approach AI-Powered Cloud Operations Wipro ServiceNXT™ Wipro Enterprise AI-Ready Platform Driving Business Value with Multi-Cloud The Quality Engineering Imperative in a Cloud Transformation From Consumer to Value Creator, Unlocking the Power of Generative AI Cloud Conversations Wipro-Your Microsoft Azure Expert Managed Service Provider Wipro Excels in Azure AI and Machine Learning Please fill the required details to access the content Cloud Operations Cloud solutions have become the bedrock of modern IT ecosystems, laying the foundation for greater flexibility, adaptability and innovation. Advanced technologies like AI, machine learning and data analytics require advanced and mature cloud capabilities. Wipro's FullStride Cloud Operations leverage Wipro's automated, full-stack operations across public and private clouds to maximize value and efficiency. Offering next-gen managed services across the full cloud lifecycle, Wipro's FullStride Cloud Operations enable seamless integration of public services (IaaS, PaaS) with cloud-native services, DevOps, microservices, containers, data protection, and more. Wipro combines industry and technology knowledge with AI solutions and predictive analytics to help clients strengthen their cloud strategies, adapt to market trends and industry demands, innovate products and services, and achieve greater agility and resiliency. Wipro has partnered with Google Cloud to integrate generative AI into its entire suite of capabilities, IP and solutions. With this expanded partnership, Wipro delivers powerful AI solutions that help enterprises tackle unique industry challenges, enhance customer experiences, improve supply chain performance, and ensure sustainability. Additionally, Wipro's AIOps supports predictive and preventative IT operations while enhancing self-governance and orchestration throughout the business.   Automate monitoring of IT systems and services with AIOps and next-gen IT operations. Enhance security response and mitigation with dynamic monitoring and data-driven recommendations. Leverage advanced technologies and expert support services for elevated cloud operations. Optimize cloud costs and maximize ROI with data-driven strategies. Empowers organizations to harness the maximum potential of cloud by managing the hybrid cloud services to deliver efficiency, mitigate risks and ensure maximum availability, in a cost-efficient manner. Help offer a set of services to enable our clients to improve reliability, scalability, and performance of their IT systems. Enhance observability and controllability throughout the entire IT stack. Minimize downtime and increase operational efficiency with next-gen managed services. Wipro Enterprise AI-Ready Platform Offers integration and connection of diverse data sources and systems within an organization. A Quarterly Survey Series by Wipro FullStride Cloud The report shows how technology partners are empowering enterprises in transforming their cloud and underlying network capabilities to achieve greater control over their hybrid-cloud environments. Preventing pitfalls through a well-designed quality engineering program. In this era of digital abundance, generative AI promises to be a transformative force. Engage with our cloud experts as they share insights on new technologies, innovation and game changing solutions that are driving the more intelligent, hyperconnected cloud According to Gartner, leaders execute well against their current vision and are well positioned for tomorrow. Contact Us
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Wipro Enterprise AI-Ready Platform

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-operations/wipro-enterprise-ai-ready-platform/ ----- Our Offerings Market Leader in the HFS Horizons: Generative Enterprise™ Services, 2023 report Contact Wipro From Consumer to Value Creator, Unlocking the Power of Generative AI Generative AI on the cusp of disruption Sustainable Technology: An Urgent Need Wipro recognized as a Leader in the IDC MarketScape: Worldwide Artificial Intelligence Services 2023 Vendor Assessment report Wipro recognized as a Leader in Avasant's Applied AI Services 2022-2023 RadarView™ Please fill the required details to access the content Wipro Enterprise AI-Ready Platform In today's complex business environment, organizations are seeking to accelerate their adoption of AI/Gen AI while addressing potential challenges related to data governance and compliance, latency, costs, controlled scaling, and performance. The Wipro Enterprise AI-Ready Platform facilitates the integration and connection of diverse data sources and systems within an organization. This solution provides tools, large language models (proprietary and open source) and processes to accelerate the development and implementation of AI/Gen AI across enterprises with a suitable landing zone – data center, private, cloud (multi and hybrid) and edge. This integration enables organizations to leverage the full potential of their data to enhance business transformation strategies. Wipro's Your Data, Your Model, Your IP approach focuses on empowering businesses to develop their own AI and data systems that maximize impact in alignment with long-term business objectives. The Wipro Enterprise AI-Ready Platform leverages the Retrieval Augmented Generation (RAG) AI framework to contextual insights based on KBs, SOPs, ticketing data, threat and patching compliance. Built in partnership with Wipro FullStride Cloud's industry-leading AI partner ecosystem using open technology, the Wipro Enterprise AI-Ready Platform delivers value by providing control, choice and flexibility. Our consultants analyze your current infrastructure and define a custom execution plan to fully embrace GenAI. Run specific AI training models and optimize resources to accelerate adoption. Integrate data sources and storage optimization controls to enhance data quality data. Offer leading-edge solutions with a GenAI software stack that includes data, AI workbench and governance capabilities. Easily deploy AI-ready infrastructure across landing zones, leveraging the full capabilities of Wipro's partner ecosystem. Across industries, businesses are recognizing the tremendous potential of GenAI, yet many struggle to successfully integrate the technology. Wipro's Lab45 explores the impact of artificial intelligence (AI) on business and society. In this special report learn about the technology fundamentals of Generative AI, the emerging business landscape and its practical integration into your business. In this era of digital abundance, generative AI promises to be a transformative force. This report provides an overview of Generative AI, the market for it and the reasons for the hype. This report details the urgency of sustainable technology, provides insights on the sustainable tech stack, and provides an approach for measuring their tech stack. The recognition highlights Wipro's groundbreaking AI-first approach, reshaping the concept of work and

fostering intelligent enterprises in the digital era. Contact Us
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Wipro SLICE

https://www.wipro.com/cloud/cloud-operations/wipro-slice/ ----- Our Offerings Wipro is Named a Leader in 2023 Gartner Magic Quadrant for Public Cloud IT Transformation Services Contact Wipro Generative AI IOPS - Storage Optimization License Management (SLM) RapidOps Navigating the cloud-native maze - Wipro Transforming Operational Technology Using Platform Services The AI Paradigm: A Special Report Wipro Recognized as a Leader in ISG Provider Lens for Mainframe Services Wipro FullStride Cloud+Cloud Leaders Please fill the required details to access the content Wipro Slice Migrating business applications to the cloud can be tremendously valuable. It can also bring unexpected challenges. Workloads distributed across hybrid and multi-cloud environments are often difficult to track and maintain, resulting in overprovisioning, underutilization, inflated utility costs and increased carbon emissions. To make the most of IT investments enterprises need full visibility and control of everything that goes on throughout their entire cloud environment. Wipro SLICE is an AI-powered cost and impact management suite of solutions designed to provide the visibility and insights teams need to truly optimize their IT performance across hybrid and multi-cloud environments. Combining AI and machine learning, Wipro SLICE offers a picture of the entire IT landscape. Teams can easily access details about performance, resource utilization, environmental impact. Wipro SLICE also offers a full suite of services and tools for FinOps, Capacity and Performance management, GreenOps, Cost avoidance, and License management. Together, these features help enterprises enhance operational efficiency, minimize downtime, reduce risks, and provide a more reliable, responsive IT infrastructure. Leverage AI and machine learning to scale platform infrastructure, avoid over-provisioning, and optimize performance. Get a comprehensive view of application performance including resourcing, risks, and provisioning. Optimize utility consumption, carbon emissions and waste management in line with sustainability goals. Maximize cloud value with data-driven insights on show-back, charge-back, and more. Access solutions from leading cloud services providers to optimize resourcing and performance from end to end. Unlock greater efficiencies and software-defined everything through infrastructure modernization. Get on-demand insights from structured and unstructured data for greater clarity and faster decision making. Optimize storage resources in energy efficient manner and I/O OPS with advanced capabilities beyond cloud-native. Get end-to-end support for everything from forecasting to procurement to license optimization. Quickly convert insights into action with Infrastructure as Code (IaC) and personalized dashboards. A Harvard Business Review Analytic Services report in association with Wipro FullStride Cloud. An HFS report in partnership with Wipro FullStride Cloud An IDC white paper sponsored by Wipro on the long-term value of a platform-based OT solution. Wipro's Lab45 explores the impact of artificial intelligence (AI) on business and society. In this special report learn about the technology fundamentals

of Generative AI, the emerging business landscape and its practical integration into your business. Our tailored approach to delivering custom cloud transformations that meets businesses where they are is why we are recognized as a Leader. Contact Us ======================

Wipro AI Control Center

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-operations/wipro-ai-control-center/ ----- Our Offerings News/Awards and recognition Contact Wipro From Consumer to Value Creator, Unlocking the Power of Generative AI Generative AI on the cusp of disruption Sustainable Technology: An Urgent Need Wipro and IBM Expand Partnership to Offer New AI Services and Support to Clients Please fill the required details to access the content Wipro AI Control Center Across industries, businesses are recognizing the tremendous potential of GenAI, yet many struggle to successfully integrate the technology. In many cases, the adoption of GenAI is sporadic across organizations, highlighting a need for a more comprehensive approach and robust governance. Such organizations face challenges in implementing GenAI at scale due to the prevalence of biases and flawed outputs from the powerful yet flawed nature of large language models. Fundamental tasks like training and output management pose significant challenges that, if not managed properly, will undermine the capabilities of these platforms, jeopardizing security, regulatory compliance and performance. Wipro AI Control Center addresses these challenges directly, offering a robust accelerator for effective, responsible GenAI adoption. Built on the Wipro Enterprise AI-Ready platform, the Wipro AI Control Center simplifies the infusion of GenAI into business operations. It uses historical data to generate precise, context-aware responses, optimizing resources while ensuring accuracy and relevance. This solution provides full control over model selection, hosting, and data governance, facilitating seamless GenAI deployment across various departments such as IT, customer care, and operations. As part of our Wipro FullStride Cloud ecosystem, the Wipro AI Control Center ensures the holistic adoption of AI from initial pilot phases to full-scale production. Ensure context-rich outputs with enterprise data collection and retrieval augmented generation (RAG). Choose from various open source and proprietary models, tailored to meet specific business needs. Expedite time to value with automation blueprints, IaC scripts and AI tools. Track data pipeline performance from acquisition to final delivery through KPIs, events and metrics. Optimize vCPU and vGPU management for greater efficiency and ROI. Leverage open source or proprietary MLOps tools to enhance insights and learning. Access practical guidance on scenarios and resources to ensure a successful AI powered cloud journey. Enable users to interact with and use services in a way that's customized to their individuals profiles or personas. Ensure a seamless integration via APIs, linking various data sources to support RAG implementation. Create AI guardrails to boost risk management and complaince posture. Wipro's Lab45 explores the impact of artificial intelligence (AI) on business and society. In this special report learn about the technology fundamentals of Generative AI, the emerging business landscape and its practical integration into your business. In this era of digital abundance, generative AI promises

to be a transformative force. This report provides an overview of Generative AI, the market for it and the reasons for the hype. This report details the urgency of sustainable technology, provides insights on the sustainable tech stack, and provides an approach for measuring their tech stack. Contact Us ======================

Industry Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/industry-cloud/ ----- Our Offerings Contact Wipro Cloud's Transformation of Financial Services How The Industry Cloud is Changing The Game Powering Cloud Innovation in the Energy and Utilities Industry The Cloud Growth Strategy for CMI Key Strategies for LifeSciences Cloud Innovation Re-defining Manufacturing for the Digital Era The Prescription for Healthcare Provider Cloud Success The Big Shift Industry Cloud Innovation Cloud modernizations are driving energy industry innovations Health and Life Sciences Industry Cloud: E-book Energy and Utilities Industry Cloud: E-book Wipro Named a Horizon 2 Enterprise Innovator in HFS Horizons: Industry Cloud Service Providers, 2024 Wipro is Named a Leader in 2023 Gartner Magic Quadrant for Public Cloud IT Transformation Services Wipro Named a Leader in Everest Group's Cloud Services in Insurance PEAK Matrix® Assessment 2023 Wipro FullStride Cloud + Leading Analysts Wipro FullStride Cloud + Cloud Leaders Please fill the required details to access the content Industry Cloud The value that cloud technologies deliver has grown exponentially over the last few years, providing greater business agility and new ways of working that have been greatly accelerated in response to the pandemic. Remote or hybrid workforces have become common, with people gaining access to real-time information from anywhere, anytime, on any device. Business teams are also gaining vital market insights and processing huge amounts of data, thanks to cloud-based applications, AI/ML platforms, and automation tools. In this hyperconnected ecosystem, the increasing benefits of cloud as the transformational platform to build businesses are undeniably clear, and with cloud capabilities evolving, the business opportunities are expanding. Cloud advancements and a cloud development mindset have ushered in a new era, and among the new fields and advancements is the creation of industry-specific clouds. These custom-built cloud solutions are specifically designed to address unique industry challenges and nuances to provide greater advantages than standard cloud platforms, which are limited in their ability to provide industry-focused advantages.   Empowering ENU providers to deliver the business outcomes they seek, even in the face of sector upheaval. These solutions empower our customers to retain a competitive edge while delivering therapies to their patients faster. Our best-of-breed manufacturing cloud solutions that best meet customer needs and deliver efficiency and agility. Enable financial firms to modernize their security and compliance initiatives while developing business innovations. To keep pace with the retail industry's dynamic changes, our cloud solutions are custom built to meet the unique challenges of meeting ever-changing customer demands and drive brand loyalty. A Harvard Business Review Analytic Services report in association with Wipro FullStride Cloud. Wipro's investment in strategic acquisitions along with its strong industry expertise

contributed to the company's Leader position. Our tailored approach to delivering custom cloud transformations that meets businesses where they are is why we are recognized as a Leader. Wipro's investment in strategic acquisitions along with its strong industry expertise contributed to the company's Leader position. Recognized as a global industry leader by leading analyst firms The strategic partner of choice for leading cloud services providers. Contact Us =====================

Wipro FullStride Industry Cloud Solutions for Health & Life Sciences

----- Arcticle source ----- https://www.wipro.com/cloud/industry-cloud/wipro-fullstride-industry-cloud-solutions-for-health-and-lifesciences/ ----- Wipro Industry Cloud Key Benefits for Collaborative Care Platform Contact Wipro Please fill the required details to access the content Health and Life Sciences Industry Cloud Health and Life Sciences (HLS) companies are poised to deliver unprecedented advances in patient outcomes, including personalized medicines, on demand drug production, and powerful new genetics-based and AI-derived treatments. At the same time, they face a global operating environment of increasing complexity and challenge. Product lifestyles span multiple and very different ecosystems, for basic chemical manufacture, to pharmaceutical production, to patient-facing therapies. Over the decade or more it can take to bring a ne treatment to market, companies must carefully manage costs, maintain quality control, and protect IP and data security while navigating the arrival of new technologies and new market entrants. The sector is also highly-regulated and non-compliance at any stage can be reputationally and financially ruinous. To manage these pressures and make the most of rapidly-emerging scientific and technical advances, HLS leaders are adopting industry-specific cloud solutions. These are enabling faster and more efficient operations that are speeding the production of both novel and existing treatments and lowering the costs of production while meeting heavy regulatory demands. Successful HLS cloud solutions are built on highly-specialized but comprehensive architectures that address all elements of the drug-production value chain, from clinical practice, to research and development, regulatory approval, supply chain and manufacturing logistics, and distribution. They are robust, secure, and flexible enough to make use of new technologies, processes, and data types as they become available and can ramp up production as needed to meet patient demand. Wipro's wide-ranging, best-of-breed HLS cloud solutions address customer challenges at any point in the drug creation and production process. Delivered through a rich ecosystem of partnerships with leading HLS and technology providers, and featuring tailored accelerators that increase speed to market by adding intelligence and automation to new or existing process, these solutions are empowering our customers to retain a competitive edge while delivering therapies to their patients faster and with greater effectiveness. About Collaborative Care Platform Modern drug regimens can be dauntingly complex, with specific dosage and timing requirements that might need to be recalibrated multiple times depending on a patient's response. Wipro's

Collaborative Care Platform (CCP) leverages mobility and online connectivity to connect patients, their healthcare providers, and pharmaceutical companies to maximize the chances of a successful therapeutic outcome. Designed in partnership with experts in human-centered design and featuring both pre-built accelerators for importing data from a wide range of external medical devices and plug-in modules for managing medical schedules and medical information, CCP platform solutions address a broad range of treatment challenges. These include remote monitoring and communication, regimen management, and easing the recruitment of new patients into clinical trials. Solutions built on Wipro's CCP platform are measurably enhancing the patient experience through improved engagement, better progress tracking, and strengthened care support. This both optimizes patient outcomes and raises the level of care that healthcare providers are able to offer. For pharmaceutical companies, the combination of increased compliance and improved patient outcomes makes their treatments more attractive to public and private healthcare providers and has a significant reputational/brand impact. In addition, with patient recruitment accounting for up to 30% of drug development budgets, CCP solutions are helping companies find trial participants faster, saving on recruitment costs and allowing them to bring new drugs to market faster. About Smart Labs/Smart LapOps Laboratories are at the heart of the HLS value chain, playing an essential role in drug discovery and in fulfilling downstream testing and quality control functions. But as both drug development and production rely on ever more complex technologies, and as regulatory demands evolve to match, lab operators face multiple challenges. These include process inefficiencies, data fragmentation, shifting regulations, and legacy manual tasks that are hard to automate. Wipro's Smart LabOps platform is a cloud-based solution designed to offer the advanced functionality companies want for their labs of the future, including common systems and device interfaces, data and workflow management, data integration, and decision intelligence. Built in partnership with best-in-class solution providers, the platform includes a custom built LabOps Toolkit for functions such as predictive analytics and anomaly detection to prevent Instrument downtime, a voice assistant to improve workflows, and AI-enhanced inventory management and record review. Key Benefits for Smart Labs/ Smart LabOps Wipro Smart LabOps customers report reduced lab errors and disruptions, improvements in automation, and faster-running processes, all resulting in increased productivity. That drives down operating costs and allows novel therapies to be introduced to the patients that need them faster. Each Smart LabOps engagement targets the specific requirements of the particular lab owner and includes a design consultation. Uniquely among HLS service integrators, Wipro also operates its own life sciences lab, allowing us to develop and deploy innovative new lab methodologies and apply cutting-edge technologies like AI/ML to HLS-specific data in fast-evolving areas such as pharmaceutical impurity testing and genomic analysis.   Why Wipro. As HLS providers look to adopt cloud solutions that bring new levels of efficiency, speed, and innovation to their operations, Wipro FullStride Cloud is helping them develop targeted, trusted, scalable solutions like Smart LabOps and the Collaborative Care Platform that successfully address their present and future needs. Our long experience in the sector—including HLS partnerships with Google, Microsoft, and AWS—affords us a deep understanding of existing and

emerging HLS value chains, a broad network of best-in-class partners, and an unparalleled range of domain, regulatory, data, and cloud competencies upon which to draw. Learn more about working with Wipro FullStride Cloud to embark on a future-facing transformation through powerful and cost-effective HLS industry cloud solutions. Contact Us ======================

Health and Life Sciences Industry Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/industry-cloud/wipro-fullstride-industry-cloud-solutions-for-health-and-lifesciences/ebook/ ----- Contact Wipro Please fill the required details to access the content Health and Life Sciences (HLS) companies are poised to deliver unprecedented advances in patient outcomes, including personalized medicines, on demand drug production, and powerful new genetics-based and AI-derived treatments. To manage these pressures and make the most of rapidly-emerging scientific and technical advances, HLS leaders are adopting industry-specific cloud solutions. Download the e-book to get a close look on how our industry cloud solutions and over 25 years of expertise have helped the sector. Download E-book =====================

Wipro FullStride Industry Cloud Solutions for Energy and Utilities

----- Arcticle source ----- https://www.wipro.com/cloud/industry-cloud/wipro-fullstride-industry-cloud-solutions-for-energy-and-utilities/ ----- Key Benefits for Energy Data Centricity Contact Wipro Please fill the required details to access the content Energy and Utilities Industry Cloud Energy and Utilities (ENU) providers face an era of unprecedented change. Under pressure to meet evergrowing global demand by quickly diversifying their product offerings with low carbon and renewable solutions, they are at the same time looking to reduce energy prices (and therefore costs), increase the reliability of supply, and optimize their collective energy carbon footprints. Additionally, established providers are newly focused on customer retention as sector upheaval attracts new market entrants. Successfully navigating these challenges requires speed, flexibility, and easy access to powerful new technologies and processes as soon as they are developed. Sector leaders are securing all three by investing in cloud-based solutions developed in partnership with experienced ENU technology integrators like Wipro. Wipro Industry Cloud Overview ENU Industry Cloud solutions build on the proven success of deployments in earlier moving sectors, offer a flexible and robust solution space primed for innovation. By partnering with cloud service providers, independent software providers (ISPs), and global system integrators, ENU providers can combine off-the shelf and customized services with accelerators contextualized to their needs to bring new agility and speed to their existing operations. Crucially, cloud solutions also provide

a vendor and technology agnostic platform for experimenting with new approaches to products, processes, and operations. Innovations can be easily tested and iterated on, and, once proven, quickly replicated and scaled out into full-fledged solutions. These deployments empower ENU providers to deliver the business outcomes they seek, even in the face of sector upheaval. In addition, they enable the rapid adoption of transformative technologies like AI/ML and generative AI as soon as they are developed. But they are also complex undertakings, requiring partners with deep experience in both the ENU and cloud technology spaces. Wipro has collaborated with leading companies in both areas for over 25 years and helped develop some of the most powerful and advanced cloud solutions in the sector. Industry Stack A solution stack targeted at resolving pain points. Solution Platform Cloud-native tools and accelerators enable rapid deployment. Business Outcomes Experience transformation with the ability to scale & flex as your organization grows. Energy Data Centricity Legacy software and production silos inhibit many energy companies from fully exploiting the benefits of cloud. A consortium of energy producers, cloud service providers, global system integrators, and independent software vendors have developed OSDU (the Open Subsurface Data Universe), an open platform on which energy data can be seamlessly extracted, stored, retrieved, transformed, searched, and shared as needed. This technology agnostic, standards based platform frees producers to shift technologies and forge new partnerships as needed, while reducing capital expenditures. But OSDU adoption takes money, time, and expertise that many energy companies don't have. Wipro FullStride Cloud & Wipro Energy Practice bring together Cloud Engineering and Energy Domain capabilities to offer, Energy Data Centricity (EDC) solution, a cloud and vendor agnostic framework of service offerings and accelerators designed to help operators speed their OSDU adoption. Wipro's Framework for Energy Data Centricity Key Benefits for Energy Data Centricity EDC draws on Wipro's unique combination of experience and capabilities in both energy and cloud engineering and the broad ecosystem of industry and technology partners it has developed over the last quarter century. The EDC framework includes solutions for data standardization, transfer, governance, security, and use case implementation. It significantly eases the process of platform adoption, migrating data into the platform, and then building novel use cases on top. Working within EDC, companies are accessing the benefits of OSDU faster than they could alone. They are seeing increased flexibility, new business and production efficiencies, and a smoother path to innovation. Early engagements suggest EDC can accelerate OSDU adoption, impacting both the organizations bottom line and its ability to compete in a newly dynamic sector. Carbon Value Modeling In response to increasing regulation and shifts in public opinion, energy producers are making commitments toward net zero emissions of carbon. Failure to meet these commitments can draw financial penalties from jurisdictions with carbon quotas, carbon taxes, or requirements that excess emitters buy carbon offsets, and risks reputational damage wherever companies operate. To move toward net zero compliance, energy producers are seeking comprehensive solutions grounded in accurate data that will accommodate changes in both business processes and the technologies used to measure and limit carbon emissions. Wipro's Carbon Value Modeling (CVM) solution is a comprehensive, industry-focused, best-in-class solution for net zero planning and execution. It brings

production, business, and capital project data into a common landing zone where it is quality checked, aggregated, and converted. This data is passed through public API's into an ISP solution that identifies site and activity bottlenecks throughout the operational value chain and determines drivers that have the highest impact on reducing emissions. It then provides scenario planning for improvements based on the business value and ROI of potential low carbon opportunities. Finally, a target-based future state model equipped with operational decarbonization pathways manages the expected reduction in carbon emissions from each change made. Key Benefits for Carbon Value Modeling By partnering with Wipro to implement Carbon Value Modeling, companies gain an accurate, organizationlevel view of total emissions and a choice of pathways toward increased emissions reductions, maximizing their return on their carbon reduction investments while reducing their exposure to carbon penalties and the need to purchase carbon offsets. Additionally, CVM empowers them to make strategic product lifecycle interventions and propagate those changes across all levels of the organization, ensuring continuous improvement from both an emissions and economic point of view. Why Wipro. As ENU providers look to adopt cloud solutions that bring agility, speed, and innovation to their operations, Wipro FullStride Cloud is helping them develop targeted, scalable solutions like Carbon Value Modeling and Energy Data Centricity that successfully meet industry needs. Our long experience in the sector—including co-developing the OSDU standard and receiving an Energy Sector Premier Partnership award from AWS—affords us a deep understanding of emerging ENU value chains, a broad network of best-in-class partners, and an unparalleled range of domain, sustainability, modeling, data platform, and cloud competencies upon which to draw. Learn more about working with Wipro FullStride Cloud to embark on a future-facing transformation through powerful and cost-effective ENU industry cloud solutions. Contact Us
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Energy and Utilities Industry Cloud

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Wipro FullStride Industry Cloud Solutions for Manufacturing

Key Benefits for Wipro's Process in a Box Contact Wipro Please fill the required details to access the content Manufacturing Industry Cloud Process in a Box Digital Logistics Solution E-book Manufacturing Industry Cloud Global manufacturing is poised for profound change. For the last century, the sector's design, procurement, build, storage, distribution, and sales processes have remained essentially discrete, with individual technologies rarely developed to improve more than a single stage in the broader manufacturing value chain. Manufacturing first movers, however, are now taking advantage of comprehensive, intelligent, cloud-based sensing and data analytics solutions to integrate and act on information from every step in the chain. Successful cloud integration solutions for the manufacturing sector are pulling data from across the enterprise into single, unified platforms that provide a real time view of any given process in the chain and can signal the consequences of any changes in the information they receive. They enable smarter and faster decision making, increased overall efficiencies and agility, and an improved ability to balance flexibility with resilience. At the same time these platforms offer new opportunities for product and service innovation, including unprecedented customization, and for demonstrating regulatory compliance. Importantly, they speed process change itself and provide greater flexibility in the face of shifting customer demand. Wipro Industry Cloud Overview While the potential gains from integrated, cloud-based manufacturing are substantial, so are the challenges. Cross-unit integration is highly complex and requires significant investment. Effective process integration efforts extend beyond individual manufacturers to include upstream suppliers and downstream sales partners, requiring manufacturers to reframe their partner relationships and work within expanded and newly-dynamic production ecosystems. Wipro's best-of-breed manufacturing cloud solutions help our customers design, build, and deploy integrated and intelligent processes that best meet their needs and deliver the efficiencies and agility they need, including the ability to thrive in the shifting ecosystems. In partnering with Wipro on process integration, manufacturers are finding new opportunities for developing novel business models, new revenue streams, and new ways to connect with, and meet the demands of their customers. Process in a Box Solution Legacy manufacturing enterprises are typically built around geographically dispersed production facilities reliant on siloed systems and information flows that are slow to deliver actionable data at either the local or organizational level. This clearly impacts local control of facility costs, quality, and productivity, requires skilled personnel to be constantly fire-fighting, and affects both asset life and availability. Just as importantly, without a source of real-time information, timely corporate-level data analysis and decision making is impossible, placing enterprises at a major disadvantage to their more connected peers who are running modern, integrated digital manufacturing platforms. Wipro's Process in a Box (PIB) is a plug-and-play digital manufacturing accelerator that is helping

manufacturers deliver a new level of visibility and operational excellence at both the individual facility level and across multiple plants. PIB gathers information outflows from across plant operations to create a single source of facility data, including in analytics, alarms, and reporting. Accelerator Solution Key Benefits for Wipro's Process in a Box PIB enables real-time decision making and collaboration for both the individual plant and across the enterprise value chain. That includes flagging production and quality issues as soon as they occur, and adjusting outputs faster to meet anticipated demand. PIB users are reporting significant improvements on key plant metrics including production quality and throughput, asset utilization, maintenance productivity, energy use, and sales return rates. At the same time, they are optimizing their overall supply chain management and building a foundation for future analytics solutions and new business models. Our customers, typically achieve a return on their PIB investment of between 1.5 and 2.5x within a year of going live. Digital Logistics Solution As manufacturers look to reduce inefficiencies and optimize supply chain management, they are under increased pressure to achieve true "just-in-time" in-bound and out-bound logistics. In-bound logistics requires tracking supplies as they arrive from multiple vendors, deciding where best to store them, and ensuring replacements are ordered in time to avoid manufacturing delays. On the outbound side, delivery trucks need to be optimally sequenced and directed as they move through the plant as well as optimally loaded and directed for delivery. Wipro's Digital Logistics Solution (DLS) is an execution system that provides an integrated, real-time view of both order sequencing/tracking and physical truck monitoring in a highly modular and scalable form. This includes the automated tracking of each stage in the process (passing security, parking, unloading/loading, weighing and exiting, etc.), and enables intelligent, demand-based management of supply chain allocation, scheduling, loading, inspection, and distribution. Key Benefits for Digital Logistics Solution After implementing DLS, manufacturers are experiencing significant improvements in operational efficiency, including reduced truck wait times at the facility of 50% or more. They also report fewer production errors, improved anomaly reporting, more efficiently loaded delivery trucks, and a reduction in personnel required to manage the overall process. Automated tracking provides comprehensive logistics data for real-time metrics reporting. The data can then be used as inputs for generating AI derived operational intelligence. Furthermore, a single version of logistics truth affords enterprise-level managers the ability to optimize cross-company logistics operations and quickly adjust when faced with shifts in the supply environment and changes in demand. Why Wipro. As manufacturers look to adopt cloud solutions that develop insights across their entire chains of production, Wipro FullStride Cloud is helping them adopt proven, secure, and scalable solutions like Wipro Process in a Box and Wipro Digital Logistics. Wipro's long-established and broad experience in the sector affords us a deep understanding of manufacturing value chains, an extensive network of best-in-class partners, and an unparalleled range of domain, sustainability, analytics, data platform, security, and cloud competencies upon which to draw. Learn more about working with Wipro FullStride Cloud to embark on a future-facing transformation through powerful and cost-effective manufacturing industry cloud solutions. Contact Us =====================

Manufacturing Industry Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/industry-cloud/wipro-fullstride-industry-cloud-solutions-for-manufacturing/ebook/ ----- Contact Wipro Please fill the required details to access the content Global manufacturing is poised for profound change. For the last century, the sector's design, procurement, build, storage, distribution, and sales processes have remained essentially discrete, with individual technologies rarely developed to improve more than a single stage in the broader manufacturing value chain. Manufacturing first-movers are now taking advantage of comprehensive, intelligent, cloud-based sensing and data analytics solutions to integrate and act on information from every step in the chain. Download the e-book to get a close look on how our industry cloud solutions and over 25 years of expertise have helped the sector. Download e-book =====================

FinOps

----- Arcticle source ----- https://www.wipro.com/cloud/finops/ ----- Strategy and Enablement Cloud Economics: Driving Business Value Through Discipline Contact Wipro FinOps and the New Path to Cloud Success Customized FinOps Processes Deliver Business Value Wipro Recognized as a Leader in ISG Provider Lens™ for Mainframe Services and Solutions 2023, US Wipro FullStride Cloud + Leading Analysts Wipro is Named a Leader in 2023 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services Please fill the required details to access the content Wipro FullStride Cloud Services FinOps solution provides businesses with advanced analytics of cloud datasets to effectively optimize cloud usage and help manage costs. Our approach simplifies operations, helps ensure compliance and allows businesses to navigate the complexities of running in the cloud. To optimize cloud usage, our solution provides an integrated dashboard for visibility into cloud spend, recalibration of cloud consumption to address current and future costs and chargebacks along with alerting and communication mechanisms to strategically use the cloud while avoiding unnecessary costs. Our comprehensive approach to FinOps is anchored in a deep understanding of each client's unique business challenges. After an in-depth analysis of the existing cloud environment, the business and technology goals, we design a customized strategy that incorporates advanced data analytics and cloud economics to achieve business goals while adapting to ever-changing cloud consumption patterns. Wipro FullStride Cloud Services FinOps provides strategy and guidelines to transform data from cloud service providers (CSPs) into actionable insights. Through continuous analysis of processes, our teams recommend targeted enhancements and opportunities to effectively implement long-term success in cost management, standardization and business growth.   Our strategy and enablement model is unique by helping enterprises to think beyond cost savings and identify new ways to manage investments that will enable the business to be more profitable and efficient moving forward. It's an unfortunate reality that many cloud migration programs fail to deliver the

intended results the first time around. An estimated one third of cloud spending goes to waste, with 13% of projects, on average, going over budget. Businesses set out to increase efficiency by going all-in on cloud, only to find that critical applications are too complicated or impossible to migrate, forcing them to put the project on hold while they revise their strategy. News and Awards Contact Us =====================

Cloud AI Solutions

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-ai-solutions/ ----- Our Offerings Market Leader in the HFS Horizons: Generative Enterprise Services, 2023 Report Contact Wipro How to Master Cloud Economics and Harness The Power of AI The True Value of Gen AI for Quality Engineering How AI Unlocks Human Potential The AI Paradigm: A Special Report From Consumer to Value Creator, Unlocking the Power of Generative AI Generative AI on the Cusp of Disruption Wipro recognized as a Leader in the IDC MarketScape: Worldwide Artificial Intelligence Services 2023 Vendor Assessment report Wipro recognized as a Leader in Avasant's Applied AI Services 2022-2023 RadarView Please fill the required details to access the content Cloud AI Solutions Build, use and adopt AI and Generative AI for your business. Offerings Insights Recognitions Businesses are seeking ways to strategically employ artificial intelligence (AI) and generative artificial intelligence (GenAI) in many ways to improve efficiencies, save time and decrease costs. This includes everything from employee productivity to business operations to customer experience. As AI advancements continue, as well as the forecasted increase in investments, AI is quickly becoming a precious resource for companies across industries. This can mean something different for every organization. The question our teams always ask during client engagements is, "How can AI be applied to drive the greatest business value?" There are many factors to consider, including the digital maturity of a company, it's immediate needs and long-term goals. The pace of AI development is accelerating rapidly. Wipro FullStride Cloud has the expertise and enhanced capabilities to lead our clients in helping them navigate how to build, use, and successfully adopt AI and Generative AI. Our focus on use cases that mitigate risk, are currently in-market and help our client realize their ambitions, will create bold moves and real business value. Building business strategies that enable developer productivity through GenAI. Optimizes the tester experience through 60+ GenAI use cases. AI powered solutions to create, deploy and manage GenAI use cases. A control center designed to accelerate and optimize operations using GenAI. GenAI powered solutions for employee experience and service desk. A Harvard Business Review Analytic Services report in association with Wipro FullStride Cloud An Insights Report by Wipro FullStride Cloud and Forbes. Quality engineering and testing offers practical applications to expand existing AI capabilities. By prioritizing the human touch in AI adoption, businesses can harness the power of technology to enhance, rather than replace, the workforce, creating a more dynamic, innovative, efficient and competitive future. Wipro's Lab45 explores the impact of artificial intelligence (AI) on business and society. Generative AI promises to be a transformative force. The most valuable applications require creativity

from the business. This report provides an overview of Generative AI, the market for it and the reasons for the hype. This recognition highlights Wipro's groundbreaking AI-first approach, reshaping the concept of work and fostering intelligent enterprises in the digital era. Contact Us ======================

GenAI Platform Engineering

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-ai-solutions/genai-platform-engineering/ ----- Our Offerings Market Leader in the HFS Horizons: Generative Enterprise Services, 2023 Report Contact Wipro The AI Paradigm: A Special Report From Consumer to Value Creator, Unlocking the Power of Generative AI Generative AI on the Cusp of Disruption Wipro recognized as a Leader in the IDC MarketScape: Worldwide Artificial Intelligence Services 2023 Vendor Assessment report Wipro recognized as a Leader in Avasant's Applied AI Services 2022-2023 RadarView Please fill the required details to access the content GenAI Platform Engineering Offerings Insights Recognitions Harness the transformative power of Generative AI (GenAI) with the full support of Wipro FullStride Cloud. Our AI-powered platforms provide visibility and insights into IT operations for optimal GenAI performance. Wipro SLICE leverages machine learning algorithms to optimize IT resource utilization, infrastructure performance, and predictive analytics. The Wipro Enterprise AI-Ready Platform offers pre-built AI components, simplified integration, and scalable architecture, empowering enterprises to rapidly develop and deploy AI applications at scale. These tools, combined with Wipro's comprehensive range of services, including strategic guidance, implementation support, and ongoing managed services, ensure a successful and sustainable GenAI transformation journey. AI-powered suite of solutions provide the visibility and insights to optimize IT performance across hybrid and multi-cloud environments. Provides tools, large language models and processes to accelerate the implementation of AI/Gen AI across enterprises. Quality engineering and testing offers practical applications to expand existing AI capabilities. Wipro's Lab45 explores the impact of artificial intelligence (AI) on business and society. Generative AI promises to be a transformative force. The most valuable applications require creativity from the business. This report provides an overview of Generative AI, the market for it and the reasons for the hype. This recognition highlights Wipro's groundbreaking AI-first approach, reshaping the concept of work and fostering intelligent enterprises in the digital era. Contact Us ======================

Identity & Access Management

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Management (EPM) Cloud Infra Entitlement Mgmt. (CIEM) Identity Proofing & Verification (IDPV) Identity Threat Detection & Response (ITDR) Just-in-Time (JIT)/Zero-Standing Privileges (ZSP) Active/Virtual Directory Services Identity Automation Identity Security Threat Management (ISTM) Blockchain Identity DICE ID™ SSO / Federation Social Login MFA API Security Passwordless Authentication Adaptive Authentication Dynamic Authorization Identity Proofing & Verification (IDPV) Identity Orchestration Progressive Profiling Preference Management Consent Management Centralized Customer Management Compliance Management Online Identity Fraud Detection CIAMaaS Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response Contact Wipro Wipro Named a Leader in Everest Group's Identity and Access Management (IAM) Services PEAK Matrix Assessment 2023 PODCAST: The Enterprise Passwordless Journey Please fill the required details to access the content Identity & Access Management Next-gen Identity & Access Services to secure your digital transformation journey Our Digital Identity offerings are designed to cover both Enterprise and Consumer user personas. In the digital transformation era, network boundaries have disappeared. Digital identities — including employees, contractors, partners, customers, bots and things — have become new security perimeter. Digital identities powered by next-gen IAM solutions helps organizations to adopt Zero Trust architecture while enabling secure omnichannel, personalized and frictionless user experiences. Advisory and Strategy Assessment of existing identity security architecture & controls and define strategy & roadmap Transformation and Implementation Accelerate legacy identity transformation and modernization using Wipro's accelerators and unique service offerings. Managed Identity Security Services Managed identity security services, "As a Service" offerings, and end-to-end coverage from licensing to implementation and support. Our Solutions and Offerings Workforce Identity and Access Management Consumer Identity and Access Management Secure your enterprise and customer applications and infrastructure in a hybrid landscape with best-in-class digital identity security solutions, built in compliance with Zero Trust Architecture and powered by AI at the core. Wipro offers the best Digital Identity Security solutions with differentiated IPs, accelerators, and highly-skilled talent—Cybersecurists—to accelerate growth that is both secure and optimized for cost efficiency. We offer a modern end-to-end framework for Digital Identity Security transformation — CyberTransformSM – that includes advisory and consulting, and our industry-leading SI and Managed services — CyberShieldSM. Our recent acquisitions and key investments in this area have created additional value for our customers across the globe. Modern identity governance and administration (IGA) capabilities are necessary for each human and digital identity in a company. Influential analyst organization Everest Group has positioned Wipro as a Leader on its 2023 IAM PEAK Matrix® Assessment. A conversation with Ashish Chandra, Wipro's global identity practice leader shares insights into the importance of removing user passwords from the enterprise: why it is important today and how to start your journey. Partners Wipro End-to-end Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and

enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Contact Us =====================

Data Security & Privacy

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potential data loss threats. End-to-end data protection across the rest, transit, and in use phase with confidential computing that provide secure and trusted execution environments for applications. OT/IoT Security The integration of Information Technology (IT) and Operational Technology (OT) in the Industry 4.0 transformation is revolutionizing the modern business landscape. By harnessing the power of OT for efficient and effective operations and incorporating cutting-edge technologies, businesses are experiencing growth, enhanced productivity, and improved customer experiences. However, these advancements also pose security challenges that organizations must address. OT & IoT Security Risk assessment, develop architecture and roadmap preparation. Accelerate OT/IoT security controls implementation to secure Critical Infrastructure. OT Threat detection and response, forensic analysis, 24x7 operations and platform management. Enable to meet the security compliance requirements and define roadmap for OT/IoT Cyber security. Provide visibility within OT/IoT network for threats, communication and vulnerability identification. Let 3rd party connect to your network securely. Isolate and protect critical assets from external threats. Respond faster and efficiently to cyber threats. Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers the best global cloud and infrastructure security solutions, technology, AI-powered sustainable automation platforms and highly-skilled talent—Cybersecurists—to accelerate growth that is both secure and optimized for cost efficiency. We offer a modern end-to-end framework for cloud and infrastructure security transformation — CyberTransformSM – that includes advisory and implementation, plus our industry-leading managed services — CyberShieldSM. Our recent acquisitions and key investments in this area have created additional value for our customers across the globe. Operational Technology (OT) involves the hardware and software that manage industrial equipment, processes, and events using automated systems. Industry 4.0 refers to the fourth industrial revolution, a technological and organizational metamorphosis that promises to fundamentally alter the way we manufacture, operate and interact with the world. Partners Wipro End-to-end Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Contact Us ======================

Emerging Technologies & AI

----- Arcticle source ----- https://www.wipro.com/cybersecurity/services/emerging-technologies-and-ai/ ----- Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security &

Privacy Cyber Defense and Response Contact Wipro Please fill the required details to access the content Emerging Technologies & AI Emerging technologies like open source, blockchain and AI have been disrupting business processes improving operational efficiency and enabling organizations to be innovative. By adopting these emerging technologies, organizations can immensely gain in achieving their business objectives through faster GTM, cost reduction, transparency scalability and enhanced automation capabilities. The increase in popularity of these technologies and their critical dependency on enterprise applications draws adversaries to focus their malicious efforts on launching attacks on organizations. It warrants additional focus and capabilities to secure applications built off these emerging technologies. The nature of these emerging technologies demands specific measures that will aid in identifying and mitigating their risk effectively. Advisory and Strategy Review of existing cloud security architecture and controls and remediation roadmap Transformation and Implementation Accelerate secure cloud migration using multi-cloud jump start and security guardrails Managed Cloud Security Services Managed cloud-native security services, application security and threat detection and response. Our Offerings Managing risk of open source and leveraging open source for security. Building layered security & transparent processes for trust and integrity. Managing Risk of AI and Leveraging open source AI for security. Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers the best global cloud and infrastructure security solutions, technology, AI-powered sustainable automation platforms and highly-skilled talent—Cybersecurists—to accelerate growth that is both secure and optimized for cost efficiency. We offer a modern end-to-end framework for cloud and infrastructure security transformation — CyberTransformSM – that includes advisory and implementation, plus our industry-leading managed services — CyberShieldSM. Our recent acquisitions and key investments in this area have created additional value for our customers across the globe. Wipro End-to-end Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Contact Us ====================

Core Advisory

----- Arcticle source ----- https://www.wipro.com/cybersecurity/services/core-advisory/ ----- Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response Contact Wipro Cybersecurity Strategy: Key Techniques for Optimization You may be Spending too Much on Cybersecurity How Security

Leaders Should Evaluate GenAI Systems Please fill the required details to access the content We secure the modern enterprise through a strategy-first, business-aligned approach As digital transformation accelerates, robust cybersecurity practices are even more critical to maintain enterprise resilience. Wipro's Core Advisory team partners with enterprise leaders to solve their most complex cybersecurity challenges spanning an ever-evolving technology landscape. We assist the C-suite in assessing and strengthening the organization's cybersecurity posture to safeguard brand reputation, business processes, and regulatory compliance. Our strategic offerings empower CISOs to invest in effective, cost-optimized security controls that protect against cyberattacks when collaborating with internal stakeholders and third parties. Our Offerings Align cybersecurity spending with your organization's maturity. Help CISOs craft strategic models to manage cyber risk and fuel growth. Connect with experts to align your security strategy with evolving business priorities, technology, tools, and threats. Discover security gaps and identify improvement methodologies. Provide tailored and responsive advice for optimal M&A outcomes. Manage risks and optimize the software supply chain throughout its lifecycle. Analyze your organization's approach to managing the supply chain for AI software. Ensure that AI systems are developed, deployed, and managed responsibly. Conduct an assessment and build a strategic roadmap to proactively defend against emerging threats, ensure compliance, and secure your critical assets. Partners Introducing Wipro Cyber X-Ray — an AI-assisted security and risk platform In today's digital landscape, security teams are increasingly overwhelmed by the sheer volume and complexity of cyber threats. How to optimize the performance and costs of your cyber management investments Best ways to execute a generative AI strategy today, including the pros and cons of using a private, closed-loop GenAI system. Wipro End-to-end Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Contact Us =====================

Cybersecurity Platforms

----- Arcticle source ----- https://www.wipro.com/cybersecurity/services/cybersecurity-platforms/ ----- Core Advisory Emerging Technologies & AI Risk & Compliance Transformation Cloud, Zero-Trust & Enterprise Security Architecture Identity & Access Management Data Security & Privacy Cyber Defense and Response Contact Wipro Identity Management Center Security Management Center Third Party Risk Management Cloud Applications Risk Governance Enterprise Data Obfuscation Integrated Threat Management Please fill the required details to access the content Cybersecurity Platforms Wipro's Cybersecurity Platforms increase the speed of change while

reducing the costs using advanced automation and other digital technologies. Wipro's cybersecurity platforms are designed to accelerate digital transformation through faster time to value, and lower cost of business operations and are delivered in an As-a-Service and outcome-based construct. The strategy aims to realize a Digital-first approach through the four pillars of Business Transformation, Modernization, Connected Intelligence, and Trust. Our investments that accelerate growth in Cybersecurity at the center of each of these pillars. The platforms address customer challenges around growth, time-to-market, and experience by harnessing the power of idea incubation and realization. Advisory and Strategy Review of existing cloud security architecture and controls and remediation roadmap. Transformation and Implementation Accelerate secure cloud migration using multi-cloud jump start and security guardrails. Managed Cloud Security Services Managed cloud-native security services, application security and threat detection and response. Our Offerings A single holistic service management platform providing a single pane of glass view into your Identity & Access Wipro's Security Management Center identifies operational security risks. Wipro's Third-Party Risk Management (TPRM) is a fast and efficient automated process of collecting, validating Make your journey to the cloud secure-by-design to deliver better business outcome with visibility into risk Enhance Data Security by Intelligently Masking Sensitive Data for Privacy Compliance, Collaboration, Testing Measurable and effective detection and remediation action with matured incident response and real time Secure your edge-to-cloud journey against the evolving cyber threat landscape with a Zero Trust approach. Wipro offers the best global cloud and infrastructure security solutions, technology, AI-powered sustainable automation platforms and highly-skilled talent— Cybersecurists—to accelerate growth that is both secure and optimized for cost efficiency. We offer a modern end-to-end framework for cloud and infrastructure security transformation — CyberTransformSM – that includes advisory and implementation, plus our industry-leading managed services — CyberShieldSM. Our recent acquisitions and key investments in this area have created additional value for our customers across the globe. Wipro End-to-end Cybersecurity Services We secure the modern enterprise through a strategy-first, business-aligned approach Wipro's Artificial Intelligence, Open Source, 5G, and more Helping C-suite assess and enhance the enterprise cybersecurity risk posture, adhere Fortify defenses both on cloud and data center against the most advanced cyber threats Next-gen Identity & Access Services to secure your digital transformation journey Safeguard your most valuable assets with comprehensive data and OT/IoT security solutions tailored to your needs. Seamless and cost-effective management of security operations provided in an as-a-service model. Cybersecurity Platforms Contact Us =====================

Wipro Google Cloud Security Pack

Contact Wipro Wipro Google Cloud Security Pack Please fill the required details to access the content Wipro Google Cloud Security Pack Code-based security enforcement and governance to accelerate the Google Cloud journey As modern enterprises transition to the cloud, IT teams are challenged in deploying and securing Google Cloud environments across all security domains. Organizations need expertise to securely design, build and manage cloud environments based on the Google cloud security foundations framework. They must adopt security best practices to eradicate threats and security loopholes due to misconfigurations, and they need effective ways to validate cloud security risks in an error-free manner. To address these challenges, Wipro has created the Wipro Google Cloud Security Pack, a code-based automation solution to enforce and govern security through a secure cloud foundation. Wipro Google Cloud Security Pack functions A solution for every need The solution is flexible and addresses industry-specific needs based on an organization's requirements. Clients can use it for their greenfield environments or to enhance the security of their brownfield environments on Google Cloud. Wipro Google Cloud Security Pack offers a 3-step process: Contact Us Wipro Google Cloud Security Pack key differentiators Resources ======================

Preparing for Cybersecurity Maturity Model Certification 2.0

Contact Wipro Please fill the required details to access the content Navigating the path to cybersecurity compliance for defense contractors   The cybersecurity compliance landscape for defense contractors is rapidly evolving. CMMC (Cybersecurity Maturity Model Certification) 2.0, introduced by the

Department of Defense (DoD), is designed to protect sensitive information in the defense industrial base. Updated requirements in CMMC 2.0 will be fully integrated into DoD solicitations in Spring 2025, so the pressure to meet the new standards is mounting. Key updates in CMMC 2.0 include: With ongoing assessments and the risk of penalties for non-compliance, defense contractors must develop a robust CMMC Readiness Plan to be certified by the time contracts are awarded in Spring 2025. This includes conducting gap analyses, understanding contract scope, and investing in modern cybersecurity infrastructure. Download our eBook to learn how Wipro can help defense contractors navigate these changes and secure their competitive position in the future of defense contracting.   Download E-book ====================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ ----- Winning Together A-H H-S S-Z Contact Wipro Please fill the required details to access the content Partner Ecosystem ======================

Wipro BMC Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/bmc/ ----- Enterprise Service Management Contact Wipro Enterprise Digital Operations Hub (EDOH) Please fill the required details to access the content Wipro BMC Empowering Autonomous Operations: Bridging Technology and Experience Wipro and BMC Software have forged a strategic partnership for more than 15 years and serve customers across the globe. The collaboration combines BMC Software's impressive solutions portfolio (such as smart services and operations management, business workflow automation, and reframing the mainframe) with Wipro's industry-specific experience and technology expertise. BMC Software and Wipro share a vision for empowering organizations with autonomous operations. Together, we connect and optimize digital operations, fueling efficiency, intelligence, and innovation through technology pillars like enterprise service management and AIOps. Our partnership bridges back-end systems with frontline experiences, ensuring that everyone in the organization has access to real-time insights that enable new opportunities, quick reactions, and better experience at scale. Wipro and BMC Software have built a Center of Excellence (CoE) that includes BMC HelixGPT, a new Generative AI offering that provides customers with ready-to-implement use cases across various industry verticals. BMC Software, registered on AWS Marketplace, now offers joint solutions along with Wipro on hyperscalers. The partnership has a proven track record of delivering holistic solutions and transformative value to clients across the world, enabling organizations to stay ahead in a dynamic digital landscape. Partner Level 15+ years partnership Approach Empowering organizations with autonomous operations Customer centricity Jointly developed Center of Excellence that includes GenAI offering - HelixGPT Services Wipro provides AI-driven operations management by leveraging BMC Helix operations management with AIOps through the Enterprise Digital Operations Hub (EDOH). BMC Helix provides risk mitigation by optimizing processes, identifying saturations, and projecting growth with Wipro Cloud Studio. Contact Us ======================

Accelerating Digital Transformation

----- Empowering CXOs to make optimized security investment decisions News, Awards & Recognitions Contact Wipro Wipro Cyber X-Ray Zero Trust Security Services Enterprise SASE Zscaler GSI Managed Zero Trust Security Partner of the Year Wipro Launches an AI-Assisted Security and Risk Platform, Powered by Zscaler Please fill the required details to access the content Zscaler Wipro's cloud-based, Zero Trust security solutions powered by Zscaler Wipro's expert Cybersecurists help modern enterprises build future-proof, cyber-resilient networks through advisory, implementation and managed services solutions powered by Zscaler. The Wipro and Zscaler joint solutions accelerate business agility using cloud-based, scalable, Zero Trust security architecture that ensures user access to applications and other enterprise resources over any network from any location. Services are based on Forrester, NIST and other industry standards and include Secure Enterprise Internet Access, Secure Application Access and Wipro Cyber X-Ray, an AI-assisted security and risk platform that empowers enterprise CXOs to make optimized cybersecurity investment decisions. Security Experts Over 9,000 experts optimize cyber investments through advisory, implementation and managed services Approach Accelerate digital transformation and business agility with Zero Trust security architecture Partner Award Wipro named GSI Managed Zero Trust Security Partner of the Year 2024 Services Empowering CXOs to make optimized security investments. Accelerating secure digital transformations. Securing users, workloads, and device communications. Featured Resource Introducing Wipro Cyber X-Ray — an AI-assisted security and risk platform, powered by Zscaler Read More Read more Contact Us ======================

Wipro Cyber X-Ray, powered by Zscaler

----- Contact Wipro Wipro Cyber X-Ray Platform Demo Empowering CXOs to make optimized security investment decisions Please fill the required details to access the content Wipro Cyber X-Ray, powered by Zscaler Empowering CXOs to make optimized security investment decisions Enterprise CXOs often struggle to access comprehensive cybersecurity risk visibility across their varied cyber projects. This makes it harder to justify the spending necessary to sustain cybersecurity programs and ensure continued cyber resilience in this age of continuous disruption. Introducing Wipro Cyber X-Ray — a cybersecurity risk insights and decision support solution Wipro Cyber X-Ray, powered by Zscaler, guides security leaders in making informed cybersecurity decisions based on various internal and external environmental factors. Telemetry

data and alerts — provided by the Zscaler product suite — are integrated into Wipro's proprietary orchestration solution to provide quantifiable risk impacts and actionable remediation insights. This breakthrough security solution provides business intelligence that will allow security leaders to confidently communicate to the board the value of current cyber investments through a cost vs. impact analysis so they can be more agile in allocating beneficial cyber budgets to business and corporate functions. Gain a quick view of the security risk posture Make cost-optimized security investment decisions Confidently communicate cyber values to the board With rich data at our disposal, Wipro equips clients with a full suite of cyber services — ranging from identification to remediation and operational recovery, as well as benchmarking their cyber posture in comparison to industry peers. From a boardroom perspective, the solution provides enterprise CXOs with business intelligence to better understand the value of their current cyber investments and enables them to do more with less. Executive values delivered Contact Us =====================

Accelerating Cybersecurity and Digital Workplace Transformation with Zscaler

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/zscaler/accelerating-cybersecurity-and-digital-workplace-transformation-with-zscaler/ ----- Contact Wipro Please fill the required details to access the content Accelerating Cybersecurity and Digital Workplace Transformation with Zscaler To steer forward in today's digital-first economies, organizations across industries must propel their digital workplace transformation goals or else become obsolete with time. But how can organizations design an effective and secure digital transformation strategy while enhancing cybersecurity? At Wipro, we enable organizations to realize their digital workplace transformation goals with the right set of solutions and support. Our end-to-end solutions include creating a security roadmap for digital workplaces, right from implementation, and integration to managed services - with continuous monitoring and insightful reporting. Propelling workforce transformation and cybersecurity with a powerful alliance with Zscaler We provide organizations Zero Trust solution that includes SASE with secure SD-WAN, secure application access, and enhanced user experience. Together, we deliver a cost-effective network security solution that enables organizations with their cloud transformation journey with enhanced yet simple cloud security architecture. Zscaler propels secure digital transformation by enabling organizations to rethink traditional network security while empowering the workforce to work from anywhere seamlessly. Zero Trust Exchange Platform Zscaler Digital Experience (ZDX) The power of two as one The partnership supports Wipro's efforts in transforming employee experience with its experience platform: Live Workspace™, ExperienceNXT. With ZDX, Wipro strengthens its capabilities in offering end-to-end experience monitoring and helps enable IT teams to proactively analyse and troubleshoot user experience

issues, improving business productivity and IT agility. Envisioned to be the live centre in the workplace, ExperienceNXT will leverage cutting-edge technologies such as Artificial Intelligence, Machine Learning, prescriptive analytics, etc. to provide a multi-disciplinary, multi-dimensional view of the workplace and help measure experience in a way that is comprehensible and easy to work upon. The advanced network path analytics being brought in by ZDX adds extra visibility into employee issues and helps generate intelligent insights. Together, we offer an integrated and failproof solution to help organizations detect and resolve failures in terms of cybersecurity and customer experience. We also bring forth proactive support to employees with AIOps and collective performance intelligence.
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Elevating Enterprise Content Translation and Creation with Wipro & LILT

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/lilt/ ----- Contact Wipro Please fill the required details to access the content Elevating Enterprise Content Translation and Creation with Wipro & LILT Leverage a GenAI platform to translate and generate multimodal content into any language Wipro collaborates with LILT to help customers accommodate scaled demand for enterprise translation and content creation services, delivering faster, more cost-effective, and higher-quality translations and multilingual content at scale. Technology improvements have been limited to integration, process flow, and rule-based pattern matching of words and phrases from source to target languages. With this market context in mind, Wipro prioritized the partnership with and investments in large language models (LLMs) with LILT, believing this foundation was imperative to the future of enterprise translation. LILT employs an innovative human-in-the-loop approach to fine-tune LLMs. By customizing these models for each Wipro client's unique content, LILT ensures brand alignment and immediate business returns. This fine-tuned foundation incorporates cutting-edge natural language processing (NLP) advancements, surpassing the rule-based techniques employed by existing providers. Unlike legacy models that require manual training, LILT's Contextual AI engine can be instantly retrained. Partner Level Strategic Venture Partner for LLMs and GenAI capabilities. Approach Combines people, processes & technology to provide enterprise-grade language translation services. Differentiator Access to 5,000+ trained Linguists for the "human in the loop" component and supports 300+ languages. Use cases: For more details please visit Contact Us ========================

Securing SAP through Zero Trust architecture

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/fortinet/ ----- Contact Wipro Please fill the required details to access the content Securing SAP through Zero Trust architecture Wipro's joint SAP security solutions powered by Fortinet Wipro and Fortinet joint security solution assures SAP security through SAP application awareness, real time SAP traffic inspection and policy enforcement. Clients receive SAP web layer protection through WAF, load balancer and the API security feature of inspecting and authenticating JSON, XML, and SOAP. This delivers application layer attack and bot protection. The solution also provides secure access, perimeter security and segmentation, and integration of IoT and OT. Deception, threat hunting and automated response are added as a service to offer visibility that aligns to Zero Trust principles. This integrated solution is a secure, modernized platform that supports remote and local users, SAP applications hosted in private clouds, SaaS (SAP Raise) and local data centers. Wipro and Fortinet jointly offer different per-device support options to cater to the varying needs of devices and services. The services offered by Wipro and Fortinet are 24X7 technical support, advanced support, and professional services as per requirements. Contact Us ======================

Automating Cybersecurity Risk Management

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/cyble/ ----- Contact Wipro Please fill the required details to access the content Automating Cybersecurity Risk Management Wipro's AI-driven threat intelligence solutions powered by Cyble Wipro and Cyble partner to deliver advanced cybersecurity solutions. Combining Cyble's threat intelligence and dark web monitoring with Wipro's IT and cybersecurity expertise, they enhance threat detection, improve incident response, and offer comprehensive cyber risk management. This partnership integrates real-time threat insights and proactive monitoring to provide robust defense against cyberattacks and protect digital assets. Clients benefit from a holistic approach to cybersecurity, including brand protection and risk assessment, helping them navigate the complex cyber landscape with confidence. The Wipro and Cyble alliance represents a significant step in providing resilient and comprehensive cybersecurity solutions for businesses in the digital age. Collaborative Integration Cyble's AI integration plus Wipro's MDR technology stack that includes SIEM, EDR, XDR, NDR Approach Implement AI and machine learning-driven real time threat intelligence, attack surface management and comprehensive risk assessments. Partner Award Wipro named GSI Partner of the Year FY 23-24 Partner Recognitions Cyble's Monitoring Capabilities 5Bn+ Digital Assets Monitored 90% Cyber Crime Space Covered 80B+ Threat Indicators

350B+ Darkweb Records Partner Offerings Wipro and Cyble Collaboration The combination of Cyble's threat intelligence and Dark Web monitoring with Wipro's IT and cybersecurity expertise provides enterprise clients with comprehensive cyber risk management that enhances threat detection and improves incident response. Our AI-driven solutions deliver a unified view of cyber threats by collecting and consolidating intelligence from more than 15,000 dark net marketplaces to offer a more secure digital future for businesses worldwide. Listen to Wipro and Cyble leaders discuss the market significance of this partnership and the value it brings to global enterprises. Contact Us =====================

Krypton

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/krypton/ ----- Contact Wipro Please fill the required details to access the content Krypton Wipro Partnership Provides Integrated Offerings that Innovate Product Design and Manufacturing In today's market, clients want an alternative to original design manufacturers (ODMs), particularly for their engineering design needs. This partnership addresses the latest capabilities in manufacturing areas such as inline, 3D X-ray, 3D AOI, chromatography lab, enhanced RF design, and processing capability. This partnership will enable Wipro and Krypton to deliver reliable products and services to manufacturing clients, including engineering design services with leading-edge technology, differentiating features and IP, supply chain management, manufacturing services, product compliance testing, logistics, and after-market services and support for feature upgrades in hardware, firmware, and software. Manufacturers with low, medium, and high volumes can benefit from these integrated E2E capabilities. This partnership provides clients with deep industry and engineering experience with manufacturers in connectivity and computing, AI and robotics, defense and aerospace, semiconductors, medical, energy, and more. Krypton's recent awards include L-3 Concepts Prestigious Supplier of the Year, TI's 2020 Supplier Excellence Award, Blue Origin's Performance Award, and Circuit Assemblies Highest Overall Customer Rating Award. And they have earned certifications in ITAR, AS9100D, and ISO 9001:2015. Wipro Engineering Edge has 35+ years of engineering experience, 1900+ patents, 600+ products engineered in software, devices, networks, and data platforms, and Wipro's Tarang Labs for testing and certifying new engineering products. Though ODMs can provide good solutions, they have limited capability to meet client demands that vary in technology and scale. A turnkey solution requires good experience with clients' design methodology/processes, strong engineering design expertise, and manufacturing capability to deliver best-in-class integrated hardware and software solutions. With the Krypton-Wipro partnership, we offer a joint development manufacturer (JDM) model that addresses the following client needs: The Wipro-Krypton global partnership accelerates everything from engineering prototype development to volume manufacturing. =====================

Appian

Appian Discover the Power of Transformation: The Wipro and Appian Partnership Welcome to a world where innovation converges with seamless execution. The Wipro and Appian partnership brings you a transformative alliance that redefines customer experiences through agile content, marketing, commerce, and analytics solutions. With a collective legacy of excellence, we are poised to amplify value for your business in unprecedented ways. Crafting Immersive Experiences: Our partnership is built on the synergy of Wipro's strategic insights and Appian's technological prowess. Together, we create immersive customer interactions that resonate deeply, powered by Adobe's cutting-edge tools. Agility at the Core: In today's fast-paced landscape, adaptability is key. We blend design, strategy, and technology to deliver solutions at remarkable speed, helping you stay ahead of evolving customer expectations. Empowering Growth: The heart of our collaboration lies in empowering your business growth. From enhanced sales to unwavering customer loyalty, our solutions cover the entire marketing journey. Integrated Solutions: Wipro and Appian, provide seamlessly integrated solutions across marketing, commerce, analytics, and customer experiences. Gain the power to understand customers, expand your market share, and engage in personalized conversations that resonate across platforms. Platinum Partner Excellence: Our Platinum Partner status reflects our commitment to excellence and innovation. It's a testament to the remarkable value we bring to the table. Ready to Transform? Get in Touch Your journey to transformative customer experiences begins here. Reach out to us to explore how the Wipro and Appian partnership can elevate your business to new heights. Let's innovate, integrate, and inspire together. =======================

QuickBase

What We Do for Employee Experience Contact Wipro Please fill the required details to access the content QuickBase If you're business isn't already investing in and planning a long term strategy around employee experience, you may find your business losing ground quickly in the coming months. Change is here, and it's positive for every organization. But it's time to dive in now. A variety of advanced technologies and cloud-based applications are making employee experience a competitive differentiator for many enterprise organizations. With the right tools, employees are gaining in productivity, reaching business objectives with ease, and finding more satisfaction in everyday achievements. This attracts talent and encourages them to remain loyal. Hybrid work models have cleared the way to smarter ways of working. But we're seeing many businesses struggle to completely adapt. This is a prime opportunity to re-think how every aspect of your business operates, grows, and thrives with the help of modern technology. What you'll gain from our combined

solutions QuickBase is a rapid application development platform for dynamic work. It powers low and no code development for business users. A leader in collaborative work management (CWM), QuickBase helps hybrid teams to see, connect and control complex projects and related processes. It enables speed and agility across teams. And as a cloud-first platform, it is easy to deploy, integrate, and maintain, while leveraging templatized vertical solutions. What Analysts Say QuickBase differentiates itself by targeting key information that supports the delivery of complex projects and programs," according to Forrester. Get Started Today Find out what's possible for your organization. Talk with an expert today. Current Industry Users Construction, Contract Management, Education, Finance, Government, Healthcare, Legal, Manufacturing, Portfolio Management, Property Management, Solar, among others. ======================

Snowflake Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/snowflake-partnership/ ----- Awards & recognitions Our Success Stories What We Think Form Title What We Think Contact Wipro Please fill the required details to access the content Snowflake Partnership Enabling modernization with Snowflake Data Cloud Realize the full potential of cloud computing and accelerate time to market by modernizing your legacy data analytics infrastructure As an ELITE partner of Snowflake, Wipro provides enterprise customers an end-to-end solution, membership in the Snowflake Data Cloud and expertise from a leading global services provider. Together, we give peace of mind to many large customers moving away from on-premise legacy environments to an all-cloud strategic deployment. Our partnership with Snowflake represents a significant, long-term commitment to help our clients streamline their operations, better serve their customers and lead in their industries. There is a massive shift in customers migrating their entire analytics infrastructure to the cloud. In response to this trend, we have established the Snowflake Center of Excellence (CoE). This strategic initiative will help enterprises adopt a modern, scalable solution, using Snowflake's platform to unlock data for all their data workloads. The CoE provides trained consultants access to Wipro's proprietary technology and data analytics expertise. The Snowflake partnership and new CoE together, enable us to deliver cloud-native solutions in a fraction of the time needed for a traditional migration. Our value proposition Wipro's partnership with Snowflake enables faster performance, lower cost of ownership, elimination of duplicate data, scalability, higher value-added tasks focus, improved visibility and responsiveness, and faster time to insight. Faster Performance Snowflake's data engine executes data integrations, reports, and analytical workloads at scale without typical performance issues. Lower Total Cost of Ownership Leverage a data engine that has low management costs, low system maintenance overhead, and lower computation costs. Eliminate Duplication & Scalability Snowflake scales easily during heavy workloads, reducing or eliminating the need for duplicate data. Higher Value-Added Task Focus The ease of database management allows teams to focus on more than just maintenance and support, delivering valuable business capabilities to the organization. Visibility & Responsiveness Easily

understand usage by business users and quickly allocate database resources to meet needs within minutes - not hours, days, or weeks. Faster Time to Insight Improve insights from the data repository for diverse datasets (sales, customer records, employee information). Quickly analyze information and find patterns that could improve business goals like boosting sales or improving customer service. Get in touch with us at Analytics-Alliances@wipro.com Snowflake partners are integral to Snowflake's growth. During the Snowflake Partner Summit, held in San Mateo on June 3, 2019, we brought together more than 150 representatives from Snowflake's partner ecosystem. The Snowflake Partner Summit provides an opportunity for key partners to plan for the year ahead, share ideas, and celebrate the joint successes we've realized through close cooperation and hard work. Fall is the time of year when we host our annual Snowflake Partner Summit. Bringing together representatives from Snowflake and our extensive partner ecosystem, the Snowflake Partner Summit provides an opportunity to gather and plan for the year ahead, share ideas and celebrate the joint success we've realized through close cooperation, open communication and hard work. Wipro selected as one of the top partners currently executing Teradata to Snowflake migrations based on customer references and feedback... The manufacturing and high-tech industry has gone through drastic changes over the past few years. The forces that are shaping the industry include intense competition, evolving customer preferences and declining revenue from traditional services and solutions. This solution unlocks insights from existing data sources at scale to drive new revenue sources for manufacturing and high-tech clients. – Kevin Miller, VP, Snowflake SI Alliances Narayan Kamat, Global Partnership Head of Wipro, talks about how Wipro is selective of its partners when it comes to strategic alliances for cloud modernization which has given us 200% growth. He also talks about the disruptive nature of Generative AI and Cloud data.
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NVIDIA Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/nvidia-alliance/ ----- Contact Wipro Intelligent Document Processing (IDP) InspectAI AI for Metaverse Please fill the required details to access the content NVIDIA Alliance Wipro and NVIDIA partner to meet the business and technology needs of customers in the healthcare, automotive and telecom industries Together we are building solutions to automate the software development lifecycle and accelerate digital and business transformation. Our partnership covers everything from planning and design to implementation and project management of solutions that include NVIDIA products and technologies. Combining Wipro's expertise and research in AI and large language models (LLM) with NVIDIA's computing power and infrastructure, this partnership is paving the way for the next wave of healthcare solutions, including AI-driven strategies, products and services that are advancing generative artificial intelligence (GenAI) adoption. NVIDIA's AI competency allows Wipro to provide an end-to-end, cloud-native suite of AI and data analytics containers and pre-trained models that make AI workflows in development and production faster, more efficient. Wipro

optimizes, manages and certifies these models so they can be deployed anywhere — from the enterprise data center to the public cloud to the edge. Wipro engineers receive ongoing training on NVIDIA application frameworks in areas like GenAI, metaverse, conversational AI, and data analytics to ensure they're always knowledgeable of the latest advancements and how to best translate that knowledge to clients. Joint Solutions Wipro offerings that leverage NVIDIA platforms include an industry-leading billing and enrollment solution in the Medicare and ACA market segment, and provider and member services that leverage GenAI capabilities. Other offerings are designed to improve member experiences, increase enrollment, improve claims processing and provider data accuracy, and support claims adjudication across the healthcare industry. Intelligent Document Processing (IDP) InspectAI AI for Metaverse Contact Us ======================

Building a Happier and Collaborative Workforce

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/alight/ ----- Read this playbook to learn more about the Wipro-Alight Partnership Contact Wipro Please fill the required details to access the content Alight Join forces with us to shape the future of HR and payroll through a strategic partnership With over 25+ years of work experience in the hire-to-retire spectrum, the Wipro-Alight partnership is ideal for its depth and breadth of service offerings. Leveraging Alight's deep domain expertise and talent capabilities, combined with Wipro's immense strength in addressing a global customer base and its digital prowess, this partnership is poised to deliver exceptional results. A unique and strategic advantage for HR and payroll transformation. Operational Efficiencies Delivered by automated, AI powered HR operations. State-of-the-art digital enablement Bringing together Alight's and Wipro's market leading HR and digital capabilities Industry analyst rankings Leader and Disruptor in Everest MPHRO and Avasant's Payroll Transformation Shaping the Future of HR with our Strategic Partnership For a leading global beverage manufacturer, we achieved a remarkable 99.5%+ payroll accuracy, ensured 100% timeliness, and 20% reduction in payroll overpayments through automated solutions designed for efficiency and accuracy. Alight + Wipro HR Specialists Customers Bringing Together Wipro and Alight's Capabilities Contact Us ======================

Oracle Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/oracle/ ----- Awards & Recognition Analyst Speak Form Title Our Success Stories Form Title Form Title Form Title Form Title Our Success Stories What We Think What We Think News & Events Form Title Form Title Form Title Form Title Offerings Our Solutions Solutions & Accelerators Solutions &

Accelerators Contact Wipro Please fill the required details to access the content Oracle Alliance Strategic partnership for business transformation Leveraging a successful and long-standing partnership with Oracle to build future-ready systems and enhance business velocity The Wipro-Oracle partnership, spanning more than 15 years, is a journey of helping customers transform their businesses by leveraging the power of Cloud. Oracle's market leading Cloud offerings span across all the layers of Cloud and the entire spectrum of enterprise functions. Wipro's industry domain expertise, consulting capabilities and digital ecosystem makes the Wipro-Oracle team the ideal partner to drive the customers' Cloud transformation smoothly and successfully. Wipro's Digital Navigator Assessment framework and TCO calculator help customers measure the potential impact of Cloud transformation before they embark on the journey. QuMiC, Wipro's proprietary platform helps customers get the best value from their investment in Oracle Cloud. With QuMiC, customers can migrate to the Cloud seamlessly to realize their desired business outcomes quickly. Our Zoom-to-Cloud Packs offer reliability of outcome combined with budget assurance. Our proven Change Management framework combined with the Wipro Cloud Excellence Center and our integrated Cloud delivery mechanism, delivers a smooth experience across the implementation lifecycle. The Wipro-Oracle joint value proposition centers on three pillars: Download PAC's "Expert View" report covering Zoom-to-Cloud. The move to Oracle Cloud is a large-scale initiative that encompasses a range of vital tasks, and creating a thorough adoption strategy is essential to reaching a successful outcome. As the leading telecommunications operator in Bangladesh. Rapid global expansion led to substantial growth for a pioneering Middle Eastern bank, which planned to expand its industry presence even further. Wipro leverages Oracle Cloud to drive increased end-user productivity and lower costs Since its inception in 1995, a leading southeast-Asian transport authority watched its road-transport network grow so significantly that it had become increasingly difficult to manage with existing business systems. The organization planned to enhance its application management services (AMS) and ensure its employees were benefitting from a resilient and reliable cloud-based system. Rapid growth and revenue increases compelled a U.S.-based publishing company to transform its operations to accelerate financial closure times Future-proof supply chain processes based on Oracle Fusion OTM and CPQ cloud enabled the transportation company to scale for the future A global ports operator in the Middle East launched an extensive plan to become a full logistics and transportation provider in order to better serve its customers and open new business opportunities. Wipro leverages Oracle's NetSuite Cloud solutions to help an information technology company seize new growth opportunities Wipro modernizes customer contact centers using Oracle's CX Service Cloud for a European utility company Wipro streamlines enterprise processes to improve productivity and establish a future-ready ERP for an engineering and construction products provider Wipro's Zoom to Cloud and Oracle Fusion Cloud connected and streamlined enterprise processes, improving the employee experience Wipro integrated the core trading environment with Oracle ERP Cloud for intercompany accounting Wipro drives seamless transition, round-the-clock cloud support and automation, helps the supplier's business evolve Wipro leveraged Oracle CPQ Cloud and Salesforce to implement robust processes for opportunity pipeline and quote

management Wipro leverages Oracle Cloud to help the company optimize costs and realize gains in its supply chain planning Wipro leverages Oracle Fusion Cloud to ensure best in class processes and an integrated approach Wipro leveraged Oracle Cloud to help streamline processes, improve sales effectiveness and reduce costs. With multiple inventory sources in its business units and supply chain The medical-device market has experienced rapid growth during the past few years... Since 1995, the growth in American public-transit ridership has increased at a faster... One of the world's largest technical professional services organizations needed to transform its finance, accounting, project, and procurement operations across its multinational footprint. A leading electronics manufacturer and distributor knew that to deliver on its growth plans, the company had to modernize its systems to meet the needs of its rapidly evolving procurement function. This task also required enhancing the finance and accounting processes associated with procurement. A commodities trade authority in the Middle East, one of the leading free zones globally..... A leading North American steel manufacturer had long relied on manual product-costing processes. Pure The Winery is a budding specialty-wine producer providing a new line of zero-sugar wine made in Piedmont Wipro implemented Oracle NetSuite for a scalable ERP solution and enabled automation for business processes Wipro transforms the client's technology landscape with Oracle NetSuite and leverages automation to streamline business processes Wipro leverages Oracle Service Cloud and Oracle Knowledge Advanced to establish a seamless knowledge management system for global network of dealers and agents Wipro leverages Oracle Cloud Applications to transform global service operations and enable revenue growth Wipro leverages Oracle Cloud to drive connected processes, simplified IT, and decreased-operating costs Leveraging Oracle Cloud, Wipro transforms the client's Transportation management process to achieve 45% faster quotes and 24% reduced costs Wipro implemented Disaster Recovery as-a-Service on Oracle Public Cloud, transforming the organization's disaster recovery landscape from a CAPEX to OPEX model Wipro implemented a shared-services model leveraging Oracle Cloud, reducing IT expenditure and enhancing customer experience Wipro leveraged Oracle HCM Cloud to enable a unified technology landscape resulting in transformation of HR & payroll processes Wipro leverages Oracle Service Cloud to help the client reduce customer churn by 20% 'Real Time Manufacturing' – a manufacturing execution system on Cloud enhanced operational efficiency on the factory floor Oracle HCM Cloud with payroll interface streamlines and unifies the bank's human resources function Wipro implemented a Digital Contract Automation and Storage solution with Oracle Content & Experience Cloud and Adobe Sign, to drive omni-channel content management and accelerate experience delivery Wipro leveraged Oracle EBS, Oracle HCM Cloud and Taleo to increase supplier recovery, employee experience and reduce costs Wipro integrates Oracle Sales Cloud with 3rd-party systems, leverages data to create smooth customer experience with 100% increase in Lead Potential Realization David Watkins, General Manager Finance APN Outdoor speaks on Wipro's expertise and an ability to execute Oracle ERP cloud to provide business real time, accurate information for faster decision making Consumer preferences and demands have changed. Migrating to the cloud seems like table stakes for the modern enterprise. When contemplating the move, there are a number of things to consider, cost always being high on

the list. Transitioning to the cloud bolsters an organization's ability to innovate and improves its overall economics by enhancing business agility, reducing costs, and strengthening the focus on core competencies. Protolabs, Wipro's specialized labs with expert teams and rapid prototyping processes, deliver path-breaking solutions at great speed through co-innovation One of the primary goals for every organization is to manage year-end payroll processing without a hitch. Every day, across the field service industry, thousands of field service technicians carry out operations such as repairs, maintenance, installations and configurations at customer sites. The primary focus for these field service organizations is to improve asset uptime, first-time-fix, customer satisfaction, retention and service-margin. Buying behavior of customers is ever evolving. An organization's Configure Price & Quote (CPQ) application serves as the backbone for the sales team to support this evolving buying behavior of customers. Every modern business in the world turns to its CPQ system to produce correct quotes and effectively sell its products, thereby generating revenue. Tollway operators are facing a myriad of challenges such as high labor costs, operational inefficiencies.... Every retailer today wants to provide the customer experience that large online marketplaces are known for. The global pandemic of 2019-20 has not left any industry untouched in its wake. If there is one factor that can help us defeat this crisis and rise stronger, it is knowledge. Hence, the pressing need for the knowledge juggernaut to roll on cannot be overemphasised. With increasing deregulation, expanding regulatory oversight, digitally driven customers, and pressure on revenues, utility companies are constantly looking for new business models and solutions. How utilities can meet changing customer expectations and improve business processes with Oracle Customer Cloud Service (CCS) Healthcare delivery is the most powerful and sought-after service during these tough times. As COVID-19 continues to create a climate of uncertainty, organizations across the globe are struggling with an unprecedented crisis—and most of them are still gearing up to handle the sudden impact to business. In an earlier article, we highlighted the remarkable transformation that the car rentals business is undergoing at the hands of technology. Leading rental services are using mobile apps for bookings and payments, facial recognition to improve speed and security around bookings, and data and analytics to improve customer service. The COVID-19 pandemic has created multiple impacts on supply chain activities, which warrants quick re-engineering to meet the change in demand. The art of possible with an intelligent service management assistant powered by AI and Oracle Cloud Reimagining employee benefits and enhancing experience for the future workforce How manufacturing organizations can drive business growth with IoT, automation and data Accelerate and simplify migration to Oracle Cloud with Wipro's Quick Migration to Oracle Cloud (QuMiC) platform In this paper, we focus on the top 5 automation areas that'll enable greater competitiveness for HR as a function. The benefits of using Oracle Cloud Infrastructure (OCI) are widely known: Organizations get the same familiar control, security, and high performance of on-prem infrastructure with the additional advantage of cost savings. Despite the advantages of SaaS—like ease of adoption, access to the latest and greatest features and the ability to control costs—organizations are reluctant to consider moving their on-premise Oracle EBS to SaaS. Wipro's Customer Experience Management solution for Utilities, leveraging Oracle Cloud Are you converting the right

data (and the right volume)? Organizations that adopt a new payroll system know that things can go wrong. From 2017 until now, in November 2019, the closure of brick and mortar stores in the US – like Toys "R" Us and Macy's, for example – may seem to suggest a downturn in retail. Utilities have been consistently investing in addressing two key challenges: Improving revenue and boosting productivity. Leverage Oracle's Cloud platform and enterprise applications to accelerate into the Industry 4.0 era Wipro's Quick Migration to Oracle Cloud (QuMiC) Move from 'automation' to 'autonomous' by injecting Adaptive Intelligence into your businesses Innovation in the Cloud helps us achieve better ROI on Disaster Recovery, and eliminates the costs and complexity of owning an entire facility specifically for the purpose of DR. The art of possible with an intelligent service management assistant powered by AI and Oracle Cloud Cloud-based solution to enhance customer experience, operational efficiency Power your migration with Wipro Zero Cost Transformation to Oracle Cloud Infrastructure (OCI) The new offering allows companies to migrate to Oracle Cloud Infrastructure with reduced risk by addressing challenges related to cost, quality and time East Brunswick, New Jersey, USA and Bangalore, India – July 21, 2020: Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO), a leading global information technology, consulting and business process services company, today announced that it has won the 'Oracle UK & Ireland Partner of the Year 2020' award in 'Customer Experience' category. Superior customer experience (CX) possibilities through Oracle CX Cloud Building digital enterprises Organizations need solutions that enable them to keep close tabs on key performance indicators, ensuring that they stay on the right path to achieve business goals. Modernizing and Transforming Supply Chains Wipro is a global implementation partner for Oracle Integration Cloud and this partnership offers advanced services and expertise to accelerate digital transformation for customers. Empowering HR Organizations Expanding Cloud ERP Horizons Oracle cloud application management services Mitigate risk and reduce TCO by up to 30% Quick Migration to Oracle Cloud Accelerate your journey to Oracle Cloud Rapid Oracle Cloud functional set up Value realization the digital way Rapid COVID-19 Risk Identification, Response Framework & Nerve Center Accelerate your journey to Oracle Cloud Modern tollway operators face a variety of challenges, from operational and technological to financial and competitive. A managed Customer Information System (CIS) Powered by Oracle NetSuite Accelerating value creation for private equity firms with NetSuite's cloud ERP solutions and Wipro's industry expertise Universities today compete in a rapidly changing, digital educational landscape. Inventory shelf-life planning and efficient management Mitigating the challenges of procurement and supply risk
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Global Logistics Powerhouse Accomplishes an Award-Winning Financial Transformation

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/oracle/success-stories/global-logistics-powerhouse-accomplishes-an-award-winning-financial-transformation/ ----- Contact Wipro Please fill the required details to access the content Global Logistics Powerhouse Accomplishes an Award-Winning Financial Transformation Ambition A leading contract logistics provider embarked on an ambitious journey to revolutionize its financial operations by deploying Oracle Cloud ERP across 49 countries. This initiative aimed to consolidate financial operations onto a unified platform, enhancing efficiency and decision-making capabilities across its vast network. The project's scale was significant, targeting more than 1,500 core finance users and more than 30,000 self-service users, and spanning diverse regulatory landscapes. Building on the initial progress, the project opened an opportunity for collaboration, leading the client to partner with Wipro. This decision was inspired by Wipro's comprehensive experience as an Oracle partner and their demonstrated agility in technology services and consulting. Wipro's mandate was clear: to accelerate the project's delivery, ensuring the achievement of its ambitious goals without compromising quality. Action Wipro's transformative journey was launched with a strategic, focused plan aimed at minimizing disruptions and ensuring continuous progress. The initiative moved forward through deep client engagement, developing a concise transformation roadmap. This roadmap emphasized targeted leadership engagement, comprehensive training, and strict metrics, all directed towards the implementation of a unified Oracle Cloud instance globally. The journey unfolded with a targeted "Beach Head" approach, initially rolling out new business processes in pilot countries - Australia, Austria, and Germany - before expanding to a global Oracle Cloud instance across all client locations. A key element of enhancing efficiency was Wipro's takeover of managed services and the introduction of a pioneering Gen AI solution for supplier inquiries. This innovation delivers precise, tabulated insights with minimal manual intervention, streamlining the process significantly. This approach not only unified data and optimized operations but also marked a significant advancement in the client's transformation journey. It underscores Wipro's strategic and focused methodology in driving transformative change, demonstrating its dedication to crafting and implementing cohesive global solutions that ensure progress and minimize disruptions. Ambitions Realized The collaboration between Wipro and the logistics provider not only achieved its set objectives but also led to the project winning a prestigious industry award. This accolade recognized the project's innovative approach to digital transformation, its significant impact on operational efficiency, and its contribution to the logistics industry at large. The project's key achievements included Wipro not only transformed the client's operations but also established a new industry standard for facilitating complex, global ERP implementations. ======================

Tibco

Overview of the partnership Success Stories Solutions Contact Wipro Please fill the required details to access the content TIBCO Alliance Enabling a digitally connected enterprise with TIBCO Driving innovation at digital enterprises with our platform, tools and methodologies and leveraging AI, IoT, APIs and Cloud TIBCO products fulfill crucial needs. They Interconnect Everything with API Management, Messaging, Event Processing, Process Management, and Integration (application, blockchain, cloud, containers, IoT, low-code, microservices) and also Augment Intelligence with Data Visualization, Data Management, and Advanced Analytics (AI, Machine Learning, streaming BI). Organizations across industries are embarking on technology transformation programs to effectively engage with the digital economy. With the TIBCO partnership we are able to enable digital transformation that helps organizations quickly innovate and execute, reduce risk, and increase efficiency and customer satisfaction. Wipro is an Elite Partner for TIBCO. We offer consulting, implementation and managed services across all TIBCO platform technologies and leverages digital integration platforms, APIs, Cloud, DevOps and event processing to deliver connected experiences and create an agile and integrated enterprise. Wipro's TIBCO COE Wipro is well positioned to help organizations build compelling mobile and social customer engagement solutions. Our dedicated TIBCO Center of Excellence (CoE) focuses on product evaluation, proof of concept, refining methodologies, building solution accelerators and reusable components of TIBCO products. Platforms and Solutions Wipro's Digital Integration-as-a-Service platform brings together integration runtimes, tools, frameworks, support services, templates, accelerators and best practices to cut down the time it takes for large enterprises to deploy their next-generation integration platforms. Tools and frameworks: DevOps tools/ processes, service/API and event governance, comprehensive monitoring and management, and collaboration portals Managed File Transfer as-a-Service (MFTaaS): A unified, one-stop Cloud-hosted solution that enables seamless integration across heterogeneous partner systems and enterprise application Industry-specific accelerators: Packs that combine pre-built application connectors, APIs, data models and analytical models specific to an industry, e.g., Connected Airports Pack—a Wipro-TIBCO joint solution to help airports quickly rollout Smart Airport use cases TIBCO product portfolio with Wipro Next-gen integration platforms: TIBCO BusinessWorks Container Edition, TIBCO BusinessWorks 6, TIBCO Cloud Integration, Mashery Streaming analytics: TIBCO StreamBase, TIBCO Live Datamart, TIBCO ActiveSpaces, TIBCO BusinessEvents BPM and Case Management: TIBCO ActiveMatrix BPM Analytics and Master Data Management: TIBCO Spotfire, TIBCO MDM, Data Virtualization Managed File Transfer: TIBCO MF AWARD Business Innovation Excellence Award – B2B/MFT 2014: Wipro at the TIBCO NOW Conference, San Francisco, November 3-5, 2014. APAC telecom services provider: Implemented real-time customer experience management system to help the organization reduce customer churn in a highly competitive market Leading hi-tech manufacturer: Modernized the

customer's middleware platform by setting up a hybrid integration platform, API-based integration, API Management and DevOps tooling for continuous and agile delivery Wipro's Automated Shelf Replenishment (ASR) is a game changer for retailers, allowing them to minimize manual restocking efforts, improve product availability, and enhance customer experiences. =======================

Automated Shelf Replenishment (ASR)

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/tibco/automated-shelf-replenishment/ ----- Contact Wipro Please fill the required details to access the content Ensuring retail brands can efficiently restock products and drive sales Navigating the Latest Retail Challenges "Deliver what the consumers want, when they want it." It's the oldest retail axiom out there, but retailers cannot overstate the importance of getting it right. More than two-thirds of customers have left a store because the product they sought was not available. As a result, revenues are missed, stock is possibly squandered, and the bottom line suffers. Sales and margin growth are becoming increasingly difficult to come by as many disrupting factors affect global retail operations for brands and suppliers, but businesses have a clear opportunity to generate value to customers and shareholders. Innovating Stock Replenishment Operations Wipro's Automated Shelf Replenishment (ASR) is a game changer for the retail industry. ASR's continuous shelf-scanning functionality works in conjunction with AI/ML-based algorithms and planogram data to accurately identify the replenishment amount needed on a specific shelf. With Wipro's ASR solution, retailers can modernize their shelf to avoid replenishment issues and more effectively deliver profitable customer experiences. As a cloud solution, ASR is built on the IoT-compatible platform, TIBCO Project AIR, which provides computer vision capabilities for analyzing shelf images or camera streams in near real time. Retailers can also configure ASR's intelligent replenishment rules to automate and optimize routine replenishment and inventory allocation tasks, resulting in improved employee productivity and greater sales opportunities. ASR Features Benefits for Retailers Innovate restocking workflows and drive business opportunities with Wipro's ASR. =====================

Winning with Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws/our-partnership/ ----- Our Partnership What we do What We Think Form Title What We Think How we innovate Get in touch Contact Wipro Please fill the required details to access the content Our Partnership Wipro is a Premier Consulting Partner for AWS This status is provided to consulting partners globally that have invested in their AWS practice and have extensive experience in deploying customer solutions on AWS. Wipro and AWS have a strong alliance, and our 'customer-first' approach is key in creating three-

way-wins for customers, Wipro and AWS. Innovate on AWS Leverage the power of AWS at the intersection of cloud with digital, IoT, analytics and cognitive Case Studies Solutions Move to AWS Accelerate the journey to AWS based on our migration expertise and experience for enterprise migrations and specialized workload migrations. Wipro is a Migration Acceleration Partner (https://aws.amazon.com/map/) at APN (AWS Partner Network) Case Studies Solutions Run on AWS Manage and run the applications and infrastructure on AWS with Wipro's AWS Managed Services portfolio Case Studies Solutions Listen to how Wipro and AWS enabled the digital journey for global customer Read more Interview with Stephen Orban, Global Head of Enterprise Strategy, AWS Wipro's AWS Innovation studio: Wipro's AWS Innovation studio is a phygital workspace where Wipro, AWS and customers collaborate to co-ideate, co-create, co-innovate on the coolest AWS services. At Wipro's AWS Innovation Studio, we The following table elucidates a catalog of Wipro's AWS solutions on AWS A technology agnostic integrated solution for generating pertinent insights (Insights as a service) through advanced analytics for faster decision-making. Read more. Blockchain Innovation Lab provides the capability to auto-provision configurable Blockchain networks in Cloud environments. Read more. CROAMIS automates the end-to-end cargo air processes from cargo revenue budgeting, capacity planning, sales, revenue management, cargo ground handling operations and customer services. Read more. MFTaaS (Managed File Transfer as a Service): A consolidated file transfer platform for end-to-end management of structured and unstructured enterprise files. Read more. A patient centric 360-degree solution suite built on AWS, which helps to map patient journey for a seamless health experience. Read more. Auto Insights is a connected car platform that uses U devices to continuously read data from connected cars and uses sophisticated analytics to offer a wide range of benefits to car owners, OEMs and insurers, and the ecosystem players such as organized garages, consumers, etc. Read more. =====================

Adobe Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/adobe/ ----- Partnership Overview Success Stories What We Think Form Title Contact Wipro Joint Solutions Please fill the required details to access the content Adobe Alliance Transforming the world through design-led digital experiences Delivering design-led experiences with high velocity content, marketing, commerce, analytics solutions For more than a decade, Wipro has delivered exceptional customer experiences powered by Adobe. Recognized as a Platinum Partner, we collaborate with Adobe to bring together strategy, design, and technology. This unique combination defines unique and immersive customer interactions that are underpinned by exclusive customer insights and leverage seamless front-to-back integration. Elevating the human experience requires more than just the latest creative and technology. In a world of unprecedented connectivity and changing customer expectations, it requires deep insight into human behavior and an understanding of what's possible. At Wipro, we help clients identify what's valuable, and deliver on it. Together with Adobe, we deliver exceptional,

design-led customer experiences with high velocity. We have jointly built dynamic solutions that drive sales and inspire user loyalty with each interaction, creating business growth through a unique combination of services and solutions that empower the entire marketing journey. Together, Wipro and Adobe help to create integrated marketing, commerce, analytics and customer-experience solutions. These solutions will help businesses to better understand and win customers, increase share of wallet and differentiate through targeted, relevant and consistent conversations across multiple devices and channels. IntelliBoarding - Wipro's IntelliBoarding solution transforms onboarding experience through digital self-service and cognitive validations. The solution is curated for identified verticals including BFS, CPG, Manufacturing and Healthcare. Partnership Level – Platinum Partner Awards and recognitions - In the EMEA region, Wipro has achieved Adobe Experience Manager Sites Specialization as a member of the Adobe Solution Partner Program. Wipro has earned Adobe Experience Manager Run & Operate Specialized in the Americas. Specialized partners are certified by Adobe for their proven capabilities and successful implementations — the best of the best in the Adobe Partner ecosystem. A leading American multinational corporation and one of the world's largest oil field service companies with hundreds of subsidiaries, affiliates, branches, brands, and divisions in 70 countries with 55,000+ employees. Leading global technology company known for its postage meters and other mailing equipment and services recently expanded into global e-commerce, software, and other technologies, serving more than one million customers in about 100 countries. Leading regional carrier which owns and operates the fifth-largest wireless telecommunications network in the United States, serving 5 million customers in 426 markets in 23 U.S. states sought to elevate the customer experience and accelerate digital transactions. Leading oil and gas business with more than $230 billion in sales uses advanced technologies and innovative processes to build a sustainable energy future. With interests in more than 20 refineries and operations in more than 70 countries, this energy company produces about three million barrels of oil equivalent per day. =====================

Software AG Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/software-ag/ ----- What We Think Contact Wipro Please fill the required details to access the content Software AG Alliance Deep and strategic partnership Identify new operational efficiencies and revenue streams using Wipro's partnership with Software AG Wipro's alliance with Software AG has defined a partnership of agility, scale and innovation. Organizations across industries are embarking on technology transformation programs to effectively engage with the digital economy. Wipro offers consulting, implementation and managed services across all Software AG platform technologies and leverages multi-channel integration, IoT, API, Cloud, DevOps and service-based implementation to deliver connected experiences and create an agile and integrated enterprise. Wipro's offerings on Software AG's Digital Business Platform expose process and business data as insights and enable enterprises to identify several operational and revenue

opportunities. It also allows them to execute intelligent actions at the right time. Wipro is a global strategic partner of Software AG. Overview of the partnership Wipro is a Global Strategic Partner of Software AG. With over 15 years of rich experience in working with organizations' digital platform technologies, we have completed more than 200 engagements across Banking, Retail, Manufacturing, Telecom, Energy and Utilities. The highest level of partnership allows Wipro's clients to identify customer-centric innovation, new operational efficiencies and revenue streams. We have also jointly developed industry specific point solutions such as Connected Devices for Manufacturing and Situational Intelligence for Energy and Utilities. Wipro was awarded Software AG's 'Best Joint GTM partner 2018'. Wipro is the winner of the Software AG Solution Excellence Award for IoT solution implementation for a leading hi-tech major.
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Empowering Digital Transformation

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-google/ ----- Google Workspace Data Platform Modernization with Google Cloud Platform Wipro Nuage Transforming Silicon Design Digital Omnichannel Banking Solution on Google Cloud API Marketplace on Google Cloud How Wipro models cloud transformation excellence with SAP on Google Cloud News, Awards & Recognitions Contact Wipro Cloud Migration and Modernization with Google RAMP Database Modernization on Google Cloud Platform Wipro GenAI Solutions Google Cloud Application Migration & Modernization SAP on Google Cloud Platform Hybrid Cloud Solution Delivered with VMware and Google Cloud Google Cloud Security Enhancing Service Desk Operations with GenAI Sales Insight Assistant for a Leading North American Medical Devices Manufacturer Streamlining Contract Management for a Leading North American Medical Devices Company Top Financial Services Brand Transforms their Enterprise with Wipro FullStride Cloud and Google Cloud Wipro FullStride Cloud and Google Cloud jointly led cloud transformation for one of the world's largest retailers Cynergy Bank Transformed into 'Human Digital Bank' with Wipro and Google Cloud Delivering Next-Gen Customer Service with Gen AI Three Impactful Gen AI Strategies for Financial Services Discover how Wipro harness Google Cloud Platform to drive client success in transformation IDC Spotlight: Cloud-Native Transformation Through an Industrialized "As a Service" Model Taking the Pain out of Mainframe Modernization Use the Tools, but do not Lose the Knowledge Wipro Launches 'Google Gemini Experience Zone' to Accelerate AI-Driven Innovation for Enterprises Wipro wins Google Cloud Specialization Partner of the Year 2024 for Data Center Modernization Wipro awarded as the Google Cloud Industry Solution-Services Partner of the Year 2024 – Supply Chain and Logistics Join Wipro at Google Cloud Next '24: Unlock the Power of AI with Cloud Wipro is Awarded Google Cloud Partner of the Year 2023 for Cloud Migration and Talent Development – Asia Pacific Wipro wins Google Cloud Specialization Partner of the Year 2021 award for Application Development Eros Investments Partners with Wipro to

Scale AL & ML Powered Content Localization Solution for Global Media & Entertainment Industry Wipro Expands Google Cloud Partnership to Advance Enterprise Adoption of Generative AI Wipro Positioned as Leader and Star Performer in Everest Group System Integration (SI) Capabilities on Google Cloud Platform (GCP) PEAK Matrix Assessment 2022 Wipro Positioned as a 'Leader' by Everest in System Integrator (SI) Capabilities on Google Cloud Platform (GCP) Services PEAK Matrix Assessment 2021 Wipro Announces Co-innovation Space with Google Cloud Wipro wins Google Cloud Specialization Partner of the Year 2020 award for Application Development Please fill the required details to access the content Google Cloud Wipro's Game-Changing Collaboration with Google Cloud Welcome to the future of digital transformation, where innovation meets excellence. Wipro is proud to be a Global System Integrator partner for Google Cloud, delivering unparalleled cloud services, AI, machine learning, security and other transformative technology solutions that drive success for enterprises worldwide. The Wipro Google Cloud Partnership empowers business leaders to reach their ambitions by offering innovative solutions that redefine industries and elevate business capabilities for our clients. Partner Level Global System Integrator partner for Google Cloud Approach Business transformation for a digital future Partner Award Google Cloud Partner of the Year 2024 Wipro's Google Cloud Competencies The Wipro Google Cloud Premier Partner, holds six prestigious Google Cloud Specializations. These certifications showcase our industry leading capabilities, commitment to long-term business investments, and expertise in Google Cloud technologies. As a trusted partner, we deliver tailored solutions that drive innovation and deliver business value our customers. Let the Wipro Google Cloud Partnership team take your business to new heights. Services Accelerating cloud migration and modernization journey. Wipro FullStride Cloud Studio, in partnership with Google Cloud's Rapid Migration Program (RaMP), offers a comprehensive migration strategy focused on business outcomes. Modernize and transition to AI-enabled Operational Databases on Google Cloud Platform (GCP) with Wipro. Advanced & innovative GenAI solutions to tackle unique industry challenges while improving common enterprise functions. Accelerating Cloud Journey by Modernizing Applications. Wipro's certified professionals help accelerate the customer modernization journey, increase agility, and adaptability with a razor-sharp focus on business outcomes. Google Workspace Services are a new set of services under Wipro LiVE Workspace that enable migration, deployment, and operations of Google Workspace Solutions for any Enterprise Customer. Accelerate your digital transformation journey with SAP applications on GCP. Wipro's innovation arena offers end to end services for SAP application migrations, including assessment and discovery, cloud migration, and support on Google Cloud. Wipro Boundaryless Enterprise (BLE)-Hybrid Cloud solution powered by VMware and Google Cloud provides a consistent roadmap for increasing business agility and reducing total cost of ownership (TCO). Wipro is delivering customized solutions with GCP for modernizing data analytics landscapes at an optimal cost and an accelerated pace to ensure seamless data migration. Wipro Nuage is an automated orchestrator that optimizes HPC costs for EDA workloads and uses an AI/ML prediction engine to right size compute cores and memory in public, hybrid and private cloud scenarios. Wipro FullStride Cloud Services applies a strategic digital omnichannel banking framework powered by six unique transformational

levers to make the cloud migration journey seamless for FIs with the right cloud solution. Wipro FullStride Cloud Services API Marketplace provides a range of services and capabilities that help companies take advantage of open API ecosystems. Safeguarding Business and Enabling Digital Transformation with GCP. At Wipro, we help enterprises assess and transform their cybersecurity maturity levels on the Google Cloud. Case Studies Featured Resources Wipro launched key cloud migration initiatives as a part of its 'Quantum Program' to re-architect and integrate productivity applications for business growth. Contact Us
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Cloud Migration and Modernization with Wipro FullStride Cloud and Google RaMP

----- Thought Leadership News, Awards & Accolades Contact Wipro Please fill the required details to access the content C-suite executives are embracing the cloud to future-proof their companies. Modern businesses require agile and intelligent systems and business applications. Legacy software poses challenges such as system incompatibility, high costs, and talent shortages, hindering the adoption of cutting-edge technology. To overcome these hurdles, businesses urgently need to transition to cloud-based solutions. Wipro FullStride Cloud brings clients comprehensive cloud services focused on delivering transformational business outcomes. Wipro's extensive engineering and infrastructure experience uniquely positions the FullStride team (a powerful force of nearly 70,000 cloud-focused innovators) as a strategic partner for cloud services. Whether it's migrating to the cloud, modernizing existing systems, or building cloud-native applications, Wipro provides end-to-end solutions that drive value to businesses. Wipro FullStride Cloud's application migration and modernization services enable enterprises to swiftly harness the entire potential of the cloud through comprehensive strategic support and cutting-edge digital solutions. The application migration and modernization practice is powered by around 8,000 employees who bring extensive expertise in enterprise cloud for the following Google product services used for different industry sector customers: Under FullStride Cloud, Wipro Cloud Studio is a one-stop marketplace that enables our customers to reimagine their cloudification journey and accelerate cloud adoption. Cloud Studio acts as a strategic ecosystem integrator, leveraging Wipro's platforms, intellectual property (IP), and talent. The Cloud Studio also leverages Cloud Centre of Excellence (CCOE) assets, architecture blueprints, platforms and delivery frameworks, and partnerships products and tools. Cloud Studio is a unique platform that delivers migrations of different workloads to cloud in an "Industrialized as-a-Service" model, helping global clients reimagine, modernize, and transform

their business processes and IT landscape. Our Cloud Studio has a proven track record of achieving up to 5x faster cloud adoption at 30% lower cost, 90% automated post-migration activities, and 3x faster business acceptance. This innovation lab combines Wipro's expertise with Google's approved frameworks, tools, methodologies, and AI capabilities to further enhance efficiency, agility, innovation, and time-to-market. In the last few years, Wipro has assisted more than 60 clients in successfully migrating more than 8,000 applications and 55,000 servers from on-premise to Google Cloud. Wipro FullStride Cloud Studio, in partnership with Google Cloud's Rapid Migration Program (RaMP), offers a comprehensive migration strategy focused on business outcomes. This end-to-end program leverages expertise, best practices, and automation to reduce risk, control costs, and simplify your path to cloud success. Google RaMP and Wipro Fullstride Cloud Studio have fully aligned and integrated to deliver accelerated cloud migration and modernization capabilities for clients. As a trusted Google Cloud partner, Wipro empowers customers to leverage the best of the Google Cloud platform. Our comprehensive cloud assessment and migration approach enable enterprises to develop and manage cloud-native business applications with agile methodologies, enabling faster time-to-market, increasing scalability of applications, and seamlessly integrating them with both external and internal IT systems. Wipro has been awarded multiple Google Cloud Partners of the Year awards, including a 2024 award for Data Center Transformation & Industry Solutions Supply Chain and the Google Cloud Migration Partner of the Year 2023 award. We are also the first accredited RaMP launch partner and are recognized as one of the only partners that combines a cutting-edge accelerator (Cloud Studio), a migration factory, and Enterprise Digital Operation Hub (EDOH). Wipro also operates a dedicated Google Cloud Academy, upskilling our team through diverse training programs, certifications, and boot camps in collaboration with Google Cloud. Our certifications from Google Cloud highlight our industry-leading capabilities and our commitment to long-term investments and proven customer success. In 2024, Wipro boasts 6,600+ GCP certified professionals, with numbers doubling annually in recent years. Ramp up your cloud migration and modernization journey today. Get connected to an expert =====================

Wipro FullStride Boundaryless Enterprise - Hybrid Cloud Solution delivered with VMware and Google Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-google/wipro-full-stride-boundaryless-enterprise/ ----- What We Think Form Title Contact Wipro Please fill the required details to access the content Wipro FullStride Boundaryless Enterprise - Hybrid Cloud powered by VMware and Google Cloud Agile and Modern Hybrid Cloud Rapid digitization is disrupting business models and modern enterprises are

moving to multi / hybrid cloud to accelerate innovation and quickly respond to change. This dramatic shift, further accelerated by COVID, has resulted in significant complexity and challenges, such as the need to exit data centers and quickly move to cloud, while ensuring operational consistency with on premises, and lower costs. For clients who want to use public cloud to modernize their existing IT environments, Wipro Boundaryless Enterprise (BLE)-Hybrid Cloud solution powered by VMware and Google Cloud provides a consistent roadmap for increasing business agility and reducing total cost of ownership (TCO). Wipro Hybrid Cloud powered by VMware and Google Cloud builds on Google Cloud VMware Engine (GCVE), a joint offering from Google Cloud and VMware. Wipro Hybrid Cloud powered by VMware and Google Cloud provides a collaborative service framework that helps reduce lead time and overall effort, while making it easier to scale the application to production via enterprise-wide service level agreements. Wipro's deep industry expertise and a robust partner ecosystem helps our clients stay focused on business results by helping to plan, execute and manage their cloud journeys. Wipro FullStride BLE- Hybrid Cloud solution powered by VMware and Google Cloud: Wipro FullStride Cloud Services combines industry-leading business solutions with a high-touch, business outcome based approach to help enterprises maximize the true transformative potential of the cloud. Our technology accelerators and dedicated team of experienced domain and technology consultants lead clients through each step of their cloud transformation journey, reducing migration risk. Partner with market leaders Wipro FullStride BLE Hybrid Cloud powered by Google Cloud VMware Engine solidifies Wipro's position as one of the trusted partners of choice for enterprises looking to create a strategic roadmap for low risk migration to GCVE and managed services. Wipro is a VMware Principal Partner and a Google Cloud Premier & Managed Service Provider. Wipro FullStride BLE, delivered through Global Cloud Studios, provides future-ready cloud lifecycle services for GCVE. It incorporates workload-centric cloud assessments and R-Lane decisions to arrive at the right treatment for each application, landing zone designs for GCVE, automated migration planning and execution using VMware HCX, and machine-learning-driven managed services.
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Accelerate cloud migration with lower risks and TCO

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-google/accelerate-cloud-migration-with-lower-risks-and-tco/ ----- Contact Wipro Please fill the required details to access the content As companies embark on their cloud journey, they often need to quickly exit data centers and reduce migration risks while ensuring operational consistency with on-premises environments. The Wipro FullStride Boundaryless Enterprise (BLE) solution accelerates the journey to cloud with reduced risks and lower TCO while helping enterprises meet sustainability targets. The solution builds on the Google Cloud VMware Engine (GCVE), a powerful joint offering from Google Cloud and VMware. Delivered through Global Cloud

Studios, BLE provides future-ready cloud lifecycle services for GCVE. Wipro FullStride BLE incorporates workload-centric cloud assessments and R-Lane decisions to arrive at the right treatment for each application, landing zone designs for GCVE, automated migration planning and execution using VMware HCX, and machine-learning-driven managed services. Key Features Wipro is a VMware Principal Partner and a Premier and Managed Service Provider partner for Google Cloud with expertise badges in infrastructure, data analytics, application modernization, and more. Key Benefits Wipro received VMware's 2022 Partner Lifecycle Services award and Google Cloud's 2021 Specialization Partner of the Year for Application Development award. Wipro FullStride Cloud Services Portfolio Our technology accelerators and dedicated team of experienced domain and technology consultants collaboratively lead clients through their cloud transformation journey. With deep industry expertise and a robust partner ecosystem, Wipro FullStride Cloud Services helps customers stay ahead of the curve by improving business outcomes. For more information, visit Wipro FullStride Cloud Services =====================

Migrating Workloads to the Public Cloud with Google Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-google/migrating-workloads-to-the-cloud-with-google-cloud/ ----- Contact Wipro Please fill the required details to access the content A simple checklist for seamless execution Cloud adoption and migration are accelerating, with nearly 50% of enterprises now running their workloads and data in the public cloud and demand for public cloud growing each year. While self-provisioning new workloads in public clouds may be seemingly straightforward, migrating existing services to the cloud demands thorough preparation. The migration can be complex, time-consuming, and risky, but with proper planning, effective migration practices, and the support of new migration technology, enterprise IT organizations can expedite the process while mitigating risks. "Migrate workloads to the public cloud: an essential guide & checklist" provides vital tips to navigate the four crucial stages of the cloud migration process: assess, plan, migrate, and optimize. The paper also includes a comprehensive checklist that outlines the tasks associated with each phase. Download the paper to start accelerating your cloud migration journey! Download Checklist =====================

Delivering Next-Gen Customer Service with Gen AI

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-google/delivering-next-gen-customer-service-with-gen-ai/ ----- Contact Wipro Please fill the required details to access the content Delivering Next-Gen Customer Service with Gen AI Customer service has always been a priority for businesses, but in this digital era it is taking on a new sense of urgency

due to competency growth and technology advancements. Across nearly every industry, customers have come to expect immediate responses to their queries, personalized support, even the ability to help themselves through self-service. The integration of artificial intelligence (AI) has helped contact centers keep up with these demands by making information more accessible. Now, rapid advancements in AI and generative AI (Gen AI) technology are making virtual assistants even more capable, paving the way for streamlined efficiencies that empower both agents and customers, maximizing business value. Combining AI with Cloud To make the most of any AI application, companies first need a strong cloud foundation. The large language models often require tremendous compute power, and the ability to access huge volumes of data in real time. This requires scalability and accessibility that can only be found in the cloud. As a result, cloud hyperscalers are playing a key role in AI development, offering capabilities and tools that keep pushing the envelope. Google Cloud's Contact Center AI (CCAI), for example, has helped companies go beyond the limited capabilities of traditional chatbots to offer faster resolutions and truly elevated customer service. CCAI combines natural language processing capabilities with the data security, enterprise AI foundation model and accessibility of Google Cloud to instantly connect agents and customers with the information they need. The platform can scan requests to help agents better direct customers to the appropriate channels, gather necessary documents, and extract information from those documents. It can also follow along with conversations to provide real-time support, and later draw insights from those conversations to train human agents as well as the platform itself. Because Google CCAI services are flexible and customizable, they are compatible with numerous enterprise tech stacks and use cases. Real-Time Support for More Human Interactions At the same time, rapid advancements in Gen AI are constantly revealing powerful new use cases. New features offer even greater support for agents and customers through real-time analysis and recommendations, while enhanced language processing continues to make engagements more natural and helpful. Wipro's Agent Assist, a unique solution developed on Google Cloud, uses Gen AI capabilities to identify the language used by high-performing agents and coach other agents to ensure quality customer services throughout the company. The platform also transcribes calls in real time and offers suggestions to address customer issues, leading to more efficient and successful resolutions. Products like this represent the next phase of AI implementation for call centers, building on the existing AI groundwork to make processes more efficient and useful. Consider a familiar example: A banking customer calls because their credit card has been blocked. Because this is a relatively common request, agents likely know how to resolve it quickly. But solutions like CCAI and Agent Assist can expedite a resolution before the call is even transferred to an agent by extracting the intent of the request (unblock credit card, dispute/verify charges) and preparing the agent with the information they need to assist (displaying the account and card information, the problematic charges, authentication questions, and steps for resolution). Extracting information from an email or a service ticket may not seem revolutionary, but using that to streamline such a common, time-consuming process can have a major impact on the overall customer service landscape. Agents handle tremendous call volumes. If companies can automate the right processes, they can lessen the burden of

those volumes significantly, reducing the amount of time agents spend on routine tasks such as gathering information and freeing up more time for making sure the customer feels truly supported. Continuous, Dynamic Training As enterprises leverage Gen AI to support customers, they can also leverage it to train and support customer service teams. Using Gen AI to analyze customer interactions and suggest responses can make training more dynamic and continuous. The platform can offer step-by-step guidance to walk new agents through the process, offer suggestions for how to best respond to additional concerns the customer may have, and even help redirect the call if necessary. With Gen AI, scripts are no longer static documents that only apply to a handful of instances; they're created in real-time, drawing from similar interactions in the past and learning from them. As the platform learns from the top-performing agents, it can share those best practices with agents throughout the company, enabling teams everywhere to learn from each other. Data Security and Responsible AI Process automations like these can be very helpful for agents and customers, but they can also pose security challenges, especially in highly regulated industries like financial services and healthcare. Companies want to be sure that their data and their customers' data will be safe. To maintain data security and ensure compliance with regulations, companies need to implement the proper guardrails and responsible AI practices. Google has made a point to prioritize data security and privacy in its Gen AI practices, only transferring data through encrypted channels that are within Google's control and not using that data to train its own Gen AI model. Similarly, Wipro's four dimensions of responsible AI (individual, social, technical, environmental) take a comprehensive approach to AI risk mitigation so organizations can safely harness the full potential of Gen AI. A common refrain among AI evangelists is that the technology is intended to work with, not replace. This goes for people as well as operations. The best Gen AI use cases for customer service will likely be the ones that leverage existing cloud capabilities, learn from past customer interactions, and support human agents in upholding the values of the organization. By harnessing the strengths of people and processes rather than replacing them outright, companies can multiply their impact and accelerate their growth. About the Authors Swapnil Zarekar Senior Practice Manager, Wipro Swapnil is a seasoned AI practitioner and consultant with over a decade of experience. He is senior practice manager with AI practice of Wipro Ltd and an expert in the Google Generative AI space. Dr. Magesh Kasthuri Distinguished Member of Technical Staff, Wipro FullStride Cloud Dr. Magesh Kasthuri is a Principal Architect at Wipro FullStride Cloud handling Pre-sales and technical consulting for BFSI customers. He is a multi-cloud Certified Architect and IBM Certified Bigdata Architect and a FinOps champion in Wipro. Sachin Chandra Global Practice Head, Wipro Leading Wipro's global practice team for Google Cloud. He is a hands on technology leader on cloud and Gen AI. ======================

Three Impactful Gen AI Strategies for Financial Services

Contact Wipro Please fill the required details to access the content Three Impactful Gen AI Strategies for Financial Services The technical advancements in artificial intelligence (AI), machine learning (ML), deep learning (DL), and generative AI (GenAI) are moving fast. For most of 2023, GenAI dominated the news. A recent report found that 67% of companies have added GenAI into their corporate AI strategy, proving it's not hype and here to stay. To be fair, business solutions that leverage AI are not new. What is new are the advancements that GenAI brings to the table, particularly in language creation, data handling, and content generation. In the financial sector, some companies are already beginning to embrace GenAI for content creation, operational efficiency, and risk assessment strategies to drive growth. Two GenAI Models to Know About What makes GenAI so impactful? Broadly speaking, it can consume and analyze large datasets to create normalized human responses, making it valuable for many internal uses and customer journeys. GenAI's power features will be transformational in the financial services industry. These features include: The chat-bison model, on the other hand, excels at understanding language, generating language, and handling conversations. Financial companies will find this model ideal for text-intensive tasks that require back-and-forth interactions, such as investment-related inquiries and application navigation assistance. To support such models, the Google Cloud platform is leading the GenAI space in providing 360° features including infrastructure (VM with GPU/TPU), data services (Vertex AI) and AI services (GenAI Studio). Google's GenAI solutions provide game-changing features like cloud-driven scalability, training pipelines, and more. Companies can customize the models, control default behavior, and evaluate output performance. Company data in model training is kept private and not used to train the broader model — a critical security and governance imperative, particularly in the context of sensitive financial data. Three Strategies to Drive Value with GenAI Using the GenAI models above, financial services institutions can start driving value with content creation, new operational efficiencies, and improved risk assessment processing.   Recently, Wipro and Google's GenAI models and the three aforementioned strategies to address a financial firm's investor onboarding program. Wipro trained Google's chat-bison model with the bank's proprietary data (offers, accounts, loans, processes, etc.). The resulting chatbot responds accurately to open-ended customer questions such as "What is the process to open an account?" and "What are the fees?". Integrating Google Doc AI into the model is also helping the bank accelerate customer document verification by identifying missing or incorrect information on customer forms. Customers and prospects now have seamless and efficient customer journeys for onboarding, service, and account setup Another bank wanted to improve its investor experience. Wipro trained Google's text-bison to analyze investment options particularly related to investment risk. Using the chat-bison integration, financial advisors can provide real-time summaries of different investment

instruments by sector or any scope of time. GenAI is a Game-Changer that Requires Responsibility The accelerated advancements in GenAI have led to an explosion in computer-generated content. As a result, GenAI is also raising ethical and legal questions, and answering these questions is the critical final piece of any resilient GenAI strategy. While government regulatory guardrails continue to evolve, Google and Wipro align on addressing risks with the principles of Responsible AI. Any use of the technology should protect and enhance human dignity. It must safeguard privacy and champion the security of personal information. GenAI must not discriminate or undermine an individual's identity, language, or background, and it should improve society and strengthen the values that bind us together. GenAI is a game-changer that will transform enterprise operations and enable new growth opportunities. To help companies benefit from GenAI, Wipro and Google expanded their partnership with Google Cloud and AI services. This partnership will help companies extend the benefits of GenAI across numerous enterprise functions, from customer experience and marketing to supply chain, financial modeling, and more.   About the Authors Swapnil Zarekar Senior Practice Manager, Wipro Swapnil is a seasoned AI practitioner and consultant with over a decade of experience. He is senior practice manager with AI practice of Wipro Ltd and an expert in the Google Generative AI space. Dr. Magesh Kasthuri Distinguished Member of Technical Staff, Wipro FullStride Cloud Dr. Magesh Kasthuri is a Principal Architect at Wipro FullStride Cloud handling Pre-sales and technical consulting for BFSI customers. He is a multi-cloud Certified Architect and IBM Certified Bigdata Architect and a FinOps champion in Wipro. Sachin Chandra Global Practice Head, Wipro Leading Wipro's global practice team for Google Cloud. He is a hands on technology leader on cloud and Gen AI. =====================

Unleash the Power of GenAI

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-google/unleash-the-power-of-genai/ ----- The AI Paradigm: A Special Report Contact Wipro Wipro AI Contact Center Agent Insight Wipro AI Loan Assist Wipro AI Email Navigator Wipro AI Investor Intelligence Wipro AI Health Assist Wipro AI-Ready Business Insight Wipro AI Research Pro Wipro AI Supply Chain Analyzer Wipro AI Marketing Pro Wipro AI Codey Dev Assistant Wipro AI Auto Fleet Optimizer Wipro AI News Brief Wipro AI Supply Chain Analyzer Gemini Vertex AI AI Studio/ Wipro Generative AI Framework AI Academy AI Privacy & Governance Enhancing Service Desk Operations with GenAI Sales Insight Assistant for a Leading North American Medical Devices Manufacturer Streamlining Contract Management for a Leading North American Medical Devices Company Three Impactful GenAI Strategies for Financial Services 4 Key Imperatives to Build the Future of Transportation and Logistics Harnessing the Power of Generative AI Wipro Launches 'Google Gemini Experience Zone' to Accelerate AI-Driven Innovation for Enterprises Wipro Expands Google Cloud Partnership to Advance Enterprise Adoption of Generative AI Wipro Launches Wipro ai360, Committing to Invest $1 Billion in AI over Next Three Years Please fill the required details to access the content Unleash the Power of GenAI Wipro

GenAI solutions powered by Google Cloud In an era where innovation is paramount, Wipro, in partnership with Google Cloud, is proud to introduce a groundbreaking approach to Generative AI, designed to transform the landscape of business solutions. Leveraging the power of Google Cloud's advanced AI technologies and Wipro's industry-leading expertise along with a dedicated center of excellence, we are set to redefine what's possible. Together, we are delivering solutions that enhance operational efficiency, innovate product development and improve customer experience. Accelerate your innovation journey with Wipro's Generative AI Framework and AI Studio offering expert consulting and engineering services in large language models (LLMs) and related technologies. We deliver exceptional AI value through a diverse portfolio of robust accelerators, meticulously designed to tackle real world challenges faced by global enterprises. Experience transformation at scale and unlock new opportunities with our advanced AI solutions. Rapid GenAI Prototypes Accelerate deployment with ready-to-use applications like investor onboarding chatbots and intelligent email automation. FullStride Cloud Studio's GenAI Lab Bring bold ideas to life with help from the AI Innovation Lab and Creative Workshop. Strategic Consulting and Planning Maximize impact with AI frameworks and strategies shaped by experts from Wipro and Google. Our Solutions Empower contact center agents to instantly find solutions and documents, resolving customer tickets faster. Streamline loan origination with instant processing, minimizing response times and alleviating workloads. Tackle contact center bottlenecks with real-time email traffic monitoring and task reduction. Connect investors with personalized recommendations and instant responses to investment queries. Instantly connect health insurance customers with policy information. Leverage GenAI to easily access data insights, translating natural language queries into actionable SQL. Unlock insights from over 50 research documents through LLM search, summarized results, speech-to-text, and more, empowering research exploration. Generate deeper insights from internal and external data to optimize supply chain costs, achieve real-time inventory visibility, and improve delivery times. Collaborate with AI to craft product slogans, pitches, social media posts and product images with little more than a brief description. Streamline code reviews and documentation processes with this developer assistant powered by Google Generative AI and the "Codey" model. Streamline enterprise search across more than 50 documents for more efficient SDLC workflows with seamless auto-tracking of requirements, code, and test cases. Extract key points and generate concise summaries from complex, multimedia content. Leverage internal and external data to optimize supply chain performance, achieve real-time inventory visibility and improve delivery times. Our Capabilities Empowering Tomorrow, Together Enabling chatbots with multimodal understanding, legal drafting, and personalized marketing for enterprise transformation AI solutions for support, data insights, multilingual chatbots, and customer experience enhancement through automation & NLP Innovate, Create, Transform Nurture & upskill talent with curated training for enterprise Gen AI Empowering AI with Privacy & Governance for a trusted tomorrow/ Safeguarding data & ensuring trust Case Studies Customer service has always been a priority for businesses, but in this digital era it is taking on a new sense of urgency due to competency growth and technology advancements. The technical advancements in artificial intelligence (AI),

machine learning (ML), deep learning (DL), and generative AI (GenAI) are moving fast. For most of 2023, GenAI dominated the news. Thought Leadership Wipro's Lab45 explores the impact of artificial intelligence (AI) on business and society. In this special report, learn about the technology fundamentals of Generative AI, the emerging business landscape, and integration opportunities for your business. News, Awards & Recognitions Contact Us =====================

Enhancing Service Desk Operations with GenAI

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-google/case-studies/enhancing-service-desk-operations-with-genai/ ----- Contact Wipro Please fill the required details to access the content Enhancing Service Desk Operations with GenAI Client: Leading German Wholesale Company Industry: Retail Solution: CORDS Solution - Strategic Integration of Confluence and JIRA Key Technologies: Google Cloud's Vertex AI Search and Vertex AI PaLM Large Language Models (LLMs) Target Audience: CXOs, Directors, VPs, General Managers Background: The client sought to enhance their service desk operations by reducing the time new agents spent understanding and resolving tickets, ensuring adherence to service level agreements (SLAs), and cutting incident support costs. Challenge: Service desk agents, especially new associates, struggled to quickly access the necessary standard operating procedures (SOPs) and past tickets within the client's Confluence platform. This hindered their ability to respond promptly to customer queries and maintain SLA compliance. Solution: Wipro introduced the CORDS solution, strategically integrating Confluence and JIRA. This innovative approach harnessed both unstructured SOP documents and structured SQL database entries. The solution was designed to summarize resolutions, provide comprehensive contexts for LLMs, and generate step-by-step guidance for agents. Utilizing Google Cloud's Vertex AI Search, the system fetched relevant SOP documents tailored to each specific ticket. The Vertex AI PaLM LLM enhanced the understanding and summarization of complex SOPs, making information more accessible to agents. Results: The implementation of the CORDS solution yielded transformative outcomes: Conclusion: The strategic integration of Confluence and JIRA through Wipro's CORDS solution revolutionized the client's service desk operations. This case study illustrates how targeted technological solutions, especially those leveraging GenAI, can address specific business challenges, leading to substantial improvements in performance metrics and overall business outcomes. =====================

Sales Insight Assistant for a Leading North American Medical Devices Manufacturer

Contact Wipro Please fill the required details to access the content Sales Insight Assistant for a Leading North American Medical Devices Manufacturer Client: Leading North American Medical Devices Company Industry: Healthcare Solution: Conversational BI Assistant on GCP. This GenAI-based solution enables business users with little knowledge of SQL to query and derive value out of data existing in relational databases using natural conversation-based queries. The solution converts the queries into SQL, pulls data from the database, and present the data in tabular as well as graphical formats. Key Technologies: Google Cloud's LLM, Code Bison Generative AI model, Text Bison Generative AI model, enterprise guardrails Target Audience: CXOs and GMs Background: The client sought to empower their sales agents with a conversational assistant capable of generating SQL queries through natural language processing. This assistant was designed to streamline the process of obtaining sales insights, which traditionally required expert intervention and was time-consuming. Challenge: Previously, the client's reliance on complex, manually written SQL queries hindered their ability to swiftly derive data-driven sales insights. The existing legacy systems were cumbersome, necessitating frequent adjustments to the SQL queries by experts. The goal was to eliminate the dependency on manual SQL query writing and expedite the retrieval of actionable sales data. Solution: Wipro developed a standalone solution built on Google Cloud's LLM, tailored to handle natural language requests from users. This innovative assistant transformed these requests into SQL queries, extracted insights from the sales data, and presented the results in a comprehensible format, enhanced with relevant charts and graphs. The solution incorporated the Code Bison and Text Bison Generative AI models, alongside enterprise guardrails for responsible AI implementation and deflection logic for managing irrelevant queries. Results: The implementation yielded transformative results: Conclusion: The strategic integration of GenAI models and enterprise guardrails revolutionized the client's approach to sales strategy planning. This case study highlights how targeted technological solutions, particularly those leveraging GenAI, can address specific business challenges, resulting in substantial improvements in performance metrics and overall business outcomes. =====================

Streamlining Contract Management for a Leading North American Medical Devices Company

Contact Wipro Please fill the required details to access the content Streamlining Contract Management for a Leading North American Medical Devices Company Client: Leading North American medical devices manufacturing company
Industry: Healthcare and Life Sciences Solutions Provided: Key Technologies: Python, GCP Search & Conversation, Text Bison (LLM), BigQuery, GCS Bucket, Dialogflow Target Audience: CXOs, Directors, VPs, General Managers Background: The client aimed to reduce costs and improve adherence to policies in their supplier agreement and contract management processes. Challenge: The primary challenge was to minimize the time and expense associated with contract management while enhancing accuracy and compliance with policies. Solution: Wipro, in collaboration with Google Cloud, developed a prototype based on Google Generative AI (GenAI). The solution featured a standalone model capable of searching and displaying specific clauses from a set of contract documents and generating contract documents in plain text. Additionally, the model provided crisp summaries of Statements of Work (SOWs), generated supplier agreements, and answered general questions within the agreements. Results: The implementation of this solution resulted in: Conclusion: The collaboration between the medical devices company, Google Cloud, and Wipro led to a highly effective solution that significantly improved the efficiency and accuracy of the client's contract management. The integration of advanced AI and machine learning technologies played a crucial role in achieving these outcomes. This case study highlights the transformative potential of such technologies in optimizing business operations.
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Modernize Operational Databases on Google Cloud Platform (GCP) with Wipro

Data Strategy & Planning Modernization & Transformation Data Integration & Management Operational Excellence Futureproofing Your Data Estate Contact Wipro Please fill the required details to access the content Modernize Operational Databases on Google Cloud Platform (GCP)

with Wipro In today's data-driven world, unlocking the true potential of information is essential. Legacy systems often result in data silos and sluggish decision-making. This is particularly true for databases, where migration to the cloud is key to boosting overall business performance for customers. As the adoption of Generative AI becomes increasingly widespread, transitioning to AI-enabled databases and tools is imperative. Enterprises can automate database operations and expedite code conversions through these advanced technologies, significantly enhancing efficiency, simplifying complexity, and promoting rapid innovation across the organization. The groundbreaking partnership between Google Cloud Platform (GCP) and Wipro elevates the capabilities of leveraging Wipro and Google Cloud databases to unprecedented heights. However, significant concerns loom over the migration of operational databases to the cloud, including: Wipro's Database Modernization to GCP offering, strengthened by the formidable Wipro Data Intelligence Suite, directly addresses these concerns. It meticulously streamlines customers' data estates, encompassing data stores, pipelines, and visualizations. This offering significantly accelerates the cloud migration journey by leveraging low-code/no-code tools, AI/ML capabilities, pre-built solutions, and offering multi-cloud flexibility. Importantly, it provides comprehensive guidance throughout the migration of operational databases to the cloud, ensuring a seamless transition. Wipro's Google Cloud capabilities includes wide experience in heterogenous database consolidation, with 50+ implementations. Additionally, in-house solutions and accelerators such as WDIS and Cloud Studio helps drive productivity improvements of up to 40%. Foster Innovation Automate database operations to enable faster innovation. Reduce Complexity Reduce operational overhead and complexity in managing, scaling, governing, and optimizing databases. Optimize Costs Leverage GCP's extensive portfolio of incentives to achieve near zero-cost database migration. Services Reimagine your data strategy, assess your current maturity level, and define a modernization roadmap aligned with cloud-first principles. Design and build a scalable data architecture, including data modelling, migration, performance optimization, and legacy system modernization. Implement solutions to integrate your data from various sources, ensuring seamless flow and efficient management. Leverage automation, monitoring, and best practices to optimize costs and accelerate time to market with Intelligent DevOps practices. Evolve your data capabilities, scaling your maturity level towards a next-generation data infrastructure. Contact Us =====================

Microsoft Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/ ----- Retail Innovation Experience Energy & Utilities Innovation Experience Financial Services Innovation Experience Whitepaper: Revolutionizing Enterprise Productivity with Wipro and Microsoft News, Awards and Recognition Contact Wipro Fast-Tracking SAP S/4HANA Transformations Wipro Live Workspace™ Modern Work Hub Microsoft Business Application M&A and Divesture with Microsoft Data Graph Connect Organizational Strategies Azure Cloud Services Wipro, SAP and Microsoft helped Domtar

bring intelligence and agility to its payroll system How Wipro and Microsoft helped WaterNSW drive better, faster water resource decisions How a large food company took control over its complex technology landscape with Azure IaaS How Microsoft and Wipro are elevating financial services with responsible AI and cognitive assistants ISG Briefing Note: Elevating Retail with Wipro & Microsoft's GenAI-led Intelligent Contact Center SAP's Collaboration with Microsoft and Wipro to Provide Near-Zero Cost RISE Migration Offering Executive Viewpoint: Reimagining Enterprise Productivity with Wipro and Microsoft Wipro GenAI Investor Intelligence Webcast: Unlocking Business Potential: Exploring Generative AI with Experts from Wipro, IDC & Microsoft Webcast: Unlocking the Possibilities of Generative AI: Wipro and Microsoft Join Forces for Industry Applications Blog: Driving Transformation of B2C Communications for Enterprises Harness the Full Potential of Digital Transformation eBook: Wipro FullStride Cloud and Skytap and Azure Innovation Experience for Retail, Energy & Utilities and Financial Services How Microsoft and Wipro uses AI to enable customer transformation Wipro, Microsoft and SAP Collaborate to Accelerate RISE with SAP Migration at Near Zero Cost Wipro Achieves Modernize Endpoint Advanced Specialization from Microsoft Wipro Completes Migration of ManpowerGroup's Largest Data Centre in Europe to Microsoft Azure Wipro wins Microsoft's German Partner of the Year Runner-up Award 2023 Wipro Expands its Immersive Innovation with Microsoft in Energy & Utilities Wipro Unveils Innovative Financial Services Experience with Microsoft Wipro's Smart i-Building Solution Showcased at Microsoft's Zurich Center Wipro wins three 2022 Microsoft Partner of the Year awards Wipro Unveils Retail Solutions on Microsoft Cloud, Debuts Retail Innovation Experience Wipro Achieves Microsoft Azure Advanced Analytics Specialization Microsoft Analytics Partner of the Year winner 2022 Microsoft Power BI Partner of the Year winner 2022 Microsoft Compliance Partner of the Year winner (awarded to Edgile*, Wipro's recently acquired cybersecurity consulting provider) 2022 Microsoft Azure IoT Partner of the Year finalist In 2022, Wipro won Microsoft Partner of the Year awards in three categories - Azure Analytics, Business Applications (Power BI) and Compliance. Wipro was also a runner up in Azure IoT category. Please fill the required details to access the content Driving digital transformation on Microsoft cloud services Partnership Accreditations Industry & Services Case Studies Featured Resources News, Awards and Recognition Contact Us The Wipro Microsoft Partnership has been established for over two decades, recognized as an industry leader in the market and provides digital transformation across business applications, modern workplace and the cloud. Our partnership spans three strategic pillars: Wipro as a Microsoft customer, Microsoft as Wipro's customer, Wipro and Microsoft as strategic go-to-market partners globally. The Wipro-Microsoft partnership accelerates digital transformation for our customers. Wipro's first cloud alliance business unit was the Microsoft Business Unit, which consists of a team of trained and certified Azure consultants and specialists. It aids organizations in accelerating their innovation and modernization journey by leveraging Wipro's deep domain expertise blended with Microsoft's futuristic enterprise-class offerings. With this partnership, we co-invest in industry domain services focused on data, analytics, security and customer/employee experiences. Differentiator Driving Business Transformation for leading Enterprises with our Wipro and Microsoft Innovation Centers. Partner

Status Top GSI Partner for Microsoft. Analyst Insights Wipro helps banks push more workloads to the cloud. Wipro Microsoft Partnership Accreditations Industry Solutions Unlock the potential of Data, AI, and Microsoft Cloud for dynamic, hyper- efficient retail and supply chain solutions redefining customer experiences. Address today's Energy & Utilities challenges with tomorrow's tech with our Microsoft Cloud-powered solutions Drive sustainable digital transformation securely with our customized Microsoft Cloud solutions for financial institutions Services & Solutions Near-Zero Cost "RISE with SAP" Migration by Wipro, SAP and Microsoft Redefining Digital Workplaces with Wipro Live Workspace™ for Enhanced Engagement and Efficiency. Allow your business to undergo digital transformation and become data-driven, intelligent, and connected. Classify data across Office 365 workloads for effective tenant-to-tenant migrations. Instituting a clear strategy by creating budgets and setting policies around cloud usage is an valuable way to manage cloud cost. Wipro helps enterprises transform their digital journey. Case Studies Featured Resources Wipro's Tailored Offerings for Copilot for Microsoft 365. Contact Us =====================

Wipro Earns Advanced Specialization in AI and Machine Learning on Microsoft Azure

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/wipro-earns-advanced-specialization-in-ai-and-machine-learning-on-microsoft-azure/ ----- Contact Wipro Please fill the required details to access the content Wipro Earns Advanced Specialization in AI and Machine Learning on Microsoft Azure This advanced specialization demonstrates Wipro's extensive knowledge of AI and machine learning, and experience helping customers deploy these technologies on Microsoft Azure cloud. Advanced Specialization can only be earned by Microsoft partners that meet stringent criteria around staff skilling and technical certifications, solution partner designation and customer success as well as pass a third-party audit of their AI and machine learning technical practices. Wipro has a strong track record helping organizations leverage AI and machine learning to address their business challenges, improve employee and customer experience – and continues to build on these capabilities. In July 2023, Wipro announced plans to invest $1 billion in AI development over the next three years, and launched Wipro ai360, an end-to-end AI ecosystem to accelerate enterprise transformation. Learn more about Wipro's AI and machine learning solutions. What the AI and Machine Learning on Microsoft Azure Advanced Specialization Means for Wipro and Its Customers Partners like Wipro with the AI and Machine Learning on Microsoft Azure Advanced Specialization have the tools and knowledge necessary to develop AI solutions per customers' requirements, build AI into their mission-critical applications and put responsible AI into action. "Achieving the AI and Machine Learning in Microsoft Azure Specialization is a proud moment for us, showcasing our deep expertise through third-party audit validation," said

Don McCormick, Vice President and Head of the Wipro-Microsoft Partnership. "It also highlights our commitment to foster a strong partnership with Microsoft, utilizing our solutions and accelerators built with Microsoft technologies to empower our clients to fully realize the benefits of AI and machine learning. This is our fourteenth Microsoft Advanced Specialization and we are honored to be recognized for our partnership with Microsoft. We look forward to continuing to work together to drive innovation for all our customers." Learn more about Wipro's partnership with Microsoft Azure. =====================

Build a privacy resilient workplace

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/build-a-privacy-resilient-workplace/ ----- Sensitive and Personal identification data leads to significant risks. Should you fortify data privacy and protection? Build a Resilient Privacy Workplace Contact Wipro Please fill the required details to access the content Microsoft Priva and Wipro Data Privacy Services New applications and technologies have impacted digital transformations and triggered an explosion in personal data collection. But with every powerful new business capability comes new challenges. Security systems with built-in protection tools have improved but cannot keep pace with the growing number of security threats. Data-breached organizations face costly penalties, brand-damaging headlines, decreased user satisfaction, and greater government enforcement – creating an urgent need to fortify data privacy and protection programs. Wipro and Microsoft are strengthening data privacy and protection programs by combining Wipro data privacy risks services with Microsoft privacy management solutions. Data privacy presents new challenges for every organization. Wipro and Microsoft have created an eBook called "Build a Resilient Privacy Workplace" that outlines the primary obstacles IT teams face and provides a guide for monitoring all personal data shared online through emails, chat groups, and document folders, regardless of the data collection purpose. It also identifies government regulation gaps that make data compliance (or anticipated data compliance) much more complex. This eBook provides a risk-assessment framework to guide you through your data privacy journey and explains how to deploy Microsoft Priva across your workplace. Privacy can't wait – get started today! Learn how Wipro and Microsoft help global organizations build resilient privacy workplaces. Just complete this form to download your copy. For more information about Wipro Data Privacy offerings, please contact us at wipro.com/cybersecurity-experts. Download eBook =====================

The Wipro Industry Innovation Experience - Energy & Utilities

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/the-wipro-industry-innovation-experience-energy-and-utilities/ ----- Contact Wipro Please fill the required details to access the content The Wipro

Industry Innovation Experience - Energy & Utilities Wipro and Microsoft are joining forces to create technology that powers the future of the energy and utility sector. Reshape every part of your business by addressing challenges and streamlining operations with these exciting new digital solutions. The Wipro Industry Innovation Experience - Energy & Utilities Wipro and Microsoft are joining forces to create technology that powers the future of the energy and utility sector. Reshape every part of your business by addressing challenges and streamlining operations with these exciting new digital solutions. To know more click here.
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Wipro Renews Azure Expert Managed Service Program and Achieves Multiple Advanced Specializations

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/wipro-renews-azure-expert-managed-service-program-and-achieves-multiple-advanced-specializations/ ----- Contact Wipro Please fill the required details to access the content Wipro Renews Azure Expert Managed Service Program and Achieves Multiple Advanced Specializations   As an Azure Expert Managed Services Provider, Wipro is part of a select group of Microsoft Partners recognized for their ability to provide comprehensive Azure solutions in accordance with Microsoft's highest technical standards. The Azure Expert MSP program is a global initiative designed to identify and promote the most capable Microsoft partners. Organizations are re-evaluated yearly through an independent audit based on the latest Microsoft standards. This renewed Expert program reaffirms Wipro's expertise with Microsoft Azure services and ability to deliver sustainable, repeatable, efficiently managed services across the full Microsoft Cloud lifecycle. New and Renewed Advanced Specializations Wipro has also recently achieved multiple advanced Microsoft specializations in DevOps with GitHub on Azure, Modernization of Web Applications on Azure and Low-Code Application Development, and successfully renewed the following specializations. These recognitions are a testimony to the power of One Wipro, of what's possible when Wipro's subject matter experts come together across service lines and client projects. To learn more about Wipro's partnership with Microsoft, visit the Microsoft Partner Page.
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Navigate Multi-Cloud Environments with Consistency and Confidence

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/multi-cloud-environment-with-consistency-and-confidence/ ----- Contact Wipro Please fill the required details to access the content Workloads are changing, business models are evolving, and the need to distribute risk and control costs is paramount. The solution is simple: It is to choose a multi-cloud environment that is flexible, meets compliance requirements, and runs services anywhere while allowing businesses to continue leveraging their on-premises investments. How can organizations effectively manage the growing cloud complexity? Wipro FullStride Cloud Service and unified dashboard management with Microsoft Azure Arc can help organizations simplify their multi-cloud deployment. Organizations can then enjoy full control of their resources in Azure and even extend it to other public cloud platforms such as those on-premises, AWS, Google Cloud, and VMware. Download the ebook to learn how your organization can thrive amid multi-cloud complexity. It explains how to: 1. Manage infrastructure across hybrid and multi-cloud environments from a centralized dashboard 2. Choose from a mix of bare metal, Windows and Linux servers 3. Apply universal governance and security policies at scale across all servers 4. Run data services anywhere Download the ebook =====================

Wipro Launches the Azure OSDU PaaS
Competency and Experience Center

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/wipro-launches-the-azure-osdu-paas-competency-and-experience-center/ ----- Contact Wipro Please fill the required details to access the content Wipro Launches the Azure OSDU PaaS Competency and Experience Center Wipro has been an active member of and contributor to the Open Subsurface Data Universe since its inception. The OSDU data platform is transforming energy companies around the world, yet OSDU adoption remains inconsistent across the industry. To accelerate OSDU adoption, Wipro is launching the Azure OSDU PaaS Competency and Experience Center (CEC), which will allow both customers and ISVs to explore and test Microsoft's OSDU Azure native open-source data platform in a Wipro-hosted virtual environment. This new innovation engine is an outgrowth of Wipro's FullStride Cloud Services and its strong partnership with Microsoft as an industry-leading cloud provider. The Center will be a hub for exploration,

allowing companies to explore the potential of OSDU adoption and envision how the OSDU data platform will solve core business challenges, drive upstream digital transformation, release intelligence trapped in legacy systems and data silos, and orchestrate value across operational landscapes. The new Center will allow customers to visualize: Wipro designed and developed the first releases of OSDU on Microsoft Azure and has deployed and implemented OSDU solutions for multiple oil and gas companies globally. This deep expertise, coupled with Wipro's engineering, data management and E&P consultancy capabilities, provides a 360-degree domain-driven service capacity. With the establishment of the Azure OSDU PaaS Competency and Experience Center, Wipro is ideally positioned to be the deployment partner of choice for any OSDU adoption journey. For more information, contact Wipro at info@wipro.com
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Microsoft Dynamics 365

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/microsoft-dynamics-365/ ----- Contact Wipro Please fill the required details to access the content Microsoft Dynamics 365: Building A Foundation for Collaborative Engagement Building a Foundation for Collaborative Engagement Today, a company's technology is key to keeping up with customers and operating efficiently and competitively. But legacy systems can be inflexible, making it difficult to deploy important new capabilities, such as omnichannel e-commerce and customer service, and employee and customer self-service. What's more, those systems are often not connected, making it hard to access the data needed to run the business or understand customers, leading to inefficiency, a lack of agility, and frustrated customers and employees. Wipro helps you tap into the power of Microsoft Dynamics 365 to meet those challenges and create a modern foundation for collaborative engagement. With 900 Dynamics 365 consultants worldwide, we leverage our technology and consulting expertise to deliver solutions that are tailored to your needs and connect your data, processes, and people with intelligent business applications. To help you make the most of the technology, we can assess and redesign your processes, conduct change management programs, and provide ongoing support for your systems. And our suite of Dynamics 365-based solutions cover everything from supply chain management to e-commerce, as well as solutions developed for specific industries such as retail, utilities and healthcare. With Wipro and Microsoft Dynamics 365, you can achieve a range of benefits, including:
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Remove silos. Deliver seamless retail experiences.

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/deliver-seamless-retail-experiences/ ----- Contact Wipro Please fill the required details to access the content Remove silos. Deliver seamless retail

experiences How do you compete in a digital-first world? Navigate the future of retail with Wipro and Microsoft With so many disruptive technologies and the growing number of shopping channels, it's hard to keep pace with customer demands and deliver value to the modern-day buyer—especially when your underlying infrastructure is operating in silos. To help retailers stay competitive and increase margins over time, Wipro takes a strategic approach to future proofing retail operations and elevating buyer experiences. Learn how you can tap into transformative technologies like Microsoft Dynamics 365 and Power Platform to re-architect your entire retail ecosystem. Embrace changes to your business on your terms, consolidating critical commerce data across your existing enterprise systems while exploring the competitive advantages of the Microsoft suite of Business Applications. In this eBook, learn how Wipro and Microsoft can help you: Download the eBook today to learn more.
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Capitalize on the full potential of your customer data.

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/capitalize-on-the-full-potential-of-your-customer-data/ ----- Contact Wipro Please fill the required details to access the content Capitalize on the full potential of your customer data Generate near real-time analytics from operational data. Cultivate superior customer experiences by acting on the right intelligent insights. As companies migrate more applications to the cloud, it becomes challenging to process large quantities of operational data. This makes it difficult to analyze customer touchpoints when data is scattered and locked away in various systems and tools. Wipro has designed a new portfolio of offerings to aid companies in overcoming these data transformation challenges. Organizations can take advantage of new advisory services and solutions based on Azure Synapse Link for Azure Cosmos DB to make more intelligent business decisions with access to real-time customer insights. With this eBook, learn how to make your customer data work harder for you without the need for additional coding or business disruption. Read the eBook =======================

Microsoft Power Platform

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/microsoft-power-platform/ ----- Contact Wipro Please fill the required details to access the content Microsoft Power Platform: Empowering end user innovation—while ensuring rigor and quality Empowering end user innovation—while ensuring rigor and quality Today, easy-to-use, "low code-no code" application development is helping companies empower business users to use their technology to respond quickly to changes and opportunities. Often, however, this means that end-user development is being done without the oversight and control of the IT organization—which could lead to problems with application quality and security. Wipro helps you

take advantage of the Microsoft Power Platform—a leading suite of solutions designed for business-user developers—while balancing end-user empowerment and traditional IT capabilities. To do so, we draw on our deep knowledge and experience with Microsoft's business applications, including Dynamics 365, Microsoft 365, and Azure, to help ensure that your Power Platform applications are integrated and part of your overall, end-to-end solutions. And we offer our Power Platform Centers of Excellence (CoEs) that give you get the best of both worlds; The flexibility and business focus of end-user development and the control and security of IT—which helps ensure that you and your company get the most out of your Power Platform applications. Our Centers of Excellences' key capabilities include:

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Modernize your enterprise security
operations center (SOC)

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/modernize-your-enterprise-security-operations-center/ ----- Contact Wipro Please fill the required details to access the content Modernize your enterprise security operations center (SOC) Traditional SOCs fail to combat today's cyberthreat landscape Implement a stronger threat detection & response with Wipro and Microsoft technology solution Modernizing your SOC is an essential step to staying ahead of the ever-evolving threat landscape. The availability of new technologies combined with the accelerated adoption of remote work has not only opened the door to greater innovation; it has unfortunately also increased attack surface areas. And cybercriminals are quick to take advantage. Wipro offers a unique approach to modernizing traditional security operations that incorporates Microsoft's cloud native SIEM and extended detection and response (XDR) solutions. Learn how your enterprise can harness the combined power of Microsoft threat protection technologies and Wipro's MDR services to: Bridge your security gaps today with the right integrated technologies and managed services. Learn more about Wipro's Modern SOC MDR services powered by Microsoft Sentinel and Defenders (MXDR). Read the eBook

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Understanding the Key Capabilities for Customer-Centricity

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/understanding-the-key-capabilities-for-customer-centricity/ ----- Contact Wipro Please fill the required details to access the content Understanding the Key Capabilities for Customer-Centricity Across industries today,

delivering the right customer experience has become critical to standing out in a crowded and competitive marketplace. And increasingly sophisticated technology—including predictive analytics and artificial intelligence—is taking customer centricity to a new level by enabling companies to know and serve customers with increasing precision. In a new e-book—entitled "Driving Customer Centricity Through Technology: Industry Examples"—Wipro and Microsoft explore three technology-enabled capabilities that are key to shaping and delivering a superior customer experience: This e-book depicts scenarios from a variety of industries that illustrate how these capabilities can help companies improve the customer experience. Helping companies strengthen customer centricity and the customer experience is a key aspect of the Wipro and Microsoft alliance, a relationship that spans more than two decades. Download e-book

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Microsoft Business Applications

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/microsoft-business-applications/ ----- Solutions What We Think Form Title Contact Wipro Please fill the required details to access the content Microsoft Business Applications: Transforming for the Customer Transforming for the Customer Enterprise customers have ever-rising expectations, but many companies struggle to meet those expectations. That's because functions, systems and data are often siloed. Comprehensive data about the business and customers is difficult to pull together. And older technologies are complex and difficult to keep updated. As a result, the company can't work as a coordinated team to deliver the right customer experience. Leveraging Wipro FullStride Cloud Services, Wipro helps companies leverage Microsoft Business Applications – Microsoft Dynamics 365 and Power Platform, to drive customer-centric business transformation. We build on the robust built-in capabilities of these Microsoft technologies to create solutions tailored to your business. And we can assess and redesign processes, manage the change to new technologies and provide support to help you get the most from your solutions. We also build on Microsoft Business Applications to create ready-made solutions that target key industries, such as banking and financial services, retail, manufacturing and healthcare, as well as cross-industry solutions for providing remote service for products, managing employee work shifts, and enabling people to report safety issues via their smartphones—and more. Ultimately, we help you leverage Microsoft Business Applications to: Today, a company's technology is key to keeping up with customers and operating efficiently and competitively. Today, easy-to-use, "low code-no code" application development is helping companies empower business users to use their technology to respond quickly to changes and opportunities. In a new e-book—entitled "Driving Customer Centricity Through Technology: Industry Examples"—Wipro and Microsoft explore three technology-enabled capabilities that are key to shaping and delivering a superior customer experience

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Enabling M&As and Divesture with Microsoft Data Graph Connect for Data Classification

M&A and Divesture with Microsoft Data Graph Connect for Data Classification Wipro leverages Microsoft Data Graph Connect (MGDC) to classify data across Office 365 workloads for effective tenant-to-tenant migrations. Because mergers, acquisitions and divestures have considerable impact on the IT and user workloads of all companies involved, special care should be taken to ensure that disruptions are minimal – that no content is lost, that communications (especially legal, compliance, and auditory) remain open, and that operations keep running. This can be challenging, even when the organizations are migrating within the same platform. As the preferred workplace platform for global corporations, Microsoft Office 365 is integrated with many organizations' on-premise Active Directory or cloud environments. Any activity stemming from a merger or divesture therefore involves multiple teams (infrastructure, security, procurement, management, and compliance/risk) and requires a strategic, data-driven approach to navigate successfully. By combining the rich data of Microsoft Graph with the advanced capabilities of Microsoft Graph Data Connect, businesses can utilize the advanced capabilities within Office 365 like Outlook's intelligent experiences, Azure Cognitive Services language models, and AI-driven features in SharePoint, to chart a more successful course through the M&A process. To see how, consider the following example. Divesture Use Case As part of corporate strategy, a group of business units of Pharmaceutical Company A is spinning off into newly formed Company B, which Company A will later divest in to focus on other high-risk, high-reward ventures in drug development. Certain users from Company A will migrate to Company B in a new Active Directory structure, making Azure Active Directory rationalization a common thread. The Office 365 tenant and users across both companies will still need to be able to collaborate throughout the process and Azure AD will create common access for all users in these M&A scenarios. Company A, the Office 365 tenant, has a huge inventory of SharePoint Online and MS Teams sites, around 140,000, with collaboration portals and unstructured data that has been accumulating for 10-15 years. The data in those 140,000 sites has grown significantly over the last 3-5 years, so the data size is huge – tera bytes. Key Considerations A new tenant must be created for Company B and all user data and other assets must be migrated to that new tenant from Company A. All Office 365 workloads – AAD, SPO, ODB, EXO, Yammer, Teams – must also be migrated to the new tenant while maintaining the data integrity and sanctity in terms of data ownership and permissions. SharePoint Online and MS Teams are shared between Company A and Company B users, so the businesses must be able to identify the assets that belong to Company B and are available for

divestment. This requires some additional considerations for the content shared between the two organizations: Because the data size is so large and spread across the organization, the business must leverage tools, frameworks and automation to improve the productivity and velocity for this migration to classify the data for segregation. Security, in terms of content compliance and regulations, is also critical while doing the content migration. As assets are migrated, teams must be sure to maintain proper authorization rules for who can access what. Solution Framework There are four key phases to consider when outlining a migration approach: discovery and assessment, planning and design, migration and verification, UAT and deployment. Breaking down the various steps in each of these key phases can promote a more comprehensive, seamless migration. 1. Discovery and assessment 2. Planning and design 3. Migration and verification 4. UAT and deployment Conduct all necessary validations, updates, trainings to support a smooth transition: Scoping Framework for Data Classification It's important to define the business rules across Office 365 workloads for scoping the data classification patterns for these scenarios. The diagram below shows the steps in data classification for MS teams and SharePoint Online sites. In the context of M&As and divestment scenarios, it is very important to classify data across the Office 365 workloads to perform the migrations more effectively. Microsoft Graph Data Connect can help in classifying and tagging the right data by formulating and aligning with the customized business rules. Data classification and assignment to stakeholders can be fully automated with auto tagging options, and tightly integrated with third-party or native solutions, reducing manual effort for an easier, more effective data migration strategy for large tenet-to-tenet migrations. Wipro has partnered with Microsoft to define and strategize the Microsoft Graph Data Connect based solutions for more successful M&A's and divestures for data classification scenarios. To learn how, contact the Microsoft Graph Data Connect team or click the link below to schedule a demo. Contact us ======================

Defining the Workplace of the Future

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/microsoft/defining-the-workplace-of-the-future/ ----- Contact Wipro Future of Work Copilot Unified Monitoring and Assessment Wipro Live Workspace Cognitive Automation Workplace Solution for Frontline Manufacturing Employees Leader in Gartner Magic Quadrant for Outsourced Digital Workplace Service Leader in Everest Group's Digital Workplace Services PEAK Matrix Assessment 2023 - Europe Leader in Everest Group's Digital Workplace Services PEAK Matrix Assessment 2023 – North America Please fill the required details to access the content Wipro Live WorkspaceTM and Microsoft empower collaboration, productivity and innovation. The Wipro Live Workspace™ Modern Work Hub, powered by Microsoft, is a digital workplace solution that uses responsible AI to enhance employee productivity, collaboration, and engagement. The platform leverages Microsoft technologies such as Microsoft 365, Teams, and Azure to provide a

seamless digital experience for employees. Advanced AI capabilities and low-code solutions enable features such as intelligent virtual assistants, personalized user experiences, predictive analytics for IT support, and automation of routine tasks. The Wipro Live Workspace™ Modern Work Hub combines the advanced capabilities of Wipro and Microsoft to power the workplace of the future through: Solutions Combine the advanced capabilities of Copilot and Azure Open AI to develop sophisticated AI workplace strategies. Leverage in-depth analysis and focused assessments to mitigate risks faster. Develop low-code AI solutions to key business challenges with enterprise-grade security. Embrace new workplace design and manufacturing paradigms to prepare for the future of work. News, Awards & Accolades Contact Us =====================

Red Hat Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/redhat/ ----- Partnership Overview What We Think Contact Wipro Please fill the required details to access the content Red Hat Alliance Modernize the enterprise core, "the open source way" Wipro's alliance with Red Hat has defined a partnership of agility, scale and innovation since 2007 Wipro is a Premier partner of Red Hat and runs complete infra to apps engagements at scale for our clients on complete Red Hat product stack. With thousands of dedicated Red Hat practitioners, Wipro offers architecture advisory, consulting, implementation and managed services on Red Hat tech stack across IT optimization, hybrid cloud infrastructure, cloud native development, agile integration and automation. Wipro empowers its clients re-imagine their business transformation journey with its bouquet of innovative solutions and assets built leveraging Red Hat products. Wipro is a Premier partner of Red Hat, highest status accorded to any partner. Wipro empowers its clients re-imagine their cloud journey with its bouquet of innovative solutions and assets built on top of Red Hat product stack across application development and infrastructure. Wipro's Cloud Studio helps our clients assess, strategize and accelerate cloud adoption through an industrial approach that include lift and shift, re-platform, re-factor, cloud native services and DevOps with a highly automated as-a-service model. Our clients benefit from 5 times faster migration with 30% lesser costs, 90% automated post migration activities and 30% faster business acceptance. Wipro's state of the art SDX lab adds capabilities in software defined infrastructure management, as the enterprises moves to a "software defined everything" paradigm. Wipro's App Anywhere solution, powered by SDX and built on Red Hat's industry leading PaaS - OpenShift, manages Kubernetes service for hybrid cloud. Wipro's Digital Modernization Platform (DMP) accelerates cloud native app development, and includes Application Migration Toolkit (AMT) for JBoss EAP adoption and Accelerated Development Toolkit (ADT) for microservices development with Istio and Fuse on OpenShift. Wipro's Digital Integration as-a-Service, built on top of OpenShift, provides services to build any-to-any integrations. Our other accelerators include: Wipro's strategic alliance with Red Hat has been acknowledged with several awards including Stronger Together Award for Europe (2017), North America SI Partner of the Year (2016), India SI

Partner of the Year (2011, 2012, 2013, and 2014) and APAC and India Partner of the Year (2010). Migrate from legacy integration technologies to Red Hat Fuse with Wipro's Integration Migration Toolkit Boost release cycles by up to 10x, enterprise wide Jump-start your hybrid-cloud strategy with a pattern-based approach to containerization, cloud enablement, and cost optimization. ======================

DRIVING DIGITAL TRANSFORMATION

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-cisco/ ----- Private 5G Wipro's VirtuaDesk Wipro Enterprise AI-Ready Platform Wipro VisionEDGE powers Bowling Center TV's new digital out-of-home network News, Awards & Recognitions Contact Wipro Converged Network Infrastructure Edge to Cloud Connectivity Full-Stack Observability Security Wipro and Cisco collaborate to deliver SD-WAN transformation services to Olympus WAN Operations Cost brought down by over 30% for a Top Electronics Manufacturer Media group gets future ready with Wipro virtuadesk™ Wipro empowers its mobile workforce with a smart network Minerals company designs a State-of-the-art data center A leading Indian conglomerate deploys scalable network infrastructure to optimize operations and enhance agility How an Energy giant virtually transformed its workplace Maximize the Digital Opportunity of Your Shelf Space Unlock the power of AI with 360° visibility of Business and IT CIO Spotlight: Upgrading to a New Digital Network that Empowers Hybrid and Multi-Cloud Applications Wipro and Cisco: Empowering Digital Transformation with Black Belt Academy What Wipro's Intent Based Networking means for your organization? How Wipro's Intent Based Networking simplifies network administration tasks? Wipro #WANFreedom: Helping enterprises reimagining their Wide-Area Networks Wipro VisionEdge to Power Bowling Center TV's New Digital Out-of-Home Network Wipro and Cisco Launch Managed Private 5G-as-a-Service Solution to Accelerate Enterprise Digital Transformation Wipro and Cisco to deliver Hybrid Cloud-as-a-Service Wipro and Cisco Partner to Drive IT and OT Convergence Wipro expands Sports, Entertainment, Retail and Transport Offerings with Launch of Wipro VisionEDGE Solution Wipro marks 25 Years of Partnership with Cisco; Launches Cisco Business Unit Wipro marks 25 Years of Partnership with Cisco; Launches Cisco Business Unit Please fill the required details to access the content Cisco Wipro's 360-degree Partnership with Cisco For nearly three decades, Wipro and Cisco have cultivated an enduring partnership, dedicated to delivering exceptional customer experiences and drive successful digital transformation journey for our customers. Wipro, a gold certified Cisco partner, is among the top 10 GSI partners of Cisco. Seamlessly integrating Wipro's global System Integration, IT consulting and industry domain expertise with Cisco's industry-leading technology, we have optimized operations, elevated customer engagement, and redefined the digital landscape. Partner Level Differentiator Expertise in large-scale deployment and speed of delivery with global presence in 66 countries Partner Award Cisco Specializations The Wipro Cisco strategic partnership

holds nine renowned Cisco specializations. These certifications showcase our industry leading capabilities, commitment to long-term business investments, and expertise in Cisco technologies. As a trusted partner, we deliver tailored solutions that drive innovation and deliver business value to our customers.   Services Simplify and accelerate deployment while reducing risk with unified solutions, combining computing, networking, storage, management & automation capabilities. Brings together the edge, private, and public clouds to create an agile, programmable, and adaptable hybrid cloud solution. Deliver compelling application experiences on cloud and on-prem backed by Cisco AppDynamics, ThousandEyes, Splunk & Cisco Intersight. Thrive in the uncertainty with a portfolio of Wipro and Cisco's proven IT and OT security solutions. Private 5G-as-a-Service solution, seamlessly integrate private 5G with existing infrastructure. Rebooting business into new ways of working. Wipro Enterprise AI-Ready Platform Offers integration and connection of diverse data sources and systems within an organization. Wipro VisionEDGE combines the simple, flexible, and secure network products of Cisco with the innovation-led strategy, technology, and business services of Wipro. Success Stories The cloud-based digital signage solution Wipro VisionEDGE will power Bowling Center TV (BCTV), a new digital out-of-home television network distributed across bowling centers in the United States. The new network infrastructure drastically improves Olympus's application performance to deliver superior end user experience, resulting in increased business productivity, agility and reduced costs for IT. Wipro enables the electronics manufacturing company take control of its complex legacy network by consolidating more than 100 service providers to three and implementing SD-WAN. A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation. In partnership with Cisco, Wipro creates a cloud-driven, data-optimized, highly secure networking environment, leading to superior user experience. The client had a disparate setup, which included multiple technologies, processes, and vendors across geographies. Wipro implements centralized management using Cisco IWAN solution and APIC-EM - a network automation tool. A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops. Featured Resources Wipro's FullStride Cloud Services brings together the full portfolio of Wipro's industry-leading, cloud-related capabilities and experience to help clients achieve more than they thought possible with cloud.   Contact Us
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Is There a Better Way to Upgrade SD-WAN?

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-cisco/is-there-a-better-way-to-upgrade-sd-wan/ ----- Contact Wipro Please fill the required details to access the content Is There a Better Way to Upgrade SD-WAN? A legacy SD-WAN may be holding your business back. But

successful modernization requires updating more than your network Ongoing advancements in cloud, AI and other technologies are presenting a wealth of opportunities for businesses. But to make the most of this progress, they first need to upgrade their digital networks. Legacy SD-WAN networks just aren't flexible enough to keep pace with rapid technology advancements, sudden changes in bandwidth or the demands of today's hybrid work environments. At the same time, one-off upgrades risk making the already complex task of network modernization even more complicated, diluting returns on investment. As enterprises look to upgrade their digital networks, can they also streamline those networks? Is it possible to build an SD-WAN solution that is both more capable and easier to use? With a focus on orchestration, absolutely. Orchestration is one of the most important elements of an advanced SD-WAN, enabling teams to deploy, manage and reposition network resources in real time. Centralizing management of all aspects of an SD-WAN amplifies the benefits of a modern digital network. Greater connectivity supports the flexibility and dynamism of multi-cloud environments and hybrid work models. It also increases transparency, paving the way for greater control over operations, improved efficiency, lower costs. This CIO publication, in collaboration with Cisco and Wipro, dive into the many benefits of orchestration in a modern SD-WAN network and spotlight a powerful next-gen solution in orchestrated SD-WAN-as-a-Service . Read the full piece to learn more, including how to upgrade to a new digital network that empowers hybrid and multi-cloud applications. Download Report ======================

Driving Business Value with Multi-Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/strategic-cisco/driving-business-value-with-multi-cloud/ ----- Contact Wipro Please fill the required details to access the content Driving Business Value with Multi-Cloud Orchestrating cloud capabilities across hybrid cloud environments is the key to cloud success. After years of looking to cloud mainly as a way to boost efficiency and cut costs, enterprises are finally realizing that cloud can address more business-focused challenges such as scalability, data management, new ways of working and the adoption of new technologies. This shift in focus has opened new doors for businesses. It has also paved the way for new challenges. Hybrid- and multi-cloud environments are enabling enterprises to customize cloud environments to meet their unique business needs, but these complex environments can be difficult to manage, preventing many enterprises from making the most of their cloud investments. Before enterprises can make the most of hybrid-cloud environments, they need to learn how to streamline services and manage them effectively. "Driving Business Results with Cloud Transformation" shows how technology partners are empowering enterprises to navigate these transformations, transforming their cloud and underlying network capabilities for greater control over their hybrid-cloud environments. The report focuses on as-a-service solutions from Wipro and Cisco that enable enterprise clients to "create customized cloud journeys based upon

individual business needs and goals," giving them "a cloud-like experience from a costing perspective for their entire IT infrastructure." "Global business leaders," the report states, "outperform competitors with prudent yet bold initiatives." Read the full report to learn how cloud leaders are tapping technology partners to support such bold moves, enabling them to reduce operating costs, boost planning and decision-making, and improve risk management and compliance efforts . Download Report ======================

Pega Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega-alliance/ ----- Our Expertise Contact Wipro Please fill the required details to access the content Pega Alliance Elevate Your Business Processes to the Next Level Secure operational responsiveness with simplified, intuitive, and intelligent processes Wrap Pega's expertise in BPM and iBPM with automation and customization using Wipro's domain expertise. Our personalized solutions address growing data consumption, social, mobile and analytics in real time environments so that employees can accomplish their goals consistently. ======================

Empowering Digital Evolution

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/ ----- Wipro FullStride BoundaryLess Universal EdgePowered by VMware Telco Cloud Ignite Innovation in Partnership Contact Wipro Wipro FullStride BoundaryLess Enterprise (BLE)Powered by VMware Cross-Cloud Portfolio Wipro FullStride BoundaryLess Container PlatformPowered by Tanzu Product Portfolio Live Workspace Powered by VMware Workspace ONE VirtuaDesk Powered by Horizon View WAN FreedomPowered by VeloCloud Multi-Cloud Adoption Program VMware Workload Migration & Modernization with IBM Cloud VMC on GCVE Accelerating Digital Transformation with Tanzu Unlock the Power of AI with Wipro and VMware Wipro's Vision for the Future of GenAI Empowering Tomorrow Wipro's Spotlight on Leading-edge Technologies Digital Transformation Partnership Cloud Transformation Expertise Please fill the required details to access the content VMware Wipro and VMware - Your catalyst for Cloud Excellence and Transformation Wipro and VMware alliance delivers advanced enterprise solutions that span across all facets of Cloud, Data center and Edge. The joint solutions address applications, infrastructure, and end users to enhance Business Agility, Improve Customer Experience, Boost productivity, while Strengthening enterprise security. This strategic alliance supercharges enterprise capabilities with scalable hybrid IT and Increased Mobility, thus accelerating our clients' digital transformation journey. Together Wipro and VMWare offer various services across Cloud Infrastructure, Management, Apps, and Security to help customers to move more workloads to the Cloud. Partner Level Principal VMware partner for +25-years Partner Status Master Services Competency [MSC] Partner and is a design partner for Tanzu portfolio. Recognition The only partner for Tanzu

recognized globally for end-to-end Application modernization Wipro VMware Partnership Specialization Specialized competencies Services Multi-cloud self-service designed to deliver any application on any device. A full-stack app modernization service. Cloud smart vendor-neutral telco network orchestration to enable time-to-market for innovative services at the edge. An intelligent, collaborative workspace that provides access to apps and data anywhere, anytime, on any device. App and desktop delivery to empower the workforce with outstanding user experience. WAN Virtualization at a reduced cost to pave the way for digital innovation. The service that helps large businesses achieve their goals using multiple cloud platforms. The FullStride Cloud Studio is a part of this program that guides and speeds up the process of multi-cloud adoption. Case Studies Transforming legacy infrastructure for a global enterprise, achieving scalability, security, and cost-efficiency through Wipro-VMware-AWS partnership. VMWare clients can more effectively manage technology investments while increasing security and flexibility with IBM Cloud for VMware powered by Wipro FullStride Cloud. Migrating thousands of VMs seamlessly to Google Cloud with Wipro's FullStride Cloud Services platform. Discover how Wipro's Tanzu-powered solutions have transformed businesses, delivering Realizing efficiency, Agility, and Improved Customer Experience. Featured Resources Explore Wipro and VMware's collaborative journey through a curated collection of resources that spotlight cutting-edge technologies and transformative success stories. Dive into insightful interviews, breakout sessions, and in-depth Case studies that showcase how this dynamic partnership is shaping the future of Digital Evolution. A Strategic Partnership A Maker-Checker Model for Enterprise AI Wipro's Gen AI Unleashes Innovation Across Layers Wipro stood out by actively engaging in discussions on leading-edge technologies, particularly Generative AI for enterprises. Live interviews with SiliconANGLE's theCUBE showcased Wipro's expertise, and breakout sessions, including the introduction of Wipro ai 360, captured the audience's enthusiasm. Wipro and VMware's collaboration offers a comprehensive range of digital transformation services, leveraging VMware Cross-Cloud services globally. The emphasis is on accelerating app modernization, simplifying multi-cloud complexity, and ensuring secure access to business applications and data. Addressing the challenges of businesses in cloud transformation, Wipro and VMware provide expertise in modernizing apps, managing multi-cloud environments, and ensuring data and user security. CIO Anup Purohit's insights underscored leveraging the cloud as a catalyst for growth while managing costs and contracts. Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/unlock-the-power-of-ai-with-wipro-and-vmware-a-strategic-partnership/ ----- Unlock the Power of AI with Wipro and VMware: A Strategic Partnership Contact Wipro Please fill the required details to access the content Unlock the Power of AI with Wipro and VMware: A Strategic Partnership Dive into the transformative collaboration between Wipro and VMware led by Mahesh Chandra, SVP, and Head of FullStride Cloud, and Ramu Padmanabhan, VP, FullStride Cloud Solutions. Discover the groundbreaking initiatives shaping the future of technology. Key Insights on from the video: Watch Now to Transform Your Business with Wipro and VMware! ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/wipro-vision-for-the-

future-of-genai-a-maker-checker-model-for-enterprise-ai/ ----- Enterprise AI Solutions: Wipro's Vision for GenAI's Future Contact Wipro Please fill the required details to access the content Wipro's Vision for the Future of GenAI: A Maker-Checker Model for Enterprise AI Uncover the future of GenAI with Wipro's VP of Cloud Applications, Ramu Padmanabhan. In this exclusive interview, explore the breakthroughs of 2023, focusing on Chapt GPT's impact and the collaboration between NVIDIA and VMware in AI subsets. Key Insights from the video: The Next 2-5 Years: Gain insights into the inflection point where AI apps will collaborate with existing vendors in a Maker-Checker model, ensuring quality and accuracy. Don't miss this exclusive interview shaping the future of AI. Watch now! ====================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/empowering-tomorrow-wipro-gen-ai-unleashes-innovation-across-layers/ ----- Wipro Gen AI: Unleashing Innovation with VMware for Business Transformation Contact Wipro Please fill the required details to access the content Empowering Tomorrow: Wipro's Gen AI Unleashes Innovation Across Layers Dive deep into the dynamics of Gen AI's success through the unique four-layer stack and discover why Wipro holds a distinctive position in this transformative journey. Explore the key aspects that set us apart. Impact on Your Business : Don't miss the chance to explore how this video's content is reshaping the landscape of business, creating inquisitiveness, and driving businesses to the next level of innovation. Join us to unlock the full potential of Gen AI! ======================

VMware Expansion: Empowering Enterprises to Maximize VCF Adoption

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/empowering-enterprises-to-maximize-vcf-adoption/ ----- Contact Wipro VMware Cloud Foundation (VCF) AI-Powered Cloud Studio 2.0 Modernize and Optimize with GCVE Best of Both Worlds VMware-as-a-service on IBM Cloud Zero Refactoring VCF Capabilities Delivered as an Azure Service Existing Skills VCF on AWS: Jointly Engineered Cloud Service Lower TCO Please fill the required details to access the content VMware Expansion: Empowering Enterprises to Maximize VCF Adoption Unlocking Hybrid Cloud Capabilities In the ever-evolving digital transformation landscape, the alliance between Wipro and VMware exemplifies innovation and efficiency. Whether you maintain your VMware environment or transition to VMware on a hyperscaler, Wipro offers unmatched expertise, cost-effectiveness, and seamless transitions to ensure your business excels in the cloud era. Integrating AI for Enhanced Cloud Capabilities Wipro leverages advanced AI technologies to drive efficiencies and innovation across your cloud environment. Our AI solutions enhance predictive analytics, enabling smarter decision-making and optimizing resource utilization. AI-driven automation tools streamline processes, reduce manual intervention, and improve operational efficiency. By embedding AI into our

multi-cloud solutions, we help businesses stay competitive and agile in the fast-paced digital landscape. The AI-Powered Wipro's Cloud Studio 2.0 integrates Application Modernization in its framework to keep your software up-to-date and Legacy Transformation to enhance agility. Our focus on Security and Compliance ensures robust protection and adherence to regulatory standards. Cloud Studio 2.0 Framework is designed to meet your business needs. Cloud Migration Services Ensure a smooth transition, disruption free cloud transition. We prioritize and business continuity. Cloud Management and Optimization Services provide complete visibility and cost efficiency, helping you maximize your IT investments. Wipro's Accelerators: Driving Changes and Exploring Options Wipro's portfolio includes a wide range of cloud services delivered through Fig : Comprehensive Cloud Solutions VMware Cloud Foundation (VCF) for Hybrid Cloud Adopting VMware Cloud Foundation (VCF) as your hybrid cloud platform provides a unified foundation that works on any hardware. This ensures compatibility and seamless operation across all environments. VCF's unified stack, validated through VMware Validated Designs (VVD), offers reliability and ease of management with consistent tools and interfaces across different environments. Fig : VMware Cloud Foundation (VCF) for Hybrid Cloud Offerings Cloud Studio Model for VCF Adoption, unified foundation that works on any hardware. VMware's enterprise Software combined with the flexibility and speed of cloud. 57% lower cost to migrate and 46% faster to migrate. 44% lower three - year cost of opertaions and 48% more efficient IT infrastructure teams 53% average reduction in infrastructure and operations costs vs traditional on-premises environments. Wipro's Expertise in Cloud Journeys Wipro's Cloud Studio Marketplace drives an accelerated journey to a hybrid cloud environment. Our Consulting & Strategy services align your business goals with comprehensive transformation strategies. We ensure smooth Modernization & Migrations, leveraging our expertise in applications, data, and infrastructure modernization. Our Cloud Native Transformation services, through Wipro's Full Stride Cloud Studio, facilitate cutting-edge cloud-native development. Our Managed Services include IaaS, PaaS, and cloud operations, ensuring optimal performance and reliability. Unique Value Proposition from Wipro Wipro's deep expertise and dedicated VMware practice ensure you access the latest technologies and best practices. We offer Comprehensive Training through the VMware Academy, continuous education, and skill development. Our advanced certifications and proven track record across 100+ global accounts highlight our commitment to excellence in VMware Cloud services. The Path Forward Wipro's step-by-step approach ensures a seamless cloud transformation journey. We assess your current IT landscape, develop a vision and roadmap, deploy guiding principles, execute a business readiness plan, and monitor sustainability. Whether you choose to stay on VMware or transition to VMware on a hyperscaler, Wipro is your trusted partner in the cloud journey. Embrace the Power of Wipro-VMware Partnership Wipro's commitment to excellence, cost-effectiveness, and strategic guidance ensures that your business remains agile, secure, and competitive in the digital age. Embrace the power of the Wipro-VMware partnership and unlock the full potential of the cloud for your organization. Contact Us
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Unlock the Power of VMware Cloud Foundation with Wipro

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/empowering-enterprises-to-maximize-vcf-adoption/unlock-the-power-of-vmware-cloud-foundation-with-wipro/ ----- Contact Wipro Please fill the required details to access the content Unlock the Power of VMware Cloud Foundation with Wipro Why Choose VMware Cloud Foundation? Adopting VMware Cloud Foundation (VCF) as your hybrid cloud platform provides a unified foundation that works on any hardware. This ensures compatibility and seamless operation across all environments. VCF's unified stack, validated through VMware Validated Designs (VVD), offers reliability and ease of management with consistent tools and interfaces across different environments. Broadcom's Strategic Approach Broadcom's approach ensures clients leverage the full software-defined capabilities that VCF brings, including Aria. The pricing for VCF has been made extremely attractive to encourage adoption. This policy emphasizes the strategic importance of moving to VCF. Fig: VMware Cloud Foundation How Wipro Can Help Wipro, as a trusted partner, can help you navigate the transition to VMware Cloud Foundation with ease. Our expertise ensures that you maximize the value of VCF through: Fig: VMware Cloud Foundation of Modernize, Optimize, Protect Embrace the future of hybrid cloud with VMware Cloud Foundation and Wipro. Together, we can unlock new levels of efficiency, reliability, and innovation for your business. Unique Value Proposition – Unlock the Power of AI Wipro FullStride Cloud Studio is an innovation lab, idea incubator, creative workshop, and client engagement hub, designed to accelerate business transformation to the cloud and beyond. Contact Us =====================

Empower Your Business with Hybrid Multi-Cloud Solutions

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/empowering-enterprises-to-maximize-vcf-adoption/empower-your-business-with-hybrid-multi-cloud-solutions/ ----- Contact Wipro Please fill the required details to access the content Empower Your Business with Hybrid Multi-Cloud Solutions Discover the Benefits of GCVE Leverage the power of Google Cloud VMware Engine to transform your business operations. Whether it's Virtual Desktop, Disaster Recovery, Application Modernization, Data Center Extension, or Cloud Migration, GCVE offer unparalleled flexibility and scalability. End-to-End Hybrid Cloud Lifecycle Wipro supports your hybrid cloud journey through every stage: Modernize and Optimize with GCVE VMware SDDC running on Google Cloud Platform bare metal offers a robust solution for modernizing and optimizing your IT infrastructure: Accelerate transformation on GCVE by harnessing the power of Wipro Cloud Studio Fig: Accelerate transformation on GCVE by harnessing the power of Wipro Cloud Studio How Wipro Can Help Wipro, as

a trusted partner, can help you harness the full potential of VMware Cloud Foundation on GCVE: Conclusion Unlock new levels of efficiency, reliability, and innovation with VMware Cloud Foundation on Google Cloud VMware Engine, supported by Wipro. Together, we can drive your business forward in the hybrid multi-cloud era. Contact Us =====================

Transform Your Business with Hybrid Multi-Cloud Solutions

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/empowering-enterprises-to-maximize-vcf-adoption/transform-your-business-with-hybrid-multi-cloud-solutions/ ----- Contact Wipro Please fill the required details to access the content Transform Your Business with Hybrid Multi-Cloud Solutions IBM Cloud for VMware Experience the benefits of IBM Cloud on VMware, designed to provide high availability, lower TCO, and faster time-to-value for your business. Key Benefits Accelerate transformation on IBM Cloud on VMware by harnessing the power of Wipro Cloud Studio Fig: IBM Cloud on VMware by harnessing the power of Wipro Cloud Studio How Wipro Can Help Wipro, as a trusted partner, can help you leverage the full potential of VMware Cloud Foundation on IBM Cloud: Conclusion Unlock new levels of efficiency, reliability, and innovation with VMware Cloud Foundation on IBM Cloud, supported by Wipro. Together, we can drive your business forward in the hybrid multi-cloud era. Contact Us =====================

Elevate Your Cloud Strategy with VCF on Azure [AVS]

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vmware-alliance/empowering-enterprises-to-maximize-vcf-adoption/elevate-your-cloud-strategy-with-vcf-on-azure/ ----- Contact Wipro Please fill the required details to access the content Elevate Your Cloud Strategy with VCF on Azure VCF Capabilities Delivered as an Azure Service Experience the power of VMware Cloud Foundation (VCF) capabilities delivered as an Azure service, providing flexibility, scalability, and seamless integration with your existing infrastructure. Key Benefits Accelerate transformation on AVS by harnessing the power of Wipro Cloud Studio Fig: AVS by harnessing the power of Wipro Cloud Studio How Wipro Can Help Wipro, as a trusted partner, can help you harness the full potential of VMware Cloud Foundation on Azure: Conclusion Unlock new levels of efficiency, reliability, and innovation with VMware Cloud Foundation on Azure, supported by Wipro. Together, we can drive your business forward in the hybrid multi-cloud era. Contact Us =====================

Ensono Alliance

Our Expertise What We Think What We Think Contact Wipro Please fill the required details to access the content Ensono Alliance Partnership to deliver next gen data center services A partnership uniquely equipped to address the hybrid IT needs of clients through a global footprint of 16 data centers and comprehensive infrastructure services. Wipro and Ensono have forged a robust, long-term partnership to jointly address the hybrid IT requirements of enterprise clients. Recently, Wipro divested its hosted data center services business to Ensono, in order to focus on its strategy of accelerating investments in the digital space. Ensono is a leading hybrid IT services provider that helps clients manage complex IT requirements globally and across industries. Wipro remains committed to the data center market, serving its hosted data center customers through its relationship with Ensono, which includes a strategic investment in Ensono and seat on its board of directors. Together, this partnership provides end-to-end data center services to the market including Hybrid IT Services, Consolidation and Cost Optimization, IT Governance Services, Managed Services, Transformation Services, and Infrastructure as a Service. Recent estimates point to up to 80,000 new mainframe positions expected to open by 2020. Attracting the... In this latest research commissioned by Ensono, in partnership with Cloud Industry Forum, we look at how the CIO... IT leaders often struggle to modernize their IBM i applications and databases. They mistakenly view IBM i as... Consumers today encounter digital touchpoints in virtually every area of their lives. As they become more digitally... For many organizations, migrating data and apps to the cloud is necessary to meet customer demand, keep up with the... In my previous blog post, I introduced the recent research undertaken by Ensono in conjunction with the... CIOs and CTOs are faced with myriad options to support a drive to digitally transform their business whilst... =====================

Nutanix Partnership

From Edge-to-Core to Hybrid-Multicloud with Wipro FullStride powered by Nutanix News, Awards & Recognitions Contact Wipro BoundaryLess Universal Edge (nBLUE) Hybrid Multi Cloud Wipro Virtuadesk Services (VDI as a Service) Wipro's Digital Database Platform Services 2.0 Application Anywhere Simplify Database Delivery and Enable DBaaS with Wipro Digital Database Services Powered by Nutanix Unleashing Innovation at the Edge with Wipro's BoundaryLess Universal Edge (nBLUE) Powered by Nutanix Wipro Expands Partnership with Nutanix to Launch a New Nutanix Business Unit Wipro Wins Nutanix Global System Integrator of the Year, 2022 Wipro Wins Nutanix Global Systems Integrator of the Year, 2020 Wipro Wins Nutanix Outstanding Innovation Partner Award, 2018 Please fill the required details to access the content Nutanix Alliance Wipro and Nutanix are enabling the next generation of enterprise computing, elevating IT and

cloud services to support more powerful business applications. The partnership combines the extensive cloud capabilities and services of Wipro FullStride and Nutanix to address the complex challenges of cloud transformations and maximize the business value of cloud investments. Nutanix is a pioneer in the hyperconverged infrastructure (HCI) space with software-defined virtualized environments that can be quickly deployed, scaled and upgraded. Wipro's cloud experts are skilled in managing and modernizing large enterprise environments with in-depth knowledge of Nutanix solutions. Wipro Centers of Excellence for Nutanix technologies are committed to building new capabilities and cloud offerings in areas such as hybrid cloud, software-defined everything (SDx) and virtual desktop infrastructure. Partner Level Premium Partner Differentiator One platform to run your apps and data anywhere Partner Award Global System Integrator of the Year 2022 List of Specialization/Competencies Wipro and Nutanix run a dedicated competency transformation program called ADROIT, designed to train Nutanix champions across Wipro FullStride Cloud. So far, this program has trained more than 650 Nutanix subject matter experts, each with specializations in the Nutanix Cloud Platform. Services Power innovation at the edge with a modern enterprise edge solution. Build robust hybrid cloud environments with Wipro BoundaryLess Enterprise powered by Nutanix. Leverage cloud-based VDI for fast, secure, intelligent remote work experiences. Drive productivity and infrastructure modernization with enhanced database lifecycle management. Platform modernization triangulated with Red Hat Open Shift. Featured Resources Hyperconverged infrastructure (HCI) has become the de facto platform on which to build hybrid/multi-cloud solutions. Wipro FullStride Cloud services, powered by Nutanix, helps enterprises scale operations and management across the edge, core, and hybrid/multi-cloud while hosting both traditional and cloud-native applications. Contact Us =====================

Powerful innovation at the Edge with Wipro's nBLUE

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/nutanix/powering-innovation-at-the-edge-with-nblue/ ----- Contact Wipro Please fill the required details to access the content A fully managed Edge as a Service, with architectural framework built on Nutanix Cloud Infrastructure, Cloud Manager and Wipro's ServiceTheater. Wipro and Nutanix bring together their combined deep industry experience and infrastructure and application expertise to offer customers futuristic edge solutions. Wipro's BoundaryLess Universal Edge Powered by Nutanix (nBLUE) offers seamless and granular orchestration among business, process, people, and technology that can be composed and consumed through Global Edge IT and business marketplace. Built on Nutanix hyperconverged infrastructure and integrated with Wipro's ServiceTheater, the solution delivers autonomous capability and life cycle management to eliminate manual intervention and enable faster rollouts. nBLUE combines Nutanix enterprise cloud platform with Wipro's next-gen edge managed services, enabling customers to build a unified platform capable of delivering traditional and modern application

needs through IaaS, CaaS, DBaaS, and PaaS at the edge. The scalable pay-as-you-go model helps customers control their financial risk and TCO. Get speedy and efficient data processing capabilities at the Edge with nBLUE. Leverage the power of Wipro and Nutanix to gain superior efficiency and optimized costs. =====================

Unleash innovation at the Edge with Wipro's BoundaryLess Universal Edge Powered by Nutanix (nBLUE)

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/nutanix/unleash-innovation-at-the-edge-with-wipros-boundary-less-universal-edge-powered-by-nutanix-nblue/ ----- Contact Wipro Please fill the required details to access the content Unleash innovation at the Edge with Wipro's BoundaryLess Universal Edge Powered by Nutanix (nBLUE) Wipro's nBLUE, powered by Nutanix, helps enterprises address growing challenges around the proliferation of remote and edge computing needs. nBLUE is a fully managed Edge as a Service architectural framework built on Nutanix Cloud Infrastructure, Cloud Manager, and EdgeSecOps; integrated and engineered with Wipro's ServiceTheatre to deliver modernized edge computing needs. This solution brings cloud like experience at the edge allowing granular orchestration among business, process, people, and technology that can be composed and consumed through global Edge IT and business marketplace supported by autonomous capability, centralized Edge life cycle management, intelligent Edge Ops, zero touch deployments, self-service, security, and cost governance. nBLUE delivers robust next-gen edge solution and services to support variety of workloads and applications to deliver with agility, simplified management, and autonomous capability to ramp up or ramp down edge sites as per the business and market demands with a faster time to rollout. Key business benefits of the solution include: Download the solution brochure to know more about the solution and its framework. =====================

Hybrid Multi Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/nutanix/hybrid-multi-cloud/ ----- Contact Wipro Please fill the required details to access the content Hybrid Multi Cloud Wipro FullStride Cloud Services' Boundaryless Enterprise powered by Nutanix Cloudification is the predominant transformational platform of leading enterprises across the most demanding industries. Businesses strategies are becoming synonymous with cloud-first strategy to ensure these enterprises remain competitive in the digital era. Integration of a multi-hybrid cloud ecosystem into a digital ecosystem is one of the most compelling reasons for cloudification. Wipro FullStride Cloud Services' Boundaryless Enterprise suite (BLE) and Nutanix

solution stack deliver edge to core to multicloud delivering IaaS, PaaS, CaaS, SaaS, and cloud native services via BLDC (BoundaryLess Data Center), BLCP (BoundaryLess Container Platform), and BoundaryLess Universal Edge (BLUE). Wipro contributes its proven expertise with its accelerators that include reference architecture and reusable components and frameworks such as BLE Suite, ServiceTheater and others, while Nutanix brings its product portfolio for cloud-based solutions. This robust offering from Wipro FullStride Cloud Services and Nutanix provide a fully hybrid multicloud environment, in the form of products, services, accelerators, and frameworks. The wide range of customer benefits comprise enhanced user experience, agility, freedom of choice, unified cross-cloud Infrastructure management, cost optimization, cost governance, and security and compliance. Continue to read more about the solution, click the download button. =====================

BoundaryLess Universal Edge Powered by Nutanix

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/nutanix/boundaryless-universal-edge-powered-by-nutanix/ ----- What We Do Contact Wipro Please fill the required details to access the content BoundaryLess Universal Edge Powered by Nutanix Power innovation at the edge with nBLUE, a modern enterprise edge solution Leverage a scalable, pay-as-you-go model to reduce dependency on legacy infrastructure and improve control over data and costs With the rising adoption of 5G, edge applications are fast becoming pivotal in delivering superior insights that increase predictability and productivity and are an important aspect of IT infrastructure today. Edge computing enables efficient and speedy data processing, helping implement low-latency edge applications with minimal dependence on network connectivity and are necessary to improve control over data and costs, accelerate insights and actions and enable continuous operations. Wipro has partnered with Nutanix to combine deep industry experience, infrastructure, and application expertise and offer clients nBLUE, a futuristic edge solution. nBLUE is a fully managed Edge-as-a-Service with an architectural framework built on Wipro BoundaryLess Universal Edge. The framework is tightly integrated with Wipro ServiceTheatre and Nutanix Enterprise Cloud Infrastructure. The resulting platform serves to deliver traditional and modern applications through IaaS, CaaS, DBaaS, and PaaS at the edge. nBLUE provides: With nBLUE, clients can centrally manage fragmented edge locations across the globe along with built-in capabilities for self-service provisioning, edge marketplace, intelligent ops, advanced visualization, FinOps, observability, automation, continuous optimization, file analytics, edge ransomware protection, and remediation. nBLUE is available in a scalable pay-as-you-go model that is ideal for clients who want simplified management, control over their financial risk and TCO, and a reduction in their dependence on legacy infrastructure for workloads and applications. Wipro's nBLUE, powered by Nutanix, helps enterprises address growing challenges around the proliferation of remote and edge computing needs. nBLUE is a fully

managed Edge as a Service architectural framework built on Nutanix Cloud Infrastructure, Cloud Manager, and EdgeSecOps; integrated and engineered with Wipro's ServiceTheatre to deliver modernized edge computing needs. A fully managed Edge as a Service, with architectural framework built on Nutanix Cloud Infrastructure, Cloud Manager and Wipro's ServiceTheater.
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Evolven Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/evolven-alliance/ ----- Contact Wipro Please fill the required details to access the content Evolven Alliance Strong global partnership to analyze changes impacting business availability and agility A solution that helps you to improve business availability and agility by improving the opportunity for permanent root cause fixes, reducing the impact from unauthorized changes, controlling the cost impact from configuration drifts and improving the compliance management and optimizing operation Wipro and Evolven have come together in a strategic partnership to analyze changes impacting businesses - prioritizing them on the basis of effect and enabling faster decision making. We firmly believe in the consistency of change and that's where we jointly focus at the micro level infrastructure and offer a robust and dependable solution that is agile and flexible. Wipro collaborates with Evolven to reduce incidents, respond faster and boost IT performance with change analytics. Using Evolven, Wipro's team of experts helps global businesses drive agile, efficient and cost effective IT operations, ensuring customer delight. As a leading managed service provider, Wipro leverages Evolven to help organizations seamlessly transition from a reactive mode of operation to a preventive mode, enabling IT teams to focus on more strategic aspects of their IT projects. In addition, leveraging Evolven during the release and deployment processes can help drastically improve the quality and scale of releases while reducing go-to market time.
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Moogsoft Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/moogsoft-alliance/ ----- Our Solutions Contact Wipro Please fill the required details to access the content Moogsoft Alliance Joining hands to accelerate agile transformation for customers A partnership that utilizes AIOps to enable agility and service quality, while reducing operations and support workload Wipro has collaborated with Moogsoft to utilize and embrace the NextGen AIOps solution. The NextGen AIOPs solution enables customers to accelerate their agile transformation, increase developer productivity by reducing incidents and improve time to detect and resolve incidents, thereby enhancing end-user experience. Wipro utilizes Moogsoft to seamlessly integrate systems across the IT tool chain to gather events from monitoring tools (across Cloud and on-premise) and integrates with service management toolsets for smarter, more efficient operations. The end result is a faster, smarter and dynamic IT team. This solution enables Wipro to help

their clients in the digital transformation and make them successful, where AI and ML play a pivotal role in optimizing and enhancing efficiencies. Enhancing operations during COVID-19 =======================

UNLEASH YOUR POTENTIAL FOR IMPACT—ON YOUR BUSINESS, AND THE WORLD

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/servicenow-alliance/ ----- News, Awards & Recognitions Contact Wipro Intelligent Operations ManagementReimagine Global Business Services CyberTransformA modern approach to risk and security Enterprise TransformationTech landscape consolidation, Business Model Evolution and Generational Technology Shift BoundaryLess Enterprise on NOWCloud Provisioning & Governance Mobile & Contingent Workforce OptimizationHire to Day 1 Productivity ESG & SustainabilityTurning intent into Impact FieldXField Service Management ERP Modernization The journey to a Clean Core Global Continuity Management for Supply Chain Customer ExperienceCreate Customer Success Stories, one customer at a time. Technology ExcellenceAccelerate your organization-wide digital transformation journey. Work Re-ImaginedEmployee Experience starts with ServiceNow. Finance & AccountingRe-inventing the Back-Office with ServiceNow.   Procurement & Supply ChainIntelligent automation across all aspects of Procurement and Supply Chain. Security, Risk & ResiliencyProactively confront risk with confidence and full visibility. Petrobras Accelerates Business Value with Wipro and ServiceNow Wipro and ServiceNow Join Forces for a 5-Year Global Partnership: Elevating Digital Excellence Across Key Industries. Wipro Boosts Resilience and the employee experience Wipro Celebrates Big Wins in HR Service and ServiceNow Domains, Introducing Cutting-Edge Augmented Reality Solutions Please fill the required details to access the content ServiceNow Leaders are investing in technology platforms at an unprecedented rate to power their transformation journey and looking to place Generative AI to work in the enterprise.   They're counting on their technology strategy to help them create resiliency against the major forces disrupting business today, including adapting to the new world of remote and hybrid work, delivering against dynamic standards for customer experiences, and managing governance, risk, and compliance in a changing threat climate. However, technology alone is not enough. Wipro and ServiceNow help you define who you are and where you want to go; utilizing our Global Delivery system and guiding you along the path with your employees and stakeholders while leading you through the next evolution of your business. Meaningful innovation Focus on intentional innovations and investments that matter—solving real problems and producing tangible results. Global Standard of Excellence Wipro and ServiceNow – Together we aspire to be the trusted choice for our clients. Building a Bold Tomorrow Leverage our long-term experience in sustainability to help clients define their Environmental, Social and Governance purpose and mission. Partner Level

Wipro is Elite Global Partner for ServiceNow. Approach Digital Transformation powered by ServiceNow & Generative AI. Analyst Recognition ISG ranked Wipro as a leader in the US for the 1st time ever for implementation and integration services. Wipro's ServiceNow Certifications and Specializations The Wipro ServiceNow Partnership holds Certifications and Specializations across the entire ServiceNow platform. These certifications showcase our industry leading capabilities, commitment to long-term business investments, and expertise in ServiceNow capabilities. As a trusted partner, we deliver tailored solutions that drive innovation and deliver business value to our customers. Offerings Accelerate Time to Value with complete visibility across Finance & Accounting, Procurement, Supply Chain and People Operations. An automated Risk & Security program leveraging cybersecurity, ESG, and risk management to create a competitive advantage. Combining with AI & the ServiceNow platform, the IT strategy is the business strategy. A cloud framework providing a single interface to access cloud resources, publish cloud offerings to a catalog, and manage the usage of those resources. Streamlines and automates all your processes – from candidate management to scheduling and omni channel worker engagement. Transforming transparency, reporting and management while proactively integrating ESG issues into a management console. Boost productivity and improve the quality of your field service operations. With FieldX, work smarter, more efficiently, and proactively detect customer issues in their first occurrence. Modernize traditional ERP platforms by providing a consumer-grade user experience. This will establish a single source of truth and free up innovation investments. Enabling supply chain resilience and complete visibility. The Wipro offering will measure and monitor supply chain risk, mitigate exposure to threats, and ensure a swift response when they occur. Platform Collaborate with our global team of certified experts to help unlock your full business potential. Improve customer consistency, efficiency, proactively and with complete visibility by harnessing the power of ServiceNow. Expand your business capabilities, extend your operating efficiencies, and increase stakeholder experiences. Bring power to the people by optimizing the employee experience and enabling global shared services. Elevate your financial operations with automation, analytics, and streamlined processes with AI-driven automation. Optimize supplier relationships and proactively manage risk while harnessing the power of AI for smarter decisions. Embed risk and resiliency best practices into your day-to-day operations; manage risk in real-time. Case Studies Featured Resources ServiceNow and Wipro are revolutionizing Global Business Services (GBS) with their innovative partnership and vision by creating engagement platform that enables faster, efficient work for both employees and customers. By adapting to the customer needs in the world by leveraging the ServiceNow Platform's powerful features and Wipro's digital expertise enhance the customer and agent experiences with AI, robotic process automation, and machine learning. These technologies help automate workflows, optimize processes, and provide insights and solutions. Contact Us =====================

Transforming the Employee Experience

Solutions Contact Wipro Please fill the required details to access the content Transforming the Employee Experience In an era of changing employee expectations and unprecedented levels of employee attrition, providing connected and unified employee experiences has become critical-and a competitive necessity. A key element in that experience is the nature of employees' interactions with the company, ranging from setting up medical leaves and vacations to changing payroll deductions and updating their HR profiles. Too often, however, these important "moments that matter" require employees to navigate through a complex array of HR, payroll, IT, legal, management and facilities systems. The result: A negative experience that leaves employees frustrated and unhappy. Wipro helps companies like yours transform the employee experience to improve employees' work lives. We define and map the ideal employee journey, and then use the Now Platform from ServiceNow and predefined employee workflows to design, architect and build the right solution for your company. This gives your employees a powerful "system of engagement" that manages the complexity of various back-end systems through a single intuitive solution, creating a simplified, faster and more seamless experience, whether they work onsite or remotely. With Wipro's approach, you can: Building a high performance enterprise workforce Empowering on-boarding teams and new-hires with digital capabilities of ServiceNow ======================

Bridging the Gap

About the Author Contact Wipro Please fill the required details to access the content Bridging the Gap One of the biggest challenges for businesses when it comes to meaningfully engaging their customers is the messy middle, or middle- and back-office process integration and flow. Businesses make significant investments in enterprise service management to promote digital customer engagement, but experiences can be underwhelming due to disjointed systems and processes with many manual steps. By not addressing the gaps caused by this messy middle, businesses risk lackluster engagements with their customers and employees. Unfortunately, many businesses merely mind the gap rather than trying to bridge it, leading to pressing challenges that can negatively impact the brand immediately and down the line. Rodney Hobbs, Chief ServiceNow Technologist for Wipro APMEA, describes the mindset shift that businesses must undergo to develop more meaningful, digitally enhanced customer experiences, and explains how a strategically implemented digital fabric can help them bridge costly gaps in their enterprise layer. "Organisations need to change their mindset, not only their toolset. They need to move from disjointed, siloed operations, to a

frictionless, interconnected, hyper-automated system of action that allows processes to be carried out seamlessly across the enterprise." Read the full piece to learn how businesses can initiate this shift and bridge the gaps to deliver more successful, personalized customer experiences. Download Now =====================

Enhanced ERP Transformation with Clean Core and ServiceNow

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/servicenow-alliance/enhanced-erp-transformation-with-clean-core-and-servicenow/ ----- Contact Wipro Please fill the required details to access the content In today's digital age, businesses need to be agile to stay competitive, and this requires streamlined systems that can adapt quickly to changing business needs. However, organizations with heavily customized SAP environments often struggle to maintain their systems, leading to poor performance and high maintenance costs. A clean core approach can help organizations declutter core systems, remove customizations and streamline the SAP core, yet for many organizations, the process can seem too daunting to start. With a full suite of capabilities and solutions, the ServiceNow platform can serve as a system of action for ERP modernization, helping to get it started and ensure a smooth, efficient transformation throughout. Rodney Hobbs, Chief ServiceNow Technologist for Wipro APMEA, describes how organizations can utilize these ServiceNow capabilities to declutter the core, refine operations – even deliver a more compelling engagement layer to enhance customer experience. "The ServiceNow platform provides a range of benefits, including increased agility and reduced risk. The platform can be used to automate and orchestrate workflows across departments and throughout the organization, resulting in improved collaboration, increased productivity, and better customer experiences." Read the full piece to learn how businesses can utilize ServiceNow to accelerate their ERP transformations. =====================

How to Elevate Your Customer Experience and Efficiency in Field Service with Wipro and ServiceNow:
Download the Solution Brief

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expansion to complex risk management. The eBook underscores how ServiceNow, alongside its technology partners, is striving to address these issues and propel innovation in field service management. However, the true value lies not just in the solutions themselves but in their correct implementation within your organization. That is where Wipro, in partnership with ServiceNow, comes in. Our focus is on empowering your workforce, streamlining processes, and enhancing customer satisfaction through solutions like Augmented reality (AR), Artificial intelligence (AI), and IoT (Internet of Things) sensor capturing capabilities. 1. Upskill Your Workforce Bridge the expertise gap by fostering knowledge sharing, enabling remote support and empowering on-site technicians with interactive 3D augmented reality (AR) models. 2. Proactively Detect and Resolve Issues Harness the power of IoT sensors to schedule timely repairs, diagnose problems remotely and optimize field worker efficiency. 3. Improve Efficiency Enable self-service for end-users, streamline processes and increase first-visit resolutions though the use of Augmented Reality. Wipro, in collaboration with ServiceNow, offers a comprehensive suite of field service solutions, including: Access our eBook to explore how Wipro and ServiceNow can revolutionize your field service operations. Elevate your customer experience, cut operational costs, and stay ahead in the ever-evolving field service landscape. It's time to work smarter and achieve field service excellence. Download eBook =====================

Intelligent Operations Management

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/servicenow-alliance/intelligent-operations-management/ ----- Innovation-driven Business Transformation Contact Wipro Wipro Intelligent Operations Management: Transforming Global Business Services with GenAI Digital Operations Consulting | RPA Consulting - Wipro Digital Service Platform | Digital Platform Services - Wipro Digital Operations Center | Cloud Service Providers - Wipro Ventures Please fill the required details to access the content Intelligent Operations Management Optimize and Transform your Finance, Procurement, Supply Chain, and Employee Operations. In today's competitive business environment, balancing innovation with achieving operational efficiencies has become paramount. However, the persistent shortage of specialized talent in Finance, Accounting, Procurement, Supply Chain, and Employee Operations compounds these challenges. Businesses face a critical dilemma as they strive to optimize operations while contending with the scarcity of skilled professional's adept at managing complex and diverse global needs. Wipro's Intelligent Operations Management transforms how businesses approach functional outsourcing. Leveraging the power of ServiceNow, seamlessly integrating Finance, Procurement, Supply Chain, and Employee Operations, IOM creates a single system of engagement and innovation. With a focus on value creation and optimized workflows, this approach empowers businesses to navigate complexities, drive efficiency, and unlock unparalleled potential in a globally competitive landscape. Experience the value of functional outsourcing.

Benefits One Platform to Optimize Core Business Functions Intelligent Operations Management Empowers the C-Suite Streamlined processes, enhanced insights, and proactive decision-making. Discover how Intelligent Operations Management, powered by ServiceNow, operated by Wipro's Digital Operations and Platforms group, can help you streamline your finance, procurement, supply chain, and people operations access specialized talent, and leverage Gen AI to stay ahead of the curve News, Awards and Recognition Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/servicenow-alliance/intelligent-operations-management/transforming-global-business-services-with-genai/ ----- Contact Wipro Please fill the required details to access the content Wipro Intelligent Operations Management: Transforming Global Business Services with GenAI Wipro Intelligent Operations Management: Transforming Global Business Services with GenAI In the dynamic landscape of Global Business Services, GenAI is emerging as a pivotal force. Wipro, in collaboration with ServiceNow, is bringing the transformative power of GenAI through the innovative NowAssist platform to enterprise leaders worldwide. This webinar is your opportunity to leap from the edge of potential into the expanse of possibility. Stay ahead of the curve and embrace the transformative power of Wipro Intelligent Operations Management (IOM) powered by ServiceNow with Wipro's Digital Operations & Platform group. Don't miss out on the insights that could redefine your organization and position yourself for success in the AI Era. =====================

Unlock the Future of Global Business Services with Wipro Intelligent Operations Management

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Harnessing The Potential Of The Cloud

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Wipro FullStride Cloud: The Ultimate Solution for Multi-Cloud Management

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multi-cloud operations? Do you want to leverage the best of cloud technologies without compromising on security, governance, or performance? Do you want to transform your business with faster, smarter, and more agile cloud solutions? If you answered yes to any of these questions, then you need Wipro FullStride Cloud's BoundaryLess Enterprise, powered by ServiceNow. This is a unique offering that combines the expertise and experience of Wipro and ServiceNow to provide you with a unified framework for multi-cloud provisioning and governance. With this solution, you can: Wipro FullStride Cloud's BoundaryLess Enterprise, powered by ServiceNow, is designed to help you unlock the potential of the cloud and deliver on innovation and transformation. Whether you are looking for hybrid cloud, multi-cloud, or non-cloud solutions, this offering can help you achieve your business goals and overcome your cloud challenges. If you want to learn more about Wipro FullStride Cloud's BoundaryLess Enterprise, powered by ServiceNow, and how it can help you achieve boundaryless enterprise, download our eBook today. In this eBook, you will discover: Don't miss this opportunity to take your cloud journey to the next level. Download our eBook now and get ready to achieve BoundaryLess enterprise with Wipro FullStride Cloud and ServiceNow. Download eBook =====================

Icertis Alliance

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Cloudera Alliance

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Data Cloud for any data, anywhere, from the Edge to AI Powered by the relentless innovation of the open source community, Cloudera accelerates digital transformation for the world's largest enterprises. Wipro is a PLATINUM partner of Cloudera, hence, able to offer its customers an end-to-end data driven digital transformation which can empower people to transform complex data, anywhere it resides, into clear and actionable insights by leveraging Cloudera's Edge (ingest, curate and analyse real time streaming data), Data warehousing (from diverse sources) and AI/ML capabilities. Wipro's big data capabilities on Cloudera meet enterprise customers' digital business needs while ensuring robust performance, security and compliance in line with their data strategies and roadmap. Supported by a Center Of Excellence and Platform & Solution team, Wipro's Intelligent Data Platform (IDP) Practice and consultancy services ensure efficient delivery of bigdata and analytics solutions for clients.
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Blue Yonder

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Zoura Alliance

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of the new subscription economy. Zuora specializes in Order-to-Revenue processes, Billing, Revenue Management, and a portfolio of other SaaS applications. Wipro's Zuora CoE brings in subscription experts and a team of highly capable technology and domain experts with Zuora's implementation experience across their product portfolio. Along with Zuora's long standing history of effective SaaS products, subscription management platform and its flexible and easy integration with multiple platforms, we help you achieve breakthrough business outcomes that help you stay ahead in the subscription economy. =====================

Apttus Alliance

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Kinaxis Alliance

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businesses succeed by applying advanced technologies that can respond quickly to rapidly changing consumer demands. Agility and accelerated operations driven by integrated business processes is a necessity to unlock growth and new revenue opportunities. Wipro's award winning Infor partnership is at the forefront of delivering business leaders strategic solutions driven by Infor solutions across every major industry. We have strengthened our commitment to Infor technologies through the acquisition of LeanSwift. Infor named LeanSwift 2020 North American Innovation Partner of the Year. By combining our expertise, we provide digital transformation and application modernization services, domain consulting, and technical services built on Infor CloudSuites, M3, LN, Enterprise Asset Management (EAM), and Warehouse Management System (WMS). Leveraging Wipro's Infor expertise, brands can reimagine the way they do business, improving profitability, reducing costs and increasing revenues. The Wipro Infor team delivers innovative ERP solutions, helping customers overcome market disruptions to become more competitive. Our Infor M3 CloudSuite expertise ensures enterprises can strengthen data workflows, minimize risks, and become future-ready. Whether handling an on-premises integration or a cloud migration, we provide end-to-end integration strategies for modernizing operations. Read more Discrete manufacturers can optimize their financial, supply-chain, and product delivery processes with Wipro's Infor LN integration expertise. Our team delivers the innovations needed to improve agility, streamline experiences, and adopt industry-specific benefits. Read more Through a single point of access, easily gather information or use it in collaboration with team members, suppliers, or other colleagues. Read more Wipro's Infor and Hexagon experts provide key EAM services, ranging from issue resolution to the customization of workflows. Our 24/7 support team optimizes applications for increasing performance needs, allowing enterprises to focus on achieving business goals. Read more =====================

Infor M3 CloudSuite Integration Services

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following industries: We are committed to enterprises' long-term success, and through our holistic approach to maintenance and support e, we assess cloud systems and provide best-practice tactics for driving the reliability of an organization's infrastructure, applications, and data. Our global team of Infor experts provides customized services that drive productivity and efficiency across business operations. Regardless of the managed service requirements, whether cloud-based or on-premises, Wipro ensures enterprises gain the resources they need to meet their business objectives. =======================

Infor LN CloudSuite Integration Services

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B2B & B2C Self-Services

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been so simple. Create Exceptional Experiences with LeanSwift Customer Portal Using a single point of access, users get real-time information about customer transactions, orders, invoices, and payments. Integrated with Infor M3 CloudSuite through ION, the portal's self-service functionality enables customers to make e-payments, manage user accounts, and quickly complete other tasks, including searching, filtering, and downloading order information. Empower Teams to Collaborate with LeanSwift Sales Portal Since sales are rarely made by a single person, teams can rely on sharing customer information through a central location. This self-service portal enables salespeople and their support staff to streamline order channels, track information, make order input more efficient, and document customer data and conversations. The sales portal integrates with Infor M3 CloudSuite through ION, enabling seamless communication.
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Application Management Services

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Transformer Monitoring: The Key to Smart Energy Management

The global energy consumption is estimated to be 580 million terajoules per year, with about two-thirds accounting for electricity consumption alone. Global electricity generation is expected to reach nearly 45 trillion kilowatt-hours (kWh) by 2050. The demand for energy is ever-increasing. The pandemic put a brief pause on this growing demand, with a fall of 1% in 2020, but it came back up quickly and is expected to grow by 4% this year. The usual suspects – population, economic development, and advances in technology – are the key drivers for this growth in demand. How is this energy produced? Today, much of the energy consumed is sourced from fossil fuels such as oil, coal, and natural gas. High energy-consuming countries such as China, India, and the US are still reliant on fossil fuels, with 71% (China), 59% (India), and 61% (USA) of energy coming from these sources. However, fossil fuels are rapidly depleting and also hampering climate goals. Governments and organizations worldwide have recognized this and are equally and heavily invested in identifying new sources of energy - sources that are cleaner for the environment and the planet. Energy generation from renewable sources such as wind, sun, and water is set to increase over the next few years. Renewable energy sources accounted for close to 30% of the global electricity generation in 2020. By 2050, renewable sources are expected to contribute to 80 to 90% of global energy consumption. There are, of course, several challenges to the widespread adoption of renewable energy sources - the prohibitive cost of installation, their distributed nature, the need for new transmission infrastructure, unpredictability due to weather, political influences, and market conditions. Given this juxtaposition of factors, governments and energy bodies globally urgently need a solution to optimize energy production, distribution, and consumption from multiple sources. Enter Smart Grid: The way forward for smart energy management This is where Smart Grid comes in. A Smart Grid is an electrical grid with automation, communication, and technology that help monitor the flow of power from its point of generation to the point of consumption, thereby controlling or curtailing the load to match the generation of power in real-time. Primarily leveraging IoT technologies, a Smart Grid helps to proactively detect and respond to consumer needs. It enables analysis, and communication of information to enhance efficiency and transparency across the supply chain, optimize energy consumption, and improve the reliability of the supply. Smart Grids help to make transmission efficient, identify and resolve outages, predict the peaks and troughs in demand to optimize utilization and reduce wastage, improve operational costs for utility companies, and enable smoother integration with renewable energy systems. In this way, Smart Grids provide the advantage of connected distributed energy resource assets, including renewable energy sources. Efficient transformer

monitoring at the core of the Smart Grid Transformer monitoring is a key element in the move toward Smart Grids. It provides power producers the transparency to make critical decisions on power production and optimize power consumption. Transformer monitoring also enables demand analysis - what is being consumed by every household or industry or commercial establishment, in which areas is the consumption higher, and what are the peak periods of demand. Let's take a look into the types of transformers that utility companies typically deal with: Electrical transformers constitute the largest share of investments in any utility system. Hence, replacing the electrical transformers frequently for better efficiency is an expensive proposition for most industries. The average lifespan of a transformer is 30-40 years. However, the costs of transformer failure are high, up to $15 million. So, it's critical to ensure that the best monitoring and control system to maintain the transformer is in place. Globally, transformer fleets are operated beyond their designed life and with higher average loads resulting in catastrophic failures. Causes of transformer failure There are several reasons why a transformer fails. Evaluating aspects such as the technical condition of the transformer, based on an analysis of its make and model, features, number of years of usage, location, and other factors can help determine the risk. Figure 1 gives an overview of the key technical causes of transformer failure. When it takes 7 days or more for investigation, remedial work, or replacement, it is considered a major failure on a transformer. To mitigate the risk of failure, it's important to determine the probability as well as the consequences of failure. Unexpected failures can also have significant cost impacts. How transformer monitoring systems help to optimize power distribution and usage As renewable energy sources are increasingly providing power across the globe, the distribution systems are also changing. Hence the greater role of transformer monitoring. Transformer monitoring can be done in two ways – offline and online. Offline monitoring allows technicians to perform condition testing without any constraints. However, the major drawback is that the transformer has to be taken off the grid, which is both cumbersome and expensive for the power company. Online monitoring leverages technologies that don't require taking the transformer offline. In addition, the offline monitoring system can only provide a historical overview of the health of the transformer, unlike an online monitoring system, which can provide updates in real-time. The former can lead to the aging and deterioration of insulation which causes the most catastrophic transformer faults. With an online system, real-time interventions can help predict failures and plan for such events. For producers of power from renewable sources such as wind and solar energy which are unpredictable, the ability to predict transformer failure and proactively repair or replace parts, especially when the energy is not being produced, is invaluable. Hence, with an online monitoring system, the standard offline diagnosis limitations can be easily mitigated. In a nutshell, an online monitoring system: Powering into the future with Smart Grids Given the prohibitive costs of replacing a transformer as well as the cost incurred in maintaining them to last an expected lifespan of 30-40 years, transformer maintenance is key to profitability for utility companies. However, costs are not the only aspect of transformer maintenance. With the increasing demand for energy resources, downtime or outages are not an option. The world's reliance on fossil fuels will eventually reduce, and renewable energy sources will contribute significantly to energy production.

As we move towards this scenario, optimum utilization of all the resources with minimal wastage is a priority for all concerned. Leveraging new-age technologies such as IoT, automation, and even AI or ML, to make the Smart Grid even smarter and for effective online monitoring of transformers is the way forward. Purushottam Konar Purushottam is the Global Head of Product and Solutions Engineering at Wipro. He has over 22 years of experience in design, development and deployment of enterprise solutions and products for large multifunctional organizations across different verticals. Purushottam has extensive experience in architecting & building products, platforms and solutions in the IoT and IIoT domains. He is currently responsible for the global product and solution engineering charter of Wipro's IoT practice. He holds a Master's degree in Computer Applications =====================

Transforming Legacy Estate for the Journey to Cloud

----- Arcticle source ----- https://www.wipro.com/infrastructure/transforming-legacy-estate-for-the-journey-to-cloud/ ----- About the author Contact Wipro Related Blogs Optimizing Field services Through AR Transforming the leave-of-absence experience into an employee-retention tool A Smarter Way to Collaborate and Build Applications with Azure DevOps Please fill the required details to access the content Transforming Legacy Estate for the Journey to Cloud Digital transformation as a buzzword has been around for a while now – 70% of companies had a digital transformation strategy in place even before the pandemic . However, the pandemic accelerated and accentuated the shift toward digital transformation propelled by the need for agility to adapt to the 'new normal' of work and life as well as the onslaught of new connected technologies including 5G, Edge and other AI-powered solutions. In most instances, digital transformation is a gradual evolution, a process where organizations leverage digital technologies consistently to transform their existing legacy business processes and services to meet evolving market and customer needs. To be truly successful, this evolution requires a paradigm shift in the way businesses operate and deliver products and services to their customers. Digital transformation drives innumerable benefits for organizations including real time access to vast amounts of data, as well as scalability, agility and innovation. With data-driven insights, organizations can understand customers better and align business strategies for success. Accelerating digital transformation with the cloud Today, organizations are focusing on agility and leveraging automation to facilitate faster time to market. The cloud is a key driver for this renewed focus and forms the foundation for the new agile business world. For organizations that have depended on traditional data centers, migrating mission-critical IT workloads to the cloud helps meet the need for agility and scalability. Is cloud adoption easy? Is it for everyone? The statistics are overwhelming and the writing on the wall is clear. There is no doubt that the cloud is the way forward. And yet, there is no single proven framework for the success or type of cloud computing that works for enterprises. There are different computing models and services

that have evolved to meet the technology demands of organizations. Primarily, enterprises choose between three options for cloud deployment methods —public cloud, private cloud, or hybrid cloud. In addition, service models could range from software as a service (SaaS), infrastructure as a service (IaaS), or platform as a service (PaaS). The deployment methods and services depend on business needs. However, for organizations, the choice is far from being simple, given the history of their tech stack and existing infrastructure provisioning. Let us examine some history of the evolution of cloud migration to understand why the cloud migration journey can be complex for organizations. Over seven decades ago, IBM led the pack in creating the computing age and developed critical applications, sophisticated modeling for large scale transactions, and workloads for large organizations as this offered stability, security and scalability. There have been several innovations and developments in the computing world subsequently, but the mainframes have prevailed. Consider this: about 67 of the Fortune 100 and 45 of the 50 top banks are still on mainframe servers. However, the mainframe servers did not address the needs of medium to small sized businesses. And so, the IBM Power processor was launched in the 1980s, in the RS6000 and AS400 servers. The RS6000 was running AIX, IBM´s Unix version and the AS400 was designed for OS400 (now called IBM i). Organizations are looking at migrating IBM Power workloads to the cloud to improve flexibility and reduce risk. They also seek cloud-native services that enhance core business applications and support agile development and innovation. The cloud also ensures high availability and disaster recovery capabilities for business connectivity. Plus, several businesses run traditional and mission-critical applications on these servers. However, a lift-and-shift approach is challenging for the IBM Power workload migrations, given that these applications are written for IBM Power Systems server hardware. And moving them to the major public clouds cannot be done without refactoring and rewriting significant amounts of application code — associated resource, time, and cost considerations are also significantly huge. How to bridge the need gap in cloud migration Skytap on Azure is a cloud computing service that runs traditional enterprise workloads natively in the cloud. Skytap allows companies of any size running IBM AIX, IBM i, Linux based operating systems, or traditional x86 workloads to easily migrate workloads to Azure. It helps to mitigate risks in the migration, reduce complexity, and minimize disruptions to business continuity. The Skytap environments replicate on-premises data center environments, including infrastructure, storage, networking, OS, middleware, memory state and applications. Organizations can migrate complete environments with agility, depending on the size of the workload. With Skytap, companies get access to core cloud infrastructure capabilities including capacity on-demand, self service provisioning, high availability, and associated benefits. In addition, organizations can also manage the diverse portfolio in their IT landscape. With Azure, these organizations can leverage the benefits of the cloud faster and innovate better with the integration of existing legacy applications to other Azure services. Skytap enables IBM Power workloads to run on Azure without any rewriting, thus creating a faster path to the cloud at lower costs. It provides developers with the ability to innovate across these applications at speed and scale through integration into Azure's full suite of other services such as analytics and compute, along with the added benefit of instant core cloud

infrastructure capabilities. Further, Skytap provides opportunities to: A new lease of life to traditional infrastructure with Skytap on Azure There are several use cases for leveraging Skytap on Azure that can enhance the migration of existing enterprise workloads to the cloud and enable smoother functionality: Wipro is a certified Microsoft Gold Partner and MSP expert. Wipro, Skytap and Microsoft Azure provide a joint service framework that helps reduce lead time and effort while enabling our customers to scale the application to production easily and quickly with enterprise-wide service level agreements. Wipro's research revealed that companies expect success from their cloud journeys, and 80% of them expect the cloud implementations to be partially completed, if not fully on the cloud. The goal of any transformation initiative is to modernize applications to gain greater insights into the business through the availability of data-driven insights. A fragmented application landscape across different infrastructure does not allow the business to deliver on its goals. Hosting a few applications on the cloud and some others on an on-premises, mid-range server may lead to security risks, not to mention that gleaning data to gain business focused insights would be difficult. Hence, leveraging Skytap on Azure helps enterprises truly realize the benefits of the cloud. To know more, please get in touch with us at Azure-Marketing@wipro.com Rajiv Kumar GM & Presales Head - Cloud, Cloud & Infrastructure Services, Wipro Rajiv has about 23 years of experience in the IT Industry. He has played a crucial role in developing next-generation transformative offerings like Azure Stack and rapidly growing the cloud practice across geographies. He is a member of the Association of Enterprise Architects and has many leading certifications like TOGAF, Azure Cloud architect Expert, Google Professional architect and AWS Solution Architect. In the evolving landscape of digital workplaces, efficient field service operations are critical in ensuring reduced downtime... appy employees usually stay at their jobs, frustrated workers often don't. Chief human resource officers (CHROs) tell us that the corporate leave of absence (LOA) process is one of the most common sources of employee frustration. Employees often rank their LOA experiences low on the satisfaction scale, using descriptors such as complicated, confusing, inconsistent, time consuming, and unresolved. In a world where business is evolving at the speed of thought, rapidly changing market conditions pose several challenges for enterprises across industries.
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The Future of Work: Redefining Employee Experiences in the New Normal

----- Arcticle source ----- https://www.wipro.com/infrastructure/the-future-of-work-redefining-employee-experiences-in-the-new-normal/ ----- About the author Related Articles Contact Wipro Please fill the required details to access the content The Future of Work: Redefining Employee Experiences in the New Normal August | 2022 A hybrid workplace is becoming the new norm. The pandemic acted as a catalyst in accelerating the remote work

model much faster than most enterprises and employees anticipated. The Microsoft Work Trend Index for 2022 — covering 31 countries and backed by an analysis of "trillions of productivity signals in Microsoft 365 and labor trends on LinkedIn" — found that 53% of respondents are likely to consider transitioning to a hybrid model in the year ahead. The report correctly called this an inflection point. Enterprises worldwide are discovering that the remote work model is more than a solution to a one-time crisis. It is also prompting enterprises to lean more heavily on digital and accelerate their transformation journeys. While hybrid is expected to be the default work model by 2024, businesses are struggling to adapt, with 72% of businesses still lacking a clear hybrid work strategy. Many are apprehensive about switching to a hybrid model because it impacts every aspect of their organization's infrastructure. Even minor flaws in strategy and technological choices could affect employee productivity and impact device, application, network, and data security. Our experience shows that enterprises focusing on digitization initiatives powered by cutting-edge workplace technologies such as Artificial intelligence (AI) and Machine Learning (ML) for automated workflows are finding success. Creating an efficient hybrid work model Wipro's implementations of hybrid work technologies for global industry leaders show that success requires a focus on three vectors: Leveraging the possibilities of remote management A critical fabric of the remote-first mindset is a change in the technology used by the workforce. Employees demand devices that offer ease of use and seamless experiences. However, ensuring the security of remote devices without interrupting the workforce from doing their job poses a challenge to IT teams. Astute investments in remote management solutions must be made in sync with the changes in technology used by the workforce. These solutions should maintain security while improving employee experience and safety. Our collaboration with Intel and VMware allows us to harness cutting-edge technologies for remote management. Solutions like Intel vPro® platform and Intel® Endpoint Management Assistant (Intel® EMA) enhance remote field support services with both in-band and out-of-band remote management capabilities. This enables IT teams to be smarter, faster, and more efficient with remote troubleshooting. Similarly, VMware Workspace ONE® Intelligence™ suite offers data-driven insights to improve employee experience, strengthen security compliance, and optimize business operations. Technological choices are crucial to ignite and build a remote-first organizational culture. Cloud-native, zero-trust security is paramount to a hybrid workforce. The right technology partners enable enterprises to empower on-site and remote employees to go about their jobs efficiently and securely without additional stress or interrupting their regular work patterns. We believe that three aspects will define the future of the workplace: To make the right strategic choices that enable a hybrid workforce and select the most appropriate remote management solutions, tune into this Prediction Panel on Driving Workplace Dexterity: Modern Manageability at the Edge for a Productive, Distributed Workforce — that features Sidharth 'Sid' Mukherjee—GM and Global Practice head for digital Workplace Services at Wipro, Yasser Rasheed— Global Director at Intel, and Josh Olson—Global Director at Intel Corporation, Experience Solutions & GSI Sales at VMware and Mrinal Rai – Senior Manager and Principal Analyst at ISG. Sidharth Mukherjee Sidharth Mukherjee, Global Practice Head of Wipro's Digital Workplace Services, is a dynamic leader and a true technology enthusiast at heart. He comes with

more than 18 years of rich, holistic experience in driving cutting-edge cloud and infrastructure services transformations for Fortune 500 organisations. Sid has a passion for delivering "what's next" and technologically improving "what's now" for enterprises, while keeping a keen focus on employee experience and innovation. He has an academic background specializing in IT & Management and is currently engrossed in harnessing the power of AI, cognition, blockchain and analytics to create an intricate workspace metaverse aligned to the future of work. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.

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AIOps & Observability – Journey Towards Business Composability

----- Arcticle source ----- https://www.wipro.com/infrastructure/aiops-observaility-journey-towards-business-composability/ ----- About the Author Related Articles Contact Wipro Please fill the required details to access the content AIOps & Observability – Journey Towards Business Composability August | 2022 Business composability provides flexibility, agility, and the pace for business applications. However, with distributed architecture accompany the challenges of governance, security, and an immense pool of data. AIOps & observability plays a vital role to address these challenges. Organizations with high composability have seen better success rate than their peers. They are faster and more effective at developing new partnerships, pursuing new opportunities, offering innovative products and being more responsive to customers and clients. Why the composable enterprise is necessary for organizations Digital transformation from monolithic applications to a composable enterprise model opens up new possibilities to integrate business applications with new technologies at a competitive pace to serve customers. Flexibility - A composable business enterprise provides a platform to incorporate new age technologies. The modular structure makes it easier to implement the best fit tools and technologies to create a robust system. A large enterprise becomes a structure of smaller independent blocks, making it simpler to upgrade, replace, or decompose the block as needed. Innovation - A composable enterprise encourages new skills and talent among their staff, and provides them a platform to experience with minimum risk of failure and effect on other business lines. Faster releases - The composable approach to development allows enterprises to release new features and updates as a packaged business capability with a faster rate due to reusable code and modular design principles. Happier customers - In this competitive world, it is important to cater to each customer's need with agility. The composability in structure provides the ease of creating customized requirements for each

of the customers with the modular approach enabling it to be delivered at pace. The capabilities can also be provided to customers as self-service tools empowering the customer to choose the features as per need. Future state vision - The composable approach induces functional independence at each layer of the business applications and process, simplifying it for the future. This could include upgrading the technology stack, introducing new features, migrating to new cloud provider or coming up with a new line of business altogether. This helps the enterprise to be always ready to embrace any new futuristic trends to remain cost effective and upbeat in the market. How Wipro's AIOps and observability framework helps in building composable enterprises Every business has data, and data is what AIOps consumes – understanding and using it to empower operations to become more durable, adaptive, and agile. AIOps enables real-time efficiency of digital operations, microservices and cloud computing, further driving composability. Wipro's AIOps & Observability framework is designed to offer you the three key features to achieve composability: Data collection and analysis - AIOps work on two basic principles: data collection and data analysis. Data collection needs visibility across the complete stack. The massive data collected needs to be stored and analyzed, requiring enormous algorithms based on AI/ML to process and generate crisp and contextual insights for various persona in the organization. Wipro's Observability solutions provide the mechanism to collect all metrics, logs, traces, and events, giving complete insight of what is happening in the system and its connected systems. AIOps provide the powerful AI/ML algorithms for data analysis for deducing predictions and reliability signals. Wipro's AIOps & Observability framework is designed based on the concept of data-lake where the data is ingested from numerous sources, analyzed via ML models to provide actionable insights to various personas such as business, DevOps and Site Reliability Engineers (SRE). "Monitoring as a code" - Wipro's AIOps breaks the standard barrier between ITOps and DevOps by injecting monitoring with development, making it an integrated part of CD/CI pipeline increasing the possibilities for tracing through the code. This increases the observability at each layer of the application enabling a better insight to govern and track any changes in an application, real time, making the system more reliable for business. Wipro's AIOps provide a second level of tracking via its intelligent change analytics offering which helps SRE trace both authorized and unauthorized changes. Orchestration - Due to the composable nature and high complexity of data generated, automation and orchestration play a key role in ensuring the equilibrium on constant enhancements (deployment of new features) and maintenance of existing ones. Wipro's Observability framework provides constant feedback for identifying the improvement areas while AIOps provide tools to automate and orchestrate the environment. Wipro's "No Ops" make the system self-resilient by performing auto remediations using AI based recommendation actions.   Enterprises working toward a composable business should assess not only their processes and functions but also their maturity with AIOps and Observability, considering that observability needs to be present in the organization's DNA, tracking each module for security and performance. Wipro's AIOps & Observability self-assessment tool kit is just the right tool to help you to measure the maturity not only in ITOps but across all practices such as DevOps, SecOps, Cloud Ops and SRE. AIOps makes IT operations more self-governing and well-orchestrated within the business.

Embark with us on journey to business composability. Check our AIOps & Observability offering at Wipro Business service management solutions | AI for IT operations - Wipro Ankur Jalpota Global Practice & Delivery Head for BSM & AIOps, Wipro Ankur works with technology partners in advancing and modernizing the tooling space and aligning the overall offering with the ongoing evolution journey. He is an evangelist for humanizing technology that focuses on end customer usability and ground level business impact. Ankur has played key roles in developing next-generation transformative offerings and executing growth strategies at Wipro in AI & cloud. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. ===================== ----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-fullstride-cloud-services-and-skytap-on-azure/ ----- What We Think Contact Wipro Please fill the required details to access the content Find out how businesses can increase the resilience and speed for their IBM Power workloads in the cloud. Most Fortune 500 companies are missing out on the full range of cloud benefits, running their traditional business-critical applications in the data center on AIX, IBM i, or Linux on IBM Power Systems. Taking your company to the cloud unlocks immediate benefits, keeps your business agile and scalable, and saves you money—so why wait? With the help of Wipro Fullstride Cloud Services and Skytap on Azure, you can move IBM Power to the cloud right away, with minimal risk and no refactoring. In addition, Wipro's partnership with Microsoft spans two decades, where we have jointly helped our clients enhance their customer experience and delivered connected insights and focused outcomes. Leverage the combined power of the Wipro FullStride Cloud Services and Skytap on Azure joint services framework to reduce lead time and effort. Download the ebook now to learn the following: 1. How to future-proof your business with cloud migration 2. The steps being taken by businesses to leverage the power of Azure, improving operational efficiency, and eliminating management costs 3. What experts in the industry are recommending to help enterprises unlock new value and successfully build in the cloud =====================

4 strategies for sustaining a secure, flexible financial workplace

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in the DevOps Era with Distributed IT Please fill the required details to access the content 4 strategies for sustaining a secure, flexible financial workplace September | 2022 Almost three quarters (74%) of banks and insurers in the UK have experienced a rise in cyber-crime since the pandemic. More than two-fifths (43%) believe that remote working models - with work systems being moved online more than ever before - are to blame for making their organizations less secure. In part, this is due to many banks having quickly implemented a remote working model to satisfy employee and business needs during the pandemic. An often-piecemeal approach to delivering this model meant that the attack surface expanded and exposed gaps within a long-term security strategy. While these remote models worked in the short term, they were not future proof. When cybersecurity risks increased, the banking industry experienced a 1318% increase in ransomware attacks in 2021, according to a Trend Micro report. How can banks ensure they are not only protecting sensitive data right now, but managing security effectively for the next five years and beyond? And how can they do so without impacting the user experience and collaborative capabilities of hybrid workforces? This is a particularly pertinent question for IT leaders, with almost four fifths (80.7%) claiming they are finding it more difficult to spot IT security or business risks brought about by employees working as part of a hybrid workforce. This is where great user experience and workspace security become symbiotic; remote workers faced with obstacles thrown up by inefficient access to systems might take digital shortcuts. Simple examples of this include the use of insecure file-sharing tools, signing up for said tools with personal email addresses, or using a BYO device already infected with malware, which could potentially steal data unbeknown to the user. So how can organizations simultaneously ensure that workplaces have the right virtual collaborative tools and infrastructure to adapt to changing workplace dynamics? How to find harmony between seamless access and robust security As the tension builds between C-suite executives calling for seamless access for employees to drive retention and attraction, and IT leaders - who need to maintain application and device security across cloud-enabled dispersed networks - financial institutions need solutions that create harmony between these conflicting priorities. Banks, financial services and insurers, who want to build a holistic, future-proof security strategy that does not restrict user freedoms, will be required to implement proactive monitoring, collaborative, flexible, yet secure technologies, which can be accessed everywhere to improve employee experience (EX) and productivity. These are the four key steps IT decision makers can take to deliver a successful transformation from the 'sticking plaster' measures of the early pandemic to a future-proof model: Choosing the right partner can relieve the challenge of mitigating threats. Leveraging the power of advanced technologies to lead your organization into a successful future isn't difficult with the right partner to support you. Indeed, it presents banking, financial services and insurance organizations with many exciting opportunities - not least the chance to liberate employees from stale working practices and offer true flexibility around when, where and how work gets done. By harnessing the right tech and taking advantage of managed consultancy services, the sector can put in place a strategic vision to balance the twin priorities of seamless user experience and robust cybersecurity. Wipro and Citrix have partnered for over a decade to help enhance business outcomes for some of the biggest

names in the banking, capital markets and insurance sectors. To find out how you can benefit from a secure hybrid work solution with superior user experience, visit our dedicated banking, financial services and insurance site. Gopal Tadepalli Gopal Tadepalli heads Global VDI sales at Wipro Technologies. He leads VDI practice and business development along with delivery. With more than 25 years of experience in the IT industry, he worked on End User Computing transformations such as User experience management, Digital workspace, DaaS, VDaaS, Cloud journey etc., in the last 15 years. In the evolving landscape of digital workplaces, efficient field service operations are critical in ensuring reduced downtime... Enterprise Mobility Management (EMM) involves the process management and IT services needed by any organization to acquire, provision, and support the mobile devices (tablets, smartphones etc.) and other devices used by the organization's work force. Digital transformation and end user experience drive businesses to innovate with new applications and enhance core applications flexibility. ======================

Pillar focus: Hybrid cloud and service delivery

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functions, such as claims processing and policy underwriting, and customer-facing functions - such as customer onboarding and claim submission and settlement - firms need a hybrid cloud solution that guarantees continuous superior service delivery, next-level security and reliability. As a number one priority, insurers should invest in hybrid cloud technology to fuel the service reliability that powers their essential offerings and products of differentiation. The key is leveraging the right tools, such as Virtual Desktop Infrastructure (VDI) or next-generation Desktop-as-a-service (DaaS) - a plug-and-play preconfigured delivery models that offer a unified control plane for any workload, whether working on the Cloud or Hyperconverged Infrastructure (HCI). These solutions will power liberated and secure hybrid workforces - along with driving seamless user experiences and product differentiation, and elevating service quality. There are three key considerations for insurance firms to make when deciding on which technology to invest in: 1. Open finance models, hybrid working, and hyper personalization using data, analytics, AI and automation to provide relevant and timely targeted customer experiences are examples of insurance industry trends that continue to gain traction. However, for an insurance organization to continue to innovate and stay ahead of the curve in these areas, advanced hybrid cloud infrastructure - with the power to adapt, scale, and inter-operate to meet changing demands - is a pre-requisite 2. When time to market, guaranteed performance, and scalability are primary indicators of success, a plug-in-and-play preconfigured delivery model such as an integrated Desktop as a Service (DaaS) solution can empower insurers to overcome complex implementation projects quickly. With this kind of delivery model, insurers can virtualize, manage, stream, and remotely display applications and desktops with minimal upfront costs and no deployment delays. 3. Adopting a managed approach, with an outcomes-based focus, can prevent downtime in the migration process and enable teams to work productively. Additionally, as the need for technological skills in the sector is set to increase by more than half (55%) through to 2030, process standardization and automation can bridge the labor gap in manual processes. As the talent squeeze continues across many verticals, it will be vital for insurers not just to enhance the user experience for employees but to also account for gaps in the workforce - the gaps where they don't have the resource to implement these solutions - by partnering with the right managed services providers. Implementing these measures will realize two vital goals for insurance firms: 1) the ability to retain and attract top, digitally savvy talent - and 2) the ability to guarantee optimized service delivery for customers. With the nature of insurance not defined by an exchange of physical products, it's vital the sector differentiates itself in the form of superior experiences. For customers this looks like the provision of a quick and highly personalized service, underpinned by flawless connectivity. For employees this looks like seamless network connectivity, which enables collaboration across dispersed teams, end-to-end visibility, security - and the flexibility to work from anywhere on any device. Successful hybrid working can also broaden the potential talent pool available to insurers, who will no longer be limited to hiring based on geographical location and can instead look further afield to find the best possible people to drive their organizations forward. And with the capacity to continually optimize service delivery and bring new products to customers, firms can simultaneously drive business outcomes - such as higher revenues, lower cost-to-serve and

better retention. Recent research from Statista reveals that more than half of senior insurance executives surveyed globally said their employees would follow a hybrid work model throughout 2022. One fifth of them said their employees will be required to come to the office on specified weekdays but can work remotely some or all other days - and 35% said their employees will follow a rotating schedule and should work in the office when it's their designated day or week. With hybrid working here to stay, it's an exciting time for insurers to grasp the opportunity for successful transformation. The technology and expertise now exist to help reimagine when, where and how work is done, and workforces can be liberated from outdated work processes to thrive from anywhere, and on any device. Wipro and Citrix combine best-in-class cloud technology with maximum data and application security. Our digital workspace is a secure, high performant Desktop-as-a-Service (DaaS) built to empower productive, seamless enterprises. The partnership is reloading the future of insurance work and transforming IT by driving business outcomes, improving employee experience, and enhancing operations visibility and service delivery with single-pane-of-glass health monitoring. We have partnered for over a decade to help enhance business outcomes for some of the biggest names in insurance. To find out how you can develop a secure, productive hybrid working model for the future of insurance, visit our dedicated site here: Gopal Tadepalli Gopal Tadepalli heads Global VDI sales at Wipro Technologies. He leads VDI practice and business development along with delivery. With more than 25 years of experience in the IT industry, he worked on End User Computing transformations such as User experience management, Digital workspace, DaaS, VDaaS, Cloud journey etc., in the last 15 years. In the evolving landscape of digital workplaces, efficient field service operations are critical in ensuring reduced downtime... Enterprise Mobility Management (EMM) involves the process management and IT services needed by any organization to acquire, provision, and support the mobile devices (tablets, smartphones etc.) and other devices used by the organization's work force. Digital transformation and end user experience drive businesses to innovate with new applications and enhance core applications flexibility. ======================= ----- Arcticle source ----- https://www.wipro.com/infrastructure/hi-techs-inevitable-destination-is-cloud/ ----- Related Articles Contact Wipro Please fill the required details to access the content Hi-tech's inevitable destination is cloud The ability to reimagine business infrastructure and operational workflows is separating hi-tech leaders from the rest of the industry. As modernized hybrid cloud operations take the uncertainty out of the future, these companies can flow with the economic tide while shaping dynamically effective customer delivery methods. For many tech-based organizations, cloud platforms have primarily been used to accommodate spikes in workloads through their additional capacity. Since then, cloud computing has driven architecture and process modernization, providing a greater understanding of what cloud technologies can deliver and helping many tech organizations move beyond one-dimensional approaches. By expanding cloud adoption and implementation, hi-tech players are leap-frogging traditional competitors stuck in outdated development and delivery models, making progress toward the industry's inevitable destination.   Primary cloud benefits for hi-tech enterprises Industry-wide advantages are expanding, enabling more enterprises to adopt cloud migrations that align with a variety of business

objectives. With increasing data challenges and the greater need for productivity, cloud platforms empower the industry to gain a range of transformative benefits. Greater agility to meet changing demands Agility is on everyone's list of things to improve, and for an industry that nearly all other industries heavily rely on, cloud-based solutions enable hi-tech brands to gather customer data and rapidly understand end-user expectations, needs, and challenges. In addition, cloud solutions enable greater speed to market for global consumer electronics companies, semiconductor makers, and telecom providers. Companies can respond faster to industry changes, economic shifts, and natural disasters. With cloud, speed enables greater agility and scalability, sharpening the competitive edge for every hi-tech business while adjusting to customer needs with ease. Improved processing-power scale Using scalable cloud platforms that drive stronger processing power than on-premises systems, organizations can handle ever-increasing amounts of data and accelerate workflows to keep up with the speed of the market. The increased computing power drives the ability to derive valuable insights more quickly and uses machine learning and artificial intelligence technologies to improve the flow of information, improving uptime and reducing troubleshooting time for many tech-based organizations that rely on cloud for service and product delivery. Stronger ability to innovate Maintaining a competitive edge is essential in every market. By enhancing cloud-based infrastructure and operations, more companies can further innovate their products, delivering advanced sophistication with stronger reliability. Teams can modernize products to be available in next-gen as-a-service business models using cloud-native or cloud-agnostic features. The results are better customer experiences and expanded business opportunities. The impact on hi-tech operations In addition to the overall benefits, cloud platforms are empowering hi-tech fields with new ways to transform operations. Silicon manufacturing is one of the world's most complicated manufacturing processes, which has been an ongoing factor in the current chip shortage. With cloud platforms, semiconductor producers and EDA teams can integrate their entire value chain from design to computer simulation to post-production. This provides unprecedented levels of efficiency as well as greater collaboration among teams regardless of location. Cloud platforms also provide greater visibility into the entire digital supply chain to pinpoint where improvements are needed or strong performance should be maintained. For engineering teams, cloud platforms provide a pathway to modernizing legacy systems and implementing cloud-based applications. They also prevent teams from being limited to the capacity of an on-premises system. With cloud-based "infinite capacity," tech engineers can keep as many workflows running as necessary and remain flexible as demands change. The built-in scalability of cloud platforms enables them to focus on creating next-gen products without being restricted by storage, memory, or computing hindrances. Developing a cloud performance strategy After gaining an understanding of the benefits in reach, developing a strategy for enhancing cloud performance or planning a migration will be a vital foundation for achieving successful results. Partnering with a cloud expert is the most effective way to create a thorough plan that fits an organization's specific business needs. It's important to ensure that an enterprise can preserve what works in its current system while implementing improvements to fully utilize what cloud and advanced technologies can provide. Working with a team of experts will

also enable a faster, more reliable path to realizing cloud-driven business value.   A comprehensive strategy would be based on an evaluation of an organization's cloud platforms, business processes, and goals. These dictate the most effective way to design and develop a solution, migrate systems, and then deploy them. The strategic decisions done at this early stage are vital to achieving benefits later on, and collaborating with an experienced partner can ensure that a company will develop greater cloud maturity or adopt new cloud functionalities.   Taking a hybrid approach is common for many companies as it provides a balance of both on-premises and cloud advantages benefits, allowing security, workforce productivity, and flexibility. Regardless of the goals, preparing a strategy with a cloud expert that has extensive industry experience will be key to achieving cloud benefits now and into the future.   Moving toward the inevitable destination of cloud Staying competitive requires that a company continuously evaluate its tech systems and infrastructures. Competition is powerful within the hi-tech industry and is getting stronger as businesses and consumers continually advance the way they do business. As companies in the field seek to adopt new innovations, cloud platforms are delivering the ability to enhance agility, adopt greater processing power, accelerate workflows, and modernize products. These transformative benefits are fueling business growth and new revenue streams, and to reach cloud's fullest potential, it's necessary that business teams embrace the technology, not just IT experts, due to the efficiencies and business opportunities it can open. As workloads and business requirements change, cloud is poised to play a significant role in the industry's future. Taking a proactive, rather than reactive, approach to the latest cloud advancements can result in greater tech maturity and stronger digital resiliency. Although a full cloud adoption may not be necessary or advantageous for some hi-tech brands, it's clear that the technology will have a larger presence in the months and years to come, and optimizing cloud infrastructures for business growth will play a crucial role in helping hi-tech brands maintain their leadership.   Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Mastering Cybersecurity Strategy: How to Prevent Cybercrimes and Threats

----- Arcticle source ----- https://www.wipro.com/infrastructure/mastering-cybersecurity-strategy-how-to-prevent-cybercrimes-and-threats/ ----- About The Author Related Articles Contact Wipro Please fill the required details to access the content Mastering Cybersecurity Strategy: How to Prevent

Cybercrimes and Threats Very recently, JBS USA Holdings Inc., the world's largest meat supplier had to shut down its systems to slow down an online attack. The company paid $11 million to a criminal ransomware gang to regain control of its systems. This is just one instance of a business, among thousands, that has been at the mercy of cybercriminals. Regardless of how big or powerful an organization is, today's sophisticated cybercriminals can bring it down. A recent Intel study reported that most small and medium sized businesses had dealt with malware (77%), ransomware (63%), data theft (63%), phishing attempts (75%), and focused hacks (67%). Two in three IT decision-makers agreed that the pandemic accelerated the expansion of their overall digital footprint, increasing their vulnerability. Simultaneously, the world of cybercrime is getting more sophisticated. Hackers use Artificial Intelligence (AI) and Machine Learning (ML) to launch attacks. Deep Learning approaches that can guess passwords use Generative Adversarial Network techniques to make phishing look old-school. Making things more difficult is that hackers are turning to exotic languages such as Go, D, Nim, and Rust to evade detection. Even when discovered, expertise in these languages is not readily available, delaying defensive actions. Nothing short of military-grade defense can stop today's sophisticated breaches. Organizations are acutely aware that as technologies and trends such as IoT, mobile, 5G, work from home, and state-sponsored cyber war grows, they need to increase their focus on security. Analysts forecast that the security market, valued at $150.37 billion in 2021, will reach $317.02 billion by 2027. With significant investments being planned, how should organizations strategies their security for maximum impact? Wipro and Intel have created a joint approach to answer that question. The method ensures organizations create a threat defense architecture and bring AI/ML techniques into play for superior threat detection. In addition, Wipro simplifies recovery from an attack using automation for service-level tasks. This helps accelerate vault-to-production data recovery. Click to access a complimentary Gartner® research on Innovation Insight for Leveraging Isolated Recovery Environments and Immutable Data Vaults to Protect and Recover From Ransomware. Recommendations for a cyber resilient organization The hallmark of an excellent security strategy is that it attempts to reduce the time taken to identify, analyze, respond, and recover from an attack. There are five cornerstones on which an organization can build its ability to do this: Technology elements for cyber-resilient data management Wipro's cyber resilience program focus on the cornerstones by including: The reimagined 3-2-1 Resiliency Principle It is time for organizations to re-evaluate the classic 3-2-1 Resilience Principle in a hybrid and multi-cloud environment. The principle requires an organization to keep at least three copies of its data—two on different media and one offshore. With distributed IT, data mobility, and increasing exposure to the cloud, it is best to use a solution that offers air-gapped and multi-cloud tertiary copies. Our reimagined approach (see Figure 1) balances cost, protection, manageability, and recovery speed. Wipro's Enterprise Recovery Vault (ERV) Wipro leverages Intel's technology to deliver a nextgen ERV. The service comprises end-to-end consulting, planning and design, implementation, and managed recovery operations. Organizations use our service to set up their ERV, a clean room and a landing zone. These enable periodic tests and validation and post-incident forensic analysis. Intel's foundation for a secure and scalable ERV Intel's latest chipset and Xeon scalable processors provide

breakthrough technologies for security and performance. The most important building blocks for nextgen ERV include: a. Optane, Intel's revolutionary high-performance, persistent, non-volatile memory used to expand storage. b. A Trusted Platform Module (TPM) with Intel's Unified EFI and TPM cryptography ensures a trusted execution of the boot process throughout the virtualization layer and the operating system's secure login process. Without UEFI Secure Boot, malware developers can exploit pre-boot vulnerabilities. ERV uses this feature to ensure safe operations from BIOS to the data landing zone. c. Intel Xeon Virtualization, where 3rd Gen Intel Xeon Scalable processors allow more VM density per server and hence more applications with inline encryption. d. Intel's CPU integrated memory controller (IMC), a key component for performance with features such as tiering hot data closer to the CPU on the L3 Cache. IMC also increases memory bandwidth and enhances data management. Core ERV solution The ERV is built on modern backup and data management (see Figure 2). The main components of the ERV solution include: Typical vault sizing begins with the minimum solution and expands to 500VMs, 2000 VMs, and 5000VMs as per the sizing of the applications. The security baseline and governance are managed as per managed ERV: The Wipro-Intel advantage Wipro's managed ERV solution allows clients to rapidly expand capacity and run security operations in conformity with local data regulations. Wipro's team uses its expertise in Risk Intelligence, Data Management, Security Management, and IAM to focus on standardization and automation using ServiceTheatre and best-in-class solutions. Intel's technologies reduce costs, provide SLAs for data recovery and enhance security. Closing note Wipro's partnership with Intel provides the right capabilities for assessment, solution architecture, and lifecycle management for organizations keen on creating military-grade security. Gartner, Innovation Insight for Leveraging Isolated Recovery Environments and Immutable Data Vaults to Protect and Recover From Ransomware, Jerry Rozeman, Michael Hoeck, 28 September 2022 Gartner is a registered trademark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved Mayur Shah General Manager and Global Head for Wipro's Data center & Hybrid cloud practice development and engineering Mayur Shah is a GM & Global practice head for Wipro's Data center business. He is also a Distinguished Member – DMTS at Wipro. He has a track record of incubating and maturing emerging technology practices. In his current role his charter includes driving overall strategy and priorities at Wipro for DC practice. He has spent over 20+ of his 24+ years' experience in Wipro being part of niche practices and offering. He has rich experience in strategy and operations entailing building the niche solution offering and new business development. Mayur's sound understanding of Infrastructure Technology Outsourcing (ITO) has helped Wipro acquire new business while handling many deals of varying sizes. He has broad exposure of developing solutions for several industry verticals in both domestic and global market. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with

the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Business and Security Risk

About The Author Related Articles Contact Wipro Please fill the required details to access the content Business and Security Risk Moving from Reactive to Proactive November | 2022 From outdated server infrastructure and operating systems to manually maintained network gear and unpatched end-user compute: there are many ways that technology can expose organizations to increased security risks and outages. To avoid these risks, businesses need to fully understand the health of their IT systems and take a proactive approach to managing the IT infrastructure that is running all workloads, not just the critical ones. There are many resources that can help organizations evaluate their current security posture and move from a reactive position to a proactive position. It is critical that IT organizations become not just the providers of these services, but partners to the businesses implementing them. Maintaining the compute power How well do you know the health of your business's compute power? Are you sure it's not putting your company at unknown risk? Whether your compute power is located on-prem, in a co-location, or in the cloud, there are multiple layers of maintenance that need to occur on a regular basis. If not properly maintained, each device and layer of its maintenance is a potential security risk There are three parts of the compute layer that need to be considered: the firmware of the hardware components, the operating system (OS) itself, and the major software components that control functions within the OS. 1. The firmware layer Updating firmware helps address critical problems, such as unresponsive servers, which can put your system at risk. Firmware updates also correct product issues such as ROM or processor functionality to improve system performance, and make the system easier to service. Keeping firmware up to date is critical to maintaining system stability, performance, and security, yet investigating firmware is not part of regular maintenance for many organizations. Some do not check it at all. It is important to update firmware (also called "flashing the ROM") as part of regular service maintenance, and to check for specific firmware updates between regular updates for optimal performance. 2. The OS layer The OS layer includes the OS of the virtualization layer and the OS of the physical or virtual server. All OS vendors provide regular patches or updates from their operating systems. Many organizations rely on third-party solutions to handle these updates, which can sometimes lead to issues if the processes are not fully understood and co-managed. For example, when a new patch is released that supersedes a prior patch, third-party systems may report that the prior patch is "compliant" because it is no longer needed, even though it was never installed. Or there may be prerequisites missing; the system has not installed many of the required patches, but reports that the patching process script is complete even if the patch installation does not. Business restrictions on system reboots can also cause issues. The patch is completed, but some operating systems will continue using the old code

until they are rebooted. These are common scenarios that can increase security risks and jeopardize system stability. 3. The software layer The third layer is the major software components — drivers or other code that is managed by the OEM or third parties — that control system functions within the OS. Like OS patches, these major software components are critical to maintain performance, stability, and security. For the most part, these three layers exist in all the hardware components in the datacenter, whether on-prem, co-location, or cloud. (Some hardware does not have reprogrammable firmware or has parts that are not reprogrammable. Some operating systems are controlled by a peripheral supplier and therefore are out of scope from "normal" operations.) With cloud computing, businesses pay hyper-scalers to manage firmware and physical machine maintenance, as well as their virtualization layers, but the organization is still required to manage the rest. Network modernization Do you have a holistic understanding and uniform set of practices across the whole network? IT networks are the fabric connecting everything in the modern enterprise, so it is critical that they are adequately maintained. Ransomware and other cyber-attacks can proliferate through design or maintenance issues throughout networks. However, keeping networks up to date can be challenging, and even necessary maintenance such as updating operating systems and installing patches can put networks at risk. Many organizations do not have full redundancy in all their switching layers, leading to single points of failure, meaning one failed device can bring down multiple other devices and applications. Businesses concerned about potential routing issues sometimes avoid rebooting at all costs because there is a risk that a switch may not come back on after it is rebooted, or that it will come back on improperly and require remediation. Changing consumer and industry demands have exacerbated these issues. Businesses feel pressure to provide services that their IT program does not currently support (or does not adequately support) and go outside of IT to pursue new technologies without a proper implementation strategy. In the rush to embrace cloud computing, for example, some businesses have failed to properly enroll IT in the transition, forcing IT to take a reactive role that can lead to gaps in security and usability. To keep up with business shifts and the growth of cloud, organizations need to expand their networks while maintaining IT performance and resiliency. Wipro sees a lot of organizations that are working toward software-defined networks (SDN), but these networks are sometimes implemented only in the greenfield spaces rather than holistically across the network. This approach increases complexity, cost, and risk down the line because the SDN is not being integrated with the legacy system. Piecemeal modernizations are fine, but they need to be done strategically, working toward a goal that accounts for the entire network. Another major risk area is how the legacy networking environment was put together. This is both a business risk and security risk. Manually coded rules controlling user movement or ports, for example, are not always consistent. Sometimes there is less accessibility management in legacy data centers, or one admin might have started by excluding everything and opening as need while others have started by allowing everything and blocking as issues arise. When security events occur, complex and inconsistent network management increases downtime and vulnerability, leading to more penetration points for cyber-attackers. Workplace security and mobility With the push for zero-trust environments, the need to be diligent is increasing as well. What is

your current level of risk? Are your most precious assets really protected and are they helping to protect the enterprise? Whether on site or remote, employees are a risk to the business. It can be easier for organizations to manage how employees access company networks when they are working in the office rather than remotely, but human error and underdeveloped security strategies still pose risks. To reduce these risks while still enabling flexible ways of working, organizations need to focus on a few areas in particular. Hardware Like server infrastructure, one of the most often overlooked areas of the worker environments is the hardware, including desktops, PCs, and mobile devices. While most companies have processes in place to bring machines up to spec when they are ordered, some assume incorrectly that machines come from the OEM with the latest hardware firmware loaded. All new machines need to be processed, their hardware brought up to current firmware revisions to address any issues with applications, stability, or security vulnerabilities. Operating system After the hardware is fully updated, the operating system, drivers, and agents need to be updated to eliminate any business or security risks. Businesses sometimes think that they are saving money or streamlining processes by skipping this step, but those costs are almost always deferred to the end user. Employees cannot do their jobs effectively if they are fighting with their devices. And if the operating system on those devices is out of date, employees may be putting the company at risk just by doing their job. Maintenance Once companies set employees up with the right hardware and OS assets, businesses need to ensure they have the processes in place to maintain those assets. There are many elements to a proper maintenance program, such as scanning and maintaining of all the hardware code from the BIOS to potential firmware of the embedded devices (drives, graphic processing units, network interfaces) as well as all the increasing variation in peripherals. This can be increasingly extensive with additions of things like AR and VR. There is also the software for the OS, drivers and agents that need to be maintained. Finally, it is important to make sure, especially for critical security patching, that reboots occur. End users tend to put off reboots, especially in the engineering and factory worlds, to avoid downtime, but the risk of exposure increases until all necessary reboots are completed. Getting proactive instead of reactive It is critical for companies to transition from a reactive IT program to a proactive one — working to understand what their business needs will be in the future and how to apply technology to achieve them while addressing any associated security risks. What's preventing your organization's transition from reactive to proactive? Are you working with a lot of legacy tech debt? Are outages and security incidents taking too much time? Do your teams need upskilling and cross training? These questions can help you identify priority areas in your business's digital transformation. Working with an experienced technology partner can help you better understand the transformation your business needs and strategize the best path forward. To learn more about Wipro's approach to Accelerating Your Innovation, visit Innovation. Nicholas Holian Global CTO and GM, Wipro iCORE-Cloud Infrastructure Services Nicholas Holian serves as the Global CTO and GM for Wipro's iCORE-CIS business unit with a focus on customer growth strategic transformations using new and emerging technologies and methodologies. Nicholas has been helping customers understand how to take advantage of cost savings, automation, cloud and other technologies to accelerate their business transformations to

meet their customer demands. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Why 5G? Isn't 4G good enough?

----- Arcticle source ----- https://www.wipro.com/infrastructure/why-5g-isnt-4g-good-enough/ ----- About The Authors Contact Wipro Please fill the required details to access the content Why 5G? Isn't 4G good enough? December | 2022 As of late 2021, mobile networks carry around 300 times more traffic than they did in 2011. 5G networks are predicted to have more than 1.7 billion subscribers and account for 25% of the worldwide mobile technology market by 2025, according to the GSM Association and Statista. Why should you switch to 5G? The answer lies both in technology's march forward and the explosion of mobile devices that are hungry for the increased capacity of an upgraded network. 5G's promise to business is to reimagine and optimize company operations. It's a big promise in a world of pronouncements of transformative technology. Why transition from 4G to 5G? The primary reason for upgrading the network is to support the growing number of devices that demand internet access. These devices require so much bandwidth that the existing 4G network can't deliver long-term.   By transitioning to the 5G network from 4G, mobile phone users soon notice that connections are more reliable with less latency. Latency refers to the delay between sending and receiving information. In other words, less time waiting for things to happen, plus fewer dropped calls. 5G also improves signaling with no packet loss. Feature comparison between 4G and 5G 5G's enhanced broadband, ultra-reliable latency, and fit with machine-to-machine communications also opens the door to mission-critical applications, industrial automation, augmented reality, smart cities, and telemedicine, to name a few. The point is, it's a future made possible with 5G that is impossible with 4G. As a result, the great 5G network buildout is well underway. 5G features and capabilities Features of 5G stand out that will usher in new capabilities and use cases. The timetable for evolving to 5G Transitioning from 4G to 5G won't happen overnight. The pre-launch phase occurred in 2020. The period now is the launch stage with services starting (day 0+), and then an explosion in new use cases and products happening in 2023 and beyond (Day 1+).   Moving to 5G requires new spectrum and technology 5G and all its promises couldn't take place without three categories of spectrum and technology: new spectrum, spectral energy and efficiency, and new network architecture. Understanding 5G Core 5G Core refers to 5G's service-based architecture (SBA) that enables authentication, security, session management, and aggregation of traffic from linked devices. It's a sophisticated integration of network activities with integrations based on http/rest APIs. 5G Core Elements – How 5G

functions? User equipment (UE) like 5G smartphones and 5G cellular devices link to 5G core through the 5G New Radio Access Network and then use DN for internet connections. User Plane Function (UPF) oversees transporting IP data traffic between UE and external networks. Mobility Management Function (AMF) is the entry point for the UE connection. Based on the service requested, the AMF selects the right Session Management Function (SMF) to handle the user session. The Authentication Server Function (AUSF) lets the AMF verify the UE authenticity and grant access to 5G core services. Other functions provide the policy control framework, apply policy decisions, and grant access to subscription information to govern network behavior. 5G is an evolutionary step forward from 4G Network traffic has grown exponentially, demanding 5G's new architecture. Many new and exciting 5G services will be here in a matter of months. Industrial use cases and consumer examples already exist. Moving from 4G to 5G offers improvements in latency, security, capabilities, and more. The 5G uses cases for specific industries offer a glimpse into what is possible. 4G was good and infinitely better than 3G. However, 5G has the potential to be great, transforming industries and improving the lives of billions.   Shalvi Yadav Senior Consultant - 5G and IoT Practice, Wipro Shalvi has over 14 years of experience in presales, delivery management, customer success, partner enablement, packet pore operations & implementation, network security implementation. She has the presales, delivery, and implementation expertise in various packet core technologies 2G, 3G, LTE (4G), 5G as a service, Cisco security portfolio, application centric infrastructure and routing & switching. She is currently working on various 5G solutions for multiple industries. Ashish Khare General Manager & Practice Head – IOT & Smart City, Wipro Ashish has over 26 years of experience in Consulting, SI & Manage Services in IT & OT. He is currently working on various 5G and IoT solutions for multiple industries. He heads the 5G, IoT and Smart City CIS group. He is working on IT-OT convergence & Service Management framework for IoT. He owns multiple IP's including Wipro Smart i-connect™, Platform for Smart Spaces & IoT, won innovation awards. =====================

From broken experiences to breakthroughs: accelerating healthcare success in a hybrid working world

----- Arcticle source ----- https://www.wipro.com/infrastructure/from-broken-experiences-to-breakthroughs-accelerating-healthcare-success-in-a-hybrid-working-world/ ----- About The Authors Related Articles Contact Wipro Please fill the required details to access the content From broken experiences to breakthroughs: accelerating healthcare success in a hybrid working world With more options about where, how and for whom employees want to work, the life sciences and healthcare sector must not only adopt digital methods of working – but design for the future human

experience. This means not just creating one-size-fits-all hybrid workspaces but designing solutions that meet each employee's priorities, both now and in the future. Hybrid working is here to stay, but the often-piecemeal approach to digital transformation taken by organizations in the early stages of the Covid-19 pandemic – out of necessity, rather than vision – must now be transitioned into a long-term strategy for flexible, secure, and productive working models. Already, organizations in the sector are responding to this need, with Deloitte reporting that 82% are planning to continue the digitalization of services beyond those pandemic-enforced changes. This sector is not alone in adopting hybrid working for the long term; it has become the norm across multiple verticals. However, the healthcare and life sciences sector relies more than most on in-person work and collaboration — from time in the laboratory to field research and conducting trials. To continue conducting these activities successfully while also facilitating employees' ability to work productively from anywhere, the sector needs to adopt technology that provides superior, joined-up user experiences. Fractured experiences such as fragmented communications and poor accessibility to critical resources can damage the user experience, and worse still, hinder progress to potentially life-saving research and development. These employees rely on the ability to communicate information accurately, seamlessly and in real-time - and they also need to do so securely, without having to worry about compliance concerns. In fact, a study on digital workplace productivity, including life sciences respondents, revealed that employees achieve just 60% of their potential work output due to poor connectivity and application experiences, making intuitive remote working tools and environments a top priority. The sector has already shown it can work quickly and with huge success throughout the pandemic, delivering life-saving vaccines while also driving other medical and scientific research forwards, including the development of a novel drug for Primary-Progressive Multiple Sclerosis and a 'Squirrel Parkour' study that represents a breakthrough in robotics. With hybrid working firmly established and continuing to evolve, companies in this sector must grasp the opportunity to achieve successful transformation, ensuring breakthroughs like this continue to be made in a new working model. Focusing on the power of a human, user-centered approach will help to achieve this, while leveraging technology to improve interactivity between dispersed teams will accelerate research, development and release cycles. In focusing on a long-term, future-thinking approach to the workspace, the sector must take the following key considerations into account: Fortunately, UX software, virtual desktop platforms, and Desktop-as-a-Service (DaaS) managed services will optimize audio-video collaboration capabilities, preventing delays and leading to a rich, high-definition user experience on any device - and enabling reliable service delivery on a hybrid cloud platform. Solutions that allow for 3D graphics cards to be present on a few servers, where users can access them from shared sessions, help to provide visually rich images from any mobile device, too. For life sciences firms, having the most powerful tech solutions as part of their infrastructure is essential for innovation and exploration. Take cutting-edge Cryogenic Electron Microscopy (CRYO-EM) - a next-generation imaging technique that allows scientists to observe biomolecules in thrilling detail at sub-nanometer resolution. For this, specialized digital tools transform cryo-EM samples - encompassing thousands of high-resolution (4K) two-dimensional images -

into 3D models and motion clips. And so, only next-generation future-fit technologies will do. The optimal user experience and flexibility of the digital solutions we've discussed, coupled with robust security, also facilitate agile collaboration between dispersed teams, thus streamlining the communication of crucial project information. By harnessing this technology, healthcare and life sciences companies can realize their long-term visions with a successful transformation of working models. The world relies on the sector to continually work towards creating new treatments that help people live longer and healthier lives - and this makes it vital that organizations get their digital transformation just right. The good news is, implementing advanced technologies to bring this about needn't be a daunting task. Together, Wipro and Citrix support healthcare and life sciences organizations to future fit their workplaces, with a secure, high performant Desktop-as-a-Service (DaaS), built to power productive, seamless enterprises. To find out how you can benefit from a secure hybrid work solution with superior user experience, visit our dedicated healthcare sector focused site here: Seshu Venkata General Manager and Global Head for Wipro Virtuadesk (co author) Seshu is an Experienced Technology and Business Leader with a demonstrated history of working in the management consulting industry. He is skilled in Service Delivery, Project Governance, Requirements Analysis, Agile Methodologies, and Business Process Improvement. He is also known for his Strong operations skill in the industry. Satya Gadepalli Head of Platform Engineering for Wipro Virtuadesk (Author) Satya is a Digital transformation leader with more than 25+ years' experience in large product engineering. Currently he is building products & solutions around user centric experience metrics for DaaS Platforms based on SRE, Observability, FinOps, Rapid DevOps and User Experience. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

How 5G Networks will Accelerate the Journey from Smart Cities to Cognitive Cities

----- Arcticle source ----- https://www.wipro.com/infrastructure/how-5g-networks-will-accelerate-the-journey-from-smart-cities-to-cognitive-cities/ ----- About The Authors Related Articles Contact Wipro Please fill the required details to access the content How 5G Networks will Accelerate the Journey from Smart Cities to Cognitive Cities January | 2023 The digital evolution of cities has gained tremendous momentum in the last few years. The cities today are increasingly connected, competitive, prosperous and sustainable, and are rightly known as Smart Cities. Accelerated innovation

has led to new opportunities, optimization of infrastructure and urban activities in these Smart Cities. 5G networks are now here to further the journey of Smart Cities to Cognitive Cities, that will be empowered by advanced technologies and will be more proactive and predictive in nature. 5G networks would enable collaborative decision making and analyze multi-dimensional consequences of an event and its impact on society by the convergence of siloed systems, which would lead to faster and effective response. 5G networks will play a very important role as an enabler for cognitive computing to enhance the performance of urban services. As we see, today's Smart City is set to transform into a Cognitive City, thanks to 5G technology. In fact, Gartner predicts that by the end of 2024, 60 percent of communication service providers will commercialize 5G service covering Tier-1 cities. Smart Cities, an evolution of cities adopting digital transformation for monitoring, managing and reporting the overall performance of the city with citizens as a stakeholder, began a few years ago. However, the road ahead is still a long one. Evolution and adoption of digital transformation technologies like AI, machine learning (ML), 5G, Big Data and Internet of Things (IoT) serve as catalyst, equipping city management to be more dynamic and shift from a Smart City to Cognitive City. Cities are already adapting to technologies that enable monitoring of various city parameters like energy and water consumption, waste management, traffic analysis etc., helping urban authorities with consumption pattern and trend analysis. This helps them take appropriate steps like traffic diversions, improved water supply planning and other remedial measures. At the same time, cities are experiencing persistent operational challenges due to siloed functions, which impact faster decision making and holistic development of the city. This need to be resolved with systems interacting with the population and helping to take faster, informed and collaborative decisions by authorities aimed to improving the quality of life for the citizen. Therefore, the pace of urbanization in some of the major cities calls for disruptive technologies that allow intelligent decision-making at the source with less human interventions and fewer delays. 5G Network plays a pivotal role as an enabler for a shift from Smart City to Cognitive City technologies. 5G enabled cities utilize technologies like artificial intelligence (AI) and cognitive computing to enhance the quality and performance of urban services.   Smart City to Cognitive City enabled by 5G Network City management is a large-scale operation that needs communication between multiple systems with different types and volume of data moving from sensors to applications. At present cities use a mix of wired and wireless media for communication depending on the use case, which leads to complex network operations and limitations for breaking the silos. A common wireless network with multiple bandwidth slices, catering to multiple city systems would be an appropriate choice for communication infrastructure. 5G Network is better suited to meet this requirement of cognitive cities because of multiple connectivity options like the massive Machine Type of Communication (mMTC) for low bandwidth and high density requirements, especially as it supports up to one million device connections per square kilometer. This will enable high-density deployment of a massive number of IoT devices within a small geographic area. Similarly, 5G network can offer very high bandwidth for large volume of data, like video streaming, for specific use case of city surveillance and traffic monitoring. 5G networks with improved network slice management

and dynamic access will play a key role in cognitive computing for the city systems. Cognition for a collaborative decision making Cognition, in the context of a connected city, is the process of continuous learning by different urban systems through an enhanced automated workflow powered by suitable Internet of Things (IoT) interventions and reliable communication like 5G, which allow them to learn from the past and adapt to regular changes. Cognition enables city authorities to better manage the challenges of rapid urbanization. Cognitive IoT, and AI/ML based systems and technologies advance smart city architecture to support innovative applications. Some of these applications place high demands on bandwidth, but can have huge potential to improve critical aspects of cities like intelligent intersections for road safety, location-dependent services for better mobility, vehicle to infrastructure (V2I) for better traffic management, and in-vehicle internet to support autonomous vehicles. By combining cognitive analytics with 5G communication, Cognitive Cities can perform collaborative decision-making in various departments within city government, which helps to achieve a dynamic, ever-changing cityscape that is flexible and resilient. For example, if a hyper-localized weather monitoring system predicts heavy rain in a city area, the traffic management system can divert the traffic to avoid water-logged areas as well as trigger emergency response team and other urban authorities to be ready for evacuation of citizen in that area or handle any untoward incident, through a faster collaborative decision making, involving multiple agencies. A confluence of 5G, IoT and Edge AI empower Cognitive Cities 5G, IoT, and Edge AI are transforming the world we live in. Cognitive deployment in different sectors within a city like transportation, utilities, health care and construction, among others, ease operations and management, thereby reducing the scope of manual interventions. 5G, along with Edge AI, will enhance this experience multifold, resulting in real-time monitoring and control, better resource utilization, and reduced cost. Traditional urban intelligence can be freed from silos and integrated to give a holistic view of the city. The infrastructure of cloud-edge combination powered by 5G communication will facilitate a seamless connection between urban systems and the various stakeholders. Think of a city with a water distribution network with zero leakage and zero waste, and no human intervention to operate valves — all driven with close loop need-based water distribution with cognitive capabilities. Similarly, this can impact city traffic with near zero wait time at junctions and near zero accidents. Citizens at the core of cognition initiatives 5G network can communicate within 1 milli second in comparison to 4G, which is above 40 milli second. The combination of high density — the speed to upload and download data — and low latency, which compresses the time between sending and receiving signals, will transform cities. Most of the 5G and IoT infrastructure being created in the urban space is aimed at catering to the people who live in urban areas. This transformation of a city from smart to cognitive with 5G as a catalyst, will significantly improve several quality-of-life indicators. The reimagined city will be resource conscious as the cognitive ability offers a real-time performance and utilization in terms of faster communication between different sensors to application and between siloed systems, and that will unleash other dimensions that analyze and predict consequences. It eventually will be beneficial for citizens, city governments and, eventually, economic growth in the long run. Raj B.R Practice Director – 5G IoT & Smart City Raj heads the

new-age-solutions team with the charter to develop IoT solutions for the 5G era. He is the Practice Director of Wipro's global Smart City team and plays a key role in consulting and business initiations with global clients. He has 28 years of experience in multiple domains with proven track record for innovative technologies, customer centricity and passion for excellence. Ashish Khare General Manager & Practice Head – IOT, 5G & Smart City, Wipro Ashish has over 30 years of experience in Consulting, SI & Manage Services in IT & OT. He is currently working on various 5G and IoT solutions for multiple industries. He heads the 5G, IoT and Smart City CIS group. He is working on IT-OT convergence & Service Management framework for IoT. He owns multiple IP's including Wipro Smart i-connect™, Platform for Smart Spaces & IoT, won innovation awards. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. =====================

Offloading TETRA traffic to 5G Mobile Service

----- Arcticle source ----- https://www.wipro.com/infrastructure/offloading-tetra-traffic-to-5g-mobile-service-tetra-systems-role-in-a-5g-world/ ----- About The Authors Related Articles Contact Wipro Please fill the required details to access the content Offloading TETRA traffic to 5G Mobile Service: TETRA system's role in a 5G world TETRA system's role in a 5G world November | 2022 How will TETRA system's role change as the world migrates to 5G? User needs and use cases will no doubt play a factor. TETRA has coexisted with different generations of mobile network from 2G to 4G. While mobile networks witnessed exponential popularity and expansion amidst users, TETRA saw its own share of growth. TETRA never faced competition from mobile networks. This PoV evaluates whether TETRA and 5G can coexist or if 5G will replace TETRA. TETRA is a TDMA (Time Division Multiple Access) mobile radio system defined by ETSI TS 100 392-XX-XX series of specifications. TETRA has been a choice of services like Utility, Hospitals, Airport, Railways, Fire, Police, Warehouses and Mines and many more for more than last two decades. The users of PMR (Professional Mobile Radio) or PAMR (Public Access Mobile Radio) find TETRA quite useful. Comparison of TETRA and 5G Features TETRA offers benefits and levels of service that mobile technologies and networks were unable to provide in certain scenarios. 5G network can handle features such as network slicing in its own way. Blocking Traffic There is no blocking in TETRA system, which implies that calls can get through in all the cases. The mobile networks of past were designed with certain amount of traffic calculations mostly supporting from 0.1 Erlang to 0.3 Erlang of traffic. The 5G mobile Technology enables the Network Slicing function. By the capability of

network slicing, certain services can be given a better QoS (Quality of Service) or non-blocking traffic capability. Direct Mode Operation While many of the calling features can be replicated in 4G/5G mobile networks, DMO (Direct Mode Operation) feature is one of the benefits of the TETRA Radio System. It enables the handset to communicate with another handset for a limited distance without involving the base station or other elements of the network. This is an extremely useful feature in case of disaster. Deployment of 5G system enables use of various commonly available phones and a hybrid operation that enables much higher network availability. The hybrid mode of 5G deployment offers great advantages. Hybrid mode is private 5G and Telco provided 5G network working in combination. This scenario is quite useful in the telcos deployed 5G SA (Standalone) networks. Data Network Support in instrumentation is another requirement that is expected from a communication network. The instrumentation requires much higher bandwidth as compared to voice. Most of the major users of TETRA are also deploying IoT or Industry 4.0. A new specification of TETRA 2.0 is introduced to increase the bandwidth of data on TETRA. Still the best-case bandwidth is few hundreds of Kbps. Apart from this, using TETRA radio for data communication from machines requires a modem that is too large and requires a bigger antenna due to lower frequency of operation. The 5G modules-based modems are quite small, and they support bandwidth of the several hundreds of Mbps (Theoretically 20 Gbps). Not only this, 5G can enable uRLCC, mMTC or eMBB type of services offering better QoS in such cases. Hardware TETRA has simple architecture, but it requires custom hardware, and maintenance team needs to inventory more spares. On the other hand, due to network function virtualization, 5G has the majority of the system requirement that are met using cloud or COTS products that makes supporting a private 5G network a less cumbersome activity. Coverage Coverage area may be challenging for TETRA for certain applications like police or fire that require covering a vast area. In such cases, having a captive or private network is a challenge. The challenge in using the existing mobile network has been the availability of channels during emergencies. With the 5G network, along with network slicing, a guaranteed QoS can be given to such services, plus an advantage of wide geographical coverage can also be augmented. This would save users from requiring separate spectrum with TETRA. There are 5G flavors like 5G CBRS and DECT NR+ that can operate in license-exempt band. Applications in UE (User Equipment) While TETRA radio handset supports a few applications, developing applications for such system is tedious. On the other hand, it is quite easy to develop applications for a 5G mobile handset working on commonly available operating systems. Moreover, 5G handset/UEs offer better cost benefits than the TETRA radio handset due to economies of scale. Working with contemporary technologies Increasingly, the workplace is using technologies like automation, AI, Analytics and IoT. To enable these technologies, a large bandwidth with low latency is required. Even machines used in normal or emergency operations require high bandwidth and low latency to implement automation and AI. Apart from these popular applications, there are a number of scenarios that require two-way video streaming. In such situation, 5G is the inevitable choice. Conclusion While both technologies have their advantages, it really depends on the use case. In many of the applications where high baud (bandwidth) rate or low latency is important, 5G has an edge. However, certain applications like

underground mines where voice communication is critical and LoS (Line of Sight) is difficult to obtain, TETRA has an edge. In some cases, 5G and TETRA can both be deployed, and the unified system can be connected at the trunk. In such cases, people would appreciate the option of having both technologies. Some areas can be covered by private 5G while others are serviced by TETRA. For example, in environments like hospitals, warehouses, oil & gas refineries and airports, where communication happens above the ground surface and data communication is important, it makes sense to use private 5G or hybrid 5G. The handsets are small and mobile users can access all their applications, thanks to 5G technology and the Network Slicing function.   In addition, a great advantage of 5G is the ability to hook to any network in case of an emergency. 5G for emergency use, along with automation, AI, Analytics and IoT, make 5G an excellent choice for developers. In the short term, both technologies will coexist. However, in the long run 5G is expected to take over the majority of TETRA traffic. Swapnil P N Srivastava DMTS- Senior Member (Communications), Wipro. Swapnil has over 28 years of experience in Telecom. He is experienced in Telecom Equipment Design, Baseband Design and System Integrations working in various functions like Equipment Design, Product Management, Telecom Technical Consulting and Presales. He owns patented IPs in the field of optical network. He is currently leading 5G network practice in Wipro CIS team. Ashish Khare General Manager & Practice Head – IOT, 5G & Smart City, Wipro Ashish has over 30 years of experience in Consulting, SI & Manage Services in IT & OT. He is currently working on various 5G and IoT solutions for multiple industries. He heads the 5G, IoT and Smart City CIS group. He is working on IT-OT convergence & Service Management framework for IoT. He owns multiple IP's including Wipro Smart i-connect™, Platform for Smart Spaces & IoT, won innovation awards. Enterprise business leaders need to deal with the new volatile, uncertain, complex and ambiguous This paper provides an overview on how CIOs should transform the underlying elements of Datacenters – Infrastructure, Applications, People and Processes - to be able to quickly Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings.
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Improving Sustainability and Reducing Cost in Oil and Gas Industry

----- Arcticle source ----- https://www.wipro.com/infrastructure/improving-sustainability-and-reducing-costs-in-oil-and-gas-industry/ ----- About the Authors Contact Wipro Please fill the required details to access the content Improving Sustainability and Reducing Cost in Oil and Gas Industry February | 2023 People around the world use gasoline for transportation every day. For consumers and businesses, the most noticeable thing about

each fill-up is its fluctuating price, but they often know little about the complex process of extracting crude oil and refining it into motor fuel. For example, few are aware that crude oil only accounts for one-tenth of what is extracted at the typical well site. The other 90% is toxic wastewater. This creates significant friction for the business. Operational impacts include the need for increased scaling in wells, more corrosion of equipment and more energy consumption. Having so much wastewater also means less treatment capacity for the oil that brings revenue in the first place. The operational impacts also cause sustainability problems. Processing large volumes of water requires more energy consumption and creates additional CO_2 and NOx discharges. It also requires the use of large volumes of biocides, corrosion inhibitors, and other chemicals. For oil and gas companies, these operational and environmental impacts also create enormous pressure on the bottom line. As per industry sources, it is estimated that 45% of capital investment in the typical well, and 65% of its operating costs, go toward the management of toxic wastewater. These massive financial costs result in a significant increase in the lifting cost of a unit of oil or gas. Significant Improvement Is Possible Even many inside the industry assume that the wastewater to crude oil (90% : 10%) ratio is fixed and cannot be improved. The fact is, making the overall operation more efficient reduces wastewater and brings down per-unit production costs by up to 23%. This overall potential cost reduction can be the result of efficiencies gained throughout the process, as shown in Figure 1. By optimizing operations at the progressing cavity pumps (PCPs), organizations can realize a 10% reduction in energy costs and reduce chemical use at the wellhead by 7%. By having to process less water, the first-stage and second-stage production separators can see further reductions in both power consumption and chemical use, and the emulsion breaker also requires less energy. Finally, less volume means huge savings in the cost of treating, transporting, and disposing of the wastewater. This includes 40% less chemicals used in the treatment process and 13% less in the pipeline; and a 27% reduction in power consumption for treatment and a 40% reduction for disposal. The reason that such significant savings are possible is because of inherent inefficiencies that have remained unaddressed in the drilling process for decades. These points of friction are so ingrained at many organizations that even longtime veterans may be skeptical of resolving them. The problem is that each element of the very complex process of drilling has historically been managed in a silo. To optimize operations, improve efficiency and reduce the volume of wastewater, organizations must take a holistic approach, using automation to optimize each step in the process and minimize waste. Architecting a Solution With an advanced and unified orchestration and analytics platform, all elements of the drilling process seamlessly work together to ensure maximum efficiency and minimal waste. The platform is built around data concentration units (DCUs)— computational units that acquire data and orchestrate different data sets between an advanced analytics platform, a digital ecosystem platform and the drilling and processing infrastructures (Figure 2). Actuation sensors and actuators measure and control the flow at the rig site and at the pumps. Micro Edge Computing infrastructure enables data processing onsite before it is transferred to the DCUs. Since drilling rigs are typically in remote location, this transfer is enabled by satellite communications. At the refinery, MECs are again used to process data from all aspects of the

process. This information uses a secure data exchange (SDX) solution to transfer the data to the DCU. The SDX tool also facilitates the integration of the operational technology (OT) systems that provide plant automation and controls with the DCU. Doing significant computation at the edge and rapid transfer of data by satellite results in data collection and analysis in real time, enabling organizations to make drilling adjustments on the fly to reduce water production. It also builds both efficiency and resilience into the overall process, making it more likely that problems are solved before they become unmanageable. Improving Sustainability and the Bottom Line By taking a holistic, strategic approach, it really is possible to reduce the amount of wastewater that results from drilling, thus boosting operational efficiency. This, in turn, significantly reduces chemical use and power consumption throughout the process, resulting in big savings in operating costs. And as the orchestration and analytics platform is standardized across an organization, leaders can anticipate less wastewater for future wells— resulting in savings in capital expenses for new projects. Needless to mention that this supports sustainability, has a positive impact on the global economy and makes the earth a better planet. Purushottam Konar Global head of Products & Solutions Engineering Purushottam is the Global Head of Product and Solutions Engineering at Wipro. He has over 24 years of experience in design, development and deployment of enterprise solutions and products for large multifunctional organizations across different verticals. Purushottam has extensive experience in architecting & building products, platforms and solutions in the IoT and IIoT domains. He is currently responsible for the global product and solution engineering charter of Wipro's IoT practice.   Ashish Khare General Manager & Practice Head – IOT, 5G & Smart City, Wipro Ashish has over 30 years of experience in Consulting, SI & Manage Services in IT & OT. He is currently working on various 5G and IoT solutions for multiple industries. He heads the 5G, IoT and Smart City CIS group. He is working on IT-OT convergence & Service Management framework for IoT. He owns multiple IP's including Wipro Smart i-connect™, Platform for Smart Spaces & IoT, won innovation awards. ======================

Decode business value with a strategic approach to cloud migration

----- Arcticle source ----- https://www.wipro.com/infrastructure/decode-business-value/ ----- Download the ebook now to explore the following: HOW WHAT WHY Contact Wipro Please fill the required details to access the content eBook - Unlock the true potential of agile cloud infrastructure Why is it critical for enterprises to design a seamless cloud migration roadmap? How does it help in driving real business value? Today, a cloud-first strategy has become paramount for enterprises across industries. Shifting towards a cloud-first strategy enables enterprises to keep pace with the dynamically changing business environment while adopting scalability, agility, and security. However, designing a strategic move to the cloud

comes with its own set of complications. While migrating to cloud many enterprises grapple with challenges such as refactoring business applications, eliminating technical challenges, managing the time taken for the migration, and optimizing investments. Wipro's Boundaryless Enterprise (BLE), powered by VMware Cloud on AWS, provides a consistent roadmap for increasing business agility and reducing total cost of ownership (TCO), enabling a seamless and streamlined cloud migration. Wipro's Boundaryless Enterprise (BLE), powered by VMware Cloud on AWS, brings in the collaborative power to help enterprises reduce lead time and overall effort while making it easier to scale. With deep industry expertise, the partnership helps enterprises pivot business outcomes, and strategize, execute and manage their cloud journeys. to steer the migration plan and avoid a prolonged stall. is an optimized way to upgrade infrastructure while lowering resource requirements. is it important to integrate an end-to-end solution that brings together the critical elements for a seamless and safe cross-cloud migration. =====================

Service Desk of the Future: Smart, Fast and Efficient

----- Arcticle source ----- https://www.wipro.com/infrastructure/service-desk-of-the-future-smart-fast-and-efficient/ ----- About the Author Contact Wipro Please fill the required details to access the content Service Desk of the Future: Smart, Fast and Efficient Wipro Live Workspace™ OneDesk: Shaping the future of the workplace with differentiated services March | 2023 Evolution of the service desk The service desk has been a cornerstone of IT departments for decades, but the evolving needs of employees are now significantly changing the future of work. The help desk is transitioning from a reactive, manual intervention-based service model to an approach that is proactive, intuitive, and digitally enabled. This transition is taking a quantum leap forward through the adoption of new-age, next-gen technologies leveraging a multi-channel approach. The digital service desk of today is adding more and more capabilities, not just to keep up with business progress, but for acting as a catalyst for transforming the workplace into a strong, technology-driven, and customer-centric organization. Technology enablers Digital transformation, prolific cloud adoption, and the evolution of next-gen technologies are the compelling, overarching drivers shaping the future of work across industries. The service desk must align with these changes to stay relevant for organizations. For example, cloud capabilities enable organizations to access and analyze large swathes of data and drive the analytics that help them serve customers better. As global enterprises turn to the cloud, the service desk must do so, too. Intelligent automation, AI, and chatbot technologies Automation is being integrated into the service desk to provide faster and more efficient service as it helps streamline processes, reduce errors, and save time. Organizations can achieve quicker responses to inquiries and more efficient handling of tasks such as resetting passwords, creating new accounts, and managing software updates. Intelligent virtual assistants (IVA) also augment automation in the service desk workflow. Empowered

with natural language understanding (NLU) capabilities, IVAs can further enhance the self-service capabilities with keywords and phrases from the organization's knowledge base. AI- and ML-driven hyper-automation can automate mundane and repetitive tasks, identify patterns and anomalies, and streamline operations. Hyper-automation can improve the employee experience by automating the service processes. ML algorithms can identify trends by analyzing employee information. Also, ML algorithms and techniques such as clustering or classification can identify trends by analyzing employee information. By clustering or classifying employees together, the algorithm can identify patterns and trends that might not be apparent when looking at individual employees, thereby enabling organizations to target specific activities or incentives toward that group. Self-service is the way forward The traditional help desk is also poised to transition from a transactional first-level IT support to a zero-touch service desk, implying an intelligent, automated approach to resolving issues with as little human involvement as possible. With this, organizations will steadily move towards self-service solutions enabling employees to access needed services wherever and whenever. Self-service will be especially beneficial for large organizations with multiple geo locations or employee bases, giving IT workers more time to focus on complex issues. Examples of self-service options in service desks of the future include virtual agents, chatbots, and automated systems that can reply to customer inquiries. These solutions will let employees access required information easily, cutting down on wait times and increasing employee satisfaction. Overall, self-service solutions will make the services more cost-effective, while enhancing the employee experience. Personalization of the employee experience The one-size-fits-all era has ended. The service desk of the future will incorporate persona-driven methodology to create user profiles of the employees based on their roles, devices used, and workloads, for instance. The profiles can further hyper-personalize the resolutions offered based on the key parameters. Personalizing the service desk involves tailoring it to meet the unique needs of everyone. This can include customizing the service desk interface, personalizing service requests, and providing customized responses. By using employee data, service desk teams can also create more efficient processes such as automated ticket routing and automated response systems, ensuring the best possible service for each employee. Data analytics meets the service desk Data and analytics have become the new global currency, revolutionizing the core of modern businesses by combining the power of robotic process automation (RPA), AI, and ML to glean meaningful insights across functions, including the service desk. Leveraging data and analytics at the service desk can help monitor usage patterns, identify areas for improvement, increase employee engagement, provide a more integrated and elevated employee experience, and bring greater employee satisfaction. Using analytics to track employee service requests can help service desk staff better understand factors that are impacting resolution time, resource utilization, and overall efficiency. Data analysis is also critical for providing more personalized services because service desk agents can use employee request histories to better anticipate their needs. To foster a data-driven culture that democratizes service desk analytics, companies can adopt the following features: An experiential service desk Ultimately, the service desk will evolve into an experience desk that maps employee journeys. Under an XLA-based approach, the outcome-based

service desk will foster continuous improvement and help build a customized knowledge base with feedback accumulated from experienced professionals across touch points throughout the organization. An experience-based service desk aims to offer employees an engaging, customized one-on-one experience, with seamless and agile resolution. Employees will get their questions answered even more directly and efficiently. Sidharth Mukherjee General Manager and Global Practice Head- Digital Workplace Services, iCORE-CIS, Wipro Sidharth Mukherjee (Sid) is a dynamic leader and a true technology enthusiast at heart, with over 18 years of rich, holistic experience in driving digital sensitivity and cutting-edge cloud and infrastructure services transformations for Fortune 500 organizations. Sid has a passion for delivering "what's next" and technologically improving "what's now" for enterprises while keeping a keen focus on employee experience and sustainable innovation. Currently, he is engrossed in harnessing the power of AI, cognition, blockchain, and analytics to create an intricate workspace metaverse aligned with the future of work. He is an alumnus of IIM Ahmedabad and specializes in Business Strategy, IT and Management. =====================

Engage in the virtual world of work

----- Arcticle source ----- https://www.wipro.com/infrastructure/engage-in-the-virtual-world-of-work/ ----- About the Authors Contact Wipro Please fill the required details to access the content Engage in the virtual world of work May | 2023 The Metaverse has taken the world by storm. But what exactly is the Metaverse, and how will its adoption change the world of work? The opinions on what the Metaverse is vary, mainly because the idea is still evolving. However, the time is right to explore how this technological revolution will reshape the way we work. Industry-leading analyst firm Gartner, defines the Metaverse as "a collective virtual space, created by the convergence of virtually enhanced physical and digital reality." In simple terms, the Metaverse leverages new technologies to enable the movement of people and objects across the real and digital worlds. Although still in its infancy, the Metaverse will profoundly impact virtually every aspect of business operations, including recruitment, employee meetings, strategic marketing, manufacturing, and account and asset management. Ultimately, every asset, process, or person within and related to an enterprise will be replicated virtually – and connected. Gartner estimates that by 2026, 25 percent of people will spend at least one hour a day in the Metaverse, using metaverse platforms and technologies. The Metaverse is backed by the convergence of technologies such as Web3, VR/AR, AI, blockchain, spatial technologies, social media, digital currencies such as NFTs, and connectivity technologies like 5G, IoT, and cloud. It is also device-independent, meaning the Metaverse can be accessed from a PC, Mac, tablet, TV, smartphone, or any other digital device. The Metaverse will bring significant changes to the workplace. For instance, immersive environments enabled by augmented VR and AR, that will allow employees to manipulate 3D digital replicas of equipment from their desks, providing them with practical product design

experience and training. Another example is the use of mass simulations and AI technologies, which will leverage data streams from across and beyond the enterprise to help senior executives predict future trends with high precision. As remote and mobile workforces continue to rise, the workplace is rapidly revolving. In reimagining the future workplace, businesses must prepare for what lies ahead. Now is the time to harness the power of new and emerging Metaverse technologies. The potential benefits include improved collaborations, human resources, support operations, and asset management, among others. And this is just the beginning. Discovering innovative models for communications and collaboration A productive workplace must be engaging and provide a sense of belonging and community. From this perspective, the Metaverse is a game changer that can boost meeting effectiveness with unprecedented flexibility and new immersive experiences. With the help of AR and VR technologies, employers can improve hybrid workplaces by bringing in-person and remote teams together. Employees can collaborate in virtual meeting rooms on virtual objects such as 3D models of new designs. In addition, organizations can create realistic 3D avatars that mirror the body language of employees. Businesses can even set up virtual campuses, enabling employees to move around and interact freely through their avatars. The Metaverse offers a vast environment with a range of shared and immersive experiences that enable all kinds of collaboration and co-creation opportunities for users. This unlocks new ways for customers and enterprises to interact. For instance, clients can customize a jacket to see precisely how it will look on an avatar that resembles their shape and size. Remote coworkers can also work together to create a new product in a virtual design studio. The number of interesting use cases for the Metaverse is practically infinite. Here are a few examples across industries. Thus, the Metaverse will significantly influence both physical and social interactions, and its impact will be driven by the integration of key technologies such as AR, VR, and AI. Fostering talent via virtualized training, onboarding, and recruitment Virtual environments will facilitate more effective talent identification and acquisition to keep pace with the hybrid working model. By embracing the Metaverse, organizations will take their employee onboarding and training processes to the next level, accelerating skills acquisition, and creating new opportunities for career advancement. Organizations will hold events that let workers experience physical office onboarding from the comfort of their remote offices. The Metaverse will also provide an immersive, interactive, and safe environment for equipping employees with the right skills, helping them be better prepared to face real-world scenarios. This will be done using AR and VR technologies that enable simulation-based gamification and product usage training. Reinventing support operations, improving support quality Companies across industries will be able to improve brand identification by leveraging the Metaverse for innovative approaches to large-scale events, holding product launches and customer meetings in virtual expo halls. For manufacturers, on-site data visualization and remote access to operational information will introduce a multitude of productivity and efficiency gains. These gains will range from real-time maintenance monitoring to providing assembly instructions on the equipment itself. Organizations will establish virtual assembly lines for employees to follow. This will lead to increased efficiency, optimized workflows, fewer errors, and decreased need for physical manufacturing facilities. Through VR, companies will be able to

create virtual prototypes of products, accelerating testing before items are manufactured. Virtualization for quality control will allow manufacturers to slash downtime and enhance the accuracy of their inspections. Data collection from various sources like IoT sensors, PLM, ERP, and MES will make it possible to generate digital twins of factories. Powering risk management with blockchain capabilities In the Metaverse, a blockchain ledger facilitates the recording of transactions and the management of tangible and intangible assets. Through blockchain technology, tasks like reporting, balancing P&L statements, and cash flow management will become easier, besides saving time for companies to focus on their core businesses. Blockchain makes transactions secure and reliable by ensuring that each transaction is validated. It also reduces the risk of virtual assets or vulnerabilities, resulting in more robust workflows. Inventory management using blockchain When managing inventories in large warehouses, the main aim of enterprises is to find opportunities to reduce costs. With blockchain, it becomes easier to achieve this since it ensures complete transparency in the network, helping employees keep track of any product's exact path. Since everything is made visible in real-time in the Metaverse, controlling surplus inventory, clearing out stocks, managing stock-outs, and reducing employee errors are all made much easier. Further, inaccuracies can be easily corrected, leading to reduced costs and increased revenue, helping achieve the primary goal of all businesses. Also, blockchain helps enterprises plan necessary implementations and changes by keeping track of the production and sales cycle daily, helping the business in the long run. Leveraging Spatial Computing in the Metaverse Our lives have already been made easier and inextricably linked by spatial computing. It accelerates the idea of a parallel, three-dimensional virtual reality that engages with the real world. It never shuts down, as it fuses AR, VR, and MR to realize the Metaverse concept. It enables real-time simultaneous interaction between the virtual and physical worlds. Through virtual meeting rooms, the spatial computing component of the Metaverse makes conferencing and presenting more convenient and exciting. As avatars, you may work, converse, and socialize in a detailed, three-dimensional digital environment that closely resembles the actual one. Spatial computing has developed into a significant class of technology by enabling us to manipulate and access 3D spaces for better experiences. Spatial computing has many applications, which is conclusive evidence that it will be the next phase of digital transformation. It will affect almost everyone, including retail customers, patients, doctors, employees, and CEOs. Additionally, it will be crucial in enhancing the efficiency of machine-to-machine communication. Humans are powerful because of their capacity for collective thought. The same will be made possible by spatial computing, which will enable millions of people to communicate without using words. To power this, the collective human knowledge about every person, place, and thing will be captured graphically. Additionally, the use of AR cloud infrastructure will ensure this capability is accessible instantly to everyone. Whether it is the digital twin concept or the Metaverse, along with a gamut of other opportunities, the possibilities for spatial computing technology are limitless, implying that exciting times are ahead. The time is here for the paradigm shift to an enterprise Metaverse It can be said with certainty that the Metaverse is here to stay. The potential is enormous, and companies must start evaluating how to leverage these technologies. Wipro has already begun to offer its

Specialized Metaverse Value Proposition to organizations keen on leveraging this technological revolution. The service is based on a futuristic approach, XLA-based design, AI and IOT integration, and is driven by ensuring equitable experiences to employees. Furthermore, by leveraging capabilities from partners like Virbela, Wipro is building world-class immersive virtual worlds engineered to meet an enterprise's exact needs and redefining the future of work. Sidharth Mukherjee Global Practice Head of Wipro's Digital Workplace Services Sidharth Mukherjee (Sid) is a dynamic leader and a true technology enthusiast at heart. He has more than 18 years of rich, holistic experience in driving digital sensitivity with cutting-edge cloud and infrastructure service transformations for Fortune 500 organizations. Sid has a passion for delivering "what's next" and technologically improving "what's now" for enterprises while keeping a keen focus on employee experience and sustainable innovation. He is currently engrossed in harnessing the power of AI, cognition, blockchain, and analytics to create an intricate workspace Metaverse aligned with the future of work. He is an alum of IIM Ahmedabad and specializes in Business Strategy, IT, and Management. Alex Howland President & Co-Founder, Virbela Alex Howland, Ph.D., created Virbela, a virtual world for work, learning, and events, and one of the pioneering Metaverse companies in 2012. Virbela was later purchased and made public by eXp World Holdings in 2018. Alex leads the development of Virbela's products and services — continuing to expand the platform to accommodate not just business workspaces but also classrooms, event spaces, and recreational areas. Prior to co-founding Virbela, Howland was an instructor in the Psychology Department at the University of California, San Diego, where he taught Industrial and Organizational Psychology to undergraduate students. His expertise in organizational psychology gives him a unique perspective on creating virtual work and education spaces. Howland has a bachelor of science in psychology from Providence College and his Ph.D. in organizational psychology from Alliant International University, San Diego. =====================

Why IT personas hold the key to experience and resilience

----- Arcticle source ----- https://www.wipro.com/infrastructure/why-it-personas-hold-the-key-to-experience-and-resilience/ ----- About the Authors Contact Wipro Please fill the required details to access the content Why IT personas hold the key to experience and resilience March | 2023 While the family of technologies which make remote work possible have been developing and evolving for a long time, recent shifts have suddenly planted them in a central position of essential technology enablement for businesses. Hybrid work is now part of our daily lives, sitting on a brand new spectrum between at-home and in-person modes of productivity. In this new world, technology, culture, and personal habits are all playing catch-up in a way that can leave businesses which prioritize the employee experience feeling like they're swinging on a pendulum between differing demands and expectations. If you wish that your hybrid work strategy could stop reacting to trends and start building a resilient, long-term approach, you are not

alone. The way to do this is to put your real users at the heart of things by creating detailed, nuanced IT user personas and design your infrastructure around their needs. That was the big takeaway from Wipro and Citrix's recent discussion panel , where our experts came together to share the latest thinking from different perspectives and specialisms about what good hybrid work looks like today. Our panelists agree that, while many businesses have spent recent years on technological catch-up – trying to mature from VPN-based offerings to modern, secure remote access at record speed – now is the right moment to build proactively for the future. The importance of personas is about recognizing what stays the same and what changes between different job roles. Those differences are obvious between different industries. In healthcare, for example, telehealth and connected medicine have been launched into the spotlight in recent years. However, both the data at hand and its usage in this scenario contrasts heavily with the kinds of security and assurances required by financial services businesses. Differences can be just as stark within businesses too. A clinician working on the floor of a ward has different IT needs compared to one giving advice over a video link, and granular access to sensitive data is different for a bank's customer services agent compared to its portfolio manager. Fully understanding these roles and mapping out their needs means that more informed and lasting decisions can be made around overcoming the technological hurdles that these situations have in common. Here are three important benefits of starting with personas when building a hybrid workplace strategy: 1: Resource-based security Security is a challenge that every business must reckon with when building an effective hybrid work environment, and one which might come second only to the overall employee experience. While traditional approaches have emphasized hardening devices against misuse and compromise, this is becoming more difficult in the context of a growing diversity of device types. Using virtual desktop infrastructure (VDI), businesses can instead focus on controlling data and application resources. When VDI is established with well-designed personas, sensitive data can be made accessible only to those who have authorization to use it. This also keeps the data inside the well-secured central system rather than requiring tech teams to tackle the much tougher task of maintaining the highest security standards on every remote device. At the same time, this resource-based security approach simplifies users' lives by automating access based on who they are rather than repeatedly inputting passwords. 2: Autoscaling infrastructure Using persona modelling also creates the potential for service improvements in other areas. A financial analyst, for instance, might spend almost all of his or her time working in everyday productivity software like Office 365, but occasionally require higher-performance computing in order to extract fresh insights from large real-time datasets. Without well-architected virtualization, businesses are left with unsatisfactory options, such as providing employees with a device that is over-specified for most of their needs or requiring them to seek assistance from a second person to run their analysis. When a VDI deployment is aware of the employee's workflow, the power available to them in the virtualized environment can be automatically scaled up when it is needed and scaled back down to save on costs when it is not. 3: IT management The panel also discussed how businesses exploring VDI for hybrid work are uncovering opportunities to improve the IT workflow. In particular, AI-based service delivery management is now coming into scope

as a viable option to deliver better on key objectives. With a clearer picture of what needs to be enabled for different user personas in order for the business to function well, AI tools can in fact go beyond accelerating the response to network failures and proactively eliminate problems before they interrupt productivity. With this kind of predictive analytics, we can now begin to speak seriously about building self-healing systems which – together with user-facing tools like AI chatbots and IT quality-of-life improvements   – free up IT professionals to focus on more strategic work that delivers growth opportunities. Virtualization has been in the industry for a long time, but the last few years have been an exponential growth phase for the technology. That process has created a real wealth of experience and insight around how VDI delivers for different sectors. To hear more and get the full picture on persona-led hybrid work strategy, you can watch the panel discussion today. Gopal Tadepalli Global VDI Sales and Presales at Wipro (Author) Gopal Tadepalli heads Global VDI sales at Wipro Technologies. He leads VDI practice and business development along with delivery. With more than 25 years of experience in the IT industry, he worked on End User Computing transformations such as User experience management, Digital workspace, DaaS, VDaaS, Cloud journey etc., in the last 15 years. Mahesh Chandra Senior Vice President and A2 Sector Head, Cloud and Infrastructure Services at Wipro (Co-Author) Mahesh heads Wipro's Cloud and Infrastructure Business (CIS) Unit. He looks after the growth of the CIS business within the Americas market. This includes driving overall strategy, orchestrating delivery and managing both the sales team and the Americas segment results. Mahesh also spearheads sales and client engagement on large transformation and digital programs. Under his leadership, Wipro has been established as a leading innovation partner for this firm. Mahesh firmly believes that well-executed partnerships lead to more partnerships – a philosophy he uses to lead his team and achieve results for both his clients and for Wipro.
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EDGE COMPUTING UNDERSTANDING THE USER EXPERIENCE

----- Arcticle source ----- https://www.wipro.com/infrastructure/edge-computing-understanding-the-user-experience/ ----- ABOUT THE AUTHOR Contact Wipro Please fill the required details to access the content EDGE COMPUTING UNDERSTANDING THE USER EXPERIENCE March | 2023 As we'll see below, edge computing brings business and IT benefits like cost savings, bandwidth optimization, and enhanced security, all of which benefit end users indirectly. Yet edge computing also brings direct benefits to end users, including faster application response times, improved support for collaboration, greater personalization, more productivity, and a heightened user experience. DIRECT BENEFITS TO BUSINESS AND IT 1. Maximizing Bandwidth The need to optimize available bandwidth is critical and will continue to increase. New technologies like 5G, 6G and WiFi6 are becoming

available and satellite connectivity is making progress, but the amount of data moving between points will keep rising. Think about something as simple as the cameras in cell phones. In comparison to years past, these cameras are capturing and uploading massively more data today per photo and video. All the while, people are taking a lot more photos and videos. In moving this increased amount of information, constant monitoring and optimization of the bandwidth utilization is required so that the end user experience remains topnotch. Through the use of edge technology, data can be processed closer to the source. Data compression and data deduplication can be used to limit the amount of data. Technologies are also available to prioritize and optimize data movement through the pipes.   2. Lowering latency Latency is another key reason to look into edge computing. Network latency refers to the delay between when data is spent and when it is received. For most topologies, latency in the last mile is usually the highest and most impactful. The lower the amount of latency, or delay, the better the end user experience will be for interacting with applications and data. This is especially important for legacy applications and interactive applications that are more sensitive to network latency. Here are five ways in which edge can help with latency: 3. Leveraging workload distribution Workload distribution, an important aspect of edge computing, is about moving the workloads closer to the end user as well as spreading workload processing across a higher number of devices, zones and regions. This strategy can improve the end user experience in three ways: 4. Enhancing Security The security of an edge computing server, if compromised, doesn't require an entire network shutdown. In the event of an attack, it is easier for the business to shut down the affected server without disrupting the entire network. Due to the distributed nature of the architecture, work can be redirected to other edge nodes or back to the cloud. 5. Optimizing IT spending Edge computing reduces some of the inhouse demands of traditional computing, while introducing IT hiring needs associated with the new environment. The demand for jobs like system administrators, database administrators, admin, and support functions will be affected by the improved automation, resiliency and performance brought about by edge computing. On the other hand, job roles in edge computing projects, software development, network maintenance, and analysis will see a rise. Are there certain areas in your business where specific workloads can benefit from improved bandwidth utilization, lower latency, and workload distribution? Do you need help in understanding your current infrastructure topology to be able to plan an edge strategy? APPLICATIONS FOR EDGE COMPUTING Edge computing can be applied to many different workloads. Here are three of the most critical areas that companies are investigating today. 1. Manufacturing For manufacturers who rely on data for rapid decision-making, edge computing offers an opportunity to move away from traditional data closets to a more resilient and flexible infrastructure. The data gathered through sensors and robotics can be analyzed and applied to improve processes, maintain systems, and respond to real-time issues on the factory floor. Sophisticated sensors, for example, can improve quality control and monitor maintenance. Industrial robots can operate autonomously and communicate with manufacturing systems. Introducing or expanding the use of augmented or virtual reality (AR/VR) devices can help improve safety and training for industrial workers and reduce downtime of factory maintenance events. How can manufacturers harness the full

potential of these advanced data-driven technologies, such as the IoT, AI, and robotics, to boost productivity, streamline processes, and increase flexibility? How can they scale the smart factory initiatives that will help them stay ahead of the competition, while maintaining data privacy and security? 2. Field services Some examples of edge computing for field services are enterprises in the industrial, manufacturing, mining, energy, and oil and gas industries. Many of these companies are working to take advantage of the edge to let them run the core elements of their solutions locally. Local devices can save their state, interact with each other, and send important alerts and notifications. Even if the Internet connectivity goes, the edge processing in the factory, warehouse, industrial site, or mine keeps working, enabling continuity of business processes and operations. These advantages are spurred by mobile edge computing devices that capture data directly from equipment or from sensors attached to legacy equipment. Organizations are using these edge computing capabilities to translate out-of-date machine protocols into more modern languages and interact with the modern equipment. Companies can then compute a variety of data coming in from different sensors to provide operational information with increased accuracy and reliability, or to produce intelligence that can be used for other purposes. How can your organization utilize edge computing to run core elements of your network in local regions? Is it feasible to integrate IoT data into your edge computing solution? 3. Real-time and near real-time processing Edge computing can minimize the network and bandwidth issues associated with moving large amounts of data to or from IoT devices and reduce reliance on the network. During edge analytics, the processing control of all applications, services, and data is then shifted from the cloud to the edge of the network, where a physical contact is made with the data source. Edge analytics has been adopted by many vendors for use on servers, allowing businesses to pre-process their data near its creation instead of transmitting and processing in the cloud. Companies are looking to edge solutions that can process data at the source and provide summary information about what's going on. These solutions eliminate the need for the SIM cards, data plans, and other network costs that would accrue when the data is instead transported from the device to a network. Edges can use simple logic or advanced AI algorithms to understand and build summary information. How can pre-processing data and the increasing reliability of operations on edge technologies support your corporate initiatives? Are there areas within your business that have the ability to acquire insights faster to reduce time-to-market, operational expenses, or allow for predictive maintenance? DIRECT BENEFITS TO THE USER EXPERIENCE Beyond the many IT and business benefits with indirect advantages to end users, organizations are also realizing direct end user benefits that can improve abilities to attract, retain, train employees and make the workplace a more productive environment. 1. Faster response times One of the major complaints IT organizations face from end users is the response time of the applications they work with on a daily basis. End users do not understand the underlying complexity of connecting the applications to their data, nor should they need to do so. Improving response time by bringing the various different parts closer enables employees to work more efficiently and effectively. Customers, too, obtain a better engagement experience. The goal is to give end users the perception that their environment is close at hand, when it really might not be. Sometimes users are working with data

that's been distributed from the cloud to the edge, and sometimes the data there is thinner and optimized for their ingestion.   2. Easier collaboration More and more of the work performed by employees does NOT happen in the siloed world of the past, where one person creates something for someone else to consume independently and serially. Organizations are uncovering an increased requirement to use technology to enhance collaboration, especially with the rise in remote work since the pandemic. Edge computing enables and enhances collaboration by allowing for faster and thinner data access. At the same time, technologies like augmented reality/virtual reality (AR/VR) in the workplace are allowing for real-time collaboration in the workplace, in contrast to approaches of the past which were limited to audio communication at best. Solutions like Virtual Desktop Infrastructure (VDI) and engineering VDI (eVDI) or graphical VDI empower users to share information rapidly and quickly by minimizing the movement of data. Combining those technologies with edge can reduce the networking path, enhancing end user experience and significantly improving end users' perception of the ecosystem. 3. Individualized experience Finally, by bringing edge technologies closer to end users and customers, businesses can offer more personalized experiences. These can include improvements in the collection of information such as customer sentiment while shopping, for instance. Improvements in data collection can lead, in turn, to greater efficiencies in supply chain and distribution. It's possible with edge technologies to create regional, local and even personal experiences for users. The data and the people can be nearly co-located, with no need to keep connecting back into the cloud and/or the datacenter. What are the best ways for your organization to harness the power of edge computing for improved collaboration, personalization, productivity, and satisfaction? Are you looking at incorporating live streaming video, AR/VR, or VDI into your edge computing solution? SUMMARY Edge computing opens up new worlds for improving the user experience through faster application response time, bandwidth optimization, reduced latency, and better support for personalization and remote collaboration. Edge also provides an optimal environment for innovative new technologies such as live video streaming, VDI, and AR/VR. The results? Improvements to business processes, productivity, and employee and customer acquisition and retention. After all, ultimately, edge computing is about the end user. To learn more about Wipro's approach to Accelerating Your Innovation, visit Innovation. Nicholas Holian Global CTO and GM, Wipro FullStride Cloud Nicholas Holian serves as the Global CTO and GM for Wipro's FullStride Cloud business unit with a focus on customer growth strategic transformations using new and emerging technologies and methodologies. Nicholas has been helping customers understand how to take advantage of cost savings, automation, cloud and other technologies to accelerate their business transformations to meet their customer demands. =====================

How Human-Centric Work Leads to Digital Transformation

How Human-Centric Work Leads to Digital Transformation July | 2023 After three years of experimenting with remote work models, businesses and employees appear to finally be striking a satisfying balance with hybrid work. Employers have been able to cut down on overhead costs by downsizing their office spaces to accommodate fewer on-site employees and staggered in-office schedules. Remote work has allowed businesses to reach top talent in other geographies, increasing diversity and capabilities throughout the workforce. Meanwhile, employees are saving time on commuting and finder greater work-life balance. Even business infrastructure is benefiting, with businesses upgrading legacy systems to accommodate hybrid models. With so much value coming from new work models, it seems clear that hybrid work is here to stay. The question is, In what form? What is the best way for business leaders to balance the needs of the business with the needs of the employees? Yes, there have been advancements over the past three years, but is there still room for improvement? The past few years have offered some insights. What sets the most successful hybrid work models apart is their shift from an office-centric to a human-centric approach to work. What Is a "Human-Centric" Approach to Work? At its most basic, a human-centric approach to work is one that prioritizes the employees rather than the office. But this a deceptively simple definition. The most successful hybrid work solutions are successful not because they allow employees to split their time between the office and remote locations; they're successful because they focus on empowering employees rather than empowering the office. This subtle shift helps business leaders to consider what's really best for both the business and the employees because what's good for the employees is likely going to be great for the business. Employees who feel supported in their roles are more likely to be engaged at work, leading to increased productivity and creativity. This might mean a modern office space where teams can meet for a few hours a day. It might also mean a stronger remote work capabilities to increase virtual collaboration. What's important is that businesses invest in solutions that better serve the needs of the employees, rather than adopt new solutions and hope employees adapt. With a human-centric approach to hybrid work, business leaders consider what the employees need to be most effective and uses these considerations to guide the development of their working models. How Human-Centric Drives Digital Transformation Shifting focus from the office to the employees helps businesses move away from legacy systems in favor of more flexible cloud-based and as-a-service models. These kinds of enhancements allow businesses to offer more advanced capabilities to support remote work. Cloud computing, for example, can increase accessibility for teams, paving the way for greater collaboration and stronger DevOps programs. As-a-service offerings can flex to accommodate changing demands – scaling with the company and its workforce, providing the latest software or infrastructure services while reducing costs and technical debt. In this way,

a human-centric approach to work can actually accelerate digital transformation by identifying the technologies that will be most helpful and therefore most likely to be integrated quickly, used effectively, and to show quick returns on investments. Consider cybersecurity, which is a growing concern for organizations. Remote work is risky for businesses because it extends the threat perimeter, exposing the business to new threats from private devices and public networks. At the same time, studies have shown that flexibility of a hybrid work model improves performance, making employees three times as likely to be high performers. A Gartner survey found that an organization would risk losing up to 39% of its workforce if it were to go back to an entirely onsite arrangement. The office-centric solution is clearly not the best options, so employers have had to find a way to provide the flexibility of remote work while maintaining the security of working onsite. The human-centric approach directs organizations to upgrades in virtual desktop infrastructure (VDI), bring-your-own-device (BYOD) programs, along with investments in more flexible security models like zero-trust and secure service edge (SEE) for browser-based web applications. These remote-friendly options also focus on building a more scalable infrastructure that the company can manage. Zero-trust security, for example, allows organizations to limit access to specific assets rather than specific physical locations, so security is maintained onsite and offsite. By combining zero-trust security and SSE with virtual desktop infrastructure, companies can provide more secure remote access to company applications and data from any device or platform. There is no one best hybrid work model, and even the great ones will change over time to meet the changing needs of employees and the business. A human-centric approach to working models can help businesses stay ahead of the curve, illuminating new ways for technology to empower employees, wherever they choose to work. =====================

AI-Powered Strategies for Cloud Cost Optimization

----- Arcticle source ----- https://www.wipro.com/infrastructure/ai-powered-strategies-for-cloud-cost-optimization/ ----- Contact Wipro Please fill the required details to access the content AI-Powered Strategies for Cloud Cost Optimization With AI, organizations are unlocking the full potential of their hybrid and multicloud investments, achieving cost efficiency and operational excellence. The rise of hybrid and multicloud environments has been a game-changer for businesses, offering unprecedented scalability, flexibility, and pathways to innovation. Yet, this adoption has also brought to light a significant challenge in managing costs associated with cloud services. As companies dive deeper into the multicloud environment, they're finding that managing the associated expenses is more complex than anticipated. Resource usage can become a significant challenge. Achieving comprehensive visibility into resource usage, performance, and costs across hybrid and multicloud environments is difficult because companies often lack comprehensive insights and control over their diverse IT landscapes. This leads to overrun budgets and underutilized resources, highlighting a

critical gap in effective financial management within cloud environments. Enter artificial intelligence (AI) and machine learning (ML). These technologies are proving to be invaluable tools for companies looking to get a handle on their cloud costs in a hybrid/multicloud environment. AI and ML dive deep into data on resource usage and business operations, uncovering insights that can lead to more informed decision-making. With these technologies, businesses can predict demand more accurately, optimize costs automatically, and monitor performance more effectively. This isn't just about cutting costs; it's about optimizing the entire cloud environment to ensure that every dollar spent is driving value, maintaining performance, and adhering to compliance standards in a risk-managed way. Common Challenges to Managing Hybrid and Multicloud Programs Driven by the business need for greater flexibility, resilience, and access to best-in-class services across different cloud providers, multicloud and hybrid cloud strategies are on the rise, creating a labyrinth of services and pricing models. This complexity is not just a matter of navigating different platforms; businesses also struggle to integrate these services so they function as a cohesive unit. The diversity in operating and billing structures across cloud providers complicates the management process. Another challenge is the lack of overall visibility and control over cloud resources. In the absence of comprehensive monitoring tools and clear governance policies, organizations struggle to get a holistic view of their cloud spending and usage patterns. This lack of transparency can lead to inefficiencies, as decision-makers might not have the insights necessary to make choices about current resource usage, allocation, and cost management. Without a detailed understanding of where and how cloud resources are being consumed, it becomes nearly impossible to identify areas of waste or opportunities for optimization. Navigating Cloud Complexity with AI AI/ML offers a pathway to not just mitigate the complexities of today's hybrid cloud environments but to transform them into opportunities for optimization and cost savings. These technologies predict and respond to demand, refine cost management and enhance performance monitoring with a level of precision and foresight previously unattainable. To be successful in integrating AI into cloud financial management and instilling financial prudence, businesses must further prioritize the accessibility of quality data, invest in training for their teams, and establish clear governance and oversight mechanisms. AI's potential to transform cloud cost management is amplified when it is fed high-quality, comprehensive data, enabling more accurate forecasting and decision-making. Furthermore, fostering a culture that values data-driven insights and continuous learning can empower teams to leverage AI tools more effectively, driving innovation and efficiency. Establishing robust governance structures ensures that AI's integration aligns with the organization's dual strategic objectives: cost optimization and operational excellence. The integration of AI into IT financial planning for hybrid/multi cloud environments marks a critical step forward for businesses seeking to optimize their cloud investments. While this shift may seem daunting to less digitally mature organizations, it is essential for harnessing the full potential of cloud in a rapidly evolving digital landscape. By embracing a change in mindset, prioritizing strategic integration, and leveraging AI's capabilities, organizations can achieve a more dynamic, predictive, and cost-effective approach to cloud management. As a larger more strategic approach to managing costs organizations the practice of cloud economics can also come

into play to maximize business value. For businesses, this journey will continue to unfold and will require insight and collaboration to navigate these changes successfully. By taking the right steps organizations can realize significant cost savings but also gain a competitive edge through enhanced agility and strategic foresight. About the Author Gaurav Parakh Global Head of Hybrid Cloud Strategy & Emerging Offerings, Wipro Gaurav is a Senior Hybrid Cloud Strategist at Wipro with over 24 years of experience in IT consultancy and advisory services. He specializes in digital transformation, go-to-market and business development. At Wipro, Gaurav engages with Fortune 500 clients and partners at the leadership level, drawing on his experience designing and implementing cloud solutions, operating models, and strategies for FinOps, open source and generative AI to drive success. He also has a background in entrepreneurship, having built tech startups in 3D printing, education and AI from inception to exit. ======================

DC and Cloud

Transformation Tests

----- Arcticle source ----- https://www.wipro.com/infrastructure/dc---cloud-transformation-tests/ ----- Contact Wipro Please fill the required details to access the content Smooth Datacenter and Cloud Transformation ======================

Service Desk Services

----- Arcticle source ----- https://www.wipro.com/infrastructure/service-desk-services-0/ ----- Contact Wipro Please fill the required details to access the content Service Desk Services A Service Experience to Surpass All As emerging technologies continue to overhaul enterprises, workforce experience must also be transformed. Today, the expectations from the service desk do not just involve autonomous issue resolution and ticket lifecycle acceleration but also enhanced experience. Hence, enterprises must funnel their focus toward designing a digital workspace to modernize service desk operations and processes. Personalize enterprise service management with AIOps-led predictive and proactive support Wipro's Live Workspace™ OneDesk is a transformational and comprehensive service management platform, founded on agile principles, that is aligned with an enterprise's digital imperatives and evolving market dynamics. Active workplace analytics with performance intelligence promotes AIOps-centric proactive and predictive support to address issues automatically before employees get impacted. ======================

Application Management Services

----- Arcticle source ----- https://www.wipro.com/infrastructure/application-management-services/ ----- Contact Wipro Please fill the required details to access the content Application Management Services Painless Application Distribution across Devices ======================

Managed Network Services

----- Arcticle source ----- https://www.wipro.com/infrastructure/managed-network-services/ ----- Analyst speak Contact Wipro Please fill the required details to access the content Managed Network Services Hands-Free Network Management ======================

Active Directory Services

----- Arcticle source ----- https://www.wipro.com/infrastructure/active-directory-services/ ----- Contact Wipro Please fill the required details to access the content Active Directory Services Active Directory for Pros: Keep it Lean and Simple ======================

Hybrid Infrastructure Management

----- Arcticle source ----- https://www.wipro.com/infrastructure/hybrid-infrastructure-management/ ----- Contact Wipro Please fill the required details to access the content Delivering intelligent operations with hyper automation ======================

Smart i-Airport

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-i-airport/ ----- Contact Wipro Please fill the required details to access the content Smart i-Airport Enhance passenger's airport experience, achieve operational excellence, sustainability, and contribute to non-aero revenue Combine IoT, data, analytics, AI, and Digital Twin to create the airport of the future that increases operational efficiency while improving passenger experience IoT is transforming the operations of every business, including airports. The new generation of airports uses sophisticated digital and IoT systems to plan and execute operations, support operations teams, and efficiently manage the flow of passengers. Wipro's Smart i-Airport solution hosts independent airport systems for airlines, passenger queuing, baggage management, ground fleet management, dwell time analysis, IT/OT

management, utilities, building management, asset management, etc. In addition, the platform can integrate applications for current and future requirements while its Central Command Center provides process KPIs and visualization for intelligent real-time decision-making. The platform includes the following key capabilities: Virtual Queue Management System ensures passengers can join queues remotely (via a QR code or a link), monitors queue status, and dynamically manages them (counter and queue number allocation) using predictive analytics based on customer profiles, travel schedules, and customer standard classifications. The system can be integrated with FIDS, employee resource management, and Airline Operations Control Center. Airports using the system can easily integrate it with advertising solutions that improve revenue and with email and SMS gateways for passenger alerts and notifications. The benefits of the Virtual Queue Management System include the following:
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Smart Cities

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-city/ ----- Contact Wipro Integrated Command Control Center Smart City Service Management and Automation Smart Parking Lighting Management Waste Management Safety and Security E-Governance Smart Healthcare Services Traffic Management Travel and Transportation Utility Management Please fill the required details to access the content Smart Cities Transform citizen experience by building digital and sustainable cities leveraging IoT, 5G and AI =====================

Smart i-Campus

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-i-campus/ ----- Contact Wipro Please fill the required details to access the content Smart i-Campus Improve campus performance and strengthen user experience with persona-focused digital transformation. Leverage an IoT-led solution that delivers a modern, sustainable, and smarter campus In modern society, citizens spend most of their lives on campuses. These campuses include commercial complexes, manufacturing plants, refineries, airports, seaports, warehouses, universities, and hospitality, among others. Many campuses house thousands of people simultaneously, making comfort and safety a priority. Wipro's Smart i-Campus solution provides persona-led design to improve campus infrastructure performance and strengthen user experience. The preventive and prescriptive insights provided by the solution for proactive management through IT/OT systems also create non-linear value for enterprises and improve asset ROI. The solution covers the following areas: Utility Management: Optimizes energy, water, and gas consumption and manages all utilities in line with sustainability goals. Environment Monitoring: Ensures the health and well-being of users through AI-driven indoor air quality monitoring, thermal management, light and noise level control, and odor management. Safety & Security: Provides integrated monitoring and management of surveillance systems, evacuation

systems, fire control systems, worker safety, and access controls. It also includes an integrated command center that automatically detects, responds, and recovers from incidents using AI and advanced analytics. Sustainability: Enables energy savings, supports green energy, drives water savings, and facilitates better waste management that reduces the burden on landfills. Connectivity: Provisions easy-to-deploy, low-latency, secured, high-speed wireless coverage using private 5G and Wi-Fi 6. Customization: The modular design, flexible workflows, and feature-based deployment models make the solution scalable, configurable, and adaptable for various user needs. The Smart i-Campus solution transforms facilities with an open standards architecture and persona-led experiences, which subsequently help to drive sustainability while elevating data security, and improving user experience. =====================

Smart i-Rig

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-i-rig/ ----- Contact Wipro Please fill the required details to access the content Smart i-Rig Rig management, along with security and HSE compliance, to create a safe operational environment Bring real-time asset and environment monitoring to rigs with a solution that can be integrated with existing systems. Rigs are unpredictable and hazardous environments. Winds, tides, heat, cold, humidity, slippery work surfaces, extreme noise, poor visibility, etc., constantly expose workers and equipment to risk. Safety is a primary concern, and non-compliance to Health, Safety, and Environment (HSE) processes can threaten life and assets. Early monitoring and tracking of abnormal asset performance, the operational environment, and threats inside and outside the plant help prevent accidents and business loss. Wipro's Smart i-Rig solution allows rig owners and operators to monitor assets and environments, explore predictive maintenance in critical equipment, and enables 5G and edge-based operations. It also provides comprehensive device management and AI and ML-based algorithms to boost safety, reduce operational downtime, and increase asset lifetime. The solution can be integrated with existing upstream and downstream systems to monitor supply chain performance and avoid failures pertaining to pipeline health, leakages, etc. In addition, enterprises using the Smart i-Rig solution also benefit from generating data-driven business decisions that prevent disruptions and improve operational efficiency. Wipro's Smart i-Rig solution is designed to: =====================

SAP on Google Cloud Platform

----- Arcticle source ----- https://www.wipro.com/infrastructure/sap-services-on-google-cloud-platform/ ----- Our Success Stories Form Title What We Think Contact Wipro Please fill the required details to access the content SAP on Google Cloud Platform Fastrack your digital transformation with SAP applications on Google Cloud Platform (GCP). Transform your enterprise with risk free migration with SAP on Google Cloud Platform (GCP) As businesses transform rapidly, companies need to be more agile, innovative,

and cost efficient than ever before. While some companies have begun their journey to the cloud, many others are still exploring ways to use cloud technology to become scalable, sustainable, intelligent, innovative, and cost effective. Wipro's innovation arena offers end to end services for SAP application migrations, including assessment and discovery, cloud migration, and support on Google Cloud. It ensures a risk free migration with speed and agility for our customers. Our robust SAP cloud migration framework called "Safe Passage to Cloud" is uniquely designed for the Google Cloud Platform, and it incorporates SAP best practices, cookbooks, 20+ tools, levers, and partner accelerators to deliver a risk free, on-time, on budget, and nondisruptive migration. Additionally, our migration manager (MigMan), augments our safe passage framework to help plan and execute migration projects with accuracy and quality. Wipro is Google's partner of choice for SAP implementation and Google has recognized Wipro for its "SAP on Google Expertise". The company has the experience and scale to support large and complex cloud migrations across verticals and varied business requirements. We are also a strategic partner of Google's Cloud Acceleration Program (CAP), which gives our customers exclusive access to partner incentives for cloud migration. Leveraged cloud functionalities and improved customer experience with SAP Hybris How Wipro is helping its customers with their SAP transformations on Google Cloud Platform by leveraging its SAP on Google Cloud Expertise. Running your SAP on Google Cloud Platform is cost effective and increases... =====================

Wipro's AppAnywhere

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-appanywhere/ ----- Contact Wipro Please fill the required details to access the content Wipro's AppAnywhere Managed service to automate the container based IT Lifecycle AppAnywhere is a managed service comprising a set of tightly integrated technologies to deliver end-to-end automation of container-based IT lifecycle to enterprises AppAnywhere is an industry-leading managed service from Wipro for customers adopting containers. It addresses the operational and security encounters of multiple Kubernetes clusters, and provides managed services for monitoring, logging and observability of multiple Kubernetes clusters. With AppAnywhere, Kubernetes can be included as a service for hybrid Cloud/ multi-Cloud and implemented as managed Cloud-native platform as a service. In addition, you can avail the "pay-as-you-use" models like GKE, AKS and EKS, on-premise or SaaS. AppAnywhere brings DevOps autonomy to ensure autonomy and control, storage acceleration with no I/Q blender or granular control, simplicity with workload drives and details and freedom from lock-ins to move the workloads across Clouds and manage Cloud exposure. The key differentiators of AppAnywhere include an efficient use of hardware utilization with lower TCO and the usage of best-in-class Kubernetes – RedHat Openshift, SuSE, etc. Gecko platforms helps with Observability, Chaos engineering and cross-cloud data migration. =====================

Remote Support with Intel vPro

----- Arcticle source ----- https://www.wipro.com/infrastructure/remote-support-with-intel-vpro/ ----- Contact Wipro Please fill the required details to access the content Remote Support with Intel vPro What to do if remote resolution isn't working? Utilize Intel® vPro for increasing the effectiveness of remote field services While traditional remote services are crucial for providing support to remote workers, there are still issues where traditional remote support still doesn't work, e.g. fixing BYOD issues, device driver corruption issues, or OS corruption issues. Wipro's LiVE Workspace™ Digital Field Services (DFS) provides augmented out-of-band remote support for your remote workforce by utilizing the inbuilt functionality available on Intel® vPro chipsets that are available in 80% of the enterprise estate. The service provides your remote support teams with the ability to manage issues that they traditionally could not, such as OS corruption, device driver corruption and the famous blue-screen-of-death, thereby increasing end user productivity, user satisfaction and reducing the pressure on both your field services as well as your remote support groups.
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Home is the New Branch

----- Arcticle source ----- https://www.wipro.com/infrastructure/home-is-the-new-branch/ ----- Contact Wipro Please fill the required details to access the content Home is the New Branch A business continuity solution for secure & seamless remote working We are living in uncertain times amidst a global pandemic. Organizations are taking all measures to ensure safety of their employees and customers, while maintaining business continuity. As part of this effort, organizations are adopting new ways of working. With the majority of the workforce locked down in their homes, the need of the hour for enterprises is to enable these employees to deliver their responsibilities remotely, in other words, make the employee's home a 'new branch office'. Wipro's #WANFreedom, a secured SD-WAN solution, ensures that users get seamless access to authorized applications irrespective of their location - office or home. The secure internet access ensures that users have the right level of protection and apply the same policy while they are on the campus, branch or working from home. Home is the New Branch 'Home is the New Branch' solution, delivered with #WANFreedom, enables secure remote access to the work-from-home users, who are originally connected to their enterprise network. This gives the remote users seamless and secure access to the applications sitting at cloud and private cloud data centers. While the user is at the branch, security is ensured by the branch edge SD-WAN part of the #WANfreedom secure network. The user is allowed in the corporate local area network with an active directory-based authentication. Once the user is authenticated, the access to all applications is controlled via WAN segmentation and application policy as part of SD-WAN solution. Wipro's Home is the New Branch solution ensures the same level of access and security even at home. The secure tunnel which gets established from the

user machine to the secure cloud over the internet creates a micro-tunnel to enable access to the authorized app for a given user. This ensures corporate apps have protected usage, which is achieved using secure authentication of the user to the secure internet cloud. High-level architecture of Home is the New Branch solution Key highlights of the solution Office wireless experience at home Home is the New Branch solution enables Office Wireless Experience at Home, which provides office SSID and Wi-Fi experience at Home. This is enabled with a special Wireless Access Point (WAP) at home, which automatically creates an IPSEC tunnel to the headquarters and enables access to corporate or cloud applications. The WAP is completely controlled and managed by the Wi-Fi solution for the corporate local area network. This ensures: Office wireless experience at home Empowering remote workforce Wipro, along with its strategic partners, stand committed to support our valued customers in these uncertain times to deliver and enable business continuity services on priority. Wipro's managed services and global services delivery model is fully equipped to support organizations to run their business with minimum disruption. Wipro's InsightixTM based consulting approach will help you select the right access methodology and design for the Remote Working solution. =====================

Digital Concierge – Cognitive AI Office

----- Arcticle source ----- https://www.wipro.com/infrastructure/digital-concierge-cognitive-ai-office/ ----- Contact Wipro Please fill the required details to access the content Digital Concierge – Cognitive AI Office Help eliminate boring repetitive tasks for employees Help accelerate the digital journey of your organizations by deploying bots that eliminate non-value added tasks across business and IT Enterprise IT is still struggling with the general adoption of Virtual Private Assistants (VPAs), given the rapid pace of change in cognitive platforms. The sheer choice - from Microsoft's Bot framework to Amazon's Lev, makes finding the right platform a challenge. Furthermore, these platforms are still built for developers, hence their reusability and application of analytics are key challenges. Wipro's Digital Concierge –Cognitive AI Office solves these problems by providing an integrated platform that allows IT and business users to develop use cases with agility through a drag and drop UI. Its suite of services helps discover new use cases and leverages inbuilt analytics to determine user sentiment and utilization of business use cases. All of the above services are delivered through our digital factories using our unique DLAD (Design Led Agile Delivery Methodology) that drastically reduces the time to value from 12-18 months in a traditional engagement to less than 12 weeks. =====================

Wipro's ServiceTheatre

----- What We Think Contact Wipro Please fill the required details to access the content Wipro's ServiceTheatre Platform to embrace digitalization Services platform that enable internal API economy by exposing callable services and delivers autonomous operations as outcome-driven approach for complex heterogeneous IT Wipro's Service Theatre delivers fully-programmable industrialized services platform that exposes callable services via API mediation and adaptive automation workflow engine. The platform abstracts complex heterogeneous technologies and deliver outcome driven automation assets which are discoverable and each used as managed API. Platform radically simplify and centralize the automation asset creation by its theatre concept and balance it with efficient consumption and reuse model to deliver speed, agility to deliver new services aligned to changing business demands. Service Theatre anonymize the underline technologies and skills required to manage it which allow protecting existing investments (even traditional infrastructure) and seamless adoption of new age technologies. One can deliver callable services for consumption by applications on premise and on Cloud, called as part of business process or application workflow and enabled as self-service. The workflows and services integrated with AIOps engine delivers intent driven autonomous operations for overall IT lifecycle management. ServiceTheatre enable internal API economy and enable knowledge automation with ultra-efficient reusability of services leveraging centralized repository. It enhances the velocity of DevOps or micro-services roll out by empowering end user and unlocking technology potential to enhance their pipelines. Transform your IT ecosystem from complex to outcome-oriented
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Rebooting business into new ways of working through Wipro virtuadesk™

Our Success Stories Form Title Form Title Form Title Form Title What We Think Form Title Form Title What We Think What We Do News and Events Form Title Form Title Contact Wipro Please fill the required details to access the content Rebooting business into new ways of working through Wipro virtuadesk™ Making the hybrid office and work from home a possibility Virtual Desktop Infrastructure (VDI) is instrumental in helping businesses stay abreast of the changing digital economy and create an efficient next-gen digital workspace. Wipro's flagship virtuadesk™ is a transformative application and desktop delivery platform, powered by 14 patents (granted and filed) across the globe in the areas of artificial intelligence, analytics,

automation led managed services. We offer packaged solutions that combine leading cloud and hyper converged infrastructure (HCI) technologies, to deliver workplace transformation and seamless user experiences. Wipro's virtuadesk™ approach provides an enterprise-grade virtual workplace, enabling access to remote desktops, laptops, and operating systems anywhere, anytime. The virtuadesk™ offers an as-a-service model that leverages simplified and integrated architecture for a cloud-hosted desktop, to deliver an unconstrained experience. It includes critical features such as service monitoring and automation, service visualization and management, enterprise marketplace, and application performance monitoring, to enable a modernized and consumption-based framework. Wipro's virtuadesk™ also helps optimize costs and scale quickly. It enables businesses to update enterprise software tools and allows employees to run multiple operating systems on the same machine. They can also use their own devices to enhance productivity while ensuring data and application security. We support over 600k users globally, with more than 1000+ VDI experts across multiple verticals. We have built in-depth technical expertise and fine-tuned our solution approach throughout numerous engagements and technology partnerships with leading companies across geographies. Our focus has been integrating with proven technologies from leading partners and expert consulting teams to offer innovative and stable solutions, to drive enterprise transformation. A leading Europe-based media and digital company implements Wipro virtuadesk™, a complete desktop virtualization solution in 3 months, leading to 25% cost savings and digital transformation A large oil and gas exploration company attains mobility, seamless collaboration, flexi-workspaces by deploying VirtuaDesk™ Platform A leading UK-based electricity and gas company implemented Wipro virtuadesk™, a complete desktop virtualization solution, leading to two times improvement in stability and performance of desktops Wipro's virtual desktop facilitates secure remote work and ensures excellent user experience What is Virtual Desktop Infrastructure (VDI)? A technology that enables your global workforce to securely access company data on their personal devices without sacrificing security. Global research and advisory firms envisage a new normal with businesses not returning to the pre-pandemic work model, and reveal a Hybrid Working trend Pharmaceutical companies aim to address their requirements around disease-focused early stage drug development Covid-19 pandemic is impacting people and enterprises globally. The top priority for enterprises is to keep employees, Organizations are quickly embracing flexible arrangements that blend working from home with going into a highly altered office environment. Enable a safe remote working environment for your employees, advisors and channel partners Stay connected to lead your business Making the hybrid office and work from home a possibility Be prepared to lead your business through unanticipated crises DaaS: Minimizing business disruption during and post the pandemic Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO), a leading global information technology, consulting and business process services company, today announced that Wipro VirtuaDesk™, Wipro's Desktop as a Service solution and Wipro's Digital Workspace solution, will join forces with Citrix Systems, Inc. (Nasdaq: CTXS) and Microsoft to help customers drive business continuity while executing operations within the boundaries of social distancing and other limitations that have currently become the new normal. The ISG report highlights that Wipro offers a strong support

services portfolio with increased focus on automation.
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Wipro's 5G-Edge Services Solution Suite

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-5g-edge-services-solution-suite/ ----- What We Think What We Think What We Do Contact Wipro Please fill the required details to access the content Wipros 5G-Edge Services Solution Suite Uberization of 5G-Edge Services Comprehensive platform driven by gig economy, AI and AR/VR offering complete lifecycle management for telcos and enterprises Wipro's 5G-Edge Solution Services Suite offers EdgeCent, Digital Design Studio, BoundaryLess Universal Edge platform - BLUE and Tririga catering to telecom operators, cell site infrastructure providers, tower companies and enterprises/networks. 5G, along with Edge services demand innovative and revolutionary change due to high network and device densification requiring radical transformation in telco operations. The capital intensive infrastructure and technological refresh of the network is fundamental to deliver ultra-reliable capabilities - high bandwidth, low latency and macro scale communication promised by the 5G technology. This solution addresses the operational and management complexity faced by the telecom industry.   Discover how the solution's integrated modules deliver Telcos & enterprises end-to-end solutions related to 5G & Edge Uberization of 5G-Edge Services Over the last few years, growth of the telecom industry in North America has been quite static. The subscriber market has saturated. The movement of subscribers from one operator to another is driving the growth of cheaper service providers. Interestingly, the number of postpaid subscribers has increased as compared to prepaid subscribers, adding to the revenue potential. This describes how MVPDs actively need to deploy their services over MEC platforms to be able to cater to the growing demands of Video consumption Mobile communication providers are facing increasing competition from OTT players while simultaneously battling diminishing ARPU (average revenue per user). Re-imagining your business transformation journey ======================

Monetize and Modernize IT – The 'new normal' proposition for your business

----- Arcticle source ----- https://www.wipro.com/infrastructure/overcome-covid-19-impact-by-monetize-and-modernize-it/ ----- What We Think Contact Wipro Please fill the required details to access the content Monetize and Modernize IT – The 'new normal' proposition for your business Transform your CapEx investment into OpEx to fund your IT initiatives Monetize and modernize IT with data center and asset buyout and move to a public Cloud

with 'consumer as a Service' for hybrid Cloud Setup Monetize and modernize – With numerous offerings and incentives from OEMs, CSPs and partners, it is essential to build the right proposition that will help customers achieve a balance between their long- term aspirations and short-term challenges. While it is imperative to continue the modernization journey to stay ahead as well as to maintain compliance and security, it is necessary to curtail the capex spend on non-business activities. To self-fund IT, it is necessary to look at the consumption-based pricing model, partner/ CSP offerings such as payment deferrals, cash incentives and discounts and leverage investments made by partners on IP, process, platform and process to expedite the modernization (or Cloud) journey. As a vendor neutral IT services partner, Wipro will primarily look at the customer's long-term plan that aligns with their objectives and build a proposition that makes use of these incentives and accelerators to arrive at improved TCO. Wipro will overlay financial support from our partners with a set of highly automated solutions that will help your clients to significantly reduce ongoing operating costs besides modernization. 'Monetize and Modernize' proposition is created by Wipro keeping in mind the current challenges for IT to support new normal solutions, transformations to support with reduced/shrunk budgets =====================

Wipro's SAP Infrastructure Modernization Offering

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-sap-infrastructure-modernization-offering/ ----- Contact Wipro Please fill the required details to access the content Wipro's SAP Infrastructure Modernization Offering Realize the full potential of your SAP investment On demand optimized and certified SAP infrastructure and value-added services to help you adopt SAP solutions faster. Speed, agility and innovation are essential in today's fast changing competitive world driven by AI, analytics and IOT. To achieve these, only moving applications to the Cloud is not enough; and public Cloud may not be the right option for every organization. Lack of in-house application centric infrastructure expertise will neither optimize performance nor help you realize the maximum business value of the application. Wipro's SAP Infrastructure Modernization solution helps your organization accelerate innovation, drive growth and reduce risk. The service offers you a validated, certified and customized SAP infrastructure platform optimized for performance, scale and TCO. Moreover, the solution can be hosted in your own data center or off premise in a secured, private and dedicated environment. The solution is professionally managed by Wipro's Infrastructure and SAP experts. The services are modular and customizable to each organization's unique needs ranging from infrastructure management to business process alignment. =====================

Collaboration using Moogsoft Situation Room

----- Arcticle source ----- https://www.wipro.com/infrastructure/collaboration-using-moogsoft-situation-room/ ----- Contact Wipro Please fill the required details to access the content Collaboration using Moogsoft Situation Room Enhancing operations during COVID-19 Wipro's alliance with Moogsoft to provide continuous assurance on connectivity for collaboration During the COVID-19 crisis, it is estimated that nearly 70% of delivery and operations teams are working remote. There is increased usage of collaborations platforms, such as WebEx, Skype and Teams, and higher demand on network bandwidth. However, the performance of all critical collaboration platforms is degraded due to heavy usage, poor network and/or inadequate mobile connectivity on the remote end. As a leading managed service provider, Wipro uniquely positions its services as an IT operations management (ITOM) aware collaboration solution that goes beyond simple point solutions by leveraging Moogsoft Situation Room. This solution reduces the voice-based collaborations for non-critical and non-major incidents, and eliminates chat interactions where not necessary. This ensures good performance levels for end user support, network bandwidth chokes and reduces cost incurred from voice-based collaborations for incident management. It also helps retain the knowledge and history of the incident management unlike remote working where knowledge capturing on incident tickets may be missed. =====================

BLUE powered by IBM Edge Application Manager

----- Arcticle source ----- https://www.wipro.com/infrastructure/blue-powered-by-ibm-edge-application-manager/ ----- What we Think What We Think What we Do Contact Wipro Please fill the required details to access the content BLUE powered by IBM Edge Application Manager Intelligent Edge application lifecycle management An autonomous Edge offering for end-to-end management of Edge applications. The transformation from centralized computing to Edge computing results in thousands of heterogeneous servers and devices in several remote locations with a high rate of changes in variability and scale. Wipro's BLUE integrated with IBM Edge Application Manager helps in managing these challenges. This solution is built on the foundation of OpenShift and Container technology and helps in autonomous lifecycle actions on thousands of edge nodes. This solution solves operational and management complexity faced by the enterprises. IBM Edge Application Manager is an intelligent and flexible platform that provides autonomous management for edge computing. This describes how MVPDs actively need to deploy their services over MEC platforms to be able to cater to the growing demands of Video consumption Mobile communication providers are facing increasing competition from OTT players while

simultaneously battling diminishing ARPU (average revenue per user). Uberization of 5G-Edge Services ======================

#WANFreedom – Wipro's SDWAN solution

----- Arcticle source ----- https://www.wipro.com/infrastructure/sdwan-solution/ ----- What We Think Form Title Form Title Form Title Our Success Stories Analyst Speak Form Title Our Success Stories Form Title Contact Wipro Please fill the required details to access the content WANFreedom – Wipro's SDWAN solution Accelerating transformation in the new normal Take control of your WAN investments and drive superior performance across clouds The new ways of working have made traditional wide area network (WAN) architecture obsolete, paving the way for the widespread adoption of SD-WAN. Some of the key drivers of SD-WAN include rapid cloud adoption, rise of hybrid WANs, internet links with business-class SLAs, network hardware & software decoupling, and standardized interfaces. #WANFreedom, Wipro's SD-WAN managed services offering, allows organizations to move away from legacy network architectures and helps them improve WAN utilization, reduce costs and enhance WAN agility. It seamlessly incorporates connectivity to cloud service providers in addition to the existing branch and regional office connectivity. It also addresses traditional challenges of the treatment of voice and video and the prioritization of business-critical applications. #WANFreedom creates best fit solutions for the customer's specific requirements and delivers applications across private and public clouds. Customers adopting the SD-WAN solution can take advantage of our comprehensive life-cycle services that include consulting, planning & design, product procurement, implementation, and managed network services. Explains SDWAN business case the widespread migration of networks and datacenters to Cloud, the growth in end-user wireless devices and bandwidth hungry applications are forcing CTOs to re-examine how they architect, provision and manage their enterprise networks. Software Defined Networking (SDN) and Network Functions Virtualization (NFV) have revolutionized the world of networking. Virtualized Branch Networking with the power of hyper-convergence is the new approach that is geared-up to address the shortcomings. : #WANFreedom, Wipro's SD-WAN managed-services offering, helps organizations take control of their WAN (Wide-Area Network) investments and optimize performance across cloud networks. Powered by Cisco's industry-leading SD-WAN technology, #WANFreedom delivers superior monitoring, maintenance, and managed services, flexibly, and at a lower cost. The next wave of SD-WAN adoption will require an unprecedented degree of automated intelligence, including pervasive visibility and extensive security capabilities. The client had a complex IT network distributed across 40+ countries and managed by over 100 vendors. This made operations very difficult and cumbersome, and resulted in. ======================

Wipro Surfonomics Offering

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-surfonomics-offering/ ----- Contact Wipro Please fill the required details to access the content Wipro Surfonomics Offering AI powered multi-cloud and container optimization Autonomous advisor augmented by AI driven insights that saves over 40% of your cloud spend, with assured performance Enterprises are accelerating their digital transformation initiatives like never before to address the disruption caused by COVID-19. Multi cloud and modern applications have become vital enablers to power this journey. This dramatic shift has raised many pertinent questions - How do we size the right capacity from day 1 as we move to the cloud? How do we ensure that resources are optimally sized on an ongoing basis to reduce costs? How do I schedule workloads only when needed and decommission unused workloads? How do I decide the right purchasing strategy – reserved instance versus on demand? Can we do all of this without impacting application performance? Wipro's Surfonomics offering for multi-cloud and container optimization addresses these business challenges and delivers business outcomes by lowering TCO by 40% while assuring performance across multi cloud and container environments. The unique solution capabilities include - The offering comprises of advisory services and ongoing execution leveraging Wipro Cloud Studios. Customers get a standard service from Wipro that surfs, senses and recommends optimization avenues. The Surfonomics autonomous engine possesses recommendation and automated executions with integrations into enterprise service management processes. All of this happens securely without impacting application performance. =====================

BoundaryLess Universal Edge (BLUE)

----- Arcticle source ----- https://www.wipro.com/infrastructure/boundaryless-universal-edge-blue/ ----- What We Think What we Do Contact Wipro Please fill the required details to access the content BoundaryLess Universal Edge (BLUE) Universal Edge Lifecycle Management Framework BoundaryLess Universal Edge (BLUE) is Wipro's holistic framework to address the different aspects to delivering robust and production grade edge services. Wipro brings in a range of accelerators with the BLUE framework, including a ready to adopt end-to-end cloud-based solution, reference architecture, reusable components, and shared services that are tuned to address the complete lifecycle. 5G is here and it brings in a set of features that will be of significant interest to businesses who would want to leverage the new features like ultra-low latency, high bandwidth, high density M2M communication etc. to create new use cases and services. But the low coverage radius and high densification will mean elements of 5G network like Multi-access Edge Compute (MEC) will need to be deployed in thousands of locations. Edge computing is also a crucial element for

developing the next generation of digital services. However, a production grade deployment of edge services brings several challenges for the stakeholders. BLUE provides a way to address the challenges - Wipro's BLUE brings together a range of our capabilities into a single framework to seamlessly manage and orchestrate 5G edge application services and telco workload across core, edge and Remote office/Branch Office (ROBO) sites. Smart Edge infrastructure lifecycle management Uberization of 5G-Edge Services =====================

Wipro's Cyber Recovery Vault as service

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-cyber-recovery-vault-as-service/ ----- What We Think Contact Wipro Please fill the required details to access the content Wipro's Cyber Recovery Vault as service Last line of data protection against destructive cyber attacks A comprehensive, end-to-end service with a multi-layered approach to protect backup data against ransomware and detect and rapidly recover from an attack Data is the currency of the internet economy and a critical asset that must be protected. Cybercrime has been called the greatest transfer of wealth in history, and hence it's even more critical to protect data. Cyber-attacks continually expose businesses and governments to compromised data, lost revenue, reputational damage, and regulatory fines. The impact of being unable to recover critical data and resume business operations after an attack can be devastating. In addition, avoiding ransomware is of utmost importance to CIOs and CISOs. Wipro's Cyber Recovery Vault service protects critical data assets with much-needed cyber recovery resilience, automation and integration with security operation center, unified dashboard, forensic tools and uses machine learning techniques. Shield mission-critical Applications and business data with military grade data safe guarding against destructive cyber attacks =====================

Wipro's Edge Cloud

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-edge-cloud/ ----- Contact Wipro Please fill the required details to access the content Wipro's Edge Cloud Cloud-Like Experience and Economics for Edge Tiered, edge cloud catalogue-based, secure, integrated, and programmable infrastructure platform led solutions with autonomous operations and agility Today, Edge is becoming more important with the number of devices and user expectations continuously increasing. With legacy, edge estate has numerous constraints, including but not limited to: Pointed, tailored, vendor-dependent, and siloed solutions, longer build time, management complexity, higher TCO, less flexibility and non-compliant nature. Wipro's Edge Cloud offerings bring unique value proposition to meet edge estate requirements for telco and non-telco with best-of-the-breed solutions using hyper-converged infrastructure (HCI)-based programmable infrastructure platform

supporting virtual machines and container ecosystem coupled with autonomous operations in an agile way. Edge Cloud delivers cloud experiences with improved ROI by protecting the investment with API based platform. Offerings are more secure and compliant while delivering more compute with intelligence at the edge, thereby addressing latency-specific requirements. These offerings are standardized and customized with the freedom to choose OEMs and technologies to integrate with for various core cloud services. Edge catalogue based offerings deliver scale of economics, assured performance with lesser time-to-market, and ease to scale out, consume and manage. In response to edge market demands, Wipro is offering edge solutions in collaboration with strategic partners.
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IBM AIX Modernization and Migration

----- Arcticle source ----- https://www.wipro.com/infrastructure/ibm-aix-modernization-and-migration/ ----- What We Think Contact Wipro Please fill the required details to access the content IBM AIX Modernization and Migration Modernize IBM Power Systems with Cloud Flexibility Accelerate and cost-optimize your journey from on-premises-only infrastructure to Power Systems Virtual Server on IBM Cloud IBM Power Systems clients who have typically relied upon on-premises-only infrastructure can now quickly and economically extend their Power IT resources onto IBM Power Systems Virtual Servers, while mitigating the large capital expense or added risk involved when migrating essential workloads. Wipro accelerates the journey with hybrid integration of existing on-premises IBM Power System workloads to IBM Power Systems Virtual Servers. Wipro's state-of-the-art accelerator provides an automated migration program which delivers business agility (through digital transformation) by abstracting infrastructure, nextgen application packaging, and orchestration with DevOps to deliver faster and cost-optimized modernization. Our accelerator also abstracts the complexity of configuring, managing, and life-cycling compliant traditional technologies and delivers management with data services. Modernize the AIX Enterprise Power Infrastructure with Cloud Flexibility =====================

Legacy Microsoft Server Application Migration

----- Arcticle source ----- https://www.wipro.com/infrastructure/legacy-microsoft-server-application-migration/ ----- What We Think Contact Wipro Please fill the required details to access the content Legacy Microsoft Server Application Migration Innovative one touch approach Automatically migrate your Microsoft Windows 2003 and 2008 server applications to modern server platforms Organizations running unsupported operating systems are exposed to heightened cyber security risks such as malicious attacks or

electronic data loss. They also encounter problems with software and hardware compatibility since new software applications and hardware devices may not be built for Windows Server 2003 or 2008. In addition, security regulatory obligations may find they are no longer able to satisfy compliance requirements while running Windows Server 2003 and 2008 servers. Wipro's customized transformation approach provides automated assessment and remediation for Windows 2003 and 2008 application workloads with zero input from the customers' business owners. We enable our customers to modernize the underlying Microsoft server operating system and the applications deployed to modern servers. Innovative one touch approach ======================

Wipro's Boundary Less Data Management (BLDM) powered by NetApp (Building a Data Fabric for a data-centric world)

----- Arcticle source ----- https://www.wipro.com/infrastructure/boundary-less-data-management-bldm/ ----- What We Think Contact Wipro Please fill the required details to access the content Wipro's Boundary Less Data Management (BLDM) powered by NetApp (Building a Data Fabric for a data-centric world) Migrate quickly, deploy instantly and achieve cloud storage optimization Accelerate your hybrid/multi cloud journey with a single management platform with versatile data management/orchestration The most compelling benefit that hybrid multi-cloud offer to enterprises is flexibility – the freedom to choose where and how to deploy workloads. However, a disjointed approach, with no clear strategic plan that aligns business goals with technology investment, can increase risk and complexity of business operations. Siloed implementation of new technologies brings unpredictable cost and performance as well as a lack of data management control across an organization. Wipro's BLDM powered by NetApp helps you determine the right cloud model strategy for your business to reduce IT complexity and risk, improve IT agility and performance and enable faster technology adoption. With a comprehensive data management capability, Wipro's BLDM powered by NetApp can help you align your business and technology goals and design, deploy and manage your new environment to achieve the flexibility your business needs. The solution provides flexibility in data management, enhanced data sovereignty and compliance, availability, and durability. Operationalize hybrid multi-cloud and optimize your cloud storage costs ======================

Wipro's Cyber Resiliency Solutions

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-cyber-resiliency-solutions/ ----- What We Think Contact Wipro Please fill the required details to access the content Wipro's Cyber Resiliency Solutions

Protect business critical data assets effectively Wipro's Cyber Recovery solution powered by Dell Technologies and Wipro's Cyber Recovery services helps enable enterprises to battle a joint war against cyber-attacks and protect critical data assets. Data is the currency of the internet economy and a critical asset that must be protected. Cybercrime has been called the greatest transfer of wealth in history, and it is all about the data. Cyber-attacks continually expose business and governments to compromised data, lost revenue, reputational damage, and regulatory fines. The solution is an outcome of strong integration of the Dell cyber recovery solution into Wipro's cyber resiliency framework providing the much-needed cyber recovery resilience, automation and integration with security operation center, unified dashboard and forensic tools, using machine-learning techniques. Wipro Cyber recovery vault services powered by Dell is integrated with Wipro FLUID IT ASPIRE and Service Theatre framework to reduce the deployment time and automated and orchestrated workflow for faster recovery. Protect your critical data assets effectively from cyberattacks powered by analytics, machine learning and forensic tools Data is the currency of the internet economy and a critical asset that must be protected, kept confidential and made available at a moment's notice. Protect your critical data information assets effectively to withstand and recover from adversity arising from cyber space, powered by analytics, machine learning and forensic tools. =====================

Service Assurance using Splunk

----- Arcticle source ----- https://www.wipro.com/infrastructure/service-assurance-using-splunk/ ----- Contact Wipro Please fill the required details to access the content Service Assurance using Splunk Open up innovative opportunities through continuous service assurance, intelligence, and predictive analytics The only AIOps platform that enables teams to prevent incidents before they impact customers. Wipro's IT operations management (ITOM) aware solution goes beyond simple point solutions offered by Splunk. It targets ITOps, bringing data to IT operations, enabling infrastructure monitoring and ensuring business and IT service monitoring. At the same time, the AIOps platform utilizes machine learning for predictive alerting and auto remediation. This helps get visibility into the entire migration process, cloud provider infrastructure, applications and workloads running in the cloud. In addition, the intelligent alerting, automated event clustering and prioritization capability helps in faster incident resolution. The ITOM aware solution also simplifies and unifies insights across container environments and the entire technology stack for providing better visibility into faults, events, capacity, configurations, and security of server elements. This allows companies to create a single, streamlined and rapid monitoring experience for ensuring higher VMware stacks uptime. =====================

Wipro Enterprise Recovery Vault Powered by Cohesity

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-enterprise-recovery-vault-powered-by-cohesity/ ----- Contact Wipro Please fill the required details to access the content Wipro Enterprise Recovery Vault Powered by Cohesity Delivering Enterprise-Class Data Protection & Management as a Service Safeguard your data against cybersecurity threats while ensuring business continuity and disaster recovery readiness Data is an enterprise's most valuable and targeted business asset. Cybersecurity experts predict that in 2021, cyber-attack incidents will occur every 11 seconds, and cybersecurity-related attacks will cost the global economy $6.1 trillion. Hackers are creating increasingly sophisticated and focused attacks that now target organizations' last line of defense—backup data. Wipro and Cohesity have partnered to bring you peace of mind with industry-leading data protection and disaster recovery—Wipro Enterprise Recovery Vault Powered by Cohesity. The joint offering is aligned with NIST Cybersecurity Framework 1.1 with an immutable data protection solution that protects, isolates, detects, and most importantly, rapidly recovers data to reduce downtime and ensure business continuity. Wipro Enterprise Recovery Vault Powered by Cohesity integrates with Wipro FLUID IT Aspire and Service Theatre framework to reduce deployment time and ensure faster recovery through automated workflows. Together, Wipro and Cohesity provide modern, secure data protection and disaster recovery customized to your unique needs and delivered as-a-service for your convenience.
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Wipro virtuadesk™ Services (VDI as a service)

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-virtuadesk-services/ ----- Contact Wipro Please fill the required details to access the content Wipro virtuadesk™ Services (VDI as a service) Enabling an intelligent, fast, and secure remote working experience Modernize workspace infrastructures and cloud-enabled platforms through Wipro virtuadesk, powered by Nutanix Enterprises are moving to virtualized desktops due to the immense value of rapidly and securely provisioning apps, workspaces, and data to a mobile, distributed, global workforce. Better access to enterprise technology services means more collaboration, higher productivity, and less wasted time. As a provider of EUC, hyper-converged infrastructure (HCI), and cloud solutions, Wipro has collaborated with Nutanix to leverage its cloud-based workplace transformation capabilities. Nutanix and Wipro's in-depth industry knowledge and wide-ranging experience in delivering infrastructure solutions provide you a solid virtualization offering that's secure, scalable, and flexible. Virtuadesk's shared virtualized hardware also migrates across infrastructures.

Experience an evergreen futuristic workspace for your organization. Available in an appliance model to simplify delivery, virtuadesk integrates hardware, software, and managed services – enabling a remote workforce. Together, we are well-positioned to help companies navigate the changing workspace landscape. ===================== ----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-virtuadesk-services/virtuadesk-bfsi/ ----- Contact Wipro Please fill the required details to access the content Put employee experience at the heart of your hybrid working. See beyond hybrid and rethink the future of your workplace by transitioning to secure, high-performance Desktop-as-a-Service (DaaS). You can unleash productivity by working from anywhere. Buyer's Guide: See beyond hybrid. Wipro and Citrix's finance experience means we understand your challenges. Download our concise guide on robust workspace security, always-on service delivery, and enhanced UX and collaboration. Finance's Hybrid Future: Resources Discover insights, ideas, and practical examples of how Wipro and Citrix have helped financial organizations future-proof their digital infrastructures for the world of hybrid work. How firms are embracing next-gen UX with Wipro and Citrix 4 strategies for sustaining a secure, flexible financial workplace Harness hybrid to acquire top talent Beyond hybrid By leveraging and combining leading cloud and hyper-converged infrastructure (HCI) – such as Wipro virtuadesk™, Citrix Secure Private Access & HDX Technology and Citrix DaaS - the Wipro and Citrix partnership offers your organization a single solution that meets your key business needs for cybersecurity, user experience and service delivery, with outstanding success. Our cutting-edge alliance is leading most of the high-volume deployments in the banking, financial services and insurance industries. Our partnership is successful because one complements the other: while Citrix offers the advanced security solutions, Wipro brings next-generation systems integration and management, as well as consultancy to the mix. We will support you in delivering a secure, hybrid workforce, with next-level cybersecurity, service delivery and user experience. Download our detailed report today to learn more about the issues affecting the finance sector – from security breach risks, and compliance issues, to the race for the best digitally savvy talent. You will discover how your organization can start building a future-ready strategy for ongoing success, right now. Sign up to download the report Download Now
===================== ----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-virtuadesk-services/virtuadesk-healthcare/ ----- Contact Wipro Please fill the required details to access the content Putting people at the heart of hybrid work. Realize the best of all worlds. Download our detailed partner guide to find out more about how you can grow beyond hybrid and realize your best work – wherever that may be. Buyer's Guide: See beyond hybrid. Download our concise guide to discover how embracing a centralized, managed services approach to the future of hybrid can support you to achieve your three key goals: robust workspace security, always-on service delivery, and enhanced user-experience and collaboration. Healthcare's Hybrid Future: Resources Discover insights, ideas, and practical examples of how Wipro and Citrix have helped healthcare firms future-proof their digital infrastructures for today's ever-shifting hybrid landscape. How Wipro and Citrix deliver next-generation UX From broken experiences to breakthroughs Beyond hybrid By leveraging and combining leading cloud and hyper-converged infrastructure (HCI) –

such as Wipro virtuadesk™, Citrix Secure Private Access & HDX Technology and Citrix Cloud Services – the Wipro and Citrix partnership offers your organization a single solution that meets your key business needs for cybersecurity, user experience and service delivery, with outstanding success. Our cutting-edge alliance is leading some of the most high-volume deployments in the healthcare industry. Our partnership is successful because one complements the other: while Citrix offers the advanced security solutions, Wipro brings next-generation systems integration and management, as well as consultancy to the mix. We will support you in delivering a secure, hybrid workforce, with next-level cybersecurity, service delivery and user experience. Download our detailed report to understand the issues affecting operations in the sector — from keeping intellectual property data secure to the need for optimized collaborative tools. See how your organization can begin to grow beyond hybrid to realize a new world of work, today. Sign up to download the report Download Now
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LiVE Workspace myUniHub

----- Arcticle source ----- https://www.wipro.com/infrastructure/live-workspace-myunihub/ ----- Contact Wipro Please fill the required details to access the content LiVE Workspace myUniHub Drive a Digital-First Strategy to Enhance Productivity A user enablement platform built on the principles of design thinking to drive user productivity while providing hyper-personalized user experience and digital fabric across physical and virtual workspaces. Wipro LiVE Workspace's myUniHub, is a unified, intelligent and integrated user enablement platform that provides employees with consumer grade user interface coupled with industry leading solutions. It offers an extensible API bridge to enhance employee experience and drive employee productivity. The result is a digital workspace, which provides consumerized experience enabled through harmonized multichannel interfaces supported by smart automation and data insights. myUniHub helps in creating design-led features to simplify user journeys while aligning to enterprise technology roadmap to maximize returns on investments. The solution provides: ======================

Live Workspace™ - WaaS360

----- Arcticle source ----- https://www.wipro.com/infrastructure/live-workspace-waas360-choice-experience/ ----- Contact Wipro Please fill the required details to access the content LiVE Workspace WaaS360 – Choice & Experience Reimagine Device-Focused Digital Experiences with Workspace-as-a-Service Enable digital dexterity with increased "remoteability" by adopting a synergistic combination of multiple companies under a single contract and enjoy results that range from enhanced employee experiences and productivity to reduced operational redundancies in a Workspace-as-a-Service model Being modular and flexible, WaaS360 can be easily customized to meet any device-focused requirement– be it fostering a dynamic business environment, rapid expansion, or just looking to move to a

digital workplace model. The WaaS360 offering is built around the following primary tenets that Wipro helps translate into tangible benefits for the customer: - Enhanced employee experience with the right spec-matched devices. - Reduced TAT on service and incident requests.. - Free CapEx and internal resources to focus more on core business activities. - Multi-pronged optimizations, including TCO, resources, efforts, contracts, and supply chain. WaaS360 is an integrated offering of devices, employee services, and additional third-party services, all bundled in a single global contract that enables customers to optimize outflow and, therefore, focus more on their core business activities. With WaaS360, Wipro ensures availability of choices of devices from multiple OEMs along with persona-mapped experiences. While it's managed centrally, we support it locally as we act as the single point of contact while leveraging core competencies of multiple parties, all stitched together in a seamless fashion. This flexible and modular offering addresses the challenges of workplaces today while being ready for the challenges to come tomorrow. ======================

Wipro's Boundaryless Data Protection Powered by Dell Technologies

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-boundaryless-data-protection-powered-by-dell-technologies/ ----- What We Think Contact Wipro Please fill the required details to access the content Wipro's Boundaryless Data Protection Powered by Dell Technologies Holistic data protection solutions for modern and legacy workloads across hybrid cloud ecosystem Wipro's Boundaryless Data Protection Services Framework combined with Dell Technologies' Data Protection Suite protects our customers' workloads with unified data protection and management. As organizations leverage cloud platforms and services to realize their digital and IT transformations, the need to efficiently protect and secure the organization's data capital and intellectual property is even more critical. Wipro's Boundaryless Data Protection (BLDP) powered by Dell Technologies protects your data, wherever it lives – on the edge, at your core or in multi-cloud, by providing protection across traditional and cloud-native workloads. This results in significant cost savings and improved operational efficiency. Wipro's BLDP is a holistic, cloud-agnostic data protection platform, supporting multi-cloud environments to address end-to-end data protection scenarios. BLDP provides a single-pane-of-glass management solution to connect, secure, backup, recover, manage and control enterprise-wide data, increasing operational efficiency and ensuring consistency across on-premise and public clouds. Dell's proven data protection portfolio enables our customers to efficiently protect traditional and modern workloads and ensure cyber-resilience across platforms while mitigating risk and reducing complexity. Wipro's Service Theatre, at the heart of BLDP, delivers agile and flexible automation to orchestrate various data protection tasks to efficiently manage the lifecycle of data protection across edge to core and multi-cloud. This also covers pre-defined runbook to enact various scenarios for

frictionless workload recovery. This is delivered by tightly integrating with various components of the Dell Data Protection Suite through API integration and plugins. Data is the most critical asset for today's enterprises. It enables them to deliver new and innovative services to enhance the customer experience, increase loyalty and drive revenue.

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Google Cloud Infrastructure Modernization

----- Arcticle source ----- https://www.wipro.com/infrastructure/google-cloud-infrastructure-modernization/ ----- Wipro's Service Offerings on Google Cloud Platform Wipro's Google Cloud Solutions Migrate Virtual Machines (VM) to Google Cloud Google Cloud VMware Engine (GCVE) SAP on Google Cloud Microsoft on Google Cloud Bare Metal Solution on Google Cloud Contact Wipro Please fill the required details to access the content Google Cloud Infrastructure Modernization Accelerating cloud journey by modernizing infrastructure As customers look to modernize their infrastructure to control costs and at the same time drive innovation, public cloud services are playing an integral part in this transformation. Gartner predicts 40% of enterprise workloads will be hosted on public clouds by 2023 against the current 20%. The latest Gartner IT spending forecast shows a 10% decline in spend on data center systems. In contrast, spending on cloud system infrastructure services is expected to grow from $63 billion in 2020 to $81 billion by 2022.The growth is further accelerated by current pandemic crisis. Global companies are looking to adopt public cloud, to unlock business value from data swiftly and meet unpredictable demand from their user base. Wipro as a Managed Service Partner with Google Cloud has perceived that selecting the right migration strategy for workloads is of paramount importance instead of "one size fits all" approach. As a trusted Google Cloud partner, Wipro is helping customers leverage the best of Google Cloud platform as they develop and manage cloud native business applications, enabling faster time to market, increasing scalability of applications, and integrating them with external and internal systems in the IT landscape. Wipro's team of certified professionals help accelerate the customer modernization journey, increase agility, and adaptability with a razor sharp focus on business outcomes. Google and Wipro jointly offer key solutions for successful modernization of workloads by adopting Google Cloud. Data center exit solutions provides a fool proof architecture to land and expand in Google Cloud tagging the workloads with the right migration strategy. Hybrid cloud solutions using Google Anthos to run containerized apps on Managed Kubernetes in cloud, on premise and at edge. Run your VMs on the world's largest private and ultra fast network with Google Cloud, with pricing that meets your needs. Google sustained-use discounts can allow you to get discounts up front—without year-long commitments—and automated right-sized recommendations can help you save even more money. Google Cloud VMware Engine, is VMware as a Service offering, is your simplest, fastest, and cheapest "on ramp" to Cloud. GCVE allows customers to bring VMware-based environments to cloud without major

modifications. SAP and Google Cloud have had a strong relationship and have worked closely together ensuring Google Cloud capabilities meet the needs of SAP systems. Google Cloud developed large VMs to support SAP HANA Program and we have a 12TB VMs instance in production today. Google's VMs enable customers to provision HANA in a few minutes and deploy entire SAP landscapes including high availability & disaster recovery (HA & DR) in 60 minutes or less. Offers a first class experience for MS workloads like SQL Server and any Windows server-based applications, all backed by enterprise grade support. Moving Windows workloads to Google Cloud lets you increase IT agility and reduce your on premise footprint. Google Cloud can also help optimize your license expense and exposure by increasing the license usage efficiency on the underlying infrastructure through innovative features like custom VM shapes and sole tenant nodes. It is a purpose-built certified hardware for high performance mission critical workloads like Oracle databases that provides support and billing from Google Cloud for all bare metal needs. Bare Metal Solution is built in close proximity to Google data center with dedicated interconnect providing flexible ways to leverage existing DBAs or to bring partners to manage specialized workloads. =====================

Google Workspace

----- Arcticle source ----- https://www.wipro.com/infrastructure/google-workspace/ ----- Flexble Trusted Helpful Innovative What We Think Form Title Form Title Form Title Contact Wipro Please fill the required details to access the content Google Workspace Modern collaborative productivity Today, people have much higher digital dexterity than ever before. We all ultimately want a seamless digital environment to achieve business objectives & goals, irrespective of our: Status: employee, customer or partner Location: office premises or remote (Anyplace) Time: peak or off-hours (Anytime) Device: Corporate or BYOD. (Any device) Network: Enterprise or Internet Security Architecture: Zero Trust We share the experience of digi-tech in our day to day personal lives and expect the same experience to either be extended or replicated in our work environment. This, coupled with a hybrid work environment, makes the Digital Workspace one of the most dynamic and defining functions of the enterprise information technology ecosystem. A solution that makes it easy to work securely from anywhere. Have employees access all communications, files, and projects from a single space on any device, from anywhere, online or offline. Seamlessly move between email, chat, video, and voice communications. Integrates with the other business applications you already use so you can work across platforms. A solution that makes it easy to work securely from anywhere. Have employees access all communications, files, and projects from a single space on any device, from anywhere, online or offline. Seamlessly move between email, chat, video, and voice communications. Integrates with the other business applications you already use so you can work across platforms. Secure, cloud-based controls that are easy to manage. Intelligent security insights help reduce risk by identifying issues before they happen. Proactive protections help keep employees secure by identifying emerging threats. Simple controls enable centralized

manageability in a single admin console to help keep employees, data, and devices secure. Industry-leading AI helps employees focus on high-value work. Smart writing suggestions help teams create more inclusive, high-quality content quicker. AI-powered data tools promote data-driven decision making. Intelligent meeting capabilities make it easier to collaborate across languages and regions with equitable access. Immersive, human-centered solutions keep people connected. Intuitive, reliable experiences make it easy to collaborate from home or the office. Tightly integrated apps make it easy to stay connected and transform ideas into impact. Billions of employees can choose the apps without IT mandates. Flexible and full-featured room kits for easy, reliable video meetings, scalable to any size rooms and spaces. Wipro's Service Offerings on Google Workspace Google Workspace Services are a new set of services under Wipro LiVE Workspace that enable migration, deployment and operations of Google Workspace Solutions for any Enterprise Customer. Productivity has moved to the Cloud. Going to The Cloud is no longer anything 'new' or 'innovative'..... What is the most visible change that the world is seeing in terms of emerging work trends?
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Energy Management

----- Arcticle source ----- https://www.wipro.com/infrastructure/energy-management/ ----- Contact Wipro Please fill the required details to access the content Energy Management Enhancing Energy Efficiency with IoT An end-to-end solution that leverages Wipro Smart i-Connect™ to improve energy performance and maximize energy savings Engineering operations and facility management teams face challenges in effective utilization of energy infrastructure systems, especially in large and distributed footprints. Further, high operations cost, maintenance costs, lack of preparedness, compliance needs, and other challenges add to the complexities. Wipro's Energy Management offering is a smart and end-to-end solution that includes consultancy, systems, implementation, and support to overcome these challenges and drive effective and efficient energy management. The solution constitutes a systematic process for continually improving energy performance and maximizing energy savings. It helps to improve the operational efficiency of connected energy infrastructure systems with real time monitoring and control of assets and key parameters. Wipro's Energy Management solution leverages the multi-domain IoT solution Wipro Smart i-Connect™ to address and mitigate challenges through an IoT-based solution for better management of energy consumption in residential, commercial, and industrial sectors. Wipro Smart i-Connect analyzes the data received from various energy assets to identify opportunities for improving operations and efficiency of assets. It also provides early warning about potential faults that may degrade the overall performance of assets, resulting in increased energy consumption.
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Software Defined Multi-Cloud Networking

----- Arcticle source ----- https://www.wipro.com/infrastructure/software-defined-multi-cloud-networking/ ----- What We Think Form Title Contact Wipro Please fill the required details to access the content Software Defined Multi-Cloud Networking Embarking the cloud journey with a software defined approach for hybrid and multi-cloud networking Ensure successful cloud transformation with a secure, simplified, and scalable network for hybrid and multi-cloud. Wipro's software-defined multi-cloud networking uses software-defined cloud interconnect and #WANfreedom SD-WAN networking approaches to create seamless networking for the public or hybrid cloud environment. This enables consistent network and security policies across on-premises and cloud hosted Apps. The #WANFreedom based SD-WAN cloud onramp deployment delivers superior user experience of consuming cloud-hosted applications, irrespective of the geographical location or the cloud provider platforms. SD-WAN cloud onramp adoption empowers global enterprises to consume cloud services directly from the branches in an easy and secure manner. By enabling direct internet access at the branch offices, the enterprises can leverage true benefits delivered by the SD-WAN multi-cloud fabric. Tight integration of SD-WAN with cloud security platforms addresses the security challenges of branches connecting directly to the internet. By utilizing the power of software-defined networking on the WAN and the integrated cloud security model, businesses achieve superior performance, secure access to applications and uniform security compliance across the enterprise at reduced cost. The data center is no longer the center of gravity. Today, applications are distributed across data centers. The data centers are no longer the center of gravity. The applications are increasingly distributed across the on-premises data centers, multiple public clouds, and edge locations.
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Wipro's LiVE Workspace™ - TruRemote Powered by Intel® vPro® Platform

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-live-workspacetm-truremote-powered-by-intel-vpro-platform/ ----- What We Think Form Title Form Title Contact Wipro Please fill the required details to access the content Wipro's LiVE WorkspaceTM - TruRemote Powered by Intel® vPro® Platform Enabling cutting-edge remote support in the new normal TruRemote - An innovative and cost-effective solution to help you reduce downtime, boost productivity, and sustain device security The COVID-19 pandemic has triggered the hybrid work era, with employees being offered the flexibility of working from anywhere – office, home or any location. This

huge shift in the workplace dynamics necessitates maintaining the basic principles of operating system stability and system performance without compromising on security perimeters and ease of operations. Wipro's TruRemote is a part of Wipro LiVE Workspace™, and capitalizes on the exponential demand for remote field support services. Wipro's cost-effective and unique solution leverages out-of-the-band remote management which can connect to home or office devices from anywhere in the world through wired or wireless connections. The offering is powered by cutting-edge hardware technologies from Intel - Intel vPro® Platform, Intel® Active Management Technology (Intel® AMT) and Intel® Endpoint Management Assistant (Intel® EMA). Intel End Point Management Assistant software as part of Intel AMT allows Wipro to remotely and securely manage devices on known Wi-Fi networks beyond the firewall too. Backed by Wipro's global experience in delivering diverse solutions, it empowers you to adapt to changes and drive sustainable future business. The COVID-19 pandemic brought in many changes and established a new normal. The current pandemic has triggered "new age remote working", or, as the industry refers — the "hybrid work era". =====================

Client Computer GoBig Program

----- Arcticle source ----- https://www.wipro.com/infrastructure/client-compute-gobig-offerings/ ----- What We Think Form Title Our Solutions Contact Wipro Please fill the required details to access the content Client Compute GoBig Offerings Wipro and Intel® are collaborating to enable customers with remote field support across the globe. Wipro has joined forces with Intel to enable Wipro's LIVE Workspace™, Wipro's Digital Workspace solution with the Intel® vPro® Platform. This joint offering is helping customers drive business continuity by enabling them with remote field support solution to continue executing operations within the boundaries of social distancing and other limitations that have become the new normal. Wipro Remote Field Support offerings powered by the Intel vPro platform is integrated with Wipro Live Workspace®, an offering built using a combination of technology, tools and services. This addition to Wipro Live Workspace® enhances its remote field support and provides better remote manageability, improved system performance, and enhanced protection against firmware-level attacks in these unusual times. The combined solution provides practical business continuity services to enable enterprises to rapidly design, deploy, and manage a true remote work experience. The Intel vPro® platform delivers business-class PC performance right out of the box to power 27% faster productivity, simplify connectivity, and provide long battery life. The Intel vPro® platform features Intel® Active Management Technology (Intel AMT®) to help customers enable remote work and drive seamless productivity and collaboration while giving employees the flexibility to work from anywhere in a safe, secure and reliable manner. Intel® Active Management Technology using the Intel® Endpoint Management Assistant (Intel® EMA) tool enables management of devices both inside and outside the corporate firewall, even when out of band. The COVID-19 pandemic has triggered the hybrid work era The fast-emerging hybrid working models =====================

Datacenter GoBig program

----- Arcticle source ----- https://www.wipro.com/infrastructure/datacenter-gobig-program/ ----- Our Solutions Contact Wipro Please fill the required details to access the content Datacenter GoBig program Joint Solutions Brief Description Of The Solution BLE Hybrid cloud Boundaryless Enterprise solution, which is a flagship, market-facing offering to deliver Hybrid cloud services. Industry is targeting to move to HCI as transition from converged infrastructure like V-Block FluidIT - Cloud OnPremise Client expect cloud experience even on private cloud deployments. FluidIT - CloudOnpremise deliver consumption based cloud solution on premise leveraging Wipro accelerators and innovative Intel and OEM technologies Accelerated Hardware Refresh & Legacy modernization While we transform client estate for BLE and CloudOnPremise, there are enough workloads, which are still legacy windows, Linux and Unix like AIX, Solaris. This offering aims to bring opportunity to leverage new generation Intel hardware and Wipro accelerator for modernization of Legacy OS and currency management in BAU lifecycle with dramatically reduced dependencies on application team. Digital database as a service This solution is engineered to consolidate and run heterogeneous database engines on HCI platform. This Database CloudOnPremise solution bring down the overall DB instances and rationalize licenses cost. This is coupled with Wipro Service TheatreTM accelerator and runs on HCI technology. We have planned to test various Intel accelerators on this track throughout this year. SAP HANA Automation Huge opportunity and mandate for migrating from traditional SAP to HANA solution. This track focuses on creating differentiators for this solution on premise or on cloud. Leverage PMEM and Nextgen Intel processors. CSP Benchmarking & Golden Image An unique proposition in the industry that would bring paradigm shift in the way the Cloud Architecting and Cloud solutions are marketed to rationalize the expense borne by customer to get the value for money. CSP Benchmarking on selected workloads and based on the results defining the Golden Image which would be the game changer for Wipro & Intel.
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Wipro's Virtual Walk-In – for 100% remote ticket resolution

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-virtual-walkin-for-100-remote-ticket-resolution/ ----- What We Think Form Title Contact Wipro Please fill the required details to access the content Wipro's Virtual Walk-In – for 100% remote ticket resolution Truly Remote – 'No more / Zero' Field Support tickets Enhance productivity and reduce downtime with Wipro's Virtual Walk-In The fast-emerging hybrid working models have caused stress and pressure to remote support and field services teams to deliver effectively on-time to solve their customer needs. Though it is possible for remote field support to resolve and remediate several issues,

it is not feasible to handle hardware and device replacement related requests remotely. 90% of the service desk tickets are resolved remotely with in-band capability, while ~10% of tickets are escalated to field services teams. Wipro's unique offering of Virtual Walk-In kiosks is a blend of several cutting-edge technologies that make 100% remote ticket resolution a reality. The offering has several use cases across industries such as banking and retail. Required IT support services are deployed to provide first contact resolution to the end users who walk into the Virtual Walk-In center with issues related to IT infrastructure. User experience is enhanced with the IT concierge services and easy access to Expert Desk. They get an ATM-like experience wherein they can walk in and have all their issues resolved with a single escalation in this support center. Upon reporting the problem, users are assigned a support executive who will interact with the users, understand, diagnose the issue and provide resolutions that will address all the issues. The video kiosks allow users to interact with experts to resolve IT issues on-demand by docking into the kiosk, enabling remote troubleshooting of the issue and providing an integrated onsite + remote support model. Wipro adopts a tested approach to onboard and train the Expert Desk associates on a common curriculum at the Virtual Walk-in Academy to ensure a standardized and consistent experience across client environments in different locations and geographies. The ongoing global pandemic has irreversibly entrenched work-from-home and hybrid working
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Wipro's WANFreedom powered by VMware

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipros-wanfreedom-powered-by-vmware/ ----- Contact Wipro Please fill the required details to access the content Wipro's WANFreedom powered by VMware Enabling WAN virtualization to pave the way for digital innovation Traditional WAN architectures were focused on data center applications delivery using proprietary hardware, complex routing protocols, and substantial carrier dependencies. The unprecedented rapid changes in the IT ecosystem due to digital transformation have rendered the legacy infrastructure obsolete. Today, enterprises need a WAN solution that delivers applications from cloud, SaaS, and data centers over any combination of underlying transports including MPLS, LTE and broadband, while enforcing performance, security, and compliance policies. This has compelled organizations to rebuild the entire architecture with a software centric approach catering to current and future business needs. SD-WAN technology virtualizes the network functions by decoupling the network software services from the underlying hardware links. Wipro's #WANFreedom, powered by VMware, is a carrier neutral SD-WAN managed services offering that enables organizations to transform their legacy network architectures to a software defined, scalable solution. This helps improve WAN utilization and optimize costs with enhanced WAN agility. VMware SD-WAN is a cloud enabled overlay network that can work across any combination of underlying infrastructure delivering seamless

connectivity, assured application performance and simplified cloud management with on-ramp to cloud. The solution includes cloud on-ramp services via a global network of cloud gateways, cloud orchestrator, and edge appliances (hardware and software). Wipro's 15-year-old strategic partnership with VMware has helped generate an end-to-end portfolio of services across end users, applications, cloud, and networks space. VMware's SD-WAN product portfolio backed by Wipro's industry recognized managed network services and strong consulting capabilities helps customers to choose the appropriate SD-WAN solution for their infrastructure, delivering synergistic benefits. Continue to read more about the solution, please click the download button

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SAP HANA as a Service

----- Arcticle source ----- https://www.wipro.com/infrastructure/sap-hana-as-a-service/ ----- What We Do Contact Wipro Please fill the required details to access the content SAP HANA as a Service Seamlessly transform your IT infrastructure into a real-time enterprise SAP released their new core ERP product S/4HANA in 2015 and mandated all its customers to migrate to this product by 2027. Unlike technical upgrades, converting legacy SAP ECC systems to S/4HANA are large transformation projects. SAP S/4HANA's in-memory database engine requires a SAP certified compute architecture capable of scaling physical memory inline with the size of the HANA database. Cloud is an option to meet the constantly changing infrastructure requirements but , a public cloud strategy might not be suitable for every organization. The move to S/4HANA present challenges such as: SAP HANA as a service, a joint solution from Wipro with HPE Greenlake, provides a lucrative alternative. This solution combines the IP, service offering, and center of excellence (CoE) from Wipro. It also includes a complete set of solutions and services from HPE with SAP HANA Tailored Data Center Integration (TDI) configurations and HPE base configurations to create new possibilities for your business. The solution offers public cloud-like experience in the data center of your choice. You get simplicity, agility, and economics of public cloud combined with the security and performance benefits of on-premise IT. Transform your IT infrastructure into a real-time enterprise with Wipro, Hewlett Packard Enterprise, and Equinix.

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SAP HANA as-a-Service with Wipro, Hewlett Packard Enterprise, and Equinix

----- Arcticle source ----- https://www.wipro.com/infrastructure/sap-hana-as-a-service/sap-hana-as-a-service-with-wipro-hpe-and-equinix/ ----- Contact Wipro Please fill the required details to access the content SAP HANA as-a-Service with Wipro, Hewlett Packard Enterprise, and Equinix Transform your IT

infrastructure into a real-time enterprise with Wipro, Hewlett Packard Enterprise, and Equinix. Make the deployment of SAP HANA simple with the combined power of an edge-to-cloud platform, SAP modernization services, and a secure hosting platform Powerful digital technologies are rewriting existing business models. At the heart of this change is the ability to manage and use data to deliver better customer experiences. Intelligent enterprises are turning toward data platforms that combine transactions and analytics to make instantaneous insight a reality, and SAP HANA does just that. It leverages in-memory data processing for real-time data access and advanced analytic capabilities to bring significant benefits to the enterprise. To take full advantage of SAP HANA and complete the transition without disruption, enterprises must first replace their existing databases and implement servers built for in-memory computing. SAP is transitioning its existing deployments to S/4HANA. SAP S/4HANA's in-memory database engine requires an SAP-certified compute architecture capable of scaling physical memory in line with the size of the HANA database. All customers must migrate to S/4HANA and SAP Cloud Platform as legacy SAP reaches its end-of-life in 2027. SAP HANA as-a-service, a joint solution from Wipro, HPE, and Equinix, addresses the challenge of the complex transformation. The solution combines the Intellectual Property service offering, and Center of Excellence from Wipro and a complete set of HPE GreenLake consumption-based solutions and services from HPE, including the latest HPE mission-critical technologies and SAP HANA Tailored Data Center Integration (TDI) configurations. To complete the transformation, Equinix provides world-class, industry-compliant data center and interconnection services. The Equinix components make it simple for businesses to create and leverage infrastructure already securely connected to thousands of technology ecosystem partners, including major public cloud providers. To read more about the solution, download the brochure.
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Wipro's Digital Database Platform Services 2.0 Powered by Nutanix

----- Arcticle source ----- https://www.wipro.com/infrastructure/digital-database-platform-services-2-0/ ----- Contact Wipro Please fill the required details to access the content High-performance database environments for faster time-to-market, accelerated innovation and simplified operations Wipro's Digital Database Platform Services 2.0, built on Nutanix and integrated with Wipro's ServiceTheater redefines database lifecycle management, improving productivity and accelerating infrastructure modernization. With the proliferation of database engines and increasing complexity of database management in an evolving application landscape, a robust Database-as-a-Service platform becomes critical to success. Challenges engulfing legacy database management are multiple, including storage cost, infrastructure maintenance, longer provisioning cycles and lack of automation of complex legacy databases. Wipro's Digital Database Platform Services 2.0 (DDPS) is a fully managed Database-as-a-Service (FMDBaaS) offering that hosts traditional and next-generation databases on

a unified platform in a hybrid-cloud environment. Built on Nutanix cloud technology, and integrated with Wipro's Service Theatre, DDPS provides enterprises with database self-service provisioning, autonomous lifecycle management, flexible consumption model, developer-friendly APIs for DevOps integration and simplified management. What's more, Wipro's DDPS 2.0, integrated with Service Theatre built on Nutanix database service, Nutanix cloud infrastructure and Nutanix cloud manager delivers effortless database administration, improved IT infrastructure management, simplified operations and scalable business solutions. Wipro's DDPS 2.0 enhances scalability on a single console while self-configuring to meet the evolving demands of the end-user. It integrates public cloud platforms with existing databases while leveraging web-scale cloud infrastructure. DDPS 2.0 supports faster growth, stimulates innovation, offers impetus on return on investment (ROI) and promotes cost governance. To know more about the offering, click the download button. =====================

Wipro FullStride Cloud Services: Boundaryless Enterprise – Hybrid Cloud powered by VMware and AWS

----- Arcticle source ----- https://www.wipro.com/infrastructure/boundary-less-enterprise-hybrid-cloud-powered-by-vmware-and-aws/ ----- Our Expertise Services/Capabilities Strategic Partners Contact Wipro Cloud Transformation Services Application Modernization services Cloud Operations Please fill the required details to access the content Rapid digitization is disrupting business models and modern enterprises are moving to multi/hybrid cloud to accelerate innovation and quickly respond to change. This dramatic shift has resulted in significant complexity and challenges such as the need to exit data centers and move to the cloud rapidly while ensuring operational consistency with on premises and reduced costs. Wipro has partnered with VMWare and AWS to address these challenges and meet your cloud business objectives leveraging our deep expertise in this arena. Wipro FullStride Cloud Services: Boundaryless Enterprise Hybrid Cloud Solution Powered by VMware and AWS enables leading enterprises create a strategic roadmap for risk-free migration to cloud by providing end-to-end life cycle services across transformation and operations. Wipro is a VMware Principal Partner, Master Services Competency Partner for VMware Cloud on AWS and Managed Service Provider (MSP) expert partner for AWS globally. The joint solution leverages VMware cloud on AWS, an Enterprise Infrastructure-as-a-Service (IaaS) that runs natively on dedicated bare-metal AWS infrastructure. This solution offers the ability to quickly and seamlessly migrate or extend existing VMware workloads from on-premises environments to global AWS infrastructure with ability to modernize the applications using Tanzu portfolio or a variety of native AWS services like AWS EKS (Elastic Kubernetes Services), S3, RDS (Relational Database Service) s etc.

Customers get a chance to protect their VMware investment by leveraging the existing tools and skillsets while ensuring operational agility, innovation, and stability that AWS offers.   =====================

Wipro FullStride Digital Omnichannel Banking Solution on Google Cloud

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-full-stride-digital-omnichannel-banking-solution-on-google-cloud/ ----- Overview Benefits Our Success Stories Analyst Speak Contact Wipro Please fill the required details to access the content Wipro FullStride Digital Omnichannel Banking Solution on Google Cloud Recently, the Banking & Finance industry has been undergoing a sea of changes due to shifting customer attitudes and behavior and the emergence of new technologies. To keep up with the rapid pace of this change and stay competitive, banks have embarked on transformational journeys to enable digital banking and omnichannel modernization. Banks need the flexibility of cloud solutions to address rapidly changing customer expectations and provide the options consumers want when it comes to their financial needs. Omnichannel customer experiences, coupled with robust cloud capabilities, will enable financial institutions (FIs) to reimagine the customer journey. The Wipro Google Cloud partnership is uniquely positioned to help FIs design omnichannel customer experiences, transform data and analytics, better manage risk, and improve operational efficiencies. In addition, Wipro FullStride Cloud Services draws on strategic industry knowledge and technical and functional expertise to design and develop the best solution for FIs, leveraging the flexibility, scalability and robustness of Google Cloud. To pick the right cloud solution and make the cloud migration journey seamless for FIs, Wipro FullStride Cloud Services applies a strategic digital omnichannel banking framework powered by six unique transformational levers: identifying the high cloud-propensity areas and the right cloud approach; conducting a complexity-impact assessment to identify priorities: navigating various business and system layers for transformation; mapping the business function scope; and reimagining the customer journey. In this session Michael Rennie, Chief Operating Officer, Cynergy Bank, and Srinivasaa HG, Vice President, iDEAS, Europe, will discuss how Cynergy, in a bid to transform the services to their customers, partnered with Wipro & Google Cloud to undertake one of the boldest initiatives in the BFSI industry by radically transforming their IT estate. Download this IDC Spotlight on Wipro FullStride Digital Omnichannel Banking solution on Google Cloud =====================

Smart i-GreenIT

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-i-greenit/ ----- Contact Wipro Please fill the required details to access the

content Smart i-GreenIT Cut energy consumption of IT equipment by one third Move toward sustainability by reducing the carbon footprint of IT operations Today's IT systems are energy guzzlers. Enterprises can unlock considerable savings in their IT-related energy costs and reduce their carbon footprint using sophisticated AI and ML for power management. Wipro's Smart i-GreenIT is a network-based solution for PC, laptop, gateway and server-grade systems that dynamically improves energy efficiency during the idle time of devices without losing productivity or performance. The agentless architecture of the solution guarantees better on-premise or cloud deployment. The Smart i-GreenIT solution is equipped with best-in-class power management tools and near real-time monitoring capabilities. Coupled with remote need-based control of connected assets. The key features are: Clients using Wipro's Smart i-GreenIT solution can leverage dynamic AI and ML-based algorithms for predictive analytics and expect to reduce energy consumption by 30% plus.
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Smart i-Building

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-smart-i-building/ ----- Contact Wipro Please fill the required details to access the content Smart i-Building Leverage digital twin, data and analytics, to make building management and sustainability simple and effective Wipro's Smart i-Building solution improves traditional BMS by providing a central, integrated facility control center using powerful collaborative environments and innovative technologies. Its vendor-agnostic technology and open-source interfaces are extremely well-suited for controlling all intelligent building systems (including bookings for desks, meeting rooms and parking; wayfinding, occupancy management, environmental monitoring, OT asset management, AV monitoring, CCTV surveillance, and lighting, energy, water, and waste management). The scalable solution has several advantages, which are as follows: =====================

Smart i-Retail

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-i-retail/ ----- Contact Wipro Please fill the required details to access the content Smart i-Retail Boost customer experience and employee productivity while improving store profitability Provide seamless monitoring and control of stores while enabling consistent decision-making across stores. Providing customers with a smooth in-store shopping experience is a resource and time-intensive activity. Today's retail chains need a central and secure technology-driven solution to communicate with stores, track inventory, manage multiple devices and assets, and ensure compliance while helping customers acquire the products and services they want. Wipro's Smart i-Retail solution provides seamless monitoring and control of all geographically dispersed stores, distribution centers, assets, and business processes. It is designed to improve communication, boost employee productivity, reduce manual intervention, drive customer engagement, and

positively impact store compliance and profitability. The Smart i-Retail solution addresses and improves: =====================

Smart i-TIM: Smart & Intelligent Telecom Infrastructure Management

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-i-tim/ ----- Contact Wipro COOs NOC managers Site technician Please fill the required details to access the content Smart i-TIM: Smart & Intelligent Telecom Infrastructure Management Improve telecom site availability, utilization and optimization using AI based monitoring and management. Optimize operations cost and improve real-state utilization for telecom sites. Wipro's Smart i-TIM solution is designed for telecom providers keen on boosting the reliability, efficiency, and consistency of their sites and networks. This sophisticated solution combines built-in customizable applications and automation. Its capabilities include managing—and, in some cases—automating power, security, and environment-related tasks. Smart i-TIM's four technology modules address the needs of site technicians, NOC managers, and leadership: =====================

Smart i-YMS: Smart and Intelligent Yard Management System

----- Arcticle source ----- https://www.wipro.com/infrastructure/smart-i-yms/ ----- Contact Wipro Please fill the required details to access the content Smart i-YMS: Smart and Intelligent Yard Management System Accelerated warehouse and dispatch management with improved operational efficiency and sustainability Leverage digital systems for visibility into operations and eliminate bottlenecks affecting yard operations. Organizations with significant logistic and dispatch support requirements face several challenges, like limited visibility of yard utilization, demand for more parking space, data inadequacy in standardizing processes, increased security risks, end-to-end goods traceability, and limited data on fleet tracking and compliance management. Wipro's Smart i-YMS is an IoT platform-based integrated and collaborative solution with a user-friendly interface that enhances warehouse services and increases productivity. The scalable Smart i-YMS uses various modules to provide data insights across all associated services of yard management operations and functional requirements. The modules include: Warehouse Management: It fulfills the functional requirement of ensuring right goods at right place, monitor accurate delivery details while automating the process for quicker dispatch. The data insights for tracking & automation are achieved by integrating the

services with dispatch management systems, warehouse management & RTLS of Fork lifter in the warehouse. Integrated storage automation using robotic and automated storage management system from Wipro PARI. Dock Management: A key business requirement is to ensure faster availability of loading and unloading bays. The Dock Management module, driven by integrated computer vision analytics, accurately tracks bay utilization and quickly assigns vehicles to respective bays. Automated Gate Management: An automated gate management module is integrated with ANPR-based vehicle tracking solutions and RFID-enabled boom gate operations to maintain a safe and secure environment for goods dispatch. This service provides the vehicle license plate information, vehicle count, and vehicle classification. It also helps dispatchers with vehicle arrival notifications. In addition, the module is supplemented by an image analytics-based goods verification system. Workforce Management: This module helps dispatch managers and warehouse supervisors monitor yard jockeys and dispatch vehicles. It also auto-assigns work orders to enhance operational efficiency. Fleet Management: Real-time tracking of goods delivery vehicles provides ETA to enhance user experience and improve customer satisfaction. The module also monitors driver behavior and planned yard space utilization and integrates directly with vehicle OBD devices, GPS-based location tracking, and cold chain management to increase the quality of services.

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Intuitive Workspace

----- Arcticle source ----- https://www.wipro.com/infrastructure/intuitive-workspace/ ----- Contact Wipro Please fill the required details to access the content Intuitive Workspace Enhance employee and visitor experience along with operational excellence and optimization An intelligent, real-time workspace management solution that improves employee productivity and reduces operational costs Workspace optimization makes a considerable difference in employee productivity while providing visitors and employees with an improved experience. For an enterprise, effective workspace management improves employee-to-desk ratios while also lowering real estate requirements and operational costs. Wipro's Intuitive Workspace solution improves the user experience, increasing ROI in facility investments. The solution uses an interface accessible from mobiles, laptops, desktops, and kiosks to simplify the booking process of workspace infrastructure. The solution can be integrated with various systems, including Outlook 365, real-time occupancy sensors, NFC and RFID-enable devices, and end-user displays to provide real-time control over workspace assets. The solution's key modules include: Meeting Room Management: Allows users to book meeting rooms that have the desired size, setup, and equipment. It helps streamline meeting invites with real-time notifications and alerts, along with auto cancellation during no-shows. Insights based on real-time analytics of meeting room usage and occupancy levels let administrators make data-based decisions leading to reduced facility management costs. Hot Desk Management: Helps employees to locate and book a desk, enables better utilization of desks, and contributes to increased employee productivity by eliminating wasted time searching for available

desks at the workplace. The system includes real-time alerts and notifications, while desk usage and occupancy level data let administrators make data-based decisions leading to reduced operational costs. Visitor Management: Pre-registration and on-site registration of visitors with a self-service check-in app provides a great user experience.The solution provides visitor arrival notifications and can restrict/ enable visitor access to buildings/ areas based on business requirements. Navigation: Static and dynamic navigation for visitors and employees. AV Monitoring: Real-time 24X7X365 management and monitoring of AV equipment & assets and integration with incident management system. Smart Parking: Employees can look up and book parking for themselves/visitors across locations at the slot level, notify visitors of their parking information, and provide live parking status to the facility management team. Slot Booking: Allow users to view available appointment windows, select and book the slot for walk-up locations. These slots can be booked in walk-in centers, global immigration centers, travel desks, courier dispatch or collection centers, health centers, cafeterias, etc. Light Management: Optimizes lighting based on space occupancy and usage with remote monitoring and management. Lowers energy costs using standard controls – such as dimming, occupancy sensors, and daylight harvesting. Enterprises using Wipro's Intuitive Workspace solution can expect to improve employee and visitor experience, unlock savings in operational costs, increase employee productivity, and scale the system for a multi-tenant model. =====================

Wipro OTNxT

----- Arcticle source ----- https://www.wipro.com/infrastructure/wipro-otnxt/ ----- Contact Wipro Transforming Operational Technology Using Platform Services Please fill the required details to access the content Wipro OTNxT Drive Cost Savings and Standardization with End-to-End Managed Services for OT and IoT Infrastructure. In most organizations, information technology service management (ITSM) , ITIL and other standards has not been pressed into service to cover operational technology (OT) systems. Support of OT and IoT systems is largely reactive instead of proactive. This poses several challenges in monitoring SLAs, causes delays in fault identification and results in higher resolution time, loss of productivity due to sudden failures, and higher maintenance costs. By implementing a structured approach to manage OT systems, which includes supervisory control and data acquisition (SCADA), building management systems (BMS), human-machine interfaces (HMIs), servers, controllers, and IoT devices, it is possible to resolve the issue at hand. The adoption of an OTNxT approach can bring about numerous benefits, such as improved service quality, increased transparency, better compliance, enhanced customer satisfaction, and greater accountability for IT teams. Wipro OTNxT is an end-to-end managed service that covers the entire spectrum of OT and IoT systems, from devices to networks to the edge, WAN, cloud and applications, all in a proactive manner. It works in tandem with the client's OT strategy, enabling real-time decision-making, while minimizing unexpected downtime. Additionally, Wipro OTNxT offers the added advantage of reducing capital and operational expenses by eliminating unnecessary hardware and software.

Clients using Wipro OTNxT can expect the following benefits: An IDC white paper sponsored by Wipro on the long-term value of a platform-based OT solution. Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/infrastructure/form/ ----- =====================

Wipro elevates its BoundaryLess DataCenter to BoundaryLess Enterprise with business-first strategy

----- Arcticle source ----- https://www.wipro.com/infrastructure/form/wipro-elevates-its-boundaryless-data-center-to-boundaryless-enterprise-with-business-first-strategy-451-research-market-impact-report/ ----- Contact Wipro Please fill the required details to access the content Wipro elevates its BoundaryLess Data Center to BoundaryLess Enterprise with business-first strategy- 451 Research Market Impact Report =====================

Wipro positioned as a 'Leader' in IDC MarketScape:

----- Arcticle source ----- https://www.wipro.com/infrastructure/form/wipro-positioned-as-a-leader-in-idc-marketscape-asiapacific-excluding-japan-managed-cloud-services-2019-vendor-assessment/ ----- Contact Wipro Please fill the required details to access the content Wipro positioned as a 'Leader' in IDC MarketScape: Asia/Pacific (Excluding Japan) Managed Cloud Services 2019 Vendor Assessment Using the IDC MarketScape model, IDC studied nine organizations in 2019 that offer managed cloud services in Asia/Pacific excluding Japan (APEJ). Although many of the participating vendors deliver services globally, there are a few whose focus is on specific markets within Asia/Pacific. According to IDC MarketScape, Wipro, a major IT services vendor, has a comprehensive portfolio aimed at assisting clients in their cloud journey. It includes assessment, app modernization, and a phased approach for cloud migration as well as integration of legacy systems with the cloud. Wipro has a strong track record and capability in helping its clients upgrade legacy infrastructure to either a private or public cloud infrastructure. Wipro's Cloud Studio — an integrated collection of tools, technologies, and processes aimed at automated discovery, cloud-readiness assessment, cloud migration planning, scheduling, and execution — represents a differentiating asset in its arsenal. The Wipro-AWS Launch Pad, which is Wipro's state-of-the-art co-branded cloud innovation center in Bangalore, allows Wipro to effectively showcase to prospective customers the best of its offerings for AWS Cloud. =====================

Wipro is a Leader and Star Performer in Verification and Validation Engineering Service Providers 2020

----- Arcticle source ----- https://www.wipro.com/infrastructure/form/wipro-is-a-leader-and-star-performer-in-verification-and-validation-engineering-service-providers-peak-matrix-assessment-2020/ ----- Contact Wipro Please fill the required details to access the content Wipro is a Leader and Star Performer in Verification and Validation Engineering Service Providers 2020 In this report, Everest Group studied the vision and capabilities of 17 service providers. It also identified two service providers as the '2020 Verification and Validation Engineering services Market Star Performers' based on the strongest forward movement demonstrated on the PEAK Matrix year-on-year. "Wipro has been positioned as a Leader in the Verification and Validation (V&V) space on the back of significant investments in dedicated V&V infrastructure, including the Tarang labs. The company's development of solution accelerators and frameworks involving themes such as Artificial Intelligence (AI), Machine Learning (ML), and analytics to provide predictive analysis of test data and enhance V&V service delivery has also helped create meaningful differentiation in the market. Customers have acknowledged Wipro's V&V engineers' technical skills, and they appreciate the value of Wipro's engineers' expertise in test automation." - Akshat Vaid, VP, Everest Group Supriyo Das, Vice President and Global Practice Head – Software Engineering, Industrial and Engineering Services, Wipro Limited said, "We are thrilled with this recognition. Product complexity is ever increasing with growing digital adoption, proliferation of software across industries, need for seamless end user experience and minimal product recalls. At Wipro we have invested in infrastructure, talent, industry focused solutions and strong partnership to help our customers overcome these challenges. Our investments in new-age technologies such as 5G, Artificial Intelligence (AI) / Machine Learning (ML), Robotic Process Automation (RPA) Internet of Things (IoT), Blockchain, Certification & Compliance Labs and talent has started reaping benefits. We are confident that our offerings and solutions powered by Wipro EngineeringNXT platform will continue to meet and exceed customers' expectations. This recognition is a testimony to our commitment towards achieving excellence." Download report ======================

The Next Wave of SD-WAN Adoption

----- Arcticle source ----- https://www.wipro.com/infrastructure/form/the-next-wave-of-sd-wan-adoption/ ----- Contact Wipro Please fill the required details to access the content The next wave of SD-WAN adoption will require an

unprecedented degree of automated intelligence, including pervasive visibility and extensive security capabilities. Integrated AIOps will feature heavily too, ensuring networks and the applications that traverse them perform optimally, securely, and cost-effectively. As features are added and extensibility grows, enterprises will place a premium on SD-WAN offerings that abstract the inherent complexities of provisioning, managing, and securing the WAN. Complexity incurs the expenditure of time and resources, which slows the speed at which business can move. Simplicity will take the form of easily consumable turnkey offerings that involve no compromise in the functionality and performance of both the SD-WAN overlay and the underlying network transports. As enterprise buyers of the next wave of SD-WAN evaluate the available options, the partnership of CloudGenix and Wipro is well placed to help them achieve their digital-transformation objectives. This partnership will help deliver business benefits such as greater employee productivity, enhanced digital engagement with customers and partners, faster time to market, great WAN cost optimization (CapEx and OpEx), improved business agility, and ultimately, greater competitive advantage in a world where challenges come from traditional rivals as well as digital natives. Download Report =====================

Enabling Agile IT: Modernizing Datacenters with Software-Defined Private Cloud Solutions

----- Arcticle source ----- https://www.wipro.com/infrastructure/form/enabling-agile-it-modernizing-datacenters-with-software-defined-private-cloud-solutions/ ----- Contact Wipro Please fill the required details to access the content Enabling Agile IT: Modernizing Datacenters with Software-Defined Private Cloud Solutions =====================

Wipro recognized as a 'Leader' in Everest Group's Aware (Intelligent) IT infrastructure services automation PEAK Matrix® Assessment 2021

----- Arcticle source ----- https://www.wipro.com/infrastructure/form/wipro-recognized-as-a-leader-in-everest-groups-aware-intelligent-it-infrastructure-services-automation-peak-matrix-assessment-2021/ ----- Contact Wipro Please fill the required details to access the content Wipro recognized as a 'Leader' in Everest Group's Aware (Intelligent) IT infrastructure services automation PEAK Matrix® Assessment 2021 This report examines the dynamics of the global IT infrastructure services automation service

provider landscape. Wipro emerged as a Leader among 18 leading IT infrastructure services automation service providers. Wipro strengths highlighted by Everest Group: Download Full Report
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Wipro FluidIT: Delivering Business Agility Through Hybrid Multicloud Management

----- Arcticle source ----- https://www.wipro.com/infrastructure/form/wipro-fluidit-delivering-business-agility-through-hybrid-multicloud-management-services/ ----- Contact Wipro Please fill the required details to access the content Wipro FluidIT: Delivering Business Agility Through Hybrid Multicloud Management Today's enterprises constantly face enormous pressure to adapt to new and emerging challenges, from implementing new business models to incorporating innovations to meet critical business and IT objectives. Wipro's FluidIT can bring about seamless business transformation with expansive IT fabric, on-demand composability, and participative design while maximizing cloud infrastructure to blend organizational expertise and new technologies. This joint whitepaper by IDC, Wipro, and Intel defines hybrid multicloud management and provides in-depth coverage of the Wipro FluidIT platform. The whitepaper presents the proprietary BoundaryLess Enterprise framework of Wipro's FluidIT platform and its three key components: ASPIRE, Service Theatre, and APPAnywhere. The whitepaper discusses the architecture, which supports integration via APIs as well as any form factor for any location. To gain control over resources and assets, provide consistent visibility, ensure governance, and enable automation in a multi-cloud paradigm, enterprises increasingly turn to managed service providers, who can extend hybrid multi-cloud management capabilities. Download the whitepaper to
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Enterprise AI: Lessons from the Early Adopters Contact Wipro The Pulse of Cloud: GenAI Drives Accelerated Cloud Investment From Quality Assurance to Quality Engineering How to Master Cloud Economics and Harness The Power of AI Industry Clouds Become Catalyst for Transformation Comprehensive Look on How to Ready Your Company for the Cloud Revolution in 2024 Six Cloud Evolution Predictions For 2024 Navigating the Cloud-Native Maze Powering Cloud Innovation in The Energy and Utilities Industry Cloud's Transformation of Financial Services. The Prescription for Healthcare Provider Cloud Success Global Cloud Report. Please fill the required details to access the content   For business leaders looking to drive digital and business transformation, go FullStride. Today's CXO conversation is focused on delivering transformational business outcomes in the cloud. And Wipro FullStride Cloud's deep engineering and infrastructure experience uniquely positions Wipro as a strategic partner of choice. For ecosystem orchestration that drives next-level experiences and innovation, go FullStride. For operational efficiency and sustainability, go FullStride. To unlock data insights with AI and ML to create full-stack, cloud-native

enterprises, go FullStride. To truly thrive in the cloud, go FullStride. SERVICES Advisory & Consulting Migration & Modernization Infrastructure Services Cloud Security AI Cloud Studio Industry Cloud Cloud Assurance Cloud Business Applications Cloud Native Digital Workplace Cloud Operations CASE STUDY AND ACCOLADES Wipro FullStride Cloud + Cloud Leaders Wipro FullStride Cloud + Leading Analysts Wipro FullStride Cloud + Global Fashion Leader Wipro FullStride Cloud + Global Logistics Leader Wipro FullStride Cloud + Leading Wireless Network Operator Wipro FullStride Cloud + Major International Airport MAKING INDUSTRY CLOUD POSSIBLE ENERGY AND UTILITIES HEALTH AND LIFE SCIENCES MANUFACTURING A Harvard Business Review Analytic Services report in association with Wipro FullStride Cloud PARTNERS NEWS, AWARDS & RECOGNITION Wipro is Named a Leader in 2024 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services Wipro Named a Leader in Everest Group's Cloud Services PEAK Matrix Assessment 2023 – North America Wipro Named a Leader in Everest Group's Cloud Services PEAK Matrix Assessment 2023 – Europe Wipro Named a Leader by Everest Group Network Transformation and Managed Services PEAK Matrix® Assessment System Integrators 2023 Wipro is Named a Leader in 2023 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services Wipro and Evanta CIO Community Discuss Cloud Strategies & Business Growth Wipro achieves Google Cloud Partner Specialization in Application Development Wipro Recognized as 2021 Microsoft Modernizing Applications Partner of the Year Wipro earns Microsoft Windows Virtual Desktop Advanced Specialization Wipro enables Zero Cost Transformation with Oracle Cloud Infrastructure Wipro's Zoom-to-Cloud for Oracle Wipro is the first GSI to achieve Amazon EMR Migration Partner status Wipro named a Leader in IDC Worldwide Cloud Professional Services 2020 Wipro named a Leader in Gartner 2020 Public Cloud Infrastructure Professional and Managed Services Worldwide Magic Quadrant Wipro named a Leader in Everest Group System Integrator Capabilities on AWS PEAK Matrix® Assessment 2021 Wipro expands its AWS Launchpad for SAP Migrations Wipro looks to accelerate enterprise transformations with FullStride Cloud Are you ready to be amongcorporate leaders who are forging a future for all? Contact us now =====================

Innovation to Market faster with Cloud CRM

----- Arcticle source ----- https://www.wipro.com/cloud/faster-innovation-to-market-with-salesforce-cloud-crm/ ----- Related Articles Contact Wipro Please fill the required details to access the content Innovation to Market faster with Cloud CRM Wipro enabled CRM transformation for a large electronics conglomerate in 17 markets across 52 countries with salesforce.com Client Background The client is a leading engineering and consumer electronics conglomerate based in Europe, with over 122,000 employees and operations in more than 100 countries. Industry Landscape Most industries adopt an end-to-end value chain approach which includes three core processes areas -

Idea-to-market, Market-to-order and Order-to-cash. Manufacturers are facing unprecedented challenges in designing the right customer value chains and delivering on time in a highly competitive environment. Moreover, changing demographics, R&D pipeline productivity and evolving business models selling processes have compelled leading enterprises to embrace CRM for a complete process transformation. Opportunity The client had disparate systems across the 'Market-to-order' (M2O) process area leading to longer cycle times and process redundancy. Sales representatives did not have visibility across the entire sales process. The client needed to implement a unified CRM solution, with standardized sales tools and processes, aligned to their vision of customer centricity and enhance sales efficiency across all three divisions globally. Solution Wipro enabled the client to streamline their "Market-to-order" process using Salesforce CRM and brought together their three divisions under a single, unified SaaS CRM eco-system. The solution highlights include Global Template to optimize and standardize processes in 17 client markets across 52 countries. Business Impact Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours. Wipro Data Discovery Platform on Azure Cloud enables business process transformation and data monetization. 9 TB of data migrated, resulting in 30-35% reduction in current spend. =====================

Cloud-Based Automation for a Leading Investment Bank

----- Arcticle source ----- https://www.wipro.com/cloud/cloud-based-automation-for-a-leading-investment-bank/ ----- Related Articles Contact Wipro Please fill the required details to access the content Cloud-based Automation for a Leading Investment Bank Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours Client Background The client is a leading US-based investment management and services company, uniquely focused on helping clients manage and move their financial assets and succeed in the rapidly changing global marketplace. Industry Landscape With the advent of cloud, enterprises are not only looking at automating their infrastructure but also their application release management process. Over the past few years, many enterprises, especially banks, have implemented in-house private cloud and have deployed or started their journey towards building a continuous delivery platform to transform their software development lifecycle to an on-demand, self-service, and automated environment. A recent industry survey shows that with DevOps on Cloud solution, some of the high-performing organizations can deploy code 30 times faster with 50 percent fewer failures. The Opportunity The client had adopted extreme programming for their Software Development Lifecycle, but the underlying release process was manual, sequential and hence, time consuming. They were looking for a scalable, agile and cost-effective solution to render state-

of-the-art services to large financial institutions and banks. This necessitated that they move from their current systems to an agile cloud platform that would enable them to: The client was looking for a capable partner to help them in their journey to define and build this agile cloud platform. Solution Our team helped the bank define governance between Development and Operations teams cutting across people, process, and technology, and introduced a continuous delivery platform for DevOps on Cloud. The implementation enabled the bank's IT team to deploy environments across the application lifecycle, in an on-demand basis, while leveraging its proprietary tools and frameworks. Some key highlights of the engagement are: Our DevOps solution enabled agile self-provisioning of Infrastructure and the entire environment for developers, reducing managed service cost and TCO through automation and consolidation. Business Value Delivered Wipro successfully embarked the client on their DevOps journey and drastically lowered their application roll-out time. The engagement brought together the benefits of operational excellence and continuous delivery models merging them with the dynamic potential of cloud architectures to achieve: Wipro enabled CRM transformation for a large electronics conglomerate in 17 markets across 52 countries with salesforce.com Wipro Data Discovery Platform on Azure Cloud enables business process transformation and data monetization. 9 TB of data migrated, resulting in 30-35% reduction in current spend. =====================

Medtech company achieves insight-driven

advantage with Azure Cloud

----- Arcticle source ----- https://www.wipro.com/cloud/business-process-transformation-enabled-through-data-monetization/ ----- Contact Wipro Please fill the required details to access the content Medtech company achieves insight-driven advantage with Azure Cloud January | 2020 Client background Client: Leading US based MedTech organization Industry: Medical devices Products or services: Medical devices, consultancy, instrument systems Geography or areas of operations: Worldwide Number of employees: Over 60,000 Challenge A leading US based MedTech company wanted a partner to help them realize their vision of transitioning into an insights-driven organization that delivers business value to its end customers. The purpose of the engagement was to embed data, analytics and reasoning into their decision-making processes and empower the business in making intelligent and informed decisions. The client had the following challenges: Solution Wipro delivered the desired outcomes leveraging its Data Discovery Platform (DDP) on Azure Cloud. Wipro helped in building an analytics platform that enabled the business teams to collect, ingest, process and analyze data to derive insights and improve business outcomes. Business impact Wipro solution helped the client shorten their time to generate reliable insights and achieve high predictability of their IT assets. They are able to conduct experiments with pre-defined budgets

leveraging a catalog-based sizing approach that determines the type of data load, recognizes the insights hidden in the data, thus allowing agile interpretation and action. Our solutions delivered the following benefits: "Wipro helped the client to consolidate and leverage enterprise wide data (structured and unstructured) to harness the power of Big Data and build an insights-driven organization leveraging Wipro DDP on Azure Cloud." -Nidhi Garg Global Client Partner, Health BU, Wipro

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How a leading tech company got its cloud migration strategy right

----- Arcticle source ----- https://www.wipro.com/cloud/improved-speed-in-production-and-reduced-maintenance-costs-with-aws-cloud/ ----- Related Articles Contact Wipro Please fill the required details to access the content Improved speed in production and reduced maintenance costs with AWS Cloud January | 2020 Client background Client: An American multinational technology company Industry: IT, IT services, IT consulting Products or services: Computer hardware, computer software, IT services, IT consulting Geography or areas of operations: Worldwide Number of employees: Over 49,000 Challenges The technology conglomerate wanted to adopt a standardized approach to cloud migration on AWS. They wanted a partner who could help them identify the right workloads, the right migration methodologies and propose a resilient governance model to run effectively on a cloud set up. They also wanted to address the following requirements; Solution The client wanted a cloud environment to improve speed of production and reduce maintenance costs. Wipro did a full analysis of their current landscape and provided the following solution; Business impact Wipro helped the client to minimize cost of operations by moving on-premise Vertica Database to AWS and cost of managing licenses for reporting environment, reduced significantly. "Wipro provided a scalable architecture on Cloud leveraging AWS Direct Connect Service, which helped the client to consolidate its reporting environment and achieve significant performance improvement. Automation, optimization, cost reduction and speed to production was their key asks, and our solutions coupled with our 'business first' approach helped them embark on their cloud migration journey with minimum disruptions to business." -Ankit Ghosh Head – Cloud Transformation Solutions, Tech BU, Wipro Limited. Wipro enabled CRM transformation for a large electronics conglomerate in 17 markets across 52 countries with salesforce.com Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours. Wipro Data Discovery Platform on Azure Cloud enables business process transformation and data monetization. ======================

How a Fortune 500 company ensured

data security on the cloud

Related Articles Contact Wipro Please fill the required details to access the content How a Fortune 500 company ensured data security on the cloud January | 2020 Client Background Client: A Fortune 500 company Industry: Cloud computing, Data Management Products: Data services and data storage devices Geography or areas of operations: Worldwide Number of employees: Over 10,000 Challenge Today, most data backup solution providers are making cloud the secondary storage for backup, and provide subscription-based backup storage solutions. The client, a data management services provider, had an on premise data backup solution and wanted to move data from the primary storage device to a secondary storage device. The client was looking for a partner who could help them launch a cloud data backup solution delivered as a SaaS model with anywhere-anytime data backup management for its end customers. The key requirements were: Solution Wipro leveraged a two-phased approach for enabling a Data Protection platform on cloud for the client. The first phase was a cloud application launched from AWS MarketPlace and the second phase was a SaaS model hosted on AWS. The Data Protection platform was developed as a highly available and scalable service leveraging cloud-native services, while keeping the design completely cloud-neutral. AWS services like S3 and SQS were used in combination to create a low latency and, secure message passing infrastructure for on-premise to cloud (hybrid cloud) communication. AWS services EBS, availability zones, and application load balancer were used to provide high availability across regions and on-demand scaling. The data protection platform was developed leveraging micro-services architecture using Java Spring Boot, deployed on docker containers. Feature-rich UI implementation was done using Angular JS. The cloud backup data was stored in S3 bucket and, configuration and metadata was stored in Elastic Search deployed in HA (high availability) environment across availability zones. The other key aspects of the solution include: Business Impact The cloud data backup solution delivered as a SaaS model enabled data backup management from anywhere, anytime for their end customers through a highly scalable, highly available and a secure cloud environment. The DPaaS solution orchestrated from a hybrid cloud helped the client gain a competitive edge by providing: "Wipro delivered a highly scalable and portable cloud-agnostic data backup solution with the right balance of cloud native and cloud neutral architecture. The solution enabled better customer experience with intuitive workflows and UI. With a clear roadmap and our 'business first' approach we enabled the client to embark on a cloud adoption journey." -Ankit Ghosh Head – Cloud Transformation Solutions, Tech BU, Wipro Wipro enabled CRM transformation for a large

electronics conglomerate in 17 markets across 52 countries with salesforce.com Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours. Wipro Data Discovery Platform on Azure Cloud enables business process transformation and data monetization. =====================

How a large food company took control over its

complex technology landscape with Azure IaaS

----- Arcticle source ----- https://www.wipro.com/cloud/how-a-large-food-company-took-control-over-its-complex-technology-landscape-with-azure-iaas/ ----- Related Articles Contact Wipro Please fill the required details to access the content How a large food company took control over its complex technology landscape with Azure IaaS January | 2020 Client background Client: Multinational food and drink processing company Industry: Food processing Products or services: Dairy products, baby food, breakfast cereals, coffee, confectionery, etc. Geography or areas of operations: Worldwide Number of employees: Over 300,000 Challenges The client wanted a technology partner to consolidate and migrate their enormous technology landscape across three regions – USA, Europe and APAC to a single cloud platform. Also, the client was contemplating to move their APAC operations from Australia to Singapore. They needed a partner who could deliver Cloud Brokerage Services to help them manage the use, performance and delivery of cloud services provided by multiple suppliers and service providers. In effect, they were facing the following challenges: Solution Wipro implemented a best-in-class hybrid cloud solution that helped the client accomplish the migration journey seamlessly without any disruptions to their business. Implementation highlights: Business impact The flexible and extremely scalable solution brought down client's IT spends, and improved efficiency and time-to-market. The hybrid cloud solution enabled seamless consolidation of the client's huge technology landscape. Cloud Brokerage Services, set up on a futuristic cloud architecture, ensures elasticity, efficiency and customer delight. Some key benefits include – "Wipro brought in a wide-range of expertise with global infrastructure capabilities. With deep expertise in delivering global multi-cloud migrations, Wipro helped to move the client's IT landscape to a dynamic cloud-based environment on Azure Cloud leveraging EDOC, one of our key accelerators that helps in managing hybrid cloud set-up. This transformation clearly helped the client to reduce their physical infra-footprint, improve performance, gain uninterrupted availability and lower total cost of ownership significantly." -Subramanian Krishnan General Manager & Global Client Partner, Consumer BU, Wipro Limited. Wipro enabled CRM transformation for a large electronics conglomerate in 17

markets across 52 countries with salesforce.com Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours. Wipro Data Discovery Platform on Azure Cloud enables business process transformation and data monetization.
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Insurance company optimizes digital

marketing platform with AWS

----- Arcticle source ----- https://www.wipro.com/cloud/insurance-company-optimizes-digital-marketing-platform-with-aws/ ----- Related Articles Contact Wipro Please fill the required details to access the content Insurance company optimizes digital marketing platform with AWS January | 2020 Client background Client: Fortune 500 US-based company Industry: Insurance Products or services: Insurance, Mutual funds Area of operations: US Number of employees: Over 15,000 Challenge With the rapid advancement of technology, digital channels and tools are becoming the primary route to serve investors and advisors better. The client's content management platform (AEM), a mission critical application, was accessed by investors and finance professionals (over 27K users), and tightly coupled with 14 interfaces. This platform was built on Red Hat Linux, and its SQL Server database and active directory were hosted on Windows servers. One of the key pain points was the lead time taken to retrieve historical data from tape drives while meeting compliance needs. They wanted to rebuild and migrate their digital platform to public cloud. For this, they were looking for a partner who could understand their business values, and bring in the right set of technology and bring in the right business credentials. Solution Wipro put together a comprehensive approach to deliver the solution strategy. We provided development services, managed services, and moved their private cloud infrastructure to public cloud to drive business value. Wipro enabled migration of the AEM platform to AWS cloud. The entire migration was completed in a span of 18 weeks, which included discovery/assessment, design and set up of AWS architecture, data migration and integration, user acceptance testing, cutover and go-live. Business impact The client built a reliable, flexible and transparent cloud infrastructure platform for AEM and laid the foundation for delivering great digital experiences. The client is now not only realizing the value of infrastructure flexibility gained through this migration to AWS, but is also having a footprint from where they can take advantage of technologies like AI and ML. Key benefits include: "This engagement reinforces Wipro's 'Digital first' strategy and differentiated offerings on AWS Cloud. We helped the client transform their digital marketing platform to a highly scalable platform on public cloud. The migration was carried out with minimal disruptions and zero-outage, thus ensuring business continuity." -Pankaj Misra General Manager, Finance Solutions, Wipro Limited. Wipro enabled

CRM transformation for a large electronics conglomerate in 17 markets across 52 countries with salesforce.com Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours. Wipro Data Discovery Platform on Azure Cloud enables business process transformation and data monetization.
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Finance company connects customer

experience to business value

----- Arcticle source ----- https://www.wipro.com/cloud/finance-company-connects-customer-experience-to-business-value/ ----- Related Articles Contact Wipro Please fill the required details to access the content Finance company connects customer experience to business value January | 2020 Client background Client: Financial services company Industry: Finance Products or services: Investment, insurance and banking products and services Geography or areas of operations: Australia and New Zealand Number of employees: Over 5000 Challenges The client's core business was to empower their customers by delivering seamless personalized solutions and proactive engagements. Their existing customer data and analytics platform was not delivering the capability to understand customer needs and provide better service. It lacked the ability to capture and provide better insights to create relevant and engaging experiences for their end customers. Solution Wipro assessed and defined the client's platform architecture, established processes and prime environment and implemented customer analytics environment to host all the applications and tools. Wipro developed a modular customer analytics solution consisting of three streams – Platform, Data Preparation and Analytics. The new analytical output provided a clear amd comprehensive view of their customers and their relationship with the client. Key features of the solution include: Business impact With a new environment, the client now has the capability to explore customer information and create actionable insights to eventually support better and informed decision making. Besides, the client also achieved the following business benefits: "Our customer analytics solution enabled the client to organize and analyze their customer data to develop actionable insights, provide a consistent view of performance and ultimately drive better customer experience. Leveraging our 'business first' approach, we delivered a new analytics platform build on AWS Redshift that aids rapid and real-time decision-making during customer engagements." - Alex Roopesh Abraham Client Partner, APAC Field Force, Wipro Limited. Wipro enabled CRM transformation for a large electronics conglomerate in 17 markets across 52 countries with salesforce.com Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours. Wipro Data Discovery Platform on Azure Cloud enables

business process transformation and data monetization.
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Wipro's Test Managed Services (TMS)

helped Uniper to cut cost and

improve productivity.

----- Arcticle source ----- https://www.wipro.com/cloud/wipros-test-managed-services-tms-helped-uniper-cut-cost-and-improve-productivity/ ----- Related Articles Contact Wipro Please fill the required details to access the content Wipro's Test Managed Services (TMS) helped Uniper cut cost and improve productivity December | 2019 Client background Challenge Solution Business Impact "Wipro's contribution in improving the quality and testing standards at Uniper is commendable. Team operates with a multi-dimensional approach on achieving the business goals with a progressive mindset. I am amazed with the level of commitment for collective success and ability to generate significant business value. Wipro's technical and consulting expertise benefited Uniper to achieve the best in class platform." – Hartmut Draxler, Head of Support Cross Functions, Uniper Wipro enabled CRM transformation for a large electronics conglomerate in 17 markets across 52 countries with salesforce.com Wipro successfully built a continuous delivery platform for a leading investment bank, enhancing business agility and lowering the environment provisioning lead-time from 21 days to 3 hours. Wipro Data Discovery Platform on Azure Cloud enables business process transformation and data monetization.
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Transform Your Enterprise Asset Management leveraging Wipro's HxGN EAM Expertise

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/infor-alliance/transform-your-enterprise-asset-management-leveraging-wipros-hxgn-eam-expertise/ ----- Contact Wipro Please fill the required details to access the content Transform Your Enterprise Asset Management leveraging Wipro's HxGN EAM Expertise Unlock Efficiency and Predictability to Achieve Up to 50% Cost Savings Is your organization struggling with maintenance challenges, skyrocketing costs, and unpredictable asset performance? Introducing Wipro's HxGN EAM services that revolutionizes enterprise asset management. With Wipro's vast expertise in integrating cutting-edge technologies, HxGN EAM, a cloud-driven solution, enables

remarkable cost savings of up to 50% in maintenance overtime, purchasing expenses, and labor costs, while strengthening asset reliability. Key Highlights: IoT-Based Asset Tracking Leverage Wipro's expertise and HxGN EAM's IoT capabilities to proactively identify maintenance needs, predict asset performance, and minimize downtime. Efficient SLA Tracking and Asset Maintenance Streamline workflows and improve compliance with automated work order flagging, ensuring high service levels and reduced administrative overhead. Predictive Asset Performance Gain real-time insights into asset health, enabling informed decision-making, optimized maintenance schedules, and maximized asset efficiency. AI-Based Predictive Maintenance Combining Wipro's AI capabilities with HxGN EAM features, stay ahead with AI-powered algorithms that detect early equipment failures, enabling proactive measures and cost savings. Micro-verticalization With Wipro's industry domain proficiency, tailor HxGN EAM to industry-specific requirements, integrating with Infor CloudSuite for enhanced asset management. Seamless Cloud Migration Transition effortlessly from on-premises to cloud-based HxGN EAM, ensuring scalability, flexibility, and accessibility without operational disruptions. Compliance and Sustainability Stay aligned with industry standards and sustainability goals, maintaining compliance and driving sustainable practices. Empower Field Service Technicians Equip field service technicians with mobile capabilities for improved efficiency, response times, and uptime. Hazard Identification and Control Effectively manage hazardous materials and situations, ensuring workforce safety and risk mitigation. Accurate Inventory Management Optimize procurement and streamline operations with precise inventory level determination, avoiding shortages and delays. Modernize Enterprise Asset Management Streamline maintenance processes, enhance risk mitigation, and achieve high-performance asset lifecycles with Wipro's expertise in HxGN EAM. Experience the Wipro Advantage Partner with Wipro, a trusted global alliance partner for Infor and Hexagon, to unlock the true potential of HxGN EAM. Our experts possess deep domain knowledge and a proven track record of success. With over 250,000 employees and business partners across 66 countries, we deliver innovative solutions that address your most complex digital transformation needs. Ready to unlock efficiency, predictability, and substantial cost savings in your enterprise asset management? Download our comprehensive brochure to discover how Wipro's HxGN EAM expertise can empower your organization to achieve operational excellence, maximize asset efficiency, and make informed investment decisions. Download Our Comprehensive Brochure Today Take the first step towards transforming your enterprise asset management. Visit our website or email us at info@wipro.com to get started. Unlock the power of Wipro's HxGN EAM and drive your organization towards a future of efficiency and success. =====================

Splunk Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/splunk-alliance/ ----- What we Do Contact Wipro Please fill the required details to access the content Splunk Alliance Providing best in class observability and analytics driven solutions A global partnership to provide full fidelity with

the most powerful AI/ML analytics to accelerate business growth Splunk 'The Turn Data into Doing Platform' and Wipro's key partnership ensures seamless cloud adoption, accelerating innovation to drive business transformation and delivering operationally intelligent solutions tailored for all business domains. The engagement is committed to provide an end-to-end observability solution with use of OpenTelemetry providing a coherent view of Security Ops, DevOps and AIOps with business intelligence. Some of our other go-to-market offerings in collaboration with Splunk include: Managed Security Services and Automating the Automation (Tools in a Box). Wipro's customer centric approach to challenges and analytics driven observability provided by Splunk deliver desired solution and outcome to accelerate business growth for our clients. We are an 'Elite' partner of Splunk, the highest level of partnership, reflecting the exponential growth in the relationship and engagement over the last several years. Open up innovative opportunities through continuous service assurance, intelligence and predictive analytics =====================

Micro Focus

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ microfocus-alliance/ ----- Contact Wipro Please fill the required details to access the content Micro Focus Alliance Powering digital transformation with Micro Focus Customer centric innovation driven by critical tools in a constantly changing world Wipro's strategic alliance with Micro Focus spans over two decades across 4 partnership areas – as a customer, as a service provider, as a product partner and as a strategic go-to-market partner, globally. Our strategic alliance has been instrumental in driving numerous unique joint solutions in areas of Hybrid Cloud Management, Cyber Security, Enterprise DevOps and Agile transformation, Mainframe Modernization, to name a few. Micro Focus helps you run and transform your business. Driven by customer-centric innovation, the company's software provides the critical tools clients need to build, operate, secure, and analyze the enterprise in a constantly changing world. With Enterprise DevOps, Hybrid IT Management, Security Risk & Governance and Predictive Analytics at its core for digital transformation, Micro Focus delivers speed, agility, security and insights necessary to succeed in an evolving market place. By design, these solutions bridge the gap between existing and emerging technologies – enabling you to innovate faster, with less risk, in the race to digital transformation. =====================

Incorta Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/incorta-alliance/ ----- Contact Wipro Please fill the required details to access the content Incorta Alliance Powerful, easy-to use unified data analytics platform Wipro's Partnership with Incorta: Bridging the gap between raw data and valuable insights We're helping enterprises adopt Incorta's data analytics platform to accelerate business decisions while lowering costs. Using the Incorta data analytics platform, Wipro has enhanced the analytics

value chain by allowing companies to get insights into their business needs quickly. Together we're helping organizations gain greater value from their transactional data to better understand their customers' demands and become more competitive in their markets. By partnering with Incorta and aligning on a strategy of insights transformation, Wipro offers our customers an end-to-end data analytics platform that enables them to start their transformative migration from legacy systems to more advanced analytics platforms. This results in a reduction in costs as well as the amount of effort required to deliver insights to business users. The solution also provides customers with ready-to-deploy, pre-built dashboards for monitoring business functions. Supported by a strong Center of Excellence (CoE) and solution team, Wipro's Data Science practice and consulting services ensure an efficient delivery of Incorta solutions that drive the analytics process, from data extraction and integration to gathering valuable insights. The origin of our partnership Wipro's partnership with Incorta began in 2015, when Wipro and Incorta jointly collaborated on a project for semiconductor and software company Broadcom. It's one of the largest deployments of Incorta working with Wipro during the early days of our partnership. We helped Broadcom's management team gain quick data insights after onboarding a new business as the result of an acquisition. Today Incorta has become the analytics platform of choice for all Broadcom's analytics needs across its organization, replacing their legacy Oracle system. Wipro's Broadcom implementation of Incorta remains one of Incorta' s largest and complex deployments, which covered over 500 tables, 4 billion records, 3,000 dashboards, and 4,000 users, with several use cases implemented. Wipro's commitment to Incorta and the value its platform delivers resulted in Wipro's investment team (Wipro Ventures) deciding to invest in Incorta in November 2019. Following the investment, Wipro experienced a widespread adoption of this platform by Wipro internal teams as well as customers. This also led to Wipro being named GSI Partner of the Year 2020 by Incorta. Combining strengths to deliver streamlined analytics solutions Wipro's partnership with Incorta enables us to help our customers on their journey to become an intelligent enterprise. With our tech expertise and Incorta's platform, we deliver solutions that result in faster performance and insights, a lower cost of ownership, the elimination of duplicate data, greater scalability, improved visibility, and increased agility. The Incorta platform also reduces time to market for any given analytics use case by eliminating the need for extract, transform, and load/data warehouse (ETL/DWH) operations due to its Direct Data Mapping™ technology. In a recent study, Forrester revealed that Incorta's Direct Data Platform™ enabled a business to achieve an ROI of 313%, with total benefits of more than $14 million over three years. We're giving our clients these kinds of results, and our previous experiences include working with one of the world's largest semiconductor companies, a pipe and precast product manufacturer, a Thailand-based food product company, and a large technology conglomerate. Today Wipro has 1,400-plus consultants cross-trained and 100-plus certified on Incorta, one of the largest pools of trained and certified professionals of Incorta's partners. The top reasons to choose Wipro for an Incorta project Our experience leading one of the largest Incorta implementations Domain & technical solutions Trained & certified Incorta experts Quick POCs delivered on the Cloud Strong functional knowledge Our diversified offerings for delivering insights OBIEE/OBIA modernization: Migrating to Incort Items

Scope Small Medium Large General Number of records <500M <1B <5B Number of users <200 <1000 <10,000 Number of sources 1–2 2–3 >3 Total data volume <100GB <1TB <5TB Modules Out-ofthe-box modules Any 2 Any 3 Any 5 OBIA content Standard EBS dashboards All All All Custom ETL Up to 40 Up to 80 Up to 150 Custom model Up to 15 Up to 30 Up to 50 Custom dashboards Up to 25 Up to 50 Up to 150 ERP analytics as a service =====================

Broadcom Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/broadcom-alliance/ ----- Contact Wipro Please fill the required details to access the content Broadcom Alliance Overview of the partnership The partnership offers joint innovation and solutions packaged with portfolio of tools in a Portfolio Licensing Arrangement (PLA) where clients can not only use the specific tools they require but also have the capability to access other tools to ensure business success. The tools are offered on premise, SaaS and in the Cloud. Joint solutions: SVIC – Wipro - Miliu Bank & Broadcom Open Banking Shopgater Use Case Rolled-out Continuous Testing: SV/TDM Integrations with AssureNxT PTaaS (Performance Testing as a Service) & Broadcom BlazeMeter, APM XA Runscope In progress are focused JSO and GTM Interlocks for CT, Apps Modernization, Oracle, Security and Openstack Private Cloud CA with Wipro solutions =====================

Anaplan Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/anaplan-alliance/ ----- Contact Wipro Please fill the required details to access the content Anaplan Alliance Empowering enterprises with connected planning Deliver best-in-class Cloud Enterprise Performance Management solutions Wipro's strong consulting and execution expertise complemented by Anaplan's Connected Planning capabilities, simplifies and automates the core enterprise functions for clients across industries. This partnership is aimed to fuel business growth and enable smarter decision making for enterprises by upgrading their legacy EPM solutions to Cloud based solutions. With Enterprise Cloud Accelerator (ECA), a one-click transformation solution from Wipro, customers can efficiently migrate their business applications from their existing on-premise solutions to the Cloud-based Anaplan Connected Planning platform. Leveraging Anaplan's flexible, scalable, and collaborative Connected Planning platform, Wipro has helped clients make informed decisions and develop faster and more effective business planning processes. The partnership with Anaplan presents an immense opportunity for customers to meet their enterprise planning objectives. Wipro, in collaboration with Anaplan, has implemented the Cloud-based, in-memory Anaplan Connected Planning solution for a leading European multinational energy management corporation. Leveraging this solution, the client achieved significant productivity gains and improved utilization of their field-force through better integration of data across different functions of their organization. =====================

Looker Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/looker-alliance/ ----- Contact Wipro Please fill the required details to access the content Looker Alliance A modern BI and analytics platform empowered by Google Cloud A data and analytics platform that delivers actionable business insights By partnering with Looker, Wipro endeavors to provide more value from data and enables powerful data experiences. Leveraging Looker, Wipro provides customers the benefit of many features such as modern BI and analytics, integrated insights, data-driven workflows and custom applications. It integrates data into the daily workflows of users to allow organizations to extract value from data at web scale. When the world of data analytics is moving to Cloud infrastructure; Looker now is officially a part of the Google Cloud family. Wipro and Looker are partnering to enable businesses of all sizes, geographies and industries to reduce operating costs, improve time to market and increase agility. This partnership delivers world-class analytics to customers, helping them gain excellence in their environments through extraction and loading, governed transformation and discovery and visualizations. Together, Wipro and Looker provide remarkable value driven by collaboration, executive commitment and thought leadership around next-gen technologies.
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MongoDB Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/mongodb-alliance/ ----- Contact Wipro Please fill the required details to access the content MongoDB Alliance Partnership that modernizes enterprise while migrating to the Cloud The modern data platform Digital transformation enables companies to succeed by exploiting their marketing opportunities and responding to competitive threats. In this Cloud era, making use of data enables modern transformation, which is a big opportunity as well as challenge. Wipro's strategic partnership with MongoDB provides deep consulting, implementation and support capability to uncover insights from this leading DBaaS solution and unlock insights for our customer base. This partnership helps customers to organize, restructure and reconcile data; which is really hard otherwise because most of the time it is siloed across the enterprise. Wipro leverages MongoDB to address challenges faced by the customer where data is constantly changing rapidly and increasing in volume by organizing, using and enriching their data in real-time and anywhere. This, in turn makes it incredibly easy to work with data, intelligently using data and having the freedom to use data anywhere.
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Tableau Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/tableau-alliance/ ----- WIPRO'S TABLEAU EXPERTISE THE BENEFITS WE DELIVER OUR SERVICES KEY ACCOLADES Contact Wipro Wipro Data Intelligence Suite(WDIS) Wipro Data Discovery Platform(DDP) Wipro's Tableau Cloud migration solution Please fill the required details to access the content Tableau Alliance Harness the power of your data to unleash the potential of people Delivering personalized omnichannel experiences is vital to meeting customer expectations, and in partnership with Tableau, Wipro is helping organizations transform their business intelligence (BI) operations to gain actionable insights on market trends and stay in step with customer demands. Together we ensure businesses ranging from global brands to early-stage startups can easily adopt the Tableau platform to gather data stored anywhere, in any format, and quickly perform ad hoc analyses to discover hidden business opportunities. Using the platform's drag-and-drop features, enterprises can create interactive dashboards with advanced, sharable visual analytics that drive collaboration and accelerate decision-making. As a Premier Tableau partner across the U.S., the U.K., Ireland, and EMEA, Wipro provides end-to-end analytics and BI expertise, delivering consulting, implementation, and support services that innovate data operations and help drive personalized customer engagements.   Gartner Magic Quadrant Leader Status Tableau EMEA Award
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Teradata Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/teradata-alliance/ ----- Contact Wipro Please fill the required details to access the content Teradata Alliance Analytics, Data lakes and Data Warehouses Unified in the Cloud The powerful, modern analytics Cloud architecture that unifies Analytics, Data Lakes, and Data Warehouses at scale. Wipro partners with Teradata to transform businesses through the power of data. This partnership leverages customers to analyze and deploy their data anywhere, anytime and deliver analytics that matter most to your business. With a single platform for descriptive, predictive and prescriptive analytics machine learning functions and visualization tools; Wipro's capabilities along with Teradata give customers powerful, flexible and pervasive data intelligence across the organization.   This pervasive data intelligence, powered by the Cloud answers the complexity, cost and inadequacy of today's approach to analytics. By partnering with Teradata, Wipro offers its customers, solutions designed to scale or end-to-end enterprise data driven digital transformation solutions which help businesses achieve their modernization strategies through hybrid Cloud or Cloud alternatives. Additionally, building a foundation for driving analytics through the enterprise provides answers to the industries' most challenging questions. Supported by a strong Wipro Teradata practice, consulting, accelerators, and industry solutions, Wipro and Teradata deliver results to customers around the world. Together, Wipro

and Teradata provide enterprise capabilities with the ability to address the most challenging solutions at scale. =====================

Thoughtspot Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ thoughtspot-alliance/ ----- Contact Wipro Please fill the required details to access the content Thoughtspot Alliance Drive decision to insights faster and discover your path to business success Best-in-class AI driven Analytics Platform Wipro's expertise, complemented by ThoughtSpot, enables search-driven analytics for the enterprise and creates a fact driven world through simple, easy to use technology. Wipro's capabilities along with ThoughtSpot's Relational Search technology enables businesses to analyze company data in seconds and helps BI & Analytics teams reduce reporting backlogs by over 90%. Together we connect with data from on premise and Cloud data sources. Our capabilities are designed for enterprise-scale, security, and governance - all while deploying 85% faster than legacy technologies. It uses search to get granular insights from billions of rows of data at sub-second speed and lets AI to surface hidden personalized insights. Wipro enables its customers to zero in on the appropriate analytics use case by analyzing the available infrastructure and data to create an end-to-end solution approach. It also helps in proceeding with infrastructure build and data modeling, drawing insights from implementation and establishing security, administration and governance mechanisms. Wipro creates a culture of self service by harnessing Thoughtspot's AI and Querying platform in critical business workflows.
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Talend Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/talend-alliance/ ----- Contact Wipro Please fill the required details to access the content Talend Alliance Industry leader in Enterprise Cloud Data Management and Digital Transformations Best-in-class unified data platform Wipro is a Platinum partner of Talend. As a Platinum partner, Wipro has incorporated Talend product training into its LMS training academy and has several training consultants on Talend software at scale. In addition, it has successfully deployed over 35 Talend customer projects, which include several Talend products such as Data Integration & Data Quality, Big data Real Time Integration, Talend ESB, Talend MDM and Talend Cloud. The objective is to deliver to customers a data driven enterprise at lower cost and with ease of implementation. Wipro's next gen DI accelerates Talend adoption and is supported by a strong Center of Excellence with a platform & solution team. Together, they provide seamless DevOps through continuous integration and deployment and support for multi-Cloud and multi-Cloud serverless (through Containers). The Talend architecture supports zero footprint Hadoop/Spark clusters, which reduce the maintenance activities.   =====================

Mulesoft Alliance

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Mulesoft Alliance =====================

VMware Tanzu

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----- Our Success Stories Our Success Stories Contact Wipro Please fill the
required details to access the content VMware Tanzu Transform, build and
manage applications with Wipro and VMware Tanzu Company expands
digital capabilities and opens a Designit studio VMware Tanzu and Wipro –
Bringing startup velocity and agility to complex organizations VMware
Tanzu and Wipro bring distinct attributes to client initiatives. As one of
VMware Tanzu's leading transformation partners, Wipro brings expertise,
scale and acceleration to users of VMware's Tanzu application-development
and Kubernetes platforms. Wipro fast-tracks clients' transformation journey
by leveraging its deep industry knowledge, global scale, proprietary
accelerators, and a VMware Tanzu practice comprised of over 700
technology professionals with dedicated Centers of Excellence in Dallas and
Bangalore. Concurrently, VMware Tanzu provides a plethora of resources to
build, run and manage applications integrated into a single end-to-end
solution. This solution, combined with Wipro's expertise, ensures a smooth
and fast transformation journey for enterprises worldwide. Together, Wipro
and VMware Tanzu help to future-proof large, complex enterprises by
providing solutions and teaching enterprises to build self-sufficiency and
position themselves for success. =====================

Empowering The Modern Workplace

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Services Device Management Proof Of Concept Device Integration DaaS For
Mac Mac Technical Support Services Microsoft Intune for Mac Success
Stories Apple for the Workforce : Powered by Wipro Mac@Work in the
Enterprise Contact Wipro A Harmonious Workplace: Wipro and Mac
Bridging the Digital Gap Safeguarding Your Workplace: The New Age of
Cybersecurity In-Office or at Home: How Mac Delivers Cost Savings &
Business Value in the Enterprise CIO PLAYBOOK : Enabling a device choice
program for employees Employee choice is better for business How to
choose the right MDM solution The Total Economic Impact™ of Mac in
Enterprise Why device choice matters to employees How Macs Bridge the
App Gap How Changing Workplace Dynamics are Driving a New Employee
Experience Please fill the required details to access the content Wipro's
LiVE Workspace™ for Apple Apple for the Workforce Companies everywhere

can bring device choice to their employees with Wipro's device management solutions. These innovative services enable global organizations to deploy Apple products at scale throughout their organizations to optimize performance and security for today's modern workforce.   Wipro delivers a turn-key solution to give employees choice. Our wide range of services encompasses device provisioning, deployment, monitoring, maintenance, and support. This expertise extends across the Apple product line, including iPhone, iPad, Mac, and other Apple devices. Through excellent customer support, timely updates, and robust security measures, we ensure that our clients' Apple devices remain secure, up-to-date, and optimized for peak performance. Apple Experts More than 100 certified employees Approach Empowering Today's Modern Workplace Recognition More than 1.2 million managed Apple devices Maximize the potential of your devices and business Transform your ideas with PoC development for Apple devices by Wipro Seamless and reliable transition & integration to your existing IT environment More flexibility for employees with less complexity for IT Feel assured with our 24*7 multilingual tech support A unified solution for device management. Mia, a CMO, loves how her Apple devices all work together seamlessly Donna from HR, can work from anywhere with Apple Rebekah an engineer, can work smarter Carla in sales, can move faster with Apple Gerry in accounting, appreciates the security Rose an engineer can hit the ground running. And never stop. Raj, a designer can make his visions a reality Wipro's customizable onboarding experience Empower your digital workplace and workforce with Mac As workplace dynamics evolve, learn why prioritizing employee experience is paramount. Explore insights on the benefits of device choice programs and more Trend and impacts of encouraging workers to choose their own devices and operating systems To ensure enterprises choose the right MDM solution, essential factors must be considered Cost savings and business benefits enabled by an employee choice program The survey results show that device choice impacts recruitment, loyalty, and productivity within enterprise organizations When given that choice, employees choose Mac 75% of the time. As workplace dynamics evolve, learn why prioritizing employee experience is paramount. Explore insights on the benefits of device choice programs and more Contact Us =====================

Proof of Concept

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/proof-of-concept/ ----- Contact Wipro Please fill the required details to access the content Put your vision to the test Our proof-of-concept service gives you the support and tools necessary to prepare your IT environment for quick, seamless integration of Apple devices. Maybe you're starting from scratch — or maybe what you have can be managed better. We'll create a best-practice-based test environment specifically for your needs to show you that your IT vision is feasible, and the benefits are real. Once you know where you're headed, we can mentor your team to build up their skillset, or we can build a new system and manage it for you. Don't worry if you don't know where to start. Our Apple experts do. Contact the Wipro Apple Experts to find the right solution for your enterprise =====================

Articles

CIO PLAYBOOK

Enabling a device choice program for employees For many CIOs, Apple® devices presented a daunting challenge to their traditional approach, refined over 30-plus years, of using traditional PCs. CIOs are risk averse—a trait that seems to come with the territory—and have naturally been resistant to the trend. However, times are changing. One industry study showed a rise in Mac® and iOS device adoption. We have developed a Playbook for CIOs to explain the benefits of offering device choice to their key stakeholders. We lay out a roadmap to embrace Apple devices in your enterprise IT ecosystem. You will learn how to transform your employee's device experience, while ensuring compliance to the corporate policies and reducing total cost of ownership. This playbook shares sharpened approaches, proven strategies, and best practices from experts to get you started on the transformation journey. We provide insights into gaining support from your stakeholders, managing your deployments, and delivering new user experiences so that you can successfully transform your enterprise IT landscape using Apple devices. Download the CIO Playbook ======================

Why Device Choice Matters to Employees

Wipro partnered with Coleman Parkes Research to better understand the impact when organizations allow employees to choose which type of device they use for work (Mac® or PC). In October 2019 Coleman Parkes Research interviewed 500 US-based IT leaders to better understand the viewpoint of next generation IT leaders when it comes to choice of devices and laptops in the workplace. The survey confirmed that organizations that allow employees to choose between Mac and PCs, increases their attractiveness for new hires and strengthens loyalty for current employees. IT Leaders are recognizing that equipping employees with their preferred type of device will allow them to be more efficient and productive. This is evidence of how being flexible in IT decision-making can be better for a company, rather than the traditional

"one-size-fits-all" approach. Designing and deploying a corporate-provisioned employee choice program that incorporates Windows and Apple® products within your existing IT infrastructure can be daunting. Wipro makes it easier. Click here to find out more
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The Total Economic Impact™ Of Mac In Enterprise

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/articles/the-total-economic-impact-of-mac-in-enterprise/ ----- Contact Wipro Please fill the required details to access the content Cost Savings And Business Benefits Enabled By An Employee Choice Program Apple commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential ROI enterprises may realize by deploying Mac. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Mac on their organizations. Mac provides another option for end user machines, compared to a standard enterprise PC deployment. To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed seven customers with experience deploying Mac in their enterprise. The interviewed organizations decided to implement an employee choice program and enterprise Mac deployment due to: Mac being easier to manage; a desire to improve the employee experience; and Mac being a more secure platform. This resulted in significant benefits, as detailed in this case study. With Mac, organizations reduced IT support costs, improved employee productivity and engagement, and improved overall security Forrester developed a composite organization based on data gathered from the customer interviews to reflect the total economic impact that Mac could have on an organization If you would like to have a customized TEI report done for your organization please contact us at – Apple.Experts@Wipro.com Click here to find out how switching to Mac will save your organization money. =======================

How to choose the Right MDM solution

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/articles/how-to-choose-the-right-mdm-solution/ ----- About the Author Contact Wipro Please fill the required details to access the content Cloud and mobility have changed how we work and created an environment where employees want access to corporate applications and data anytime, anywhere, from whatever device they choose. Organizations increasingly realize the power of a flexible mobile work environment, and in many ways, the post-COVID-19 pandemic world has significantly accelerated the need for mobility. These assists employees in striking a balance between their professional and personal life and helps companies establish seamless

communication between employees and the office. However, enterprise mobility may lead to critical security concerns for business data, apps, and devices if not managed and secured efficiently. Thus, enterprises need a powerful, secured mobile device management (MDM) solution to meet today's security challenges. An MDM solution safeguards and controls the devices used by the organization's employees. It allows access to corporate apps, data, and content under assured security. Enterprise mobility involves challenges, and organizations must choose from several mobility solution providers in the market. Before selecting an MDM solution, companies should complete a detailed requirement and feasibility analysis. After the study, the company can prepare a comprehensive report of their pain points that will give them an informed position from which to choose an MDM solution. Understanding the pros and cons of any MDM solution is essential before deciding if it is the best fit for your organization. To ensure enterprises choose the right MDM solution, essential factors must be considered. INTEGRATION An MDM solution's smooth, painless integration into your ecosystem is imperative to protecting existing technology investments and avoiding rip and replacement costs. Most solutions provide options for on-premises, cloud-based or hybrid installation and integration. Integration with other management, support and reporting tools significantly adds to the overall service. Consider a solution that integrates easily with existing device management tools and vendors to share information on device state. ADMINISTRATION MDM solutions often carry hefty administrative overhead. Keeping overhead to a minimum should be one goal so that you can focus your time on more pressing tasks. Consider a cloud-based solution to manage and secure devices. This can always reduce your total cost of ownership (TCO) because it is self-healing and always available. It's also essential to examine solutions through which you can manage access to applications based on user groups and individual roles and automate security patches and updates, further reducing your administrative overhead. You'll save time and money by acknowledging the cloud data risk adequately. DEVICE AND DATA SECURITY Organizations should be able to enforce security policies to reduce the risk of breaches and prevent vulnerable or unsecured devices from accessing sensitive data. Security policies are unique to each organization, and you should be able to customize policies based on the risk associated with specific applications. For example: is the device using passcodes and biometrics? Is encryption turned on? What OS and browser versions are installed, and are they up to date, properly configured and patched? Device security status will help you detect and stop out-of-date and vulnerable devices from gaining access. It also only allows devices whose security posture conforms to the baselines established by the organization. Consider a solution that provides insights into the security posture of all devices and empowers you to enforce security policies rather than prescribing them on paper to ensure adherence. That way, you can set consistent policies across applications, whether on-premises or in the cloud, to deliver a seamless user experience. USER EXPERIENCE The process of enrolling devices in your chosen solution is often overlooked. Still, with an increased emphasis on user experience by all major platforms, it's essential to evaluate the features and capabilities of the solution. Consider a solution that offers users flexible onboarding options like automated enrollment, self-enrollment and self-service for support. It eases the burden on administrators and promotes confidence in the user

without requiring additional training. UNIFIED VISIBILITY Most endpoint visibility solutions are siloed. They are often designed exclusively for Windows, Macs, or mobile devices. A solution specific to each platform results in a massive productivity drain and major administration headaches. A solution offering a unified, comprehensive view from a single dashboard into all managed, unmanaged endpoints and platforms can streamline administration and reduce complexity. TRANSPARENCY Most MDM solutions are considered intrusive. Users fear their privacy may be invaded, and they will lose control of certain features and functions of their devices. Keeping users informed about what information is being collected or how it's being used establishes a mutual trust between administrators and users that often results in a higher level of compliance. A transparent solution that only collects a device's security information is optimal. The less personal data collected, the better – and notify users what type of information will be collected and examined. INVENTORY MANAGEMENT Many MDM solutions cannot provide a detailed device inventory. A device inventory gives you additional information and reduces the burden of device lifecycle management while eliminating the surprise of unknown devices accessing your applications. Consider a solution that enables you to identify all devices that access your environment and tag assets to specific users so you can understand which device is assigned to whom, how many devices are being used, and which applications are being accessed. COMPLIANCE AND REPORTING Most organizations adhere to strict compliance regulations, such as HIPAA, PCI DSS, NIST, SOC 2, or ISO 27001, requiring all devices to comply. A good solution for your company might enable you to generate user and device reports and security logs with just a few clicks to help meet compliance requirements for tracking and security event logging, as well as provide valuable assets for audits, incident response, and recovery. SERVICE AND SUPPORT Support and after-sales services are the deciding factors for many organizations when evaluating and selecting new solutions and services. Many MDM solutions have varying tiers of support, depending on customers' requirements and needs. Look for a solution that offers multiple tiers of support options for the type of devices you'll be managing. Thoroughly review and vet SLAs of every opportunity along with support available in different regions and languages. Chris Potrebka Wipro Senior Consultant– Apple Device Services. Chris is a System Engineer and Solutions Architect specializing in integrating Apple devices in large multinational corporations. He has held similar positions in multiple organizations, promoting, creating, and delivering devices as a choice programs. He's a member of Apple's Consultant Network and various other Apple-centric forums. He loves travelling, cycling, and volunteering. =====================

Employee Choice Is Better for Business

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/articles/employee-choice-is-better-for-business/ ----- Contact Wipro Please fill the required details to access the content This article is part of our

Employee Choice series, in which we explore the trend and impacts of encouraging workers to choose their own devices and operating systems. When we speak with organizations about Macs in the enterprise, many support organizations express concerns about them, from questions about device management systems to doubts about enterprise security, it often seems easier to consider Apple products to be consumer-only. However, the data shows something different: allowing the choice of Apple products among a set of approved options actually lowers support costs, reduces capital costs, and increases productivity significantly for those who choose Macs as their primary systems. SECURING ENTERPRISE SYSTEMS The majority of security professionals today use Macs due to their Unix-based foundation and the native security of the hardware and software. In fact, during the time of recent widespread malware attacks, in one healthcare organization, more than 80% of Windows machines were affected and 100% had to be isolated until the infection was completely cleaned. Macs were the only systems able to continue operations, and the incident team used them exclusively I have spoken with CIOs and IT leaders and found increased overall productivity per person with no increase in overall support costs. In fact, many were able to increase the staff by more than 100% while actually reducing overall end-user support costs. NATIVE SECURITY For companies looking to offer device choice, it is important to take into account the security protections of the platform, including hardware, operating system, and applications, as well as productivity and hardware lifetime cost. In fact, we found native protections provided the majority of necessary security for the platform. For example, macOS has (additional security protections) [https://www. apple.com/macos/security/], protecting the kernel and operating system from attack with runtime protections and application sandboxing. Further, Apple reviews all applications submitted through the App Store as well as provides its Gatekeeper technologies to limit application installations and provide warnings to users as they install non-App Store apps. This extensive set of protections— architected into macOS— provide substantial out- of-the-box protection for Macs in the enterprise. While we deployed applications, we also learned that beyond the native protections, enterprise management from third-party enterprise products allowed our IT team to manage systems and information on the Macs in much the same way they are able to manage their other client and server systems. From using the Apple T2 chip with the Secure Enclave, secure boot, and protection for encrypted storage to TouchID and FileVault 2, the native capabilities of Macs are enterprise-class. THE CHOICE FOR CHOICE Through this ongoing series, we will expand on each of these areas to give you more information and understanding as you consider your own plans. The bottom line is that Macs provide not only a viable alternative, but for a significant portion of an organization's staff, they represent an opportunity to save money while increasing productivity, making a choice program worth considering. ======================

How Macs Bridge the App Gap

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required details to access the content How Macs Bridge the App Gap Employees want device choice in their workplaces. When given that choice, employees choose Mac 75% of the time. Still, hesitation about device choice persists among corporate executives and IT professionals. They're looking to ensure that Macs can integrate with existing PC-based systems and support essential applications and software. IT experts often fear a macOS app gap — an inability to run certain crucial line-of-business applications. Well, wonder and worry no more. Apple has you covered. By designing, creating, and controlling the hardware, software, and cloud services, Apple creates a more unified and secure platform — all while maintaining the highest quality products, delivering a compelling end-user experience, and keeping your employees connected and productive regardless of platform. Apple provides layers of protection to help ensure that apps are free of known malware and tampering. Additional protections guarantee that access from apps to user data is carefully mediated. These security controls provide a stable, secure platform for apps, enabling thousands of developers to deliver hundreds of thousands of apps for iOS, iPadOS, and macOS — all without impacting system integrity. Users can access these apps on their Apple devices without undue fear of viruses, malware, or unauthorized attacks. If you still need access to a legacy app that's missing from the Mac repertoire, Mac likely offers effective and efficient alternatives. Because they're built by Apple, they'll be doubly secure. Finally, Wipro's virtualization services can help ease your challenge. Providing the ability to run Windows legacy app on a Mac. Wipro's in-depth industry knowledge and wide-ranging experience in delivering infrastructure solutions provide you a solid virtualization offering that's secure, scalable, and flexible. Opening your enterprise up to device choice and Mac products has benefits for both your business and your employees. Allowing employees to choose Mac can lower your support costs, reduce capital costs, and increase productivity for your enterprise. Employees gain the familiarity of Mac at work and seamless connectivity with their personal Apple devices at home or in their pocket. Plus, Macs are currently so ubiquitous in higher education that the youngest members of your current and future workforce will likely choose to work on Macs in even greater numbers. Offering them that choice will be a natural extension of their experience and an attractive recruiting tool for your business. Now you have a choice: Choose Wipro LiVE Workspace for Apple and you can empower your employees with device flexibility. Giving your people that one simple choice — Mac or PC — will make them feel more productive, more engaged, and more proud of their work and their team. We'll help you seamlessly integrate and secure iPhone®, iPad® and Mac devices with your existing systems, automate deployment and management with modern best practices, augment AppleCare support, and give your workforce customized help throughout their device lifecycle. There's no app gap when you choose Wipro and Apple. About the Author Timothy Lydon Global Apple Partnership Leader Wipro FullStride Cloud Tim Lydon is Wipro's Global leader of the Apple Partnership. Tim has executed several of largest enterprise deployments of Mac Device Choice programs. Tim advises enterprise executives on how they can improve the employee experience, reduce costs and improve sustainability by expanding the adoption of Mac.
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Mac@Work in the Enterprise

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/ articles/mac-work-in-the-enterprise/ ----- Contact Wipro Please fill the required details to access the content Mac@Work in the Enterprise Empower your digital workplace and workforce with Mac With AI taking centre stage in digital transformation, Mac is emerging as a critical player in the future of enterprise technology. Adopting Mac will empower organizations to enhance productivity, foster innovation, and adapt to the evolving demands of the modern workplace. By choosing Mac, companies prioritize employee choice and flexibility, driving satisfaction and helping retain top talent. Wipro's Mac@Work survey affirms that Mac's advanced encryption, system integrity, intuitive user interface, and security provides a secure foundation for AI. Its seamless interoperability with other devices ensures a cohesive digital workspace that drives efficiency and employee satisfaction, and its intuitive design, ease of use, and reliable performance makes it highly attractive to enterprise users. Create an Agile, Secure, and Productive Workplace with Mac. Download the Report ======================

A Harmonious Workplace: Wipro and Mac Bridging the Digital Gap

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/ articles/a-harmonious-workplace-wipro-and-mac-bridging-the-digital-gap/ ----- Contact Wipro Please fill the required details to access the content A Harmonious Workplace: Wipro and Mac Bridging the Digital Gap Workers want their at-work digital experiences to match their at-home and on-the-go experiences in ease of use, multitasking abilities, security, operating systems, and versatility. When given a choice at work, employees choose Mac 75% of the time compared to PCs. Mac's compatibility ensures smooth data synchronization and workflows, fostering an environment where digital boundaries blur and business technology becomes an effortless extension of everyday life. The renowned out-of-the-box experience starts when powered on for the first time. Mac users are guided through a streamlined, intuitive setup process that requires no hands-on tech support. Pre-installed macOS ensures users can quickly access productivity tools, business applications, and AI services without requiring extensive manual installations or updates. From the start, built-in security features provide robust protection against threats. This plug-and-play simplicity dramatically reduces the burden on IT departments. It lets employees focus on their tasks immediately, translating into greater efficiency and a more enjoyable user experience. Wipro discovered in its 2024 Mac@Work in the Enterprise survey2 that: Mac and Wipro Empower the Modern Workplace Mac compatibility with both contemporary and legacy enterprise systems, make it a robust choice for businesses eager to avoid disruptions caused by technology shifts. This compatibility lets businesses transition smoothly without sacrificing access to vital legacy software or existing databases associated with long-

established operational systems. Mac offers a competitive edge through a powerful ecosystem and unified hardware and software design. Features such as the advanced Apple silicon chips, known for speed and efficiency, can handle demanding applications and multitasking, maximizing productivity and AI applications. Apple's rigorous App Store guidelines and frequent security updates also help protect businesses from cyber threats and unauthorized data access, ensuring that sensitive information is kept secure. With Mac, businesses can take advantage of continuous advancements and maintain a leading position in technology competitiveness. Wipro's LiVE Workspace for Apple integrates Mac with existing systems, enabling businesses to continue to run without any interruptions. Whether employees use Adobe Create Cloud, Microsoft Office, Google Workspace, Zoom, or Webex, etc., Mac ensures full operation and smooth cross-platform collaboration. Mac and Wipro work together to provide a stable environment that ensures technology shifts won't disrupt businesses. MacOS integrates seamlessly with the hardware, resulting in fewer system crashes and lower downtime than other platforms. Apple's commitment to long-term software support and regular updates helps businesses maintain a secure and up-to-date operating system without experiencing compatibility problems that often arise with other platforms. This focus on stability and long-term operability means employees can remain productive without the relentless learning curve associated with newer/updated operating versions or handling unexpected technology malfunctions. Wipro's LiVE Workspace for Apple helps businesses integrate Mac within existing environments, automate deployment and management with modern best practices, augment support, and provide customized help throughout the device lifecycle. Conclusion Mac offers an unparalleled blend of compatibility and security for enterprises with diverse technological environments. Mac's seamless ability to bridge contemporary systems with legacy applications helps maintain business continuity, providing the resilience needed amidst the ever-evolving demands required to stay competitive. This multifaceted compatibility solidifies Mac as an invaluable resource for modern enterprises striving to achieve operational efficiency and future technological alignment. Wipro's in-depth industry knowledge and wide-ranging experience in delivering infrastructure solutions provide a secure, scalable, and flexible offering. For More Information Mail - info@wipro.com For more details click here apple partner page References and Notes =====================

Safeguarding Your Workplace: The New Age of Cybersecurity

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/articles/safeguarding-your-workplace-the-new-age-of-cybersecurity/ ----- Contact Wipro Please fill the required details to access the content Safeguarding Your Workplace: The New Age of Cybersecurity The rapid evolution of cyber technology presents exciting opportunities for IT decision-makers to showcase their experience and adaptability. As infrastructure grows, cyber threats—including sophisticated malware, ransomware

attacks, and phishing scams—are growing staggeringly fast, often doubling faster than unwanted spam emails (which studies suggest up to 85% of all emails sent worldwide). Using sophisticated tools like Mac, and innovative solutions supported by Wipro, organizations can confidently navigate the digital landscape. This dynamic combination doesn't merely address challenges; it champions proactive and strict defenses, ensuring a fortified and secure infrastructure. The future of cybersecurity will require mastery in protecting vital digital assets. Organizations can confidently lead cybersecurity by implementing Mac security and leveraging Wipro's support, ensuring a robust and well-protected infrastructure. The combination of Apple devices and Wipro services marks a new era in enterprise security. With its extensive IT services experience, Wipro enhances Mac's inherent security features, providing customized solutions that boost business efficiency and innovation. Mac and Wipro services propel organizations into a future where speed, safety, and seamless operations come together. Wipro Mac@Work in the Enterprise Survey1 Wipro's Value Add Wipro augments the robust foundation established by Apple's integrated approach to security and management by offering deep expertise and comprehensive solutions that enhance safety and productivity. Mac infrastructure is designed with a balanced focus on security, user experience, and manageability, giving users built-in tools and controls needed to maintain a secure environment without sacrificing usability. Wipro complements this by providing advanced analytics, risk management services, and extensive support, which help businesses optimize Mac's security features. Wipro's 2024 Mac@Work in the Enterprise survey also discovered that: Considering Mac in the Enterprise Increasing numbers of IT departments are integrating Mac into their infrastructure, driven by a strong belief in the enhanced security attributes of macOS. ITDMs across various operating system landscapes think Mac is more secure than other computers. Security is a crucial factor driving continued Mac adoption, closely followed by the ease of deployment and management. Organizations benefit greatly from the built-in security of every Mac, which combines hardware, software, and services to provide maximum protection while enhancing user experience and IT management. IT teams can deploy and manage devices efficiently with endpoint security APIs, Apple Business Manager, and mobile device management (MDM). Mac hardware security ensures robust encryption and secure boot processes. System security features and secure software updates offer additional layers of defense while built-in encryption safeguards data at rest. Enhanced app security, malware protection, and secure networking and services ensure comprehensive safety. The seamless integration of security measures and transparent user experience fosters ease of adoption for employees. Apple's commitment to privacy ensures the protection of corporate and employee data through innovative privacy technologies. Conclusion Security is and will continue to be a top concern for IT professionals as they navigate tight budgets and impending hardware refreshes. To optimize investment, evaluate vendors for cost savings, security, and efficiency. Organizations can boost their security posture and employee satisfaction by implementing best practices around authentication and zero-touch deployments and opting for hardware that naturally integrates these shifts. Selecting vendors that seamlessly blend built-in security features and data encryption without compromising on productivity is essential. The synergy between Apple

devices and Wipro services ushers in a new era of enterprise security, combining elite functionality with robust protection. Every Mac combines hardware, software, and services designed to work together for maximum security, creating a seamless and fortified ecosystem. By leveraging the inherent security on Mac and Wipro's deep expertise, organizations can achieve unparalleled efficiency, innovation, and safety. Apple products not only elevate the user experience with intuitive and powerful features but also address the comprehensive management needs of IT departments, ensuring ease of deployment and administration. The strength of Wipro's service offerings coupled with Apple devices ensures a seamless and secure digital landscape, empowering businesses to lead confidently knowing digital assets are safeguarded. For More Information Mail - info@wipro.com For more details click here apple partner page References and Notes The Mac@Work in the Enterprise survey was conducted in July 2024 and included 500 respondents from various industries, including automotive, banking/financial services, health/life sciences, manufacturing, retail, energy/utilities, and telecommunications. The respondents were crucial decision-makers, including CIOs, CFOs, CTOs, CSOs, Security VPs, and IT Directors, providing a comprehensive view of the benefits of Mac devices in the enterprise. =====================

In-Office or at Home: How Mac Delivers Cost Savings & Business Value in the Enterprise

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/ articles/in-office-or-at-home-how-mac-delivers-cost-savings-and-business-value-in-the-enterprise/ ----- Contact Wipro Please fill the required details to access the content In-Office or at Home: How Mac Delivers Cost Savings & Business Value in the Enterprise Whether working at home or part-time in the office, times are changing, and so too are the tools to empower a new generation of workers. The digital employee experience (DEX) has become a critical factor in determining an enterprise's success and equipment purchases, which affects costs associated with their capital and operational expenditures (CAPEX and OPEX). In today's digital workplace, the ease employees have using enterprise technology can significantly affect the organization's productivity, effectiveness, and overall efficiency. When employees effectively adopt new digital tools, they are more likely to utilize the equipment to its full potential and reduce the need for extensive training or ongoing technical support. Moreover, intuitive and reliable digital experiences can enhance job satisfaction and productivity, reducing direct and indirect costs associated with maintaining enterprise equipment. This leads to higher employee satisfaction and retention rates. Therefore, investing in superior digital experiences and tools is a strategic move that enhances operational efficiency and ensures a favorable total cost of ownership (TCO). Wipro discovered in its 2024 Mac@Work in the Enterprise survey1 that: Direct Quantified Cost Impacts Mac has been shown to reduce device support and management costs by nearly one-third compared to

other devices. The efficiencies stem from cheaper maintenance, fewer security incidents, and a notable reduction in support tickets—about 60% fewer tickets are filed annually, with faster and more affordable resolution costs per ticket. IT organizations also benefit by being able to manage twice as many devices per employee, again leading to substantial savings. For example, an organization with 13,125 Mac devices saved an estimated $7.3 million in support and management costs over five years. Additionally, using Mac devices avoids considerable hardware, software, and energy costs. Mac reduces the need to purchase OS license upgrades and additional security applications because of the built-in, high-level security features. Mac is also energy-efficient, consuming 56% less energy than PCs. These factors collectively contribute to ongoing financial benefits while ensuring robust operational performance. The innate security features of macOS, including System Integrity Protection, Gatekeeper, XProtect, encryption and regular updates, reduce the vulnerability to data breaches by up to 90%. This improvement can translate into an average savings of $530,000 in reduced risk of data breaches over five years. The increased reliability, faster processing, and reduced downtime of Mac can boost employee productivity, equating to an estimated average of $46.4 million over a five year period. Mac retains a much higher residual value—as high as 30% after four years compared to 15% for PCs. "Support, operational, and longevity cost savings of [Mac] compared to [PC] devices are far greater. And when it comes to ease of use, it's a more flexible and secure platform than our [PC] platform today". Director of Mobile Product and Innovation, Financial Services Indirect Unquantified Benefits Through its unmatched build quality, durability, and sustained performance, Mac offers an extended device lifecycle. Survey respondents claim their organization extended the lifespan of their Mac by an additional 13 months over other devices, enhancing the ROI and reducing the need for frequent device replacements. Using Mac strengthens an enterprise's reputation among users and benefits employee acquisition and retention. Employees generally find Mac more user-friendly, reliable, and efficient, translating to a better workplace experience. This improved employee satisfaction can help attract top talent and reduce turnover. Wipro's virtualization services allow organizations with legacy enterprise applications to run on the Mac. Wipro's in-depth industry knowledge and wide-ranging experience in delivering infrastructure solutions provide a solid virtualization offering that is secure, scalable, and flexible. Additionally, the environmental benefits of Mac—such as consuming less than half the electricity of equivalent PC devices—support environmental, social, and governance (ESG) goals by reducing emissions and contributing less to carbon dioxide levels. "Macs have proven to be more cost-effective from a management and support [perspective], for user experience, and [provide] a longer life cycle." Lead Systems Analyst, Food and Beverage Artificial Intelligence (AI) Mac helps enterprises better leverage AI development and deployment via cutting-edge hardware, especially the most current Mac lineup featuring the powerful Apple silicon chip with a dedicated Neural Engine. Apple silicon's high performance and energy efficiency offer long-term cost savings, making Mac a compelling choice for enterprises focusing on AI workloads. By collaborating with Wipro to implement Apple device solutions, enterprises can align their DEX goals to maximize the work environment, strengthen competitive advantage, promote sustainability, and ultimately strengthen TCO. Conclusion While

renowned for its design elegance, intuitive operating system, and user-friendly interface, the Wipro "Mac@Work in the Enterprise" survey confirms that Mac is a powerful enterprise-ready device. The survey provides compelling evidence from business executives that Mac better meets the needs of the enterprise workforce, proving indispensable for professionals in all parts of an organization. By promoting increased collaboration, greater integration, high compatibility, enhanced productivity, and notable cost-efficiency, Mac has established a solid position across all sectors. From a financial perspective, the benefits are undeniable. The ROI stands at an impressive 186%, with businesses seeing a payback period of less than six months. The most significant cost savings, $121.2 million, come from reduced and avoided hardware, software, and energy expenses. This compelling financial rationale underscores why Mac offers both short-term and long-term value. Mac makes a wise investment for any enterprise looking to evolve and optimize its technology infrastructure. These strengths make Mac a compelling choice for any business looking to maximize its technology ROI. Mac is future-ready and evolves to meet business needs. With Wipro's guidance, enterprises can confidently adapt to the future world of work, driven by the exceptional capabilities of the Mac. Additional Readings Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. To learn more, visit The Total Economic Impact™ of Mac in Enterprise. For More Information Mail - info@wipro.com For more details click here apple partner page References and Notes =======================

Apple for Employees – Powered by Wipro

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/ ----- Contact Wipro Please fill the required details to access the content Apple for Employees – Powered by Wipro Offering Apple® devices enable companies to attract and retain talent and Wipro's services are uniquely positioned across the entire Apple device lifecycle. ====================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/wipros-customizable-onboarding-experience/ ----- Contact Wipro Please fill the required details to access the content ====================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/i-love-how-my-apple-devices-all-work-together-seamlessly/ ----- I love how my Apple devices all work together seamlessly Contact Wipro Please fill the required details to access the content Mia's job is complicated. Apple keeps it simple. From her iPhone to her MacBook to her Apple Watch, Mia's devices give her seamless access to everything she needs, wherever and whenever she needs it. Watch how Wipro's LiVE Workspace for Apple gives this CMO top-notch support. ====================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/work-from-anywhere-with-

apple/ ----- Work from anywhere with Apple Contact Wipro Please fill the required details to access the content Donna from HR fully supports her teams—without ever taking out her laptop or phone. Apple Watch and AirPods give her the freedom to work smarter and better from the places she loves. Watch how Wipro's LiVE Workspace for Apple keeps Donna seamlessly connected to her colleagues. ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/i-make-our-products-work-apple-helps-me-work-smarter/ ----- I make our products work. Apple helps me work smarter Contact Wipro Please fill the required details to access the content Rebekah is an engineer. Apple makes devices the way Rebekah would: Smart, flexible, cohesive. Watch how Rebekah perfects every detail of the job using the devices she loves—all backed by the seamless support of Wipro's LiVE Workspace for Apple. #WiproAppleExperts #AppleAtWork ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/move-faster-than-the-speed-of-sales/ ----- Move faster than the speed of sales Contact Wipro Please fill the required details to access the content Carla needs the power to drive the campaigns that push your products. And her technology – including the iPhone -- connects her with people and tools to keep her ahead of whatever curve the current campaign throws at her. Wipro's LiVE Workspace for Apple seamlessly brings it all together. #WiproAppleExperts #AppleAtWork ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/privacy-is-the-bottom-line/ ----- Privacy is the bottom line Contact Wipro Please fill the required details to access the content Gerry from accounting knows the nightmare of getting hacked—and the peace of mind you get from knowing your numbers are safe. That's because Apple gives him a secure, sustainable operating environment without needing third-party protection. And Wipro's LiVE Workspace for Apple seamlessly brings it all together. #WiproAppleExperts #AppleAtWork ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/hit-the-ground-running-and-never-stop/ ----- Hit the ground running. And never stop Contact Wipro Please fill the required details to access the content Rose coded her first game at age 7. Since then, she's used her MacBook to compile loads of code from dozens of places—virtually unplugged. How? With the powerful, energy-saving M1 chip and Wipro's LiVE Workspace for Apple. #WiproAppleExperts #AppleAtWork ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/apple-devices-help-me-make-my-visions-a-reality/ ----- Apple devices help me make my visions a reality Contact Wipro Please fill the required details to access the content Designer Raj carries his iPad Mini and Apple Pencil with him everywhere. It's easier than taking an easel to the park. Raj's Apple ecosystem—and Wipro's LiVE Workspace for Apple—helps him stay connected to his creations and shift seamlessly from his desk to the world outside. ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/videos/wipro-customizable-onboarding-experience/ ----- Wipro's customizable onboarding experience Contact Wipro Please fill the required details to access the content Let Wipro's Apple Experts help you create an engaging experience on Mac when onboarding new hires. Provide your new hires with all the information and

resources they need #WiproAppleExperts #WiproCIS #AppleAtWork
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Device Management

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/device-management/ ----- Contact Wipro Please fill the required details to access the content We'll keep you connected — and keep your employees inspired A successful device choice program is more than just picking Mac or PC. Efficient deployment and ongoing management are key to keeping your employees engaged and productive. Wipro's device management service gives you day-to-day operational support for: From the initial power-on, your employees' Apple devices are set up automatically without any interaction with IT Wipro also supports all major Mobile Device Management Platforms that utilize the Apple management framework in iOS®, iPadOS®, tvOS®, and macOS Contact the Wipro Apple Experts to find the right solution for your enterprise =====================

Device Integration

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/device-integration/ ----- Contact Wipro Please fill the required details to access the content Choice fits perfectly into your systems Once you know exactly what devices your people want, Wipro can help you get those preferred products into their hands and seamlessly, reliably connected to your existing IT environment. Our Apple experts offer you a full range of device procurement and integration services. Contact the Wipro Apple Experts to find the right solution for your enterprise =====================

Device as a Service for Mac

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/daas-for-mac/ ----- Contact Wipro Please fill the required details to access the content More flexibility for employees Less complexity for IT Wipro's Device as a Service (DaaS) is the solution you need to give your workforce what they want — and the subscription model you didn't know you needed. Our DaaS leasing model gives you financial flexibility so you don't have to pay up front and easier single-vendor all-in-one payments. We'll support you every step of the way and even take care of getting rid of your devices when it's time. It all adds up to a better value for the life of the lease. Let us help you reduce your IT costs and complexity and help give your employees the power of choice. Contact the Wipro Apple Experts to find the right solution for your enterprise =====================

Technical Support Services

We're always working for your workforce After your employees make their device choice, prove to them that they've made the right one. With our Mac Technical Support Services backed by AppleCare, our experts will provide you and your people with helpful, always-on, individual attention. Our self-service, remote, and onsite assistance options guarantee that you and your employees get the kind of help you want. Choose from our selection of seamless support experiences. We've got you covered with AppleCare for Enterprise Contact the Wipro Apple Experts to find the right solution for your enterprise =====================

Case Studies

Mac@Wipro: Giving Wipro Employees the Power of Choice

Ambition Back in February of 2022, the Wipro executive board was discussing ways to attract and retain top talent, when a member of the board mentioned that a younger relative recently had to decide between two competitive job offers. What sealed the deal, they said, was that one company offered employees Mac devices to use while the other did not. Apple has a reputation for making devices that are easy to use and troubleshoot, with processors that are more energy efficient than competitors out of the box. Wipro's executive committee agreed that expanding the use of Mac devices throughout the company would likely help Wipro achieve many of its business ambitions, including attracting top talent, saving time for IT staff, and prioritizing energy efficiency. The committee made this focus part Wipro's digital transformation, being led by Wipro CIO Anup Purohit, who was searching for opportunities to enhance the various tools, systems, and processes that make up Wipro's IT. Action Wipro recognized that a comprehensive Mac adoption program would require engagement with various stakeholders throughout the organization to understand their needs and devise a strategy that would address them completely. The CISO team wanted to be sure that all threat vectors would be addressed, while the CFO team needed proof that switching to Apple devices made economic sense, increasing efficiency and reducing costs. Wipro worked closely with Apple throughout the

transition to offer clear solutions to stakeholder concerns and develop a strategy that aligned with the various needs of the business. Wipro's Apple Practice and Apple security specialists, for example, took time to demonstrate how the native security tools of macOS compared to Windows, and outline best practices for integration to ensure Wipro achieves the highest quality security. Apple also helped address other concerns throughout the transition such as validating technical configurations, communicating with executives and mapping logistics for device distribution. Ambitions Realized Increased employee engagement, satisfaction, and retention The Mac@Wipro program provided new hires with state-of-the-art Mac laptops and paved the way for other employees to choose their own devices. New hires responded well to seeing Mac devices in their welcome kits, posting unboxing videos to social media to share the excitement. The Mac devices are easy to set up, making onboarding a breeze. They also tend to have fewer technical issues because the hardware and software are built together. When issues do arise, Wipro's dedicated Mac@Wipro support team makes it easier for new hires to resolve those issues quickly. The Mac@Wipro team reported fewer support calls relating to Mac devices — about one fifth the number relating to Windows devices — and greater overall satisfaction from employees using Mac. Reduced energy consumption The initiative also aligned with Wipro's environmental ambitions by working to reduce energy consumption, lower electricity bills, and create a more environmentally friendly office. Apple's latest processors are designed with energy efficiency in mind, consuming less power during operation due to smart power-management features. Wipro's previous standard Windows laptop produced an average of 365 kgs of CO_2 emissions per year. An Apple MacBook Air M1 produces an average of 161 kgs of CO_2 emissions per year. That 204 kg difference applied across the thousands of devices Wipro switched to Mac eliminates 27,865,890 kg of CO_2 emissions per year — about the same as reducing 3.1 million gallons of gasoline CO_2 emissions . "Wipro has pledged to reduce its emissions by 55% by 2030 and reach net zero by 2040," Anup Purohit said. "The M1 chip in Mac helps us in reaching our goals by greatly reducing our energy consumption." Reduced deployment costs With Apple's ecosystem, Wipro simplified and centralized its approach to provisioning, configuring, and maintaining devices. Apple Business Manager (ABM) and Mobile Device Management (MDM) solutions allowed Mac@Wipro to automate device setup, configuration, and software deployment. This streamlined process reduced the time and effort required, resulting in a reduction of over 75,000 hours for the IT staff.
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Contact Us

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Manage Mac with Microsoft Intune

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/apple/microsoft-intune/ ----- Contact Wipro Please fill the required details to access the content A Unified Solution for Device Management With Wipro and Microsoft Intune, managing devices, applications, and data across multiple platforms, including macOS, is easier than ever before. This unified approach means that organizations can use one management solution for all devices, resulting in greater efficiency and scalability. Intune offers a comprehensive range of policy options for macOS, allowing administrators to enforce security measures, configure settings, and apply compliance policies. This level of control guarantees that macOS adheres to organizational standards, protecting sensitive data and mitigating potential risks. Contact the Wipro Apple Experts to find the right solution for your enterprise =====================

Coupa

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/coupa/ ----- Contact Wipro Please fill the required details to access the content Coupa Leading Spend Management Platform Get visibility and control of all your business spend in one place Coupa Software is a leading provider of Business Spend Management (BSM) solutions. Coupa offers a comprehensive, Cloud-based BSM platform that has connected hundreds of organizations with more than five million suppliers globally. The platform provides greater visibility into and control over how companies spend money. Using this platform, businesses are able to achieve real, measurable value and savings that drive their profitability. =====================

Cybereason

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/cybereason/ ----- Contact Wipro Please fill the required details to access the content Cybereason End-point protection Efficient, multi-layered and customizable threat prevention Cybereason endpoint protection combines next-generation anti-virus (NGAV) with endpoint detection and response (EDR), managed threat hunting and incident response services, and retrospective threat hunting to empower SOC analysts and provide threat protection beyond anything available in the market today. There is no 'one-size-fits-all' approach to defense, as some teams have vastly more resources and staff than others. With Wipro's threat hunting experts, the Cybereason endpoint protection platform is designed to empower efficient security operations across all SOC sizes and maturity. Organizations can adapt the platform to the needs of their SOC team. =====================

Veritas

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/veritas/ ----- Overview of the partnership Contact Wipro Please fill the required details to access the content Veritas Delivering 360-degree Data Management Driving business transformations beyond traditional backup & archival together Wipro has teamed up with Veritas to deliver world-class IT solutions for global companies. Veritas and Wipro offer a range of products and capabilities to deliver comprehensive yet easily managed solutions to store, backup, and archive massive amounts of data. The relationship includes managed and outsourced service offerings, systems integration services and product fulfilment opportunities for Data management, Information governance and Data analytics in heterogeneous environments. We jointly offer, Backup-as-a-Service, Long term Retention & analytical solutions for customers with diverse technologies on Cloud & Hybrid environments. =====================

Wipro-Pure Storage Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pure-storage/ ----- Simplify Private Cloud Deployments with Wipro FullStride Cloud and Pure Storage News, Awards & Recognitions Contact Wipro Cloud-Native Apps Anywhere Container Aware Database Platform (CDBP) Autonomous Intelligent Storage Operation Wipro VirtuaDesk Powered by Pure Storage Navigating the Future of Data and Sustainability with Wipro and Pure Storage How to Build a Boundaryless Data-Driven Enterprise Wipro and Pure Storage to Drive Sustainable Technology in Data Storage & Data Centers Wipro Wins Pure Storage GSI Innovation Partner of the Year 2022-23 Wipro-Backed Innovapost Wins 2023 Pure Good Sustainability Award from Pure Storage Please fill the required details to access the content Pure Storage Enabling Innovation in Data Storage Enabling Innovation in Data Storage Wipro and Pure Storage combine advanced strategies and capabilities in data management, cloud, and next-gen technologies to help clients maximize business value while minimizing deployment risk. As a leading developer of all-flash data storage hardware and software products, Pure Storage enables the real-time, secure data processing necessary for critical operations like DevOps and multi-cloud analytics. Wipro's consultancy expertise and capabilities in cloud, AI and other advanced technologies streamline deployment and help clients harness the full potential of their data. The partnership's 360-degree relationship is designed to deliver industry-leading data performance, compression, and an elastic, always-on approach to disaster recovery that reduces storage costs while increasing data availability with less than 1ms latency. Partner Level Global System Integrator Partner for Pure Storage Approach/Differentiator Outcome based Transformation in a Hybrid Cloud Ecosystem Partner Award Pure Storage GSI Innovation Partner of the Year 2022-23 Services Deliver consistent user experience with data that is always available and automatically protected, powered by Portworx. Modernize of

existing legacy assets as well as on any cloud anywhere, empowering DevOps teams to deliver data availability, mobility, automation and security, powered by Portworx. Achieve simplicity through automation and a consumption model with performance-focused SLAs. Build a fully managed live workplace environment with on-demand, scalable services and flexible pay-per-desktop pricing Featured Resources Wipro's strategic partnership with Pure Storage has yielded significant results since 2016, bringing to market the joint solution Autonomous Storage Operations (AISOP) and frameworks for container-based platform services. Contact Us ======================

Simplify Private Cloud Deployments with Wipro FullStride Cloud and Pure Storage

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pure-storage/simplify-private-cloud-deployments-with-wipro-fullstride-cloud-and-pure-storage/ ----- Contact Wipro Please fill the required details to access the content Weak cloud adoption often has more to do with enterprise challenges than with technology limitations. Implementing cloud solutions requires executive buy-in, close collaboration between technology and business units, and a focus on measured business outcomes. With the emergence of complex requirements in the hybrid cloud world, solutions must simplify outcomes. In "Creating Simple Private Cloud Deployments with Pure Storage and Wipro FullStride Cloud," ISG digs into the best model for cloud delivery, explaining how AI and data analytics can be used to increase resiliency, performance, and build a more successful cloud-driven enterprise. The white paper looks at several examples of how joint solutions from Wipro FullStride Cloud and Pure Storage are helping organizations utilize these tools more effectively to simplify cloud deployment. Wipro and Pure Storage: Meeting the Requirements of Modern Technology Architecture Wipro's strategic partnership with Pure Storage has yielded significant results since 2016, bringing to market the joint solution Autonomous Storage Operations (AISOP) and frameworks for container-based platform services. "The strength of the Wipro-Pure Storage solution," ISG writes, "is that each provider (and other third parties) can play and align to their strengths and capabilities to provide end users, typically everyday employees, with a seamless and invisible solution." Download the white paper to get ISG's full perspective on simplifying cloud deployment, and how the joint solutions of Wipro FullStride Cloud and Pure Storage can help. Download ISG Whitepaper ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pure-storage/navigating-the-future-of-data-and-sustainability-with-wipro-and-pure-storage/ ----- Contact Wipro Please fill the required details to access the content Navigating the Future of Data and Sustainability with Wipro and Pure Storage Navigating the Future of Data and Sustainability with Wipro and Pure Storage In this session Jo Debecker, Global Head Wipro Fullstride Cloud, and John Colgrove, Founder and Chief Visionary Officer, Pure Storage

discuss the critical interplay between data and sustainability and how their partnership is addressing the growing reliance on data storage systems and its' direct impact on our environment and energy consumption. Wipro, in collaboration with Pure Storage, is at the forefront of driving sustainability in data management. Through the implementation of advanced, energy-efficient storage systems, Wipro's FullStride Cloud Services not only optimize operational efficiency but also significantly reduce the carbon footprint associated with data storage, paving the way for a more sustainable digital era. =====================

AppDynamics

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/appdynamics/ ----- What We Think Contact Wipro Please fill the required details to access the content AppDynamics Delivering superior application experience Wipro and Cisco AppDynamics collaborate across digital transformation, end user experience enrichment and business observability With over 5 years of strategic partnership, Wipro and AppDynamics have been jointly delivering value to customers through exclusive, differentiated offerings and next-gen engagement models. Wipro, a ELITE (highest AppDynamics level) partner, is among the top 10 GSI partners of AppDynamics. We have been engaged in providing domain specific expertise across major verticals focused on making application availability a reality for enterprises and mid-size organizations worldwide. Our solutions deliver a unified 360-degree view with Application Performance Management, Business Monitoring, and End-User Monitoring that ensures business availability and standardized user experience across the full technology stack from application to infrastructure. Our primary areas of focus include: Application Modernization, Artificial Intelligence for IT Operations (AIOps), SAP Application Insights and Cloud Migration and Optimization (hybrid and multi-Cloud, across Microsoft Azure, AWS and GCP) Our major differentiator has been the ability to show CXOs and other senior figures how application performance directly correlates with business performance. Viewing revenue generation and customer engagement levels linked to a major application in real-time has become a game changer, in a world where 'every company is a software company'. With global delivery centers and joint CoE labs, we aspire to become an end-to-end solution partner of choice for customers across geographies as part of Wipro's digital transformation vision. Wipro has successfully transformed employee's application experience by partnering with SAP and Cisco AppDynamics. =====================

Thales

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/thales/ ----- Contact Wipro Please fill the required details to access the content Thales Advanced data protection services Key partnership with Thales to provide security solutions and services to the market Thales (Gemalto) is a worldwide leader in data protection, providing everything an organization

needs to protect and manage its data, identities and intellectual property – through encryption, advanced key management, tokenization, and authentication and access management. Whether it's securing the Cloud, digital payments, blockchain or the Internet of Things, security professionals around the globe rely on Thales to confidently accelerate their organization's digital transformation. Wipro partners with Thales (Gemalto) to deliver services around data security & encryption, Cloud security, PKI security solutions, and DPoD. This partnership plays an important role in providing security solutions and services to the market.
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Forcepoint

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ forcepoint/ ----- Contact Wipro Please fill the required details to access the content Forcepoint Enabling customers with data security and infrastructure security solutions Wipro's deep cyber security expertise combined with Forcepoint solutions for safeguarding data and IP, aligned to changing customer requirements Forcepoint is a leading user and data protection cyber security company, entrusted to safeguard organizations while driving digital transformation and growth. Forcepoint's solutions adapt in real-time to how people interact with data, providing secure access while enabling employees to create value. Wipro is a platinum GSI partner with Forcepoint and has partnered with Forcepoint to provide its clients next-generation data and critical IP protection, secure Cloud adoption, network user protection, and workforce and insider threat protection. Wipro is also a professional services and managed services partner to Forcepoint and can provide various commercial models to its customers. Wipro's domain-based expertise and services capabilities along with Forcepoint solutions can help customer meet their information security requirements in the infrastructure and data security space. ======================

CyberArk

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/cyberark/ ----- Contact Wipro Please fill the required details to access the content CyberArk Enabling organizations with best-in-class privilege access management solutions Platinum partnership with Cyberark to jointly offer security solutions in Privilege Access Management CyberArk's award-winning software protects the high value assets of leading companies and government organizations around the world. CyberArk's solution was one among the first in the Privilege Management space. Wipro has been a Platinum partner with Cyber Ark for over 10 years old and offers joint solutions in the privilege managed space. Wipro has leveraged its expertise to develop use cases and accelerators to enable faster deployment and continuous monitoring for customers. ======================

CrowdStrike

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/crowdstrike/ ----- Contact Wipro Please fill the required details to access the content CrowdStrike Trusted endpoint protection solutions Elevating security posture and mitigating latest threats in the customer's network CrowdStrike is a leading cyber security company specializing in endpoint protection solutions. The CrowdStrike platform is a multi-tenant, Cloud native and intelligent security solution capable of protecting workloads across on-premise, virtualized and Cloud-based environments running on endpoints such as laptops, desktops, servers, virtual machines, Internet of Things (IoT), and devices which span multiple large security markets including endpoint security, security and IT operations (including vulnerability management) and threat intelligence. Wipro is a managed services partner for Crowdstrike and offers the Crowdstrike platform as part of its endpoint security solution. Wipro's Cyber Defense platforms, coupled with the integrations and accelerators developed for the endpoint estate, help organizations in elevating their security posture and mitigating the latest threats in the customer's network. =====================

Cloudflare

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/cloudflare/ ----- Contact Wipro Please fill the required details to access the content Cloudflare Providing Cloud based secure access services =====================

Wipro and Intel

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/intel/ ----- Our Solutions Awards & Recognitions What We Think Form Title Form Title Contact Wipro Please fill the required details to access the content Wipro and Intel Delivering the Future Together Harnessing top-notch technology and services to exceed customer expectations Through a longstanding collaboration, Intel® and Wipro™ combine "industry-leading computing innovation" and "best-in-class IT and consulting services" to meet the ever-evolving demands of their global customer base across verticals. This collaboration has succeeded in driving innovation and cutting-edge enterprise solutions to clients across digital workplace services, AI, virtualization and the cloud. Wipro is a key member of the Intel AI Builders program, an ecosystem of leading ISVs, SIs, OEMs, and enterprise end users looking to accelerate the adoption of AI. Intel and Wipro are also part of the International M2M Council (IMC), a global trade association that aims to boost understanding and sales in IoT. Wipro leverages Intel's industry leading technology to develop innovative and disruptive service offerings. The partnership is focused on developing joint offerings around two distinct areas Wipro & Intel is engaged in Data Center GoBig Program for long time

IoT empowered Smart Buildings elevate the user experience and bring excellence in operations, transforming business performance and enhance sustainability A Wipro and Intel perspective An Intel - Wipro whitepaper =====================

Internet of Things (IoT) empowered Smart Buildings

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/intel/internet-of-things-empowered-smart-buildings/ ----- Contact Wipro Please fill the required details to access the content Internet of Things (IoT) empowered Smart Buildings Transform user experience and excel in operations IoT empowered Smart Buildings elevate the user experience and bring excellence in operations, transforming business performance and enhance sustainability IoT is playing a critical role in the management of buildings and its infrastructure, providing real-time actionable insights. Data from IoT devices are being leveraged to provide users and stakeholders with sharper insight and granular control over multiple areas of operations and user experience, creating a safe and healthy environment. IoT-based systems help to simplify maintenance, reduce operational costs, derive high visibility to assets, thus providing higher return on investment (ROI). Wipro Smart Building is an Intel® IoT market-ready solution powered by Wipro's Intellectual property Wipro Smart i-Connect™ (WSiC), an enterprise IoT platform. WSiC acquires, interprets, routes, processes, and visualizes data from the IoT devices to make Smart Building a central component in facility control. Intel is enabling a more intelligent Internet of Things (IoT), supporting enterprises that are moving to the edge so they can capture more data, analyze it faster, and act on it sooner. The solution uses Intel® Distribution of OpenVINO™ toolkit to accelerate deep learning inference. The free, downloadable toolkit helps developers and data scientists fast-track development of high-performance computer vision and deep learning into vision applications. With the help of Intel® Distribution of OpenVINO™ toolkit, Wipro Smart i-Connect™ improves model's performance, optimized runtime and maximized application's throughput on Intel's hardware platforms. Wipro Smart Building solution monitors, analyzes and manages the operational systems in a building. It uses vendor-agnostic technology and open-source interfaces based on IT/OT standards that are extremely well-suited for controlling intelligent building systems. Working as a central component of a facility control center, it provides the centralized monitoring and management for HVAC, lighting, access control and other operation systems and network infrastructure. The IoT gateway at the edge based on Intel® Core™ processors aggregates data and events, analytics and AI functionalities at the edge. Intel® processors come in a range of options for compute performance and power consumption, bringing AI closer to the edge thereby reducing latency, improving reliability and performance. Smart Building solution provide many benefits: Click here to know more about Wipro's IoT offering. Contact us =====================

Enhancing Endpoint Security Protection: Advanced Solutions from Wipro and Intel

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/intel/articles/enhancing-endpoint-security-protection-advanced-solutions-from-wipro-and-intel/ ----- Contact Wipro Please fill the required details to access the content A look at how Wipro Live Workspace™ Secure360, powered by Intel solutions, is combining AI and zero-trust models to deliver superior endpoint security. Seeking increased resiliency and competitiveness, enterprises are adopting new technologies and new ways of working that may also be exposing them to new cybersecurity threats. Hybrid work has extended the areas businesses need to secure, and flexible operations like bring-your-own-device programs are creating more endpoints that need monitoring. To maintain a secure, efficient digital work environment, enterprises need a comprehensive security approach that can keep pace with ever-changing business demands and regulatory requirements. In "Endpoint Protection: Securing enterprise endpoints with comprehensive security technology," Wipro security experts describe how to effectively tackle the challenges associated with endpoint security and offers businesses a guide for building a comprehensive endpoint security framework. The report also shows how solutions like Wipro Live Workspace™ Secure360 — a zero-trust based security architecture powered by Intel's vPro Platform, Hardware Shield, Remote Secure Access and other security tools—leverage advanced technologies like AI and machine learning to help enterprises reinforce critical IT infrastructure to enhance digital security throughout the organization. Wipro and Intel are working together to develop robust security solutions that help today's enterprises keep pace with change while keeping their operations safe. Access the full report to learn more. =====================

Turning business ideas into reality at the edge

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/intel/turning-business-ideas-into-reality-at-the-edge/ ----- Contact Wipro Please fill the required details to access the content Turning business ideas into reality at the edge A Wipro and Intel perspective We are in an era where information takes center stage, characterized by robust connectivity and increased digitalization. Amid the rising demand for automation and intelligence across sectors, organizations are seeking the next wave of digital transformation, and edge computing. As demand for real-time AI solutions and decentralized data processing continues to grow, implementing AI at the edge is becoming critical. An edge computing strategy should also target specific business objectives related to cost, growth, quality, and experience. The way forward is to allow splintered

workloads to run in the places best suited for them. This could be at the edge, core, hosted cloud or public clouds, thus making the landscape of enterprises boundaryless. This white paper outlines how businesses can strategically utilize Intel's infrastructure innovation in conjunction with Wipro solutions to effectively deploy and manage edge computing. Download Whitepaper =====================

Navigating the 5G Device Landscape

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/intel/navigating-the-5g-device-landscape/ ----- Contact Wipro Please fill the required details to access the content Navigating the 5G Device Landscape An Intel - Wipro whitepaper The data-driven decision-making processes and the growing need for substantial cloud computing have continuously increased the demand for higher bandwidth, leading to a growing demand for 5G. The adoption across enterprises however, has not been entirely smooth. Wipro, in partnership with Intel, acknowledge the challenges faced by organizations in adopting Enterprise 5G and outline the key strategies to propel this adoption. Below are some key insights outlined by our experts: =====================

Hitachi Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/hitachi-alliance/ ----- Contact Wipro Please fill the required details to access the content Hitachi Alliance Solutions that improves IT cost and agility Providing end-to-end IoT proposition to customers with focus on value creation using data analytics and technology Wipro partners with Hitachi to focus on joint solution offerings which are created using Hitachi Video Analytics (HVA), Visualization Suite (HVS) and Hitachi 3D Lidar with Wipro Smart i-connect™ IoT platform. Our global engagement with Hitachi across the Americas, Europe, middle east and APAC caters to multiple use cases in industries such as Consumer, Retail, O&G, Manufacturing, Telecom, and Energy & Utilities. Some of the joint solution offerings which are created using Hitachi suite and Wipro Smart i-Connect™ platform include: Smart Retail and Customer Management, Inward / Outward Logistics, Smat Warehouse operations, Intelligent rig operations, Connected Facilities - Fuel / Filling Stations, O&G Downstream logistics, catering to multiple industry verticals. Building the sensors that broadcast & collect the data that powers IoT by leveraging Hitachi's Lumada, Pentaho Internet of Things analytics, Video Analytics, 3D Lidar and Wipro Smart i-Connect ™ IoT Platform. Complete offerings focused to provide end to end IoT propositions & creating additional value for customers using data analytics and technology. =====================

Galvanize

----- Contact Wipro Please fill the required details to access the content Galvanize Ensuring Cloud security and governance Wipro partners with Galvanize to deliver services for managing threats, assessing risk, measuring controls, and monitoring compliance Galvanize, previously known as RSAM, builds Cloud-based security, risk management, compliance, and audit software to drive change in some of the world's largest organizations. Wipro partners with Galvanize to deliver services for managing threats, assessing risk, measuring controls, and monitoring compliance.
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SailPoint

----- Contact Wipro Please fill the required details to access the content Sailpoint Governance based Identity & Access Management Wipro's deep identity management services with accelerators and use cases combined with SailPoint Identity Management offerings. SailPoint IIQ is a governance-based Identity & Access Management software solution, which delivers a unified approach for visibility into 'who has access to what' in critical business data. The solution integrates with applications running in-house or from the Cloud. Wipro is SailPoint's strategic partner as part of its identity management solutions, and is known as the 'Admiral Technical Delivery Partner'. Wipro brings its deep identity management services and wraps its accelerators and use cases around the SailPoint identity management offerings. =====================

Densify

----- What We Think Form Title Form Title Contact Wipro Please fill the required details to access the content Densify Cloud cost optimization with assured performance Wipro's Surfonomics offering in partnership with Densify provides enterprise-class resources, optimization and control within public cloud and container infrastructure. The Wipro Surfonomics Optimization offering helps enterprise clients realize benefits such as: Wipro brings expertise and deep understanding of public cloud and container environments across policy definition, integration capabilities with ITSM and "infrastructure as code" to this partnership. When combined with Densify's Machine Learning driven resource optimization and cost control, the solution results in 20% to 40% savings for Wipro's enterprise clients while ensuring performance and compliance. Re-imagining your business transformation journey Intelligence, agility and affordability
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Enhance Employee Experience

The Secret to Delivering a Financial Trader Workstation News, Awards & Recognitions Contact Wipro Wipro virtuadesk™ powered by Citrix Secure Private Access Cloud Integration Platform Hybrid multi-cloud A Strategy for Successful VDI Cloud Migrations Wipro awarded Citrix Worldwide and Northern European GSI Partner of the Year 2021 Wipro recognized by Citrix as SEAKI GSI Partner of the Year 2021 Wipro Partners with Citrix and Microsoft to Deliver Desktop as a Service Solution Please fill the required details to access the content Citrix Fostering Success with Wipro and Cloud Software Group (CSG) Partnership The Wipro and Cloud Software Group (CSG) partnership delivers the right workspace, at the right time, for the best experience. We bring together the world's leading digital workspace solutions and best-in-class ecosystem management to deliver an unmatched user experience and are uniquely placed to provide clients with the expertise, speed, and scalability needed to deliver enhanced workplace infrastructure and workspace intelligence. Cloud Software Group (CSG) provides mission-critical software to enterprises at scale. It is the company that owns Citrix, NetScaler and TIBCO, created after Vista Equity Partners and Evergreen Coast Capital Corp. (an affiliate of Elliott Investment Management L.P.) acquired Citrix and merged it with TIBCO. Citrix, TIBCO, NetScaler, Jaspersoft, ibi, and ShareFile are all brands under the Cloud Software Group (CSG) name. Our partnerships focus on driving a new way of working, with joint solutions that keep high-performers engaged and help businesses retain employees. We are committed to creating efficient environments for employees, with enhanced IT infrastructure, where information can be accessed at speed and in a secured manner. Partner Level Global System Integrator Partner for CSG Approach Business Transformation for a Digital Future Partner Award Worldwide, Northern Europe & SEAKI GSI Partner of the Year 2021 Services Combined with Citrix Cloud Services to deliver an optimized desktop experience with service assurance. Zero-trust-based secure private access for both virtualized and non-virtualized users. Citrix DaaS solution, deployed by Wipro and Citrix, that integrates with all the hypervisors. An outcomes-focused managed approach to hybrid cloud and service delivery. Case Studies Featured Resources Wipro virtuadesk ensures a compliant service delivery with seamless execution. And together with Citrix's powerful solutions to deliver high-performing desktops to traders anywhere, on any device, we create fast and secure trader workstations. Contact Us =====================

PTC

Contact Wipro Please fill the required details to access the content PTC Accelerate digital transformation with market-leading platform and IIoT tools Wipro and PTC alliance combines industry-whetted tools and skills to build future-ready industrial solutions revolutionizing the way businesses

operate Wipro has one of the longest tenured partnerships with PTC in the IoT space. This alliance combines PTC's rich product portfolio in IoT, PLM, ALM, SLM, CAD, and AR/VR and Wipro's System Integration (SI) services and resources to carve out a niche offering to customers on their digital transformation journey. Over the years, Wipro has made considerable investments in terms of partner managers, executive sponsors and co-innovation spaces and forums. Wipro is an influencer for PTC software positioning as part of a strong digital transformation business with focus on quality in project execution and delivering value to the customer. Wipro has a strategic partnership with PTC that entails 2 million license influence, over 650,000 IoT bookings and a dedicated workforce trained in PTC technologies. The partnership primarily focuses on joint go-to-market initiatives to respond to customer requirements across industry verticals and geographies. The partnership also focuses on developing state-of-the-art reference solutions and accelerators to help in the rapid prototyping and development of customer solutions. Under this agreement, Wipro and PTC work with customers both reactively and proactively to architect and build end-to-end or pointed solutions that have PTC's product suite embedded at their core. The following are some of the highlights of the partnership: In addition to the efforts and activities listed above, the partnership enables an exchange of information and early access to the developments on PTC's product roadmaps. This collaborative synergy helps in building right solutions for the right consumers. PTC provides the tools, licenses and training, while Wipro primarily provides the resource pool for system integration and consultancy on how to position PTC's products in the market. The partnership is also characterized by excellent governance where a core group draws up specific partnership goals and roadmap, and tracks them closely. =====================

Tradeshift

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/tradeshift/ ----- Contact Wipro Please fill the required details to access the content Tradeshift Going digital with procure to pay Fully digital procure to pay platform to increase savings, compliance and visibility Wipro and Tradeshift enable businesses to connect their supply chain and accelerate digital transformation. Our platform simplifies collaboration among stakeholders across sourcing, procurement, finance, and suppliers. Our global partnership covering the Americas, Europe and the Asia Pacific provides a touchless procure to pay solution delivering 50-60% productivity improvements and 15-20% incremental savings across your spend. Leveraging this platform, businesses are able to achieve a fully digital procure to pay function, monetize supply chain through in-built working capital solutions and streamline the procure to pay function through artificial intelligence and machine learning.
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HighRadius

HighRadius Integrated solutions for accounts receivable Optimize accounts receivable with intuitive models that unify business operations and streamline processes HighRadius is a financial technology company that uses artificial intelligence to help companies automate accounts receivable and treasury processes. The HighRadius® Integrated Receivables platform reduces cycle times in order-to-cash processes by automating receivables and payments processes – from credit, electronic billing, and payment processing, to cash applications, deductions, and collections. HighRadius® Treasury Management Applications help teams achieve touch-less cash management, accurate cash forecasting, and seamless bank reconciliation. Powered by the Rivana™ artificial intelligence engine, designed specifically for finance, and the Freeda™ Digital Assistant, HighRadius enables teams to harness machine learning to predict future outcomes and automate routine, labor-intensive tasks. The radiusOne B2B Collaboration Network allows suppliers to connect with buyers digitally, closing the loop from supplier-receivable processes to buyer-payable processes. HighRadius solutions have a proven track record of delivering increased operational efficiency through automation, accurate cash-flow forecasting, optimized cash management, lower days sales outstanding (DSO), and bad debt, to help companies achieve strong ROI in just a few months. ======================

Dataiku

Dataiku All-in-on data science & machine learning platform An industry-leading workbench for citizen data scientists, data analysts, and engineers to build and deploy machine-learning solutions at enterprise scale Dataiku is one of the world's leading AI and machine-learning platforms. Through collaborative, elastic, and responsive AI, Dataiku provides agility at enterprise scale. Hundreds of companies use Dataiku to underpin their essential business operations and ensure they stay relevant in a changing world, including adopting models to improve fraud detection, prevent customer churn, assist with predictive maintenance, optimize supply chains, and much more. By partnering with Dataiku, Wipro offers customers data-driven insights and intelligence amplification through self-service technologies, for greater innovation and faster realization of business goals. Supported by our platform and solutions teams, and a strong center of excellence, Wipro's AI practice provides efficient implementation of AI and cognitive solutions, while our consultancy and decision-science services ensure successful collaboration with other industry leaders in the data transformation space. ======================

Calypso

----- Our Solutions Contact Wipro Please fill the required details to access the content Calypso Capital market firms are constantly challenged on multiple fronts with complexities arising from regulatory changes, trading costs, and risk exposure from trading cross-asset class and derivatives. It is imperative for these firms to rapidly adopt state-of-art integrated capabilities and platforms, addressing changing regulatory landscape, time-to-market, and increase straight-through processing. This helps firms achieve reduced total cost of ownership and managed risk. Calypso Technology, Inc. is a leading global provider of cloud-enabled cross-asset front-to-back solutions and managed services for financial markets, with over 35,000 users in 60+ countries. Its award-winning software improves reliability, adaptability, and scalability across several verticals, including capital markets, investment management, central banking, clearing, treasury, liquidity, and collateral. Wipro's Banking and Financial Services Business Unit is its largest industry vertical, serving top global banks in transforming their business, operations, and IT. Wipro augments its deep professional services capability with an extensive partner ecosystem, including leading industry platforms such as Calypso. The Wipro-Calypso global partnership leverages Calypso's strong product offerings and Wipro's leading services capability within the banking and financial services to serve clients better.
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Denodo

----- Contact Wipro Please fill the required details to access the content Denodo Unparalleled data access and agility Accelerating the journey to intelligent enterprise with data virtualization Organizations rely on disparate external and enterprise-wide data sources to make critical business decisions. Data virtualization connects these data sources, bridging data warehouses, data marts, and data lakes without the need to create a whole new integrated data platform. In partnership with Denodo, Wipro helps organizations around the globe accelerate their data and analytics transformations with our data virtualization solution: A modern, efficient method for integrating data in real time, providing a logical data catalog for business use. Rather than moving the data to a central repository, like a data warehouse, data virtualization provides integrated semantic views of data across a range of heterogeneous sources, premises, and cloud repositories. This enables companies to deliver data on demand through modern architectures such as logical data warehouses, logical data lakes, hybrid-cloud data catalogs, and single-view applications. These updates retain many of the characteristics of traditional data warehouses while drastically eliminating redundancies, reducing costs and time, and supporting modern data sources. "Our collaboration with Wipro has helped transform business processes for Fortune 500 companies," says Susan Eckenberger, Partner and

Channel Sales Director at Denodo. "As one of our top GSI partners globally, Wipro provides deep expertise in data virtualization and data-integration tools with more than 170 consultants trained on the Denodo platform. I expect the Wipro-Denodo partnership to grow exponentially in the near future, establishing Wipro as a preferred partner for data management, leveraging the Denodo platform." =======================

Wipro-Cohesity Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/cohesity/ ----- News & Insights Form Title Form Title Form Title Our Services Contact Wipro Please fill the required details to access the content Cohesity Simplifying Data Management to Drive Business Value Accelerating the enterprise digital transformation journey by enabling customers to deploy applications and manage their data where it makes most sense — on premises or hybrid cloud Cohesity and Wipro have teamed up to help organizations unlock value from data by removing complexities in data management. We jointly bring to market solutions and services that combine innovative Cohesity data management software with Wipro's strategic IT services expertise, proven frameworks and global reach to help you simplify your operations, build and grow your cloud services, and unlock valuable insights from your data. We do this by eliminating mass data fragmentation and consolidating data silos onto a single, easy-to-manage software-defined platform. The platform hosts enterprise-class services including backup and recovery, file shares, object stores, disaster recovery, dev/test, and analytics -- all managed through a simple, intuitive user interface. This unique and comprehensive approach lowers TCO and radically simplifies the way businesses back up, manage, protect, and extract value from their data—in the data center, at the edge, and in the cloud. The joint offerings address two marquee Wipro services — Boundary Less Data Management and Enterprise Recovery Vault Services. Cohesity Helios — Cohesity's consolidated data management platform — and its associated services are coupled with the underlying infrastructure and integrated with Fluid IT – Wipro's state-of-the-art enterprise-scale platform enabling software-defined intelligence-driven agile operations. FluidIT propels both adaptive and incremental transformation and frictionless day-to-day business-as-usual operations through human-centric automation. Wipro has been honored as the 2022 Global Innovation Partner of the Year by Cohesity, a renowned provider of data management and cyber resiliency solutions. If there is one thing that keeps most IT practitioners up at night, it is the threat of ransomware. Ransomware and other cybercrimes are an increasing concern among enterprises. Cyber resiliency and cyber recovery have quickly become vital components of most organizations Delivering Enterprise-Class Data Protection & Management as a Service
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Wipro & Gorilla: Cutting-Edge Utility Solutions

Gorilla Merging deep industry experience and unparalleled performance, Wipro and Gorilla's new platform is empowering businesses and customers across the utilities sector. Around the world, energy demands are shifting. Consumers are embracing low-carbon lifestyles. Businesses are switching to planet-friendly fuels. To keep pace with these changes, the utilities industry needs to evolve. Technology is helping the industry adapt. From microgrids and at-scale energy storage, to DER orchestration and data capabilities, digital innovations are enabling energy and water companies to reinvent themselves while delivering superior performance and customer service. For more than twenty years, Wipro has helped global utility leaders successfully navigate even the most ambitious transformations. Today, Wipro's strategic partnership with Gorilla empowers utility companies to deploy best-in-class solutions for critical elements of their value chains, and strengthen their engagements with customers around the world. Gorilla is a cutting-edge cloud platform offering solutions for energy pricing, forecasting, and reporting. Gorilla also automates data collection, transformation, processing, and analysis for large energy retailers. Gorilla's data-driven approach unlocks deep insights to provide greater control over margins, risks, and costs throughout the entire utility customer lifecycle. By combining Wipro's consulting, system integration, and services capabilities with Gorilla's cutting-edge technology platform, utility companies can reimagine their business models and elevate their customer experience.
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Wipro expands cloud security portfolio with Colortokens to offer zero trust-based security

content Colortokens Wipro and ColorTokens collaborate to deliver zero trust and risk quantification solutions Wipro's clients include some of the world's most advanced enterprises that deem their digital assets as their core intellectual property and competitive advantage. Protecting these assets from modern day cyber-attacks requires enterprises to take a fresh approach to security. Wipro is excited to collaborate with ColorTokens to deliver a modern, proactive security platform based on the core principle of zero trust, which translates into, "never trust, always verify". ColorTokens' Xtended Zero Trust platform delivers unparalleled protection to enterprises from sophisticated ransomware, unauthorized lateral movement, and zero-

day attacks, while drastically simplifying their security operations. This unified platform provides data, endpoint, and application protection across data centers, clouds, corporate, and edge while seamlessly integrating with existing security tools. This partnership significantly expands Wipro's cloud security portfolio, enabling it to meet the ever-increasing demand for zero trust based security for enterprise workloads, users, and endpoints. The augmented capabilities will help organizations gain business agility by enabling rapid delivery of services to their customers, partners, and employees while maintaining uncompromised security and compliance.
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Numocity

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/numocity/ ----- Contact Wipro Please fill the required details to access the content Numocity Smart Energy Delivery Ecosystem for Electric Mobility Energizing the future of transportation, building the foundation for a cleaner greener transformation of mobility worldwide. Globally the awareness and call for action to manage climate change is growing. As part of this, countries are reviewing how to limit the environmental impact from the transport sector. From adopting stricter emission standards to banning the use of fossil fuel vehicles to incentivize introduction of new energy vehicles setting the stage for mass-scale adoption of EVs. Falling Battery prices and continued (short-term) government incentives on EVs are driving EV demand. EVs (on an unsubsidized basis) are expected to be price competitive by 2025. Lack of EV charging infrastructure can become an impediment for EV Adoption, impacting de-carbonization/reduction in GHG. EVs will amount to 5% of the global projected power consumption by 2040. Numocity is a Bangalore-based award-winning start-up with rich experience in delivering solutions in the eMobility market globally. Their digital technology platform is designed and built for scale and flexibility in the emerging eMobility industry. Wipro and Numocity are collaborating to catalyze and accelerate response to this challenge through a collaborative spirit of innovative and transformational solutions across the value chain. Employing industry-leading expertise to assess, design, plan and deploy process and technology improvements
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Powercloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ powercloud/ ----- Contact Wipro Please fill the required details to access the content Powercloud Wipro & Powercloud: A partnership driving the future of energy and utilities tech solutions Wipro's industry expertise and Powercloud's next-gen SaaS platform enable energy and utility providers to reimagine business models and deliver unmatched customer experiences. The energy and utilities industry is at a strategic crossroads. Across the world companies in this section are focusing on delivering loyalty-building services and frictionless customer experiences. Increasingly, these enterprises are leveraging cloud-native and software as a service (SaaS)

platforms to help them remain competitive and continue meeting consumer expectations. Wipro's partnership with SaaS provider Powercloud enables us to provide innovative solutions that ensure our E&U clients can transform their operations and gain new efficiencies. Powercloud's end-to-end SaaS platform covers the entire customer life cycle, from quote and signup to billing, payments, and collections. Built on cloud-native technologies, the industry-specific platform is powered by microservices and application programming interfaces (APIs) that eliminate data silos and help streamline business tasks. Wipro has more than 20 years of expertise and deep industry knowledge working with utility companies across the world, helping them reinvent themselves and deliver superior business performance along with exceptional customer satisfaction. Our partnership allows Wipro and Powercloud to combine forces to help utilities companies radically enhance customer experiences using agile, digital solutions at scale while significantly reducing cost-to-serve and cost-to-acquire expenses.
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Tricentis

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/tricentis/ ----- Services Contact Wipro Intelligent SAP Testing Support Services Consulting Wipro wins Digital Transformation Partner Award 2022 Wipro Partners with and Invests in Tricentis to Deliver End-to-End Hyper Automation across Quality Lifecycle Wipro wins Tricentis's UK Partner of the Year award 2023 Please fill the required details to access the content Improve time-to-market and quality with automation Wipro and Tricentis partner with global enterprise leaders to address the dynamic challenges of today's business world. Together, we empower customers to innovate faster, optimize costs and reduce business risks. With a track record of nuanced understanding of system environments, Wipro and Tricentis guide enterprises towards success As a Global Platinum Partner, the highest level in the Tricentis ecosystem, Wipro has more than 3,000 Tricentis Tosca automation specialists and certified practitioners and has been recognized as the Best Digital Transformation partner 2022. The joint Wipro-Tricentis center of excellence, matured over last 8+ years has delivered successful outcomes across 100 plus engagements. Wipro Ventures made a strategic investment in Tricentis and partnership to drive quality, time, and effort efficiencies in its quality engineering offerings. Tricentis is widely credited for continuous improvement in software testing methodologies for DevOps and agile environments. Partner level Global Platinum Partner Approach Consulting Automation Awards Global Delivery Partner of the Year, 2023 Achieve greater business outcomes with lifecycle test automation & agile testing. Support mechanism for incident closure within optimal timelines, with a streamlined process. Joint quality consulting from Wipro and Tricentis for enterprise quality engineering maturity improvements. News, Awards and Recognitions Contact Us =====================

Aprimo

----- Contact Wipro Please fill the required details to access the content Aprimo As personalized customer engagement becomes the new norm, companies in every industry find themselves needing to deliver experiences that are relevant, timely, and engaging to their customers. Wipro and Aprimo have partnered to help firms accomplish precisely that. Wipro and Aprimo, a recognized Leader in The Forrester Waves for Digital Asset Management (DAM) and Marketing Resource Management (MRM), help clients streamline their content, operations, and planning to orchestrate exceptional marketing and digital experiences. Aprimo's DAM and work-management software helps marketing, digital, and customer-experience teams digitally transform their processes to better meet the ever-changing demands of fast-moving markets. Leveraging these industry-leading DAM and work-management capabilities, clients can plan, create, and synchronize their marketing campaigns effectively in every channel and wherever their customers are. Aprimo's top of the line Digital Asset Management and Work Management capabilities paired with Wipro Digital's world class services give businesses exactly what they need to thrive in a market where content is personalized for every customer and channel. Wipro and Aprimo empower clients to meet the omni-channel challenges they face by offering: For more information visit Aprimo =====================

HeadSpin

----- End-to-end Mobile App Functional Testing Observability and App Monitoring News, Awards & Recognitions Contact Wipro Mobile and Browser Automation Testing User Experience Assurance Wipro partners with and invests in HeadSpin to deliver next-generation mobility quality solutions and services Please fill the required details to access the content HeadSpin Perfecting Digital Experiences at Speed The strategic partnership between Wipro and HeadSpin is revolutionizing how global organizations approach end-to-end testing, optimize digital experiences, and streamline product delivery.By combining Wipro's extensive domain knowledge, proven service capabilities, and worldwide presence with HeadSpin's advanced device infrastructure and data-driven app performance insights, enterprises can achieve unparalleled efficiency. Together, Wipro and HeadSpin empower businesses to automate QA processes comprehensively, continuously monitor application performance, and seamlessly integrate with CI/CD environments, reducing development cycles and accelerating time-to-market for cutting-edge solutions. Digital experience oversight Digital services testing, analysis, and monitoring platform Hosted on-demand infrastructure Deployed globally in 60+ locations; capability of deploying on-premise AI-powered actionable insights Improve your mobile and web application performance Services Testing apps on varied device types across geographies Automation of mobile apps across devices and geographies

Validation of UX and performance for mobile apps Precise location data and alerts on UX degradations Contact Us ====================

Liferay

Liferay Wipro and Liferay help clients create more integrated solutions using Liferay's Digital Experience Platform. This collaboration helps clients create a unified, relevant, targeted and consistent experience across multiple devices and channels. Wipro is the first Indian IT company recognized as a Global Service Partner with Liferay. For more than 10 years, Wipro has delivered tailored solutions for different types of digital experiences using the Liferay Platform, offering B2B (Partner, Dealer, Supplier), Customer Self-service and Intranet Digital Experience solutions across industry verticals. Together, Wipro and Liferay bring Strategy, Design and Technology to the forefront of client solutions, building intuitive and immersive customer experiences while increasing the client's wallet share. As a strategic Global Service Partner with Liferay, Wipro leverages the following benefits for clients: For more information, visit Liferay.com. ====================

Pega

Guest experience transformation drives brand value and revenue Remote Services – Pickup Delivery Experience Transformation – Test drive scheduling Driving operations through AI predictions & insights National Water Management System End to end support for Pega applications AI driven business systems support B2B Next Best Offer Platform Digital Experience Platform (DXP) Service Network Deployment Tools | Automated Network Deployment Robotic Process Automation (RPA) | Wipro Intelligent Process Automation Solutions Business Process Management System | Business Rules Management System Cognitive Platform | Cognitive Claims Automation Please fill the required details to access the content Overview Pega provides a powerful low-code platform that empowers the world's leading enterprises to Build for Change®. Clients use Pega AI-powered decisioning and workflow automation to solve their most pressing business challenges – from personalizing engagement to automating service to streamlining operations.   Wipro has more than 12 years of strong partnership with Pega. Wipro is a Specialized – Intelligent Automation (Americas, Asia Pacific), Robotic Automation (Americas), Manufacturing (Americas, EMEA), Government (Asia Pacific, EMEA), Financial Services (Americas, EMEA), and Globally Authorized Partner (Authorized regions – Americas, Asia Pacific, EMEA, India). Value Proposition for Clients Wipro provides end-to-end services, including Advisory Consulting, Implementation, and Managed Services for all Pega's products, including Customer Service, Intelligent Automation, and 1-1 hyper personalization using Customer Decision Hub across verticals and

geographies. Awards and Accreditations Wipro is awarded the "Client Innovation Award for Customer Service" in 2023. This recognition holds immense value as it aligns with one of Pega's three GTM engagement strategies, and Wipro is the only recipient of this recognition for Customer Service this year. PEGA's Trust "At Pega, we could not be prouder of our partnership with Corrections Victoria and WIPRO. This is a transformational project and persistence, and patience have resulted in one of the best-Case Management solutions I have ever seen." Luke McCormack former Regional Vice President - Pega APAC" Analyst's Rating Wipro Digital is a leader in Digital business services, and our strategy is to realize the digital-first approach through the pillars of business transformation, modernization, connected intelligence, and trust underpinned by a design-led human-centric approach to transformation, talent strategy, high-performance engineering, and IP/Platforms/Open innovations. Wipro brings a unique blend of Experience Led (through our subsidiary firms – DesignIt and Cooper), Domain Led (through Wipro's proven deep domain expertise in various verticals), and Technology Led (through Pega's technology capabilities, Wipro's proven expertise using Pega and our long-standing strategic partnership) digital transformation for our clients at Global Scale. Our Solutions: Experience of the future Everything stats with experience - Connected, intelligent, and seamless experience Leverage Wipro Ips to provide the future multichannel experiences which allows the customers to interact with the brand in the medium of their choice (physical, digital, and virtual) and the brand to respond contextually at the moment with immersive experience design, multi-experience and conversational AI. With offerings such as AI powered workflow automation, streamlined work aggregation, and production-centric UX layer, it allows the employees to interact with the applications from a single pane to respond faster, with ML models and AI helping to analyze processes, providing actionable insights on how processes can be automated. Digital Prescriptive Maintenance IoT-based predictive maintenance solution to improve customer experience while increasing cross-sell and upsell with personalized offers to customers Wipro's Digital Prescriptive Maintenance solution integrates analytics and data from real-time asset-monitoring and remote-management solutions with Pega's industry-leading Dynamic Case Management, CRM, and Decision Hub capabilities. This combined resource recommends the proper actions for asset maintenance, enabling improved asset management and collaboration and leveraging real-time asset health and performance data from an advanced IoT platform. Using this system, clients gain assistance in the periodic refresh of recommendations and can proactively prescribe the following best action for asset maintenance. Cognitive Claims Automation Expedite claim settlements with Wipro's cognitive platforms and Pega This automated solution combines Wipro's cognitive platform with Pega for an enhanced customer experience, reduced leakage, and improved claim-settlement times. It leverages state-of-the-art Pega process orchestration and Wipro's industry-leading AI, analytics, IoT, and Blockchain solutions, driving significant cost savings and slashing processing time. Parole Decision Management Intelligent parole helps authorities make the proper decisions for a safer community This fully automated digital solution leverages a re-imagined process to eliminate the risk of incorrect parole decisions and provides a robust auditing capability with a 360-degree view of offenders. Structured automated checklists and intelligent forms further

streamline the process to help improve the accuracy and efficiency of parole decisions and related operations. Wipro Integrated Parole Management System Improves Parole Operations Efficiency Case Studies Like most Detroit automakers, our customer had traditionally let dealers manage the end-user experience. Customers of this Detroit automaker had trouble visiting dealers for minor repairs, so brand loyalty and customer satisfaction were low. This US automaker needed a system to let potential customers in Europe book a test drive, but their dealer experiences were disjointed, which led to inconsistent customer experiences. This customer is a government entity charged with administering and maintaining infrastructure and roads for every city, town, and village in a Middle Eastern country. Our customer was a government-owned corporation responsible for meeting the water needs of an entire province, operating its river systems and dams, and supplying bulk water to a city of over 5 million people. This customer, a global managed healthcare and insurance company, needed global 24/7 support and maintenance for four critical applications on Pega. Our customer is one of the world's largest offshore drilling companies. It has diverse rig fleets that meet a range of customer needs, but it lacked a way to track and monitor tickets and cases across its lines of business. HR needed to enable tracking and monitoring for tickets raised by employees. Our customer, a huge US mobile services provider, achieve revenue and profitability goals so it adopted a strategy of improving the experience that they offer business customers. Solutions Contact Us
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Automated claims transformation and the future of customer service right now it's manual intervention

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/automated-claims-transformation-and-the-future-of-customer-service-right-now-its-manual-intervention/ ----- Contact Wipro Please fill the required details to access the content Automated claims transformation and the future of customer service right now it's manual intervention Ambition This European home insurance company wanted to be recognised as the #1 home insurer in the country for their outstanding customer experience while getting customers back to normal. To do that, they needed to handle the bulk of simple claims with a digitally enabled operational backbone and handle more complex cases by balancing expert human judgement with straight through processing that was enabled by analytics. But fewer than 5% of their customer interactions were digital, they lacked basic digital customer service capabilities, and using paper documents cost them more than €2 million annually—if those documents were ever delivered. Even worse, making basic changes in coverage and payments required human touch, while over 70% of their competitors let customers change their policies online. Actions Consultants from Wipro and Pega reviewed existing processes and identified design principles and concepts that could improve the customer experience. Then we delivered key features and screens to

enable an enhanced experience, more intuitive transparency, and greater self-service ability. Wipro and the business teams arrived at a reference architecture that leveraged Pega CS and AIML, RPA components, and UX and UI design. We focused on customer research to enable humanized customer centricity beyond a functional idea. Now simple claims are quickly handled by AI-enabled decision engines while complex claims are routed to expert employees for quick and accurate processing. Ambitions Realized This digital solution enables a new way of working for employees and roughly 2 million customers. More cohesive customer self-service experiences streamline grievance management, reduce manual intervention, and lower operational costs. =====================

Remote Services – Pickup Delivery

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/remote-services-pickup-delivery/ ----- Contact Wipro Please fill the required details to access the content Remote Services – Pickup Delivery Challenge Customers of this Detroit automaker had trouble visiting dealers for minor repairs, so brand loyalty and customer satisfaction were low. Customers wanted more personalized service options, so the automaker decided to simplify every customer interaction in every channel and to make them simpler and more consistent. They decided to offer every customer complimentary services that include mobile service appointments and pickup and delivery of their vehicles for all types of service from simple oil changes to recall repairs. Approach and Solution Wipro collaborated with the automaker, its IT team, and its providers to understand the pain points. Results Now the customer's preferred dealer will come to their home or place of business, pick up their vehicle, make the repair or service, and return it after the repair is done. For routine maintenance and light repairs, dealers can dispatch a Mobile Service van with a trained technician to an eligible location. Participating dealers can set their own service and mileage limits for each type of remote experience. Significant benefits driven by this program =====================

End to end support for Pega applications

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/end-to-end-support-for-pega-applications/ ----- Contact Wipro Please fill the required details to access the content End to end support for Pega applications Situation This customer, a global managed healthcare and insurance company, needed global 24/7 support and maintenance for four critical applications on Pega. Approach & Solution Wipro created a team to handle the entire operation in an onshore-offshore model with SLA targets. We do the Review and Analysis for existing performance issues with fix recommendations, and we Results This team has enabled automation,

proactive problem management, and service improvement to reduce effort.
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National Water Management System

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/national-water-management-system/ ----- Contact Wipro Please fill the required details to access the content National Water Management System Ambition Our customer was a government-owned corporation responsible for meeting the water needs of an entire province, operating its river systems and dams, and supplying bulk water to a city of over 5 million people. Their legacy application had trouble pinpointing work locations, which caused delays and increased the number of interactions between customers and assessment officers required to complete work. Application and assessment processes were paper-based and relied on a third-party app, which delayed the application life cycle even more. Finally, it offered no self-service options for customers. Action Wipro executed this program in a co-creation model with business and IT teams to radically change how they operate. We began with a consulting assignment to identify needs, create a roadmap, and evaluate tech process automation platforms. We took the journey centric approach, initiating the program by employing design thinking and customer-centric experience as the core teams to help our client visualize their vision. They chose Pega to deliver a customer engagement platform to support multiple government departments supporting multiple personas on complex journeys. Digital Adoption platform implementation using Whatfix for faster and easier adoption by users. Ambitions realized Our solution is the first to integrate Pega Govt Platform (PGP) and Customer Service (CS) applications. It has streamlined how this customer interacts with adjacent government agencies. It also enables customer digital self-service, plus employees can track tickets more accurately and they have a 360-degree view of customer data. Significant benefits include: ======================

Guest experience transformation drives brand value and revenue

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/guest-experience-transformation-drives-brand-value-and-revenue/ ----- Contact Wipro Please fill the required details to access the content Guest experience transformation drives brand value and revenue Ambition Like most Detroit automakers, our customer had traditionally let dealers manage the end-user experience. These experiences had become disjointed and inconsistent over the decades, and 21st century customers expected more input from the automaker itself. Dealers scheduled over 18 million annual service appointments, only 10% of them online. Some dealers offered online solutions, but the experience varied by dealer, which tended to inhibit their

use. None of the dealer solutions supported portable or mobile devices for booking and managing appointments. Dealers also didn't use proactive communications and notifications, so customers missed appointments or dealers scheduled customers on top of each other. Our customer needed to gain control over the process and outcomes of this experience, using digital solutions to make everything simpler and more convenient for both dealers and customers. Action Wipro collaborated with our customer, their IT team, and their providers to understand the current model and pain points. Then we designed and built an integrated experience platform so dealers have a single integrated tool to drive holistic experiences, improve operations, and make the lives of their guests simpler. This tool also Ambitions realized Now over 3,000 North American dealers use this tool, and the automaker has made its use mandatory for its new flagship electric vehicles and all newer models. =====================

AI driven business systems support

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/ai-driven-business-systems-support/ ----- Contact Wipro Please fill the required details to access the content AI driven business systems support Challenge Our customer is one of the world's largest offshore drilling companies. It has diverse rig fleets that meet a range of customer needs, but it lacked a way to track and monitor tickets and cases across its lines of business. HR needed to enable tracking and monitoring for tickets raised by employees. Supply Chain managers needed to handle bid and spend analysis, and Finance needed to track and monitor payables, receivables, report to record, and other functions. Processing tickets through email created endless bottlenecks and provided zero visibility for tracking. Our customer needed Pega support and maintenance in addition to an application that would provide complete visibility across service requests and other cases, and integration with PeopleSoft. Approach & Solution Wipro set up a team to handle the entire operation from India, using Pega 8.1.4 to monitor ticket movement from date of creation to status to stakeholder details. We also support weekly and monthly report preparation, SLA target achievement, change management, and problem management. We manage six rig servers and one main server, and we also provide: Results Now the customer has visibility across HRMS, SCM, and Finance modules. =====================

Experience Transformation – Test drive scheduling

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/experience-transformation-test-drive-scheduling/ ----- Contact Wipro Please fill the required details to access the content Experience Transformation – Test drive scheduling Challenge This US automaker needed a system to let

potential customers in Europe book a test drive, but their dealer experiences were disjointed, which led to inconsistent customer experiences. Since the dealer scheduled test drives, the manufacturer couldn't control or track the availability of vehicles and sales personnel. It also had no insights into customer profiles and conversion rate. Approach and Solution Wipro collaborated with the automaker's business teams, IT team, and IT providers to understand the test drive process and pain points for customers and the company. Then we designed and built a unified experience platform that provides over 5,000 dealerships in 19 European countries with a single integrated tool to ensure that customers will have a simple and easy way to book a test drive for their vehicle of choice irrespective of dealer and location. Major features include: Results Significant benefits driven by this program include: ======================

Driving operations through AI predictions & insights

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/driving-operations-through-ai-predictions-and-insights/ ----- Contact Wipro Please fill the required details to access the content Driving operations through AI predictions & insights Ambition This customer is a government entity charged with administering and maintaining infrastructure and roads for every city, town, and village in a Middle Eastern country. It needed to schedule inspections, and inspectors needed to gather huge amounts of information, images, and other data to document work on projects. But it couldn't prioritize inspections based on risk, length, and severity of incidents, or the number of people and businesses an incident might affect. It also couldn't track the compliance history of businesses or business areas, and there was no way to track unlicensed business activity. The ministry also couldn't predict workloads, so it couldn't plan for workforce needs. Action The ministry launched an ambitious program to enhance the services it provides to citizens, and hired Wipro to help transform how its inspectors work and make smarter decisions. We began with a design consulting assignment to identify issues in case processing and reduce the risk to citizens. Our AI OPS service collaborated with the Customer IT team to design a framework for ingesting data and creating the engines that can be used in AI models. Then we developed a solution that leverages AI/ML models to prioritized cases within risk models based on prior history, business areas, location of incident etc. Ambitions realized Now the ministry has an AI-enabled solution that increases the safety of their citizens by providing forecasting and capacity planning for their workforce. Other significant benefits include: ======================

B2B Next Best Offer Platform

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/b2b-next-best-offer-platform/ ----- Contact Wipro Please fill the required details to access the content B2B Next Best Offer Platform Challenge Our customer, a

huge US mobile services provider, achieve revenue and profitability goals so it adopted a strategy of improving the experience that they offer business customers. The tactics they chose were to provide new capabilities that would retain business customer prospects, provide new personalized offers to attract customers online, and enrich existing offers with new features. And they needed to do all of this across ACSS, MyBiz, TELESALES, and Account Inquiry channels in real time. Approach & Solution Wipro implemented a B2B offers platform using Pega's decision engine. Our initial scope was to deliver programs for retention and upsell on their online portal. We leveraged a headless design where APIs are exposed to the online channels to retrieve the best offer for each customer. We integrated it with the customer's CDP platform and other backend systems to enrich customer profiles, offer details, inventory checks, etc. And interaction details collected are sent to downstream systems to Kibana using Kafka for further analysis. Results Our work has greatly improved customer satisfaction and has driven significant ROI. Prior call volumes averaged 2,500 – 3,000 per day which were expected to be redirected to the new platform. ======================

Seamless Sales Order Intake for a Leading footwear and apparel in the world

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/pega/seamless-sales-order-intake-for-a-leading-footwear-and-apparel-in-the-world/ ----- Contact Wipro Please fill the required details to access the content Seamless Sales Order Intake for a Leading footwear and apparel in the world Ambition Customer is looking for efficient ways to improve the Order intake process keeping up with the pace of growth. They are unable to keep up with the growing demand and process the orders. The customer challenges included a fragmented order management system involving a lot of manual work. The Order Processing team validated the incoming order and once approved it needed to be keyed-in to SAP. The SAP manual entry process was cumbersome and involved lot of data entry errors which reversed order back. The changes to orders was a cumbersome and error prone process. Since those were B2B orders involving multimillion booking value, the financial and satisfaction impact was very high. There were around 2500 orders/day and hence up to 60,000 line items to be processed daily. Action Wipro was engaged as a strategic partner to optimize and automate order processing, in-transit order management and intelligent routing of shipment of customer's products. The salient features of the solution are: Ambitions realized Our Pega orchestrated Integrated solution provided the client with a seamless order processing capability with the following benefits: ======================

SeaLights

SeaLights Wipro Digital and SeaLights provide dynamic code quality focused Quality Engineering solutions which help 'democratize' quality. Together, we accelerate our clients digital journeys towards being adaptive DevSecOps enterprises. SeaLights brings to the table a radically new and capable approach known as Software Quality Governance (SQG). Powered by AI/ML, Software Quality Governance helps enterprises in automated identification, management and control of every perceivable Quality Risk (critical Line of Code) across the end-to-end release pipeline (beyond the development box), for every single application code change within an enterprise. Unlike traditional Quality Management processes, Software Quality Governance is ideal for Agile and DevSecOps ways of working, enabling organizations to achieve Quality@ speed. SeaLights' offerings include: SeaLights combines with Wipro's intelliassure intelligent quality platform powered by Wipro Holmes to form an Intelligent Quality Eco- system enabling clients to improve true coverage of their business processes, optimize code compliance and risk management efforts at an enterprise level. Working with Wipro and SeaLights, our clients can improve code-release velocity by reducing the length of test-execution cycles 70-80%, improve their quality 25-35% by reducing the number of defects that slip into production, and optimize their efforts by 30-40% for release quality assurance. For more information, contact us or visit the SeaLights website.
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Yugabyte

Yugabyte Yugabyte is an early-stage startup in the distributed database segment that aims to make applications agile like never before. Yugabyte's unique technology provides APIs for both PostgreSQL and Cassandra applications. The core YugabyteDB solution is available as an open-source and on-premise offering, as well as a cloud-based service. Yugabyte Cloud, which can be deployed in any virtual private or public cloud, is a fully managed Database-as-a-Service product and is suitable for SMBs and large enterprises alike. Backed by Wipro Ventures, Lightspeed Venture Partners and Dell Technologies Capital, Yugabyte is led by a team with rich experience developing business-critical databases for some of the Technology sector's most-respected and future-looking companies. Yugabyte, headquartered in Sunnyvale, CA, is powered by a high-performance, globally distributed document store inspired by Google Spanner. ======================

ENSEK

Contact Wipro Please fill the required details to access the content ENSEK Wipro partners with ENSEK to accelerate the digital and cloud journey for utility companies across the world The winning combination of ENSEK's pioneering end-to-end SaaS solution and Wipro's wealth of industry experience provides utility companies with unmatched solutions for navigating today's tech challenges. The utilities industry is at a strategic crossroads. Energy providers across the world are focused on delivering seamless customer experiences and next-generation products and services to meet evolving consumer expectations. As utilities transition from legacy technologies, leveraging cloud-native and SaaS platforms is key to staying competitive and attaining new business efficiencies. ENSEK's core product provides an end-to-end SaaS platform for energy suppliers, covering the entire customer life cycle from quote and signup to billing, collections, and revenue assurance. The platform's cloud-based capabilities are powered by microservices and RESTful APIs to fully integrate data and drive new product innovations. Wipro has more than 20 years of expertise and deep industry knowledge working with utility companies across the world. Our strategies and solutions have enabled them to reinvent themselves and deliver superior business performance along with exceptional customer satisfaction. Our partnership allows Wipro and ENSEK to combine forces to help utilities companies radically enhance their customer experiences using agile, digital solutions at scale while significantly reducing cost to serve and cost to acquire. ======================

ESG Showcase: Intelligent Ransomware Recovery with Wipro's Enterprise Vault Powered by Cohesity

Contact Wipro Please fill the required details to access the content ESG Showcase: Intelligent Ransomware Recovery with Wipro's Enterprise Vault Powered by Cohesity A state-of-the-art solution to combat ransomware from Wipro and Cohesity Cyber resiliency and cyber recovery have quickly become vital components of most organizations' overall data protection and security practices. According to the FBI, organizations paid $4.1 billion to criminals to retrieve their data in 2020, which is a new record. Implementing a good cyber recovery solution is becoming more important as cyber-criminals become increasingly sophisticated, targeting not only production data and applications, but also the backup data that organizations rely on to recover their environments

from exactly such an event. The exclusive report by ESG highlights the core tenets of ransomware protection covered by Wipro and Cohesity. Aligned with the NIST Cybersecurity Framework 1.1, Wipro's Enterprise Recovery Vault Powered by Cohesity is an immutable backup and recovery solution that helps identify cyber vulnerabilities and protects the backup data and the whole platform with a multi-layered approach. Download the report to learn: ======================

Partnership with Aruba, a Hewlett Packard Enterprise company

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aruba/ ----- Solutions Contact Wipro Please fill the required details to access the content Partnership with Aruba, a Hewlett Packard Enterprise company Over 10 years of strong strategic partnership Wipro and Aruba: Leading the journey to transformation With over 10 years of strategic partnership, Wipro and Aruba (an HPE company) have been jointly delivering value to customers through differentiated offerings and next-gen engagement models. Wipro is a key certified Aruba GSI partner. This partnership combines Wipro's global system integration, IT consulting and industry domain expertise across sectors with Aruba's industry leading networking technology products, platforms and services. Our primary areas of focus include: Network Management & Transformation, SD-WAN, Edge Services Platforms, Network Security, 5G, Campus and Wi-Fi solutions. With global delivery centers and joint innovation labs, we aspire to become end-to-end solution partners of choice for clients across geographies in their digital network transformation journey. Aruba has been at the forefront of innovation since the beginning, and has continued to make significant investments to deliver Aruba ESP (Edge Services Platform), the first platform that goes well beyond conventional network management to provide AI-powered operations, provisioning, orchestration, security, and location services. Aruba gives network operators the ability to balance both security and access requirements for users, devices, and applications—no matter where or how connectivity is delivered. Bundling these benefits with Wipro's industry leading services, our joint customers can consume the network as a service (NaaS) enabling faster deployment of new features and services, ensuring optimal performance and facilitating delivery of business outcomes. Holistic WAN optimization solution for streamlining network operations with centralized management based on app-centric policies across locations ======================

Rubrik

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/rubrik/ ----- Contact Wipro BoundaryLess Data Protection as a Service BoundaryLess Data Management Please fill the required details to access the content Wipro Rubrik Partnership: Modernizing Data Protection and Data Management Embracing digital transformation journey

with powerful & robust data management Wipro and Rubrik partner with global enterprise leaders to modernize their application data management deployed across on premise and multicloud environment, to protect critical applications and safeguard these applications from ever increasing ransomware threats. Rubrik is integrated with Wipro's BoundaryLess Data Management framework to provide modernized data protection. Rubrik Zero Trust Data Security solution, coupled with Wipro GRC - Governance, Risk and Compliance services, helps customers achieve enterprise grade cyber security. Protecting their critical data with immutable backups, provides AI & ML based analysis of any potential ransomware attacks, and enables quick recovery. Partner Level Elite+ Partner Approach Modernizing data protection & data management Awards Wipro is recognized as an Elite Partner Services Safeguard data and ensure data recovery on premise and in multicloud enviroments. Industry leading data protection and management solution to support a multicloud strategy. Learn More Contact Us =====================

BoundaryLess Data Management (BLDM)

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/rubrik/boundaryless-data-management/ ----- Contact Wipro Please fill the required details to access the content A data protection and management solution powered by Rubrik Security Cloud to support a multi-cloud strategy Use a single pane of glass to connect, secure, backup, recover, manage and control enterprise-wide data in the cloud. Enterprises are adopting a hybrid and multi-cloud strategy to avoid vendor lock-ins, conveniently access sophisticated services, meet data residency requirements, and optimize the user experience. However, to leverage these advantages, they need to re-platform their applications and use cloud-native solutions to mobilize data to the cloud of their choice. Wipro's BoundaryLess Data Management (BLDM) solution, powered by Rubrik Security Cloud, provides a holistic, cloud-agnostic framework that supports multi-cloud environments. The solution includes end-to-end data protection and management services with a single pane of glass management to connect, secure, backup, recover, manage, and control enterprise-wide data. The solution uses Open API-based integration with automation tools like vRA, Chef, Puppet, and ServiceNow to optimize the resources required to manage and run environments. Clients using BLDM increase their operational efficiency and ensure consistency across on-premises and public clouds. =====================

BoundaryLess Data Protection as a Service

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/rubrik/boundaryless-data-protection-as-a-service/ ----- Contact Wipro Please fill the required details to access the content BoundaryLess Data Protection as a

Service Safeguard data and ensure data recovery Identify and remediate security incidents to ensure business continuity   Data backup is a complex but essential process. Enterprises invest in innumerable data backup tasks across hybrid and multi-cloud environments. These tasks can be automated and simplified with just a few policies. Wipro's BoundaryLess Data Protection as a Service, powered by Rubrik Security Cloud, replaces thousands of backup tasks. The service is designed to identify, protect, detect, analyze, respond, and recover from a cybersecurity incident (i.e., breach, compromise, theft, ransom, or destruction). It provides secure data observability, enabling detection and remediation from cyber threats to make enterprises cyber resilient. The service is based on the guiding principles of the NIST framework and uses ML-based anomaly/ encryption detection. Clients using the service enable rapid, automated remediation across all their important business and support systems.
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Nexthink

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/nexthink/ ----- Contact Wipro Please fill the required details to access the content Nexthink Wipro joins forces with Nexthink for an improved digital workplace service offering Wipro and Nexthink's strategic partnership spans 7 years, servicing several leading global companies together. With Nexthink, Wipro is turning data analytics inwards with a revolutionary real-time analytics technology to forever change the enterprise IT services market — transforming the IT department from a cost center into a true enabler for the business. Wipro's infrastructure services deliver innovative ways for organizations to effectively manage complexity and drive higher efficiency. Nexthink's Digital Employee Experience Management platform is one of the core components of Wipro's experience monitoring and management offering. The capabilities of Nexthink are leveraged as a part of multiple offerings within the Digital Workplace catalog like ExperienceNXT, myHubStyle, etc. Nexthink helps organizations measure, manage, and improve digital employee experience every moment. By correlating technical performance and employee sentiment, organizations have a view of the true employee experience for the first time. Flexible dashboards provide key insights and event visibility, while visualizations enable rapid problem solving, so that issues can be instantly remediated through our automation technology. Nexthink becomes the central experience hub with real-time, actionable insights into every employee – across devices, operating systems, locations, and organizational units.   ======================

BlackLine

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/blackline/ ----- Contact Wipro Please fill the required details to access the content BlackLine Wipro's leading finance transformation consulting and execution expertise, complemented by BlackLine's planning and implementation expertise, simplifies and automates the core accounting close functions for

clients across industries, freeing up capacity for more value-added and strategic activities. This partnership is aimed to fuel business growth and enable smarter decision-making for enterprises by optimizing processes and eliminating manual accounting tasks through cloud-based software solutions. BlackLine is a Gartner Leader in SAP Solutions Extensions. BlackLine's cloud-based solutions and market-leading customer service help companies modernize accounting operations by unifying their data and processes, automating repetitive work, and driving accountability through visibility. BlackLine provides solutions for financial close management, accounting automation, and intercompany governance, allowing large and midsize companies to complete accounting work better, faster, and with more control.   Designed to complement existing financial systems, BlackLine fills the gap left by ERP and CPM systems to help companies increase operational efficiency, real-time visibility, and control and compliance.   The BlackLine software solution efficiently moves the close cycle to a continuous accounting process with the following software modules: Currently, BlackLine has 3,000-plus customers in over 130 countries with 262,000 users around the world.
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A partnership with Genesys® to elevate your digital customer experiences

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/genesys/ ----- Contact Wipro Please fill the required details to access the content Leverage the knowledge distilled from 70 billion empathetic customer interactions across over 100 countries Redefine customer experience across channels and touchpoints to create happy and trusting customers Customers are getting demanding. They want personalized attention and almost-instant problem resolution over channels of their choice. Organizations leveraging Wipro's partnership with Genesys® deliver unique, fast, and memorable interactions with a problem-solving approach. Customers are treated as unique, they are heard and made to feel special. These aspects of customer experience are central to success in today's digital world. The customer experiences enabled by Genesys® result from distilling the knowledge from orchestrating over 70 billion empathetic customer interactions for organizations in over 100 countries. Using Genesys® expertise in cloud, digital, and AI technologies, clients realize the power of Experience as a Service℠. The customer support products and services provide proactive, predictive, and hyper-personalized experiences that forge deep customer relationships while improving employee productivity. In this partnership, Wipro brings its digital operations, cloud infrastructure, and application development and integration capabilities to offer modernization solutions, Cloud Contact Center as a Service (CCaaS), Digital Service Desk as a Service, AI-based virtual agents, and BPO as a Service (BPaaS). Combined, Wipro and Genesys® place the complementary heritage and expertise of two industry leaders at your disposal to provide:

We deliver a simplified way to create happy and trusting customers with reliable, scalable, and future-focused platforms.
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Leverage our Five9 partnership for an intelligent cloud contact center

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/five9/ ----- Contact Wipro Please fill the required details to access the content Let the combined heritage and expertise of two industry leaders elevate customer experience Redefine customer interaction and raise outcomes across channels and touchpoints Customer expectations are growing. And in a crowded marketplace, customer interaction can become a competitive differentiator. By leveraging Wipro's partnership with Five9, an industry-leading provider of cloud contact center solutions, your organization can deliver fast, personalized, and problem-solving-focused interactions with your customer. The Five9 Intelligent Cloud Contact Center uses analytics and practical AI to power top-grade digital engagement that surpasses your customer's expectations. Additionally, the solution enables a superior workflow to improve the agent experience. And, as studies have repeatedly shown, efficient and happy employees make happy customers. Wipro brings its digital operations, cloud infrastructure, and application development and integration capabilities to offer Cloud Contact Center as a Service (CCaaS) and BPO as a Service (BPaaS) as part of this partnership. With this your organization can expect a secure, compliant, scalable, and human-centered platform that elevates customer experience, delivers tangible business results, enhances customer trust, and strengthen your brand.
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Wipro's high-impact partnership with Databricks

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/databricks/ ----- Wipro Data Intelligence Suite (WDIS) Wipro Enterprise Generative AI (WeGA) WDIS powered Databricks Unity Catalog Upgrade Contact Wipro Wipro Receives Databricks Innovation Partner Award 2024 Strategies for AI Led Transformation Please fill the required details to access the content Create New Business Value with Data Innovations Create New Business Value with Data Innovations Wipro is a Databricks Global elite partner with implementation experience across 125 use cases, 75+ clients, and numerous industries. Our partnership with Databricks, supported by more than 1,500 engineers and consultants is focused on: Partner Recognition Innovation Partner of the year 2024 Experience 100+ implementations Business Value 40% cost savings on modernization programs Services Strategy and Governance Our Strategic Advisory team navigates clients through a reinvention process designed to drive meaningful impact and scaled business growth through a clear data,

analytics, and AI strategy. This process considers the organization's current state of data maturity along and provides an innovation roadmap, leveraging data constructs like data mesh, data marketplace, data economics (cost monitoring/optimization), and data governance (provisioning/integration of Unity Catalog). Data Engineering Wipro and Databricks' combined data engineering expertise lays the groundwork for stronger, more scalable data systems. We improve reliability in areas such as data pipeline modernization, migration from Hadoop, legacy DW and ETL Modernization, greenfield Lakehouse implementations, Lakehouse reference architecture, estimation methodologies and capacity planning, and low-code/no-code solutions. Data Science Wipro and Databricks provide end-to-end data science solutions from data prep and modeling to sharing insights. We build a collaborative data science environment on a unified foundation that spans areas like migration of cloud-native and legacy ML pipelines to Databricks, modernization of R/SAS/Python-based scripts, and business solutions that enable data-led value realization for clients. Generative AI Wipro's market-leading, custom-built services leverage state-of-the-art Large Language Models (LLMs) like DBRX, GPT, MPT, LLaMA and are backed with responsible AI controls and domain, safety, and security guardrails to accelerate the GenAI journey for customers. The WeGA Studio, GenAI accelerators, and services developed by Wipro are implemented on a Databricks-Mosaic ML platform to deliver key business solutions covering digital marketing, content generation, enterprise search, and conversational BI. Accelerators/Offerings Provides ready-to-deploy modules enabling end to end automation of the data transformation journey. Gen AI Models for hyper-personalization, contact center efficiency, business intelligence solutions and developer productivity improvement. Seamless and swift upgrade experience across hyperscalers. Success Stories With Wipro's data-centric solutions, Williams Energy has realized $6M increase in margin and reduced the total cost of asset ownership by approximately 40%. Awards and Recognitions News and Events Wipro and Databricks decode data foundation for AI. Contact Us =====================

Wipro and Databricks Partner to Build Williams Energy's First-Certified Gas Marketplace

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/databricks/success-stories/wipro-and-databricks-partner-to-build-williams-energys-first-certified-gas-marketplace/ ----- Contact Wipro Please fill the required details to access the content Wipro and Databricks Partner to Build Williams Energy's First-Certified Gas Marketplace Ambition Williams Energy, a 116-year-old leader in energy infrastructure based in Tulsa, Oklahoma, United States, handles one-third of the natural gas used daily for cooking, heating homes, and generating electricity. Their legacy is etched in pipelines that crisscross the nation, fuelling progress and prosperity. Williams sought to disrupt the energy Industry by creating the first certified gas marketplace with a gas certification process to encompass the end-to-

end supply chain: from production through transmission and delivery. Participants share emissions data throughout the value chain with the certification agency, Context Labs. The Decarbonization-as-a-Service™ platform will enable Context Labs' partners in upstream, midstream and downstream firms to track and quantify emissions associated with natural gas procurement, transmission, and delivery down to the individual molecule. Achieving this ambitious goal involves ingesting and analyzing vast amount of complex time series data from proprietary systems like FlowCal, Maximo, and Pi which house critical data of transmission, emissions etc. Action Wipro collaborated with Williams to design and implement the solution using capabilities of the Databricks Data Intelligence Platform. The design followed the industry standard Databricks Medallion Architecture for Data refinement, which was sourced from various systems, including PI. The data was stored in Delta format. While Wipro ensured governance and security of the data through Unity Catalog, the data pipeline orchestration was implemented through Azure Data Factory. Wipro successfully tackled complex data engineering challenges by developing a PI Asset Framework (AF) for the NextGen use case, enabling seamless querying of data through PI AF using a linked server. Wipro leveraged Delta Share from Databricks for delivering data to Context Labs, while also provides necessary access tokens to the third party, in less than 48 hours which was a significant achievement. From complex data engineering to pioneering Delta Share and AI-driven tag consistency, Wipro's solutions paved the way for NextGen Gas. Ambitions Realized The collaboration between Wipro and Williams Energy has yielded remarkable achievements, particularly in sustainability and commercial success. Williams Energy has realized an impressive $6M increase in margin from additional volume and secured new next-gen gas contracts in 2023. Contact Us
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Wipro and Acceldata

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/acceldata/ ----- Our Acceldata Alliance Benefits Services Contact Wipro Data Observability for Effective Data Management Reductions in Application Maintenance Costs Strengthening Data Operations Hadoop-based Platform Support Data Reliability and Predictive Data Quality Usage and Spend Intelligence of Cloud Data Warehouses Please fill the required details to access the content Enhancing data health and visibility through our combined expertise Analyzing massive volumes of data to gain valuable customer insights and accelerate business decisions is a common task in most industries. As data rates increase and markets become more competitive, a crucial component in business operations is data observability: an enterprise's ability to track the health of its data and data systems. With this visibility, an organization has an effective way to identify, troubleshoot, and fix data issues, helping ensure data is relevant and secure. According to Gartner research, data observability is now essential to supporting and augmenting data management architectures. Wipro and Acceldata's partnership enables us to deliver customized strategies for simplifying data management with multidimensional observability across

compute processes and pipelines based on the Acceldata platform. Effective data management is key to staying competitive, and the Wipro and Acceldata partnership enables enterprises to derive higher value from their data assets while improving team productivity, issue-detection capabilities, and overall data health. =====================

Bentley Systems

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/bentley/ ----- Contact Wipro Please fill the required details to access the content Bentley Systems Transforming traditional buildings into Smart Spaces To create agile and adaptable buildings, organizations and building owners must weigh various factors, including occupant health and safety, space utilization, and equipment performance, while also addressing environmental and sustainability concerns. Building owners, operators, and tenants expect these needs to be addressed in a seamless and cost-effective way. Being a global technology company, Wipro has been developing solutions that enable infrastructure owners and operators to propel digital transformation by turning traditional buildings and campuses into Smart Spaces. Bringing together an experience of over 15 years in automation, access control, and business intelligence, Wipro delivers solutions that are engineered to address the dynamic digital transformation demands. Wipro and Bentley, the Digital Twin partners Wipro collaborated with Bentley to drive awareness, adoption, interoperability, and development of Digital Twin technology and embed it into the solutions. Leveraged Bentley's iTwin® platform, Wipro catalyzes the integration and overlaying of IoT data onto interactive 3D models of buildings. This also allows the Wipro Smart i-Building app to trigger workflows in the event of anomalies, detected by IoT sensors and other equipment. Wipro has built a Smart i-Building solution, powered by Wipro Smart i-Connect™, which focuses on real-time monitoring, alerts, and incident management for large buildings and campuses across the world. Bentley iTwin® The vision forward At Wipro, we are poised to take the Smart i-Building app to the building automation organizations that are associated with us, helping them realize that there is an untapped opportunity in developing infrastructure-centric solutions on a Digital Twin foundation. Wipro and Bentley, together, are extending the solution framework with Digital Twin solutions to cater to utility management, city management, transportation, telecom infrastructure, and more. =====================

A partnership with OpsRamp to simplify the management of complex IT environments

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/opsramp/ ----- Solutions Contact Wipro Please fill the required details to access the content Opsramp Gain competitive edge with an AI-powered platform End

poor visibility into distributed IT environments – acquire a proactive and predictive monitoring stance Wipro's partnership with OpsRamp, a company that offers the world's leading digital IT operations management platform, provides IT with AI-powered capabilities to innovate and create a competitive edge. The combined experience and expertise of the Wipro-OpsRamp partnership provides organizations with three quick wins: Modernizing IT Operations powered by AI to: Innovate faster by: Accelerate ROI and value through: The Wipro-OpsRamp partnership creates value for organizations by providing a true multi-tenant, multi-tier, intelligent, and future-proofed SaaS IT operations platform to simplify the management of complex hybrid IT environments. It delivers end-to-end visibility across applications, data centers, public clouds, point tools, etc. Users can identify and analyze problems along with proactive and automated remediation that integrates with ITSM tools. OpsQ, our artificial intelligence-powered event management engine, creates a tight feedback loop between incidents and solutions, reducing alert floods. Overall, the Wipro-OpsRamp partnership provides the foundation for a competitive edge. Must read: How Wipro customized and implemented the OpsRamp platform for North America's largest postal services organization in less than ten weeks.
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Opsramp

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/opsramp/unified-digital-operations-management-platform/ ----- What We Think Contact Wipro Please fill the required details to access the content Unified Digital Operations Management Platform Reduce tools overload and gain end-to-end visibility across IT infrastructure Today's IT landscape has become complex. Operations teams must contend with hybrid, multi-cloud, and cloud-native infrastructure, significant point tools overload, and modern ops demands. The challenge is to deliver excellent digital customer experiences and reliable IT services. To simplify the challenge, Wipro offers a Unified Digital Operations Management Platform in partnership with OpsRamp. The platform provides AI-powered capabilities to resolve the problem of working with many tools and shadow IT while mitigating the pressure of rising costs. IT Ops teams using our Unified Digital Operations Management Platform gain value from being able to: Recently, North America's largest postal services organization was introduced to the power of the OpsRamp platform by Wipro =====================

A partnership with Netskope that redefines cloud, data, and network security

Access a customized, integrated, and fully managed world-class security solution

----- News, Awards and Recognitions Form Title What We Do What We Think Contact Wipro Please fill the required details to access the content Access a customized, integrated, and fully managed world-class security solution Leverage a security platform that is trusted by Fortune 100 businesses to secure their digital transformation initiatives Netskope, a global cybersecurity leader, is redefining cloud, data, and network security by helping organizations apply Zero Trust principles. The Netskope platform provides optimized access and Zero Trust security for people, devices, and data anywhere they go. The easy-to-use platform reduces risk, accelerates performance, and provides unrivaled visibility into any cloud, web, and private application activity. Clients worldwide, including more than 25 of the Fortune 100, trust Netskope and its powerful NewEdge network to address evolving threats, new risks, technology shifts, organizational and network changes, and new regulatory requirements. Wipro is Netskope's Platinum partner. Together, we ensure enterprises secure their digital transformation initiatives. With our combined strengths, we deliver customized, integrated, and fully managed solutions and services that protect users, data, and businesses As cloud and hybrid work environments become more prevalent, traditional network... Cloud transformation is imperative to enable today's workforce. As enterprises transition to the cloud and hybrid work environments, network... Contact Us ======================

Enhance customer experience with Wipro - Checkpoint® partnership

Solutions Contact Wipro Please fill the required details to access the content Innovative RFID technology for adaptable and error-free product picking, packing, and delivery Track and monitor products in the supply chain, improve the in-store experience, and manage omnichannel fulfillment confidently with the convergence of Wipro Smart i-Connect™ and Checkpoint® RFID technology Inventory management helps maintain the availability of products, reduces delivery errors, helps manage theft, minimizes out-of-stock situations, accelerates shelf replenishment, and enables omnichannel fulfillment. RFID applications are invaluable across industries such as apparel, fresh foods, grocery, cosmetics, healthcare, beauty and wellness, DIY, electronics, and logistics gain complete visibility into where a product is in the supply chain, enabling faster and more accurate picking, packing, and delivery. An up-to-date inventory can improve customer experience and increase customers' footfalls. Inventory management helps maintain the availability of products, reduces delivery errors, helps manage theft, minimizes out-of-stock situations, accelerates shelf replenishment, and enables omnichannel fulfillment. RFID applications are invaluable across industries such as apparel, fresh foods, grocery, cosmetics, healthcare, beauty and wellness, DIY, electronics, and logistics gain complete visibility into where a product is in the supply chain,

enabling faster and more accurate picking, packing, and delivery. Wipro's partnership with Checkpoint® makes it easy for businesses to integrate and deploy the latest RFID solutions (software, hardware, labels, tags, and connected cloud-based infrastructure). As a global leader in Electronic Article Surveillance (EAS), Electronic Product Coding (EPC), and RFID, Checkpoint® has delivered a steady stream of innovations with customer-focused and adaptable source-to-shopper solutions. Businesses leverage the Wipro-Checkpoint® partnership at three levels: Level 1 - To increase inventory accuracy and drive: Level 2 - To support Bricks & Clicks retailing and offer services such as: Level 3 - Improve the in-store experience with: Wipro - Checkpoint® partnership helps businesses to keep pace with customer expectations and find exceptional value in responsive and adaptable solutions. Our clients reap business benefits such as improved in-store experience, visibility into product location, superior omnichannel management, cost savings, enhanced productivity, and improved revenue.
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Boost profits with precise inventory tracking

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/checkpoint/boost-profits-with-precise-inventory-tracking/ ----- Contact Wipro Please fill the required details to access the content Gain real-time visibility into assets and inventory with RFID technology Enable accurate in-store and online sales fulfillment, boost staff productivity, track sales trends, and improve cash flow using an intelligent solution Technology investments in inventory management result in superior customer experience and limited risk. RFID systems are the ideal solution for businesses that need to track inventory in real-time so that evolving customer demand can be met without a build-up of obsolete inventory or stockouts; high-value and fragile stocks can be identified for loss-prevention strategies; precious warehouse space can be optimally designed and utilized; sales trends can be tracked; audits can be conducted efficiently and accurately; theft and shrinkage can be reduced. Wipro implements RFID-based inventory management solutions in partnership with Checkpoint® to deliver: Accurate real-time inventory tracking enables sales uplift through accurate in-store and online sales fulfillment. Increased staff productivity by reducing time spent on back-of-house tasks and more time spent supporting customers. Faster delivery discrepancy resolution through robust and regular count programs that drive down loss. Improved cash flow/working capital reduction due to faster item throughput and lower inventory cost. Manual tools used in inventory management are slow and error-prone. Rising labor costs and the need for accurate and scalable solutions will continue to drive the adoption of RFID.
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SymphonyAI

Contact Wipro Please fill the required details to access the content SymphonyAI AI solutions are rapidly transforming operations and redefining how industrial companies build and deliver products, while also improving their top- and -bottom lines. Wipro and SymphonyAI, a leader in high-value enterprise AI SaaS, have partnered to help firms deliver exactly that. This partnership combines Wipro's service delivery excellence and deep domain expertise in energy, natural resources, utilities, chemicals, glass, and electronics manufacturing with SymphonyAI's market-leading and award-winning industrial product portfolio – including asset health and process optimization, manufacturing process execution, and connected frontline worker capabilities. SymphonyAI Industrial and Wipro jointly deliver solutions to help manufacturers identify and prioritize assets and processes suitable for AI-driven decision making. We work together to build, deploy, and fine-tune AI models, create digital twins for manufacturing process optimization, and provide training and support. The Wipro/ SymphonyAI Industrial team provides tremendous value to customers by making plants run more efficiently while improving carbon emissions. Wipro's ability to improve a plant's operation and help scale to a fleet of plants is invaluable. Wipro and SymphonyAI empower clients to meet the industry-wide challenges they face by offering: Today's industrial manufacturing companies are at the cusp of a digital revolution. The proliferation of IoT devices, cloud computing scalability and analytics and advances in AI are driving the need to solve critical challenges – meet the world's growing demand with less resources and lowered carbon emissions while increasing uptime, availability, and safety. By bringing together a rich library of digital twins, supervised, semi-supervised, and unsupervised AI models, and digital workflows, customers can quickly realize value by receiving early warnings of potential failures with causes and prescriptive resolution recommendations, or advisories to adjust key process variables to optimize for mission-critical goals. Start a conversation today by contacting us at info@wipro.com =====================

e2log

Value to enterprises and their global supply chain leaders Contact Wipro Please fill the required details to access the content Making international logistics seamless Consumers in today's globalized and interconnected era have dynamic demands. They demand products and solutions that are readily available, anywhere. This is where a resilient global supply chain plays a pivotal role. The reliability, agility, and resiliency of global supply chains are determined by international logistics; however, existing international logistics technology may become inadequate at times, adversely impacting the global supply chains. Bridging the gap with synergized solutions At Wipro and e2log, we enable enterprises and their global supply chain leaders to accelerate international logistics operations

with unprecedented visibility and control. Wipro's extensive supply chain transformation & operational capabilities integrated with e2log's powerful cloud-based logistics orchestration platform help enterprises with data-driven insights and strategic roadmap to elevate international logistics processes. Together, we are empowering international logisticians to reduce their reliance on time-consuming manual work across fragmented systems. Streamline shipping of complex international cargo. Increase operational efficiency with an integrated freight booking engine, a global TMS, and digital control towers. Get a holistic view of international shipments across different activities. Analyse and improve service performance by moving to an orchestration model. Enhance customer, stakeholder & logistician experience. Make better decisions driven by data insights. Plan, execute, and deliver complex projects on time. Avail intuitive dashboards built on reliable data. Track scope 3 emissions globally.

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A partnership with BT that simplifies hybrid cloud adoption

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/bt/ ----- Contact Wipro Please fill the required details to access the content BT Accelerate your digital transformation journey with our world-class capabilities and proven track record. Hybrid cloud is central to digital transformation. To accelerate their journey, clients leverage our long-standing strategic partnership with BT to address the complexities of adopting hybrid cloud. Our clients choose the Wipro-BT alliance because it brings a number of benefits. Global Reach and Scale: BT serves customers in over 180 countries, satisfying data and application requirements from a performance, security, and regulatory perspective around the world. BT offers connectivity options, partnerships with 250+ ISPs, and global and regional aggregators for enhanced geographic coverage and connectivity. Multi-Cloud Experience: The partnership with BT provides cross-platform expertise in cloud, hybrid cloud, data center co-location services, network modernization, SD-WAN, and security services - all enhanced by a flexible and agile engineering and support model. World-class Security: Over 3,000 dedicated BT security experts handle operations centers worldwide, providing visibility into global threats. Leading Technology: Clients have access to the best technology and operational capabilities from global leaders like VMware, AWS, Microsoft, Google, and Rackspace Technology. Integration Expertise: The Wipro-BT partnership combines experience and expertise to securely integrate infrastructure, networking services, application platforms, and multi-cloud services to bridge the gap between public and private clouds. Our clients prefer the services under our joint partnership for its proven track record of migrating clients to the cloud, implementing hybrid working, ensuring regulatory compliance, and integration to deliver agile, reliable, and secure infrastructure.

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Wipro and AT&T Business

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/att/ ----- What We Think Form Title Delve deeper into the synergized solutions Contact Wipro Please fill the required details to access the content Wipro and AT&T Delivering advanced networking solutions Building a robust management platform, together Wipro, a global leader in system integration, has partnered with AT&T Business to enable enterprises with cutting-edge technology and security management platform. With a focus on delivering speed, reliability, and flexibility, Wipro leverages AT&T Business's extensive global network connectivity options to provide robust and secure solutions, setting them apart from the competition. This partnership meets the growing market demands for advanced networking technology and sets Wipro apart as a leader in delivering industry-leading technology solutions. Enabling enterprises with infrastructure modernization Many enterprises find it challenging to scale with their existing infrastructure strategy, as it limits availability, speed, and geography. With an integrated approach, Wipro equips enterprises with innovative technologies to deploy and manage their infrastructure and business units across different geos. Deployment of the new capability helps enterprises minimize or eliminate infrastructure silos and gaps – leveraging both fixed and wireless connectivity solutions for almost any company asset. Partnering for success Wipro and AT&T Business have partnered to deliver and support over 100 enterprises with Wipro platform management and support services combined with AT&T Business networking capabilities. Enterprises across retail, manufacturing, finance and utility have relied on joint solutions to accelerate business and tap into new revenue opportunities. To harness the full potential of connected devices, enterprises need comprehensive IoT solutions that empower the business. Contact Us =====================

Enhancing operational efficiency with comprehensive IoT solutions

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/att/enhancing-operational-efficiency-with-comprehensive-iot-solutions/ ----- Drive value with a powerful partnership Contact Wipro Increased Visibility Accelerate Product Development Cycle Flexible and Agile Manufacturing Increased Profitability Please fill the required details to access the content Enhancing operational efficiency with comprehensive IoT solutions The rise in IoT applications and the increase in IoT connections are leading to a massive generation of data streams. This implies that enterprises need an effective solution that enhances the data processing capabilities where valuable insights can be driven from the data in real-time. AT&T and Wipro, bringing in the best of two worlds The synergy between AT&T and Wipro expanded in 2022 with the integration of Wipro Smart i-Connect™ (WSiC) and AT&T Control Centre (ACC). The joint objective was to enable enterprises with end-to-end IoT solutions to drive optimum business value in

today's connected business landscape. WSiC and ACC bring forth global connectivity and control over business assets helping enterprises with operational efficiency and reliability. Together, we are helping enterprises leverage i4.0 technologies, such as predictive maintenance, autonomous robotics, connected supplier ecosystems, digital twin, supply chain management, and more - powered by the world's most reliable and secure network. How can enterprises benefit? =====================

Conga

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/conga/ ----- CONGA AND WIPRO SERVICES CONGA AND WIPRO OFFERINGS AWARDS & EVENTS CONTACT US Contact Wipro Application Maintenance Services Process Consulting Application Development Services Equipment as a Service (EaaS) Wipro's Smart Quote management solution Please fill the required details to access the content Conga Simplifying and Enhancing Revenue Management Together Wipro and Conga are enabling businesses to transform their revenue lifecycle management with AI-driven insights, automated tools, and unified data. Through our partnership, we help companies implement modernization strategies and innovative solutions that result in simplified business operations. By leveraging our combined expertise, organizations can accelerate quote-to-cash processes and develop a single source of truth to improve win rates and industry compliance efforts. To enhance revenue workflows, we're ensuring that companies can strengthen configure, price, quote (CPQ) tasks, streamline contract lifecycle management (CLM), and adopt new business models such as equipment as a service (EaaS). With Conga's suite of revenue management products and Wipro's extensive consulting and technology expertise, enterprises can adopt effective new ways to predict business growth and drive new revenue opportunities. Evolution from an ownership to subscription model. Significantly increases lifecycle revenue per unit improving business resilience. A key catalyst for sustainability initiatives. Learn more =====================

Planview

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/planview/ ----- Contact Wipro Please fill the required details to access the content Planview As a leader in project and portfolio management (PPM), Planview is building the future of connected work. PPM is the nervous system of an organization. It stitches the journey together from strategy to implementation, providing a 360-degree view of the organization's real-time health. Planview's portfolio and work management solutions enable organizations to draw a throughline from business ideas to impact, accelerating the achievement of what matters most and empowering teams to deliver their best work, regardless of workflow. For more than two decades, Wipro has been delivering world-class PPM transformation projects for its customers across industries and geographies. Wipro's partnership with Planview offers customers enhanced capabilities and transformative

industry-specific PPM solutions combined with Wipro's strategy, consulting, design, and technology expertise. The comprehensive Planview platform and enterprise success models enable Wipro customers to transform their business at speed for more competitive products, services, and customer experiences. Wipro teams utilize Planview-powered process transformation solutions to empower clients across industries, including financial services, manufacturing, and energy and utilities. =======================

Empowering the Business First Cloud Journey

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/ ----- Services & Solutions Wipro Cloud Compliance Shield Contact Center Microsoft Workloads Cloud Migration & Management Services Hybrid Cloud Solutions Data Analytics & Big Data Solutions Artificial Intelligence (AI) & Machine Learning (ML) Solutions Internet of Things (IoT) Integration 5G AI and Automation Disaster Recovery Solutions DevOps and Continuous Integration/Continuous Deployment (CI/CD) Services Managed Services Enterprise Resource Planning (ERP) on Cloud Application Modernization Services Mainframe Modernization with Wipro and AWS Contact Wipro A Global Energy Leader Advances Cloud Efficiency with GenAI GenAI-Powered Marketing for a Fortune 500 Leader GenAI Expedites Competency Assessment for a Global Enterprise Wipro and AWS Partner with a Global Networking & Telecommunications Leader to Modernize Infrastructure. Dealer Management in the Cloud: An Automotive Case Study Empowering a Premier European Telecom Leader: Wipro and AWS Transforming Customer Experience Through Digital Innovation Wipro Auto Insights Powers Mahindra First Choice Wheels Connected Car Rollout On AWS Cloud IDC Customer Spotlight: Mitie looks to Real-Time Insights as a Service after Success with AI-Enabled Anomaly Detection A Leading US-based IT Company Partners with Wipro to Migrate to Multi Public Cloud AWS and Azure Tagros accelerates digital transformation with its migration from SAP ECC to SAP S/4HANA on AWS Cloud Brightstar accelerates digital transformation with its move to AWS Cloud How a global company enabled faster business decisions Insurance company optimizes digital marketing platform with AWS Finance company connects customer experience to business value Improved speed in production and reduced maintenance costs with AWS Cloud How a Fortune 500 company ensured data security on the cloud Digital transformation leveraging DevOps and AWS Cloud Native Services Wipro Teams with Large US Bank to Reduce Infrastructure Costs and Align with 'Data Centre Exit' Strategy with Hadoop Platform Guide to Using AI for Cloud-based Contact Centers Navigating the Cloud Shift with Wipro and AWS Unlocking the Power of Your Data: Embrace Modernization for Enhanced Efficiency Cloud Conversations: How leading companies use Wipro's AWS Cloud Optimization Assessment Service for impressive results AWS Awards Generative AI Services Partner Competency to Wipro Wipro Earns AWS Microsoft Workload Modernization Competency Wipro Achieves the AWS Machine Learning Partner Competency Transforming customer experience in student loan services through cloud modernization Digital

Workspace: Accelerating Molecule to Market Social Distancing and Contact Tracing Solution for COVID-19 Extending cloud journeys by migrating VMware workloads to the cloud Underground or in the Cloud: The Reality of Risk Cloud Conversations: How leading companies use Wipro's AWS Cloud Optimization Assessment Service for impressive results Overcoming AWS Cloud Security Challenges with Managed Services Wipro launches Automotive Connected Services Studio in collaboration with AWS Launchpad Cloud Marketplaces: A game-changer in software procurement How AWS Helps Oil & Gas, and Alternate Energy Enterprises in Digital Transformation How to avoid pitfalls in building serverless data lake on AWS 17 reasons to build serverless data lake on AWS Emerging trends in digital transformation journey with DevOps Conversational interfaces: The game changer for your customer experience The Synergy of Smart applications and AWS Modern-day Cloud: casting a broad appeal across the business. Introducing New Categories of AWS Security Competency Partners Introducing AWS Level 1 MSSP Competency Specialization Categories How Cloud and AI Are Creating Unprecedented Opportunities for Forward-Thinking Enterprises Wipro Achieves the AWS Automotive Partner Competency CES 2023: TTTech Auto and Wipro showed how to accelerate automotive software development Marelli awards multi-year global automotive software engineering contract to Wipro Wipro achieves the AWS Manufacturing and Industrial Competency Please fill the required details to access the content Wipro's award winning partnership with AWS Services & Solutions Customer Successes Featured Resource News & Awards Specializations Over the past decade, the Wipro and AWS award winning partnership has provided unrivaled 'Business First' solutions to over 250 global organizations across every major industry. Wipro's deep industry expertise, domain knowledge, technical prowess and innovative services combined with AWS's cutting-edge cloud infrastructure and solutions has proven time and time again to help elevate businesses to new heights in the dynamic world of cloud computing. Whether your company is embarking on your first cloud venture or aiming to maximize existing cloud investments, you can rely on the Wipro AWS Partnership to navigate the complexities of the cloud landscape and propel your business towards unparalleled growth, agility, and innovation. Partner Level Premier consulting partner of Amazon Web Services Approach Supporting our customers at every stage in their cloud journeys Partner Competencies Wipro holds over 23 prestigious AWS Competencies Powered by AWS to Help Drive Security and Efficiency for Organizational Compliance. Scalable and flexible solutions for omnichannel customer interactions, real-time analytics, and improved agent efficiency. Seamless transition, optimization, and ongoing maintenance of business operations in cloud environments, ensuring efficiency, security, and scalability. Balance scalability, security, and cost-effectiveness while maintaining control over critical data and applications. Leverage data-driven insights to improve decision-making, predict trends, and enhance customer experiences. Advanced data analysis, predictive insights, and automation, empowering smarter decisions, personalized experiences, and innovation. Seamless connectivity, real-time data processing, and remote device management, enabling innovative solutions and actionable insights for the Internet of Things ecosystem. Seamless connectivity and enhanced network reliability for businesses. Driven Contact Center Transformation by Wipro FullStride Cloud and AWS Reliable data backup, seamless failover, and rapid

recovery capabilities, ensuring business continuity and minimizing downtime in case of unexpected disruptions. Streamlined software development, automated testing, and continuous integration and deployment, ensuring rapid and reliable application delivery in cloud environments. Outsource the management of AWS solutions to Wipro, allowing the company to focus on its core business, ensuring optimal performance and support. Streamlined business processes, centralized data management, and real-time insights, enabling organizations to enhance efficiency, collaboration, and decision-making. Transformation of legacy systems into agile, scalable, and cloud-native applications, driving efficiency, innovation, and alignment with modern business needs. Customer Successes Featured Resources Learn how Wipro and AWS are empowering businesses and simplifying mainframe modernization through joint solutions like Mainframe A to Z. News, Awards and Recognitions Specializations & Competencies In addition to being a Premier Consulting Partner of AWS, Wipro holds over 23 prestigious AWS Competencies. These competencies showcase our industry leading capabilities, commitment to long-term business investments, and expertise in AWS Cloud technologies. Contact Us ======================

Wipro achieves the AWS Manufacturing and Industrial Competency

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/wipro-achieves-the-aws-manufacturing-industrial-competency/ ----- Contact Wipro Please fill the required details to access the content Wipro achieves the AWS Manufacturing and Industrial Competency How Wipro is driving cloud innovations for manufacturers with AWS The manufacturing industry has been a step ahead of other sectors when it comes to cloud adoption, according to Wipro FullStride Cloud research, and through our industry-specific insights and business strategies, we're helping manufacturing enterprises transform their businesses with AWS. As an AWS manufacturing partner, we've expanded our industry expertise by achieving the Manufacturing and Industrial Competency, positioning our organization as a leading provider of cloud modernizations that drive agility and innovation. "Wipro is proud to achieve the AWS Manufacturing and Industrial Competency," says Ashish Saxena, Senior Vice President, Manufacturing and Hi-Tech. "Wipro continually invests in cloud capabilities to capitalize on the power of cloud transformation in serving our clients. We are partnering with many top manufacturing and high-tech firms to deliver digital transformation. Our teams are dedicated to helping companies achieve their business transformation goals by leveraging the agility, breadth of services, and pace of innovation that AWS provides. We are engaged with top enterprises to enable them to become 'factories of the future' through smart manufacturing, supply-chain transformation, sustainability, connected products, automation, and advanced technologies involving IT/OT, 5G/Edge, AI, and analytics." In response to supply chain

disruptions, security challenges, and tech advancements, cloud transformations remain an essential and ongoing priority for the manufacturing industry. From the outset of the pandemic, manufacturing was one of the hardest-hit sectors, and since then enterprises have been seeking not only innovative solutions, but effective strategies for implementing them. The Industry 5.0 era that's taking shape will center around the benefits that cloud technologies are putting in reach for streamlining supply chains, enhancing analytics operations, and accelerating time to market. The Impact of our AWS Expertise Through our AWS-driven transformations, manufacturers around the world are evolving their infrastructures and realizing greater business value. Our industry-specific IoT and AI solutions enable improved agility and efficiencies through a series of benefits: In a recent strategic engagement, Wipro helped an organization transform the real-time visibility of its production operations and strengthen how it tracks its order fulfillment data. Utilizing AWS IOT analytics in conjunction with a series of production-monitoring dashboards, departments across the organization gained a 360 view of their available-to-promise inventory and transparency into the production process of every active work order. The business now operates with real-time information on stock availability, price, and delivery dates, accelerating its ability to respond to customer demand and reimagine its shipment operations. When a leading steel manufacturer needed to solve its production line challenges and prevent downtime, Wipro partnered with the company to provide end-to-end visibility of inventory from its business partners. By implementing IoT-based sensors, the organization could easily track arrived inventory, and the greater transparency resulted in optimized production schedules and enhanced work-in-progress decision-making. These AWS-based innovations reduced the company's downtime challenges by 80% and drove more efficient production schedules with inventory accuracy performance reaching 99%. What the Pathway Forward Looks Like New transformational approaches such as the engagements above are allowing major industrial players to update their products, supply chains, development processes, and go-to-market strategies. Using data and insights gained from their team members, businesses have been able to automate their sales processes and gain greater visibility into their opportunities for growth. Companies in the energy sector are getting prepared for the growing demand for alternative power in manufacturing and other verticals. Managing data effectively is also an essential goal of a digital transformation. The growing number of connected devices in factories and manufacturing facilities has led to a significant increase in the amount of data companies are able to capture and utilize. But data alone isn't necessarily useful. To make the most of it, companies must have both the right fundamentals in place as well as a nuanced understanding of their unique business goals. The Three Fundamentals of AWS Cloud Transformations The adoption of emerging technologies — industrial IoT, artificial intelligence, and machine learning among them — will only increase in the coming years. To get the most out of these tools and avoid a customer experience gap, manufacturing companies must make greater investments in digital integration solutions. An effective approach to guiding infrastructure updates should be anchored by three principles: Empower your teams It pays to put people first. The key to reshaping an organization is team empowerment, and that means giving teams a full understanding of how an AWS transformation will help them

reach new achievements and greater productivity. A plan of this kind is more than technological. Employees will need to know why the change is needed, how they'll benefit, and what the overall goals are. When people are aware of the accomplishments and efficiencies to shoot for, they'll be motivated to adopt new standards that replace outdated methods and work to better serve their customers. Assess, integrate, and collaborate An AWS transformation plan should be based on a thorough assessment of a company's infrastructure, looking for weaknesses to improve and strengths to enhance. The goal should be to find where data silos exist and implement a solution for integrating them into a centralized system. By creating a more unified system, teams can have new avenues for sharing data, collaborating, and learning what's driving company success. When an organization can gain insights on what customers are responding to, it can continue the success and help build brand loyalty. Think long term As an AWS transformation is planned and new goals are set, scalability should be a serious consideration. A company's growth shouldn't be hindered by a legacy system that can't grow along with it. As a business takes on new markets and expands its workforce, its infrastructure should be able to easily handle such changes. Today ongoing digital transformations are necessary and inevitable, so be sure to consider the big picture and don't be limited by the monthly or quarterly perspective. Transforming Operations, Performance, and Outcomes Cloud-driven transformations don't occur in a vacuum, and they don't end with the adoption of any one technology. They're an ongoing process that requires careful planning and the ability to understand how existing solutions can be integrated with the latest technologies. Based on our combined tech and consulting expertise, the Wipro FullStride Cloud team is ensuring that enterprises can benefit from AWS-based solutions to achieve new levels of productivity and long-term growth through a range of advantages: Wipro FullStride Cloud has also provided thought leadership content to the manufacturing industry with our recent cloud report, which outlines the effective tactics for developing further cloud maturity. To learn more about how to develop an effective strategy for adopting cloud innovations, download the Wipro FullStride Cloud Services report. ======================

Tapestry Strengthens Its Cybersecurity Posture

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/tapestry-moves-to-cloud-for-better-ux-improved-security-posture-reduced-costs/ ----- Contact Wipro Please fill the required details to access the content Tapestry Strengthens Its Cybersecurity Posture Tapestry initiated a large-scale digital transformation that involved migrating the company's existing systems to the cloud and completely modernizing the user experience. Ambition Tapestry, Inc. is an American multinational luxury fashion holding company. It is based in New York City and is the parent company of three major brands: Coach New York, Kate Spade New York and Stuart Weitzman. Every year, Tapestry hosts its annual sample sale, offering products at discounted prices to its employees and contractors. This event

has been increasingly popular among employees over the years, but recent numbers have shown a consistent decline in sales. Tapestry attributed this decline to technical issues with the Employee Sample Sale Registration System, the application used to register for the event, and poor user experience. Upon further analysis, Tapestry traced the issue back to legacy architecture in the application that limited performance and scalability. Tapestry also discovered it was incurring high licensing and maintenance costs despite only using the system for a limited time each year. Action Tapestry initiated a large-scale digital transformation that involved migrating the company's existing systems to the cloud and completely modernizing the user experience to revitalize this once-popular employee event. The primary goals of this transformation were to reduce the system maintenance costs, enhance the overall security posture and increase sales by returning the event to its former status. Tapestry partnered with Wipro to help strategize and execute this transformation. Tapestry wanted to use the cloud to leverage the scalability and elasticity of the infrastructure, including microservices (based on demand) to optimize resource utilization and cost efficiency. In alignment with their vision, Wipro proposed an application modernization solution on AWS cloud that uses cloud-native, serverless microservices-based architecture for faster development cycles and easier maintenance, even for complex user interfaces. Switching to the AWS pay-as-you-go pricing model would help reduce administrative overhead and AWS managed services would provide strong, round-the-clock technical support. Other solution details include: Ambitions Realized In moving its Employee Sample Sale Registration System to the cloud, Tapestry included valuable upgrades to ensure the application can meet the changing needs of the business and its employees. By enabling OAuth 2.0, Single Sign-On (SSO) with Azure AD and Cognito integration (allows user authentication from different devices, including mobile) Tapestry significantly enhanced its security posture and streamlined the user experience, making it more intuitive. The results were impactful, resulting in nearly two times more registrations. Tapestry embraced managed services to reduce operating costs by approximately 30% and increased the efficiency of these operations by outsourcing them to a qualified team capable of constant monitoring. ======================

Dealer Management in the Cloud: An Automotive Case Study

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/dealer-management-in-the-cloud-an-automotive-case-study/ ----- Contact Wipro Please fill the required details to access the content Dealer Management in the Cloud: An Automotive Case Study Ambition A leading multinational automotive manufacturer headquartered in India was using a centralized, monolithic dealer management system (DMS 1.0) to manage its dealerships across over 2,000 locations. A DMS is a dealers' enterprise resource planning (ERP), enabling dealerships to perform their day-to-day operations by connecting OEMs, distributors, dealers, and customers. Implemented over a decade ago, the system had been

instrumental to the company's growth, but lately high licensing and maintenance costs and limited functionalities (including an outdated user interface and software stack) were preventing the legacy system from keeping up with the company's ambitions. The system's suboptimal scalability, performance and storage were hampering important go-to-market (GTM) efforts. There was also a significant security concerns due to the system's security upgrades, patching, and infrastructure upkeep being highly manual processes. The client sought to modernize DMS 1.0 and partnered with Wipro to build a highly scalable multi-channel solution on AWS that would reduce the maintenance cost of the system, enhance its features (e.g., seamless connectivity, API for business continuum, AI-based analytics) and security posture while allowing dealers to manage their entire business from a single platform. The Solution Wipro was the strategic partner for this engagement. The client chose to work with Wipro due to Wipro's decades of experience managing large-scale automotive industry transformations and coordinating complex interactions between technology and business teams. Wipro and the Wipro FullStride Cloud Studio worked with the client to outline the attributes of the current system, expectations for the new one, and develop a blueprint for the transformation. The blueprint included critical system and architectural requirements but balanced those technical concerns with user experience considerations to ensure that the new cloud-based interface would more than meet the needs of dealerships. The project required rewriting the client's existing system and completely modernizing the user experience. The client chose AWS cloud for its flexibility and elasticity to scale individual micro-services up or down based on user demand, thereby optimizing resource utilization and cost efficiency. Wipro worked with the client to redesign more than 85 business processes across 8 different modules including sales, customer support, service, and parts. The new solution was built on AWS cloud using a plug-and-play model, employing various AWS managed services to reduce costs while increasing the scalability, security, and performance of services like data ingestion, exchange and sync, core services, insights and persistence, orchestration, APIs, encryption and logging, DevOps, and automation. By breaking the transformation down into manageable microservices, the client was able to accelerate its transition and quickly generate concrete business value through the enhancements. Ambition Realized The new dealer management system harnesses the power of the cloud and managed services through AWS to enhance performance and user experience. Cloud Platform as a Service (PaaS) components, for example, have reduced operational costs through embedded licenses, eliminating the need for separate license procurement. PaaS components have also increased horizontal and vertical scalability. A data warehouse and auto-archival mechanism now help the client optimize transactional data size based on business requirements, while the managed database (RDS) and object storage (S3) enhance data storage and management. AWS services like load balancer and EKS Fargate, along with automated backup and recovery services, reduce load-related issues and safeguard data in case of disruptions. The solution's automation and DevOps capabilities have improved agility and GTM speed by automating repetitive tasks such as patching and code rebuilds. The new system also provides enhanced security measures through single sign on (SSO) and identity access management (IAM). The new system provides a seamless omnichannel

experience — including end-to-end visibility of KPIs, services, and sales across dealerships — and supports greater collaboration across departments. Dealerships are now able to access better inventory records in less time, leading to quicker decision-making and improved customer service. By leveraging the speed, agility, and cost efficiency of cloud, the client has reshaped its relationship with its dealers and is now reaping the benefits. =====================

GenAI-Powered Marketing for a Fortune 500 Leader

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/gen-ai-powered-marketing-for-a-fortune-500-leader/ ----- Contact Wipro Please fill the required details to access the content GenAI-Powered Marketing for a Fortune 500 Leader A leading investment firm leverages GenAI for efficient, personalized digital marketing. Ambition In the fast-paced realm of digital marketing, email campaigns remain a cornerstone for engaging customers and driving conversions. A Fortune 500 investment and insurance company sought to advance dual imperatives: reduce time-to-market while boosting conversion rates. The company recognized that incorporating GenAI into its digital marketing workflows would streamline operations and empower teams to quickly create compelling, hyper-personalized content. At the same time, the company wanted the flexibility to integrate new large language models (LLM) to keep pace with technology advancements and changing business needs. Action Wipro proposed a GenAI solution that can quickly gather insights from various trusted sources and distil that information into clear, compelling email content that engages customers and empowers them to make stronger investment decisions. Because security is paramount when handling customer data, the solution incorporates top-tier security features from AWS. Wipro used VPC private link between SageMaker and S3 to ensure that information transferred between different AWS services is secure and that the data used to train the GenAI models stays private within the client's network. To meet the client's flexibility requirements, Wipro used AWS SageMaker Jumpstart. These tools from AWS offer a range of large language models that can be adjusted to fit specific tasks. Combining AWS SageMaker Jumpstart, Transit Gateway,S3, KMS, and IAM functions, Wipro created a solution that was both smart and secure. Ambition Realized Implementing the GenAI application enabled the marketing team to automate more than 30% of its email generation processes within the first week. This leap in automation led to a 40% increase in overall process efficiency and significantly enhanced customer engagement. By harnessing the power of GenAI, the client can now ensure that every marketing email is a vessel for delivering personalized insights gathered from a variety of reputable sources, directly addressing the needs and interests of each target customer. =====================

GenAI Expedites Competency Assessment for a Global Enterprise

Contact Wipro Please fill the required details to access the content GenAI Expedites Competency Assessment for a Global Enterprise By automating competency assessments, a global IT services provider is streamlining talent development for cost-effective service delivery. Ambition A prominent IT service provider with operations in more than 50 countries boasted a large workforce with a wide array of skills. But nurturing career growth and upskilling for such a large workforce can be challenging. In particular, the company's manual competency assessments were proving to be cumbersome, time-consuming, and prone to errors. To address this issue, the business sought to automate key aspects of its competency assessments, paving the way for more efficient processes, lower costs, and increased employee satisfaction. Action Wipro developed an Enterprise RAG (retrieval augmented generation) solution built on GenAI to expedite the creation of training materials. This solution supports a platform that allows employees to earn skill proficiency badges through short online assessments. By leveraging organizational guidelines and training materials as well as externally sourced information, the GenAI solution (built on AWS Sagemaker using advanced GenAI models like Claude 2.0 and Llama 2.0) generates design, troubleshooting, and coding questions tailored to various proficiency. For addressing security and high availability requirements solution leveraged AWS SageMaker Jumpstart, Amazon ECS (Fargate), Amazon Load Balancer, Amazon Bedrock, Amazon Simple Storage Service (S3), Amazon OpenSearch, and Amazon RDS. The solution combines retrieval and generative models to generate high-quality, relevant responses, with only 10% of the generated material needing to be adjusted by a human. Ambition Realized Within just a week of implementing the GenAI solution, the client achieved remarkable results, completing over 5,600 online assessments across key technical areas such as Java/J2EE, Springboot, MicroServices, AngularJS, ReactJS, Selenium, and CoreJava. This agile new method of competency assessment has enabled the client to pinpoint areas for improvement and further bolster skill development. Upcoming additions to the assessment tool — including Mainframe, Microsoft, and CIS skills — will bring even greater coverage and efficacy, enabling the client to hone the capabilities of its global workforce, leading to enhanced productivity, proficiency, and cost-effective client delivery.
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A Global Energy Leader Advances Cloud Efficiency with GenAI

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/a-global-energy-leader-advances-cloud-efficiency-with-genai/ ----- Contact Wipro Please fill the required details to access the content A Global Energy Leader Advances Cloud Efficiency with GenAI GenAI streamlined the maintenance and upgrade process for serverless functions, cutting cloud costs by $1 million per year. Ambition An international leader in the energy and petrochemical sector sought to optimize the maintenance and upgrade process for its serverless functions on AWS. The business had developed hundreds of serverless functions over the years using Python and found the process of upgrading these functions challenging. Each upgrade required manual adjustments that risked system downtime, diminished customer satisfaction, and invited revenue loss if not executed perfectly. Delayed upgrades posed additional risks including data loss, security vulnerabilities, and damage to the organization's reputation. Furthermore, the absence of comprehensive documentation for many functions also led to inefficient utilization of cloud resources and elevated operational costs. Action To address the client's maintenance and upgrade challenges, Wipro built a user-friendly GenAI-based application using Anthropic's Claude 2.0 large language model (LLM) in AWS Bedrock . Leveraging React for the front-end and Python for backend scripts, this application automates impact analysis and upgrades for hundreds of AWS Lambda functions across various AWS subscriptions. The process encompasses securing permissions, managing source code, analyzing and upgrading Lambda functions, followed by testing, validation, and performance optimization through AWS services. Ambition Realized By automating upgrades analysis, the client reduced analysis time by approximately 75%, enabling the development team to focus more time on tending critical backlog items. The automations also reduced overall deployment time by nearly 50%, streamlining processes such as development and testing, and increased developer productivity by almost 25%. Leveraging large language models (LLMs), the client executed its Lambda upgrades seamlessly and efficiently, well before the software's end -of -lifecycle (EOL) support, ensuring uninterrupted system operations. Most notably, the client reaped substantial cost savings, amounting to $1 million per year, approximately 10% of its overall cloud expenditure. ======================

Wipro and AWS: Empowering Businesses with Microsoft Technology

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/wipro-and-aws-empowering-businesses-with-microsoft-technology/ ----- Contact Wipro Tapestry moves to the cloud for better user

experience, improved security posture and reduced operational costs Digitally Transform by Leveraging Wipro AWS Cloud Migration Services A Leading US-based IT Company Partners with Wipro to Migrate to Multi Public Cloud AWS and Azure How to Orchestrate a Successful Multi-Cloud Operation Journey Cloud Conversations: How leading companies use Wipro's AWS Cloud Optimization Assessment Service for impressive results Cloud Marketplaces: A game-changer in software procurement Please fill the required details to access the content Wipro and AWS: Empowering Businesses with Microsoft Technology In this ever-evolving landscape of technology, collaborations between industry giants often lead to innovative solutions that transform businesses. Wipro and AWS have collaborated to deliver a potent blend of Microsoft technologies on the cloud, enabling businesses to modernize their infrastructure and applications. At the core of this collaboration lies the seamless integration of the Microsoft technology stack with AWS cloud services. At the heart of this synergy lies the seamless integration of the Microsoft technology stack with the expansive AWS cloud services. Wipro's extensive expertise in Microsoft tools and technologies seamlessly integrates with AWS's scalable and flexible cloud ecosystem. This integration delivers the effortless deployment of .NET applications on AWS infrastructure, empowering businesses to embark on a trajectory of infrastructure modernization. This collaborative effort not only streamlines operational processes but also dynamic scalability, mitigates operational overhead, and optimizes resource utilization. A pivotal aspect of this collaboration is accelerated migration to the cloud, supported by the robust tools provided by AWS. This ensures a smooth transition, empowering businesses to capitalize on the benefits of a cloud-based infrastructure seamlessly. Wipro's proficiency in SQL, coupled with AWS's comprehensive database services, results in the delivery of efficient, data-driven applications. Simultaneously, the collaboration meticulously addresses security and compliance concerns, leveraging Wipro's commitment to robust cybersecurity practices and the advanced features inherent in AWS. This blend of Wipro and AWS within the Microsoft technology stack offer, growth, innovation, and efficiency, guiding businesses toward a cloud-powered future. Case Studies What we Think Contact Us
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AI and Automation-driven Contact Center Transformation by Wipro FullStride Cloud and AWS

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/ai-and-automation-driven-contact-center-transformation-by-wipro-fullstride-cloud-and-aws/ ----- eBook: Considerations in using Ai for Cloud-based Contact Centers Contact Wipro Discover the Transformative Journey of Contact Centers in the Era of Generative AI Wipro Achieves AWS Machine Learning Partner Competency Please fill the required details to access the content AI and Automation-driven Contact Center Transformation by Wipro FullStride Cloud and AWS Navigating Challenges, Maximizing

Efficiency, and Ensuring Long-Term Success in Customer Engagement. In today's dynamic customer engagement landscape, contact centers grapple with challenges ranging from scalability to ensuring a seamless experience for agents and customers. To meet evolving demands, many are turning to AI/ML and automation, yet face obstacles relating to integration and privacy. Cloud-based solutions can help, providing the scalability, agility, and industry-specific tools contact centers need to maximize value and long-term ROI. With more than 20 years of experience working in contact centers, Wipro has identified three key barriers to cloud and AI adoption, and three strategic shifts to overcome these barriers: Wipro helps contact centers adopt these strategies for long-term success, drawing on its expertise to implement Amazon Connect, address TCO concerns, identify revenue-generating capabilities, and design efficient systems. Wipro's focus extends beyond immediate problem-solving to establishing resilient systems that proactively prevent recurring issues, ensuring long-term success in the rapidly evolving contact center environment. Wipro FullStride Cloud harnesses interactive AI extensively to revolutionize and automate contact centers, paving the way for future-ready solutions. Jo Debeker, Global Head of FullStride Cloud at Wipro, predicts in his Forbes article, "Interactive AI will lead a revolution in customer service with zero-touch call centers. By year-end, businesses are likely to unveil the world's first zero-touch call centers, a testament to the advancements in Generative AI." Featured Resources Wipro and AWS detail solutions and strategies to help contact centers overcome key challenges relating to cloud and AI. News, Awards and Recognitions Contact Us =====================

Guide to Using AI for Cloud-based Contact Centers

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/guide-to-using-ai-for-cloud-based-contact-centers/ ----- Contact Wipro Please fill the required details to access the content Guide to Using AI for Cloud-based Contact Centers Wipro and AWS detail solutions and strategies to help contact centers overcome key challenges relating to cloud and AI. When engaging with brands, consumers today want personalized, reliable, interconnected service. These expectations are putting new pressure on contact centers, forcing them to become more adaptive and tech-driven. To meet these needs, businesses are turning to the cloud and exploring advanced technologies like artificial intelligence (AI), machine learning (ML) and automation. But integrating new technologies comes with its own set of hurdles, including telephony integration, budget constraints, compliance with privacy regulations and the need for comprehensive training. Moving to the cloud has proven to be foundational to AI/ML and automation in a way that drives efficiency and long-term return on investment (ROI). To realize these benefits, businesses first need to address the barriers to entry. This eBook details how contact centers can overcome key challenges relating to cloud and AI to achieve business goals with the support of Wipro's Intelligent Contact Center for Amazon Web Services (AWS). As a Premier Consulting Partner, Wipro

leverages its extensive AWS experience to customize solutions such as Amazon Connect, a cloud contact center that facilitates the seamless adoption of AI. Explore how these strategies and solutions can empower your contact center operations, driving efficiency and success in the realm of customer service. Read The Report =====================

Mainframe Modernization with Wipro and AWS

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/mainframe-modernization-with-wipro-and-aws/ ----- Contact Wipro Please fill the required details to access the content Mainframe Modernization with Wipro and AWS Learn how Wipro and AWS are empowering businesses and simplifying mainframe modernization through joint solutions like Mainframe A to Z. In today's dynamic business landscape, change is not just inevitable; it's a constant that demands swift adaptation. The pressure to keep pace has never been higher, leaving companies that still rely on legacy mainframes rather than modernized IT systems at a disadvantage. The traditional mainframe release cycle, which often takes weeks or months, simply cannot compete with the agility demonstrated by organizations that make changes daily or multiple times a day. Why, then, are so many companies still using legacy mainframes? Although many businesses today recognize the value of mainframe modernization, 75% of respondents in a recent survey claimed that fear of change and funding constraints were preventing their company from completing its modernization program. Mainframe modernization can be a complex process impacting every aspect of an organization, from business and technology to people and processes. Success requires careful consideration of different approaches such as whether to rewrite, rehost, refactor or replace. Businesses need to also consider change management, governance, production and rollout. Orchestrating all this requires a comprehensive strategy, technical knowledge and industry experience. This eBook highlights how Wipro, as a global system integrator and AWS Premier Consulting Partner, helps enterprises address these challenges with end-to-end support including next-gen application services, deep domain expertise, integration and testing proficiency, data migration capabilities, and extensive program execution experience. The eBook also showcases Mainframe A to Z, a joint solution from Wipro and Amazon designed to be a one-stop-shop for all mainframe modernization needs. Download the eBook =====================

Navigating the Cloud Shift with Wipro and AWS

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Cloud Shift with Wipro and AWS A Strategic Imperative for Contemporary Enterprises More than just a way to cut costs or increase efficiency, cloud computing has become a key driver for digital transformation. Whether a company is looking to experiment with AI applications or boost innovation through collaborative platforms, a solid cloud foundation is essential to support advanced data processing, flexibility and accessibility. To keep pace with change and stand out in their industries, companies need the support of the cloud — and yet many struggle to embrace it successfully. This eBook details how organizations can use Wipro and Amazon Web Services (AWS) to navigate migration and modernization, unlocking essential business benefits such as increased productivity, faster time to market, and a strengthened financial position. The content also sheds light on the significant advantages of cloud migration, outlines why the current moment presents a strategic opportunity for migration, and provides guidance for organizations to actualize these benefits by adopting AWS solutions through Wipro. Download the eBook ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/wipro-aws-transforming-customer-experience/ ----- Contact Wipro Please fill the required details to access the content Empowering a Premier European Telecom Leader: Wipro and AWS Transforming Customer Experience Through Digital Innovation Unleashing Innovation: Wipro and AWS Forge New Frontiers for European Telecommunications. Witness the Journey of Cloud Excellence and Digital Transformation Propelled by Collaborative Innovation. =====================

Wipro Cloud Compliance Shield

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America HFS Ranks Wipro Among the Top Cybersecurity Providers for 2022 Please fill the required details to access the content Wipro Cloud Compliance Shield Solution A Generative AI-driven Solution for Compliance and Risk Management. Navigating compliance and security in multicloud environments can be challenging. Limited visibility and manual processing prevent businesses from keeping pace with ever-changing regulations, leaving them vulnerable to security risks, fines, and costly disruptions. Wipro Cloud Compliance Shield, powered by AWS, enhances visibility into the compliance and risk postures of multicloud environments, enabling clients to proactively identify, assess, and mitigate issues. As an AWS Level 1 Managed Security Service Provider (MSSP) and AWS Security Competency Partner, Wipro leverages the scalability and security of AWS to offer a solution that automates regulatory assessments, ensuring businesses stay compliant and operational. Wipro Cloud Compliance Shield combines services like Amazon Bedrock and Amazon Security Lake with Wipro's deep expertise in cloud security, risk, and compliance, empowering clients to stay ahead of cloud threats. With a decade of partnership as an AWS Premier Consulting Partner, Wipro brings to the table 12 AWS competencies, over 4,500 AWS certifications, and a track record of serving 250+ customers with 40+ solutions engineered on AWS. Wipro Cloud Compliance Shield not only helps businesses safeguard sensitive data and maintain operational integrity but also ensures they confidently embrace cloud technology, knowing their compliance and security needs are expertly managed. Key Features Benefits Our Success Stories Featured Resources Navigating Security Risks and Regulatory Challenges with Continuous Compliance Solutions News, Awards & Recognition Contact Us =====================

Unlocking the Power of Your Data: Embrace Modernization for Enhanced Efficiency

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/unlocking-the-power-of-your-data-embrace-modernization-for-enhanced-efficiency/ ----- Contact Wipro Please fill the required details to access the content Unlocking the Power of Your Data: Embrace Modernization for Enhanced Efficiency Discover the path to data-driven excellence with Wipro and AWS. In today's data-driven landscape, organizations thrive on the wealth of insights their data can offer. Yet many enterprises are hindered by outdated data systems that impede progress. Legacy data estates contribute to siloed information and inefficiencies, complicating decision-making processes and obstructing innovation. Embracing modernization unlocks the full potential of enterprise data, paving the way for truly intelligent enterprise operations. Why Modernize? Efficiency Boost Outdated data systems slow down operations. Modernization streamlines processes, enabling businesses to work faster and smarter. Actionable Insights Raw data alone has limited value. Modernization tools such as advanced analytics and machine learning transform data into actionable intelligence. Security Matters Compliance is

essential, especially when dealing with confidential information. Protect sensitive data with a secure, scalable infrastructure. Wipro's Expertise: Your Path to Success As an AWS Premier Consulting Partner, Wipro offers comprehensive solutions to modernize legacy data estates, with a track record of successful customer engagements. Here's what Wipro brings to the table: Download the eBook Transforming Legacy Data Estates into Intelligent Enterprises This eBook is a comprehensive guide to understanding the What, Why, and How of transforming your legacy data estates into agile, intelligent enterprises. Experts from Wipro and AWS share actionable insights and strategies for how to navigate the complexities of modernization, ensuring your organization is not just a participant but a leader in today's data-driven world. Download the eBook to learn how Wipro's partnership with AWS can accelerate your journey towards an intelligent enterprise. =====================

Empowering Business Transformation with Cloud Migration

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/empowering-business-transformation-with-cloud-migration/ ----- eBook: Navigating the Cloud Shift with Wipro and AWS Contact Wipro Wipro is Named a Leader in 2023 Gartner Magic Quadrant for Public Cloud IT Transformation Services Please fill the required details to access the content Empowering Business Transformation with Cloud Migration Accelerate Your Business with Wipro and AWS Cloud Solutions In the swiftly changing worlds of business and technology, companies are pushing to make their operations more efficient, agile, and competitive. Cloud migration has quickly become a crucial step in that journey. Wipro and Amazon Web Services (AWS) accelerate organizations' transitions to the cloud by providing benefits like increased productivity and faster time to market. As companies modernize, they discover how AWS offers more than just cost savings — it catalyzes business transformation. With AWS, businesses can innovate, create new revenue streams, and enhance customer experiences. Leveraging AWS's research, companies can achieve transformational results, including cost savings and improved productivity. Wipro, as an AWS Premier Tier Services Partner, offers expertise and solutions for successful cloud migrations. Key Features Benefits With the support of an experienced AWS Migration Competency Partner like Wipro, organizations can navigate the migration process efficiently and maximize the advantages of cloud computing. Featured Resources A Strategic Imperative for Contemporary Enterprises News, Awards and Recognitions Contact Us =====================

Unleashing the Power of Data: Transforming Your Enterprise

----- Arccticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/unleashing-the-power-of-data-transforming-your-enterprise/ ----- eBook: Unlocking the Power of Your Data: Embrace Modernization for Enhanced Efficiency Contact Wipro Wipro Positioned 'a Leader' in Everest Group Data and Analytics (D&A) Services PEAK Matrix® Assessment 2023 Please fill the required details to access the content Unleashing the Power of Data: Transforming Your Enterprise Empower Your Business with Modern Data Solutions Data is an organization's most valuable resource. It can generate actionable insights, drive operational excellence, and create or augment revenue streams. But is your enterprise fully equipped to act upon its data and create these new efficiencies? Some organizations find themselves reliant on legacy data estates that hinder their progress. Siloed systems and processes can create confusion and delay decision-making at an individual level; amplify this uncertainty across your enterprise, and implementing modern efficiencies becomes more difficult. An intelligent Enterprise is not merely a standalone entity; it's an active participant in a larger intelligent ecosystem, where the collative intelligence and capabilities of interconnected entities create a more responsive and resilient business environment by moving beyond legacy data estates. If your enterprise's data estate needs full or partial modernization, Wipro is here for you. Our data, analytics & intelligence team will accelerate your journey towards the cloud and monetization – all while providing you with the best possible customer service along the way. Key Features Benefits These benefits collectively empower your organization to unlock the full potential of its data, driving intelligent business outcomes, sustainable growth, and competitive advantage in today's dynamic business landscape. Featured Resources Discover the path to data-driven excellence with Wipro and AWS. News, Awards and Recognitions Contact Us ======================

Transforming Compliance in BFSI: Harnessing AI and Cloud for Growth

----- Arccticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/reports/transforming-compliance-in-bfsi-harnessing-ai-and-cloud-for-growth/ ----- Contact Wipro Please fill the required details to access the content Transforming Compliance in BFSI: Harnessing AI and Cloud for Growth Streamlining compliance for resilience and innovation in BFSI industries powered by AI AI-powered compliance is transforming the banking, financial services, and insurance (BFSI) industries by helping institutions navigate complex regulatory environments. With rising fines and increasing cyber threats, non-compliance can lead to billions in losses and reputational damage. AI and cloud technologies offer enhanced security, risk

management, and automation, making compliance more efficient and scalable. However, these technologies bring new challenges, such as data sovereignty and the need for explainability in AI decisions. Financial institutions must carefully adopt AI to ensure transparency and accountability while using cloud solutions to remain agile in adapting to evolving regulations. By integrating AI-driven compliance frameworks, BFSI organizations can automate regulatory processes, mitigate cybersecurity risks, and streamline operations. Strategic partnerships with cloud providers ensure data residency compliance and adopting explainable AI (XAI) fosters trust by clarifying decision-making processes. These innovations allow financial institutions to transform compliance challenges into opportunities for growth and resilience in a rapidly changing regulatory landscape. Download the PDF to explore how AI and cloud technologies are transforming compliance in banking, finance, and insurance, helping firms overcome regulatory hurdles and stay ahead of evolving risks. Download the ebook =====================

Navigating Regulatory Complexity in Retail and CPG with AI and Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/reports/navigating-regulatory-complexity-in-retail-and-cpg-with-ai-and-cloud/ ----- Contact Wipro Please fill the required details to access the content Navigating Regulatory Complexity in Retail and CPG with AI and Cloud Leverage AI and cloud tech to streamline compliance, secure data, and enhance sustainability Retail and consumer packaged goods (CPG) companies face an increasingly intricate regulatory environment, with new regulations, compliance mandates, and security standards emerging rapidly. This evolving landscape demands constant vigilance and adaptability, particularly concerning updates to food safety, data privacy laws, and sustainability requirements. For global companies, managing compliance across diverse markets adds complexity, risking fines, recalls, and reputational damage if not handled correctly. Data protection is crucial, especially with regulations like GDPR and CCPA, necessitating secure consumer data management. Product integrity, involving safety and accurate labelling is equally important for maintaining consumer trust. Environmental responsibility is another growing focus, with regulations requiring sustainable practices and materials. By leveraging AI and cloud technologies, businesses can streamline compliance processes, ensure data protection, and adopt sustainable practices. Download the PDF to explore how cloud compliance is revolutionizing the Retail and CPG industries. Download the ebook =====================

Revolutionizing Compliance in Healthcare and Life Sciences with AI and Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/reports/revolutionizing-compliance-in-healthcare-and-life-sciences-with-ai-and-cloud/ ----- Contact Wipro Please fill the required details to access the content Revolutionizing Compliance in Healthcare and Life Sciences with AI and Cloud Unlock seamless compliance and innovation in healthcare with Wipro and AWS's AI-powered Cloud Compliance Shield Healthcare and life sciences face complex compliance challenges, from HIPAA requirements to FDA regulations. Traditional methods struggle to keep up with evolving demands, but cloud computing and AI are emerging as key tools to drive innovation and streamline compliance. To address these challenges, Wipro and AWS developed the Cloud Compliance Shield, a solution that combines the power of AI and cloud technologies. The solution automates the monitoring of regulatory changes, strengthens cybersecurity, and allows HC/LS organizations to quickly adapt to evolving compliance requirements. With this solution, healthcare providers can protect sensitive patient data while advancing diagnostic accuracy and personalized care. Download the PDF to discover how cloud and AI transform healthcare and life sciences, enabling organizations to meet compliance demands and foster innovation. Download the ebook =====================

The Rising Importance of Cloud Compliance in a Multi-Cloud World

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/reports/the-rising-importance-of-cloud-compliance-in-a-multi-cloud-world/ ----- Contact Wipro Please fill the required details to access the content The Rising Importance of Cloud Compliance in a Multi-Cloud World Navigating Security Risks and Regulatory Challenges with Continuous Compliance Solutions Cloud compliance has become critical as incidents of data breaches and regulatory violations rise. In June 2023, the Italian Data Protection Authority fined a global internet company €900 million for GDPR violations related to data transfers. A financial firm faced an $80 million fine for a misconfigured cloud firewall affecting 100 million customers, and third-party credential breaches exposed 41 million payment card accounts. As companies increasingly operate across hybrid and multi-cloud environments, cloud adoption brings agility and cost efficiency, but also raises risks of security vulnerabilities. The global nature of cloud operations adds complexity to compliance, pushing governments to enhance data protection regulations. The solution lies in continuous compliance, integrating real-time analytics, automation, and AI to monitor and secure cloud infrastructures.

This approach ensures businesses stay ahead of evolving regulations and security risks, transforming compliance into a competitive advantage. Download our comprehensive guide to learn how to streamline your cloud compliance strategy, secure your operations, and stay competitive in the digital economy. Download the ebook =====================

Wipro and AWS Join Forces to Revolutionize Cloud Compliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/reports/wipro-and-aws-join-forces-to-revolutionize-cloud-compliance/ ----- Contact Wipro Please fill the required details to access the content Wipro and AWS Join Forces to Revolutionize Cloud Compliance Insights from Wipro's Siva VRS As businesses embrace the cloud and AI, regulatory compliance has become more complex than ever. Data integrity, collection, and analytics remain essential but challenging components of compliance reporting. In an exclusive interview with Information Security Media Group (ISMG), Siva VRS from Wipro shares valuable insights on how AI is transforming regulatory mandates—and how Wipro, in partnership with AWS, is helping businesses overcome these challenges. In this video interview, Siva Vrs of Wipro discusses the pain points with compliance in the cloud era and Wipro's partnership with AWS to alleviate them including: Download now to access the full interview and stay ahead of the curve in the AI-powered compliance landscape! Download the Paper =====================

Prioritizing Business Value to Drive Governance, Risk, and Compliance Success

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/reports/prioritizing-business-value-to-drive-governance-risk-and-compliance-success/ ----- Contact Wipro Please fill the required details to access the content Prioritizing Business Value to Drive Governance, Risk, and Compliance Success Align Compliance with Business Goals to Protect Data, Ensure Continuity, and Enhance Cyber Resilience In an exclusive Information Security Media Group (ISMG) interview, John Hermans, Head of Europe Cybersecurity and Risk Services at Wipro, emphasizes the need for governance, risk, and compliance (GRC) programs to prioritize business value over mere regulatory requirements. Hermans stresses that compliance should not be seen as a checkbox exercise for auditors but as a strategic initiative that protects customer data, ensures service continuity, and builds disaster recovery and cyber resilience. Key insights include: Download the full interview to learn more about how successful compliance programs drive business outcomes. Download the Paper =====================

Unlock the Power of Automation in Governance, Risk, and Compliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/aws-business-group/reports/unlock-the-power-of-automation-in-governance-risk-and-compliance/ ----- Contact Wipro Please fill the required details to access the content Unlock the Power of Automation in Governance, Risk, and Compliance Discover How Automation Enhances GRC Efficiency, Reduces Errors, and Delivers Lasting Business Value In an exclusive Information Security Media Group (ISMG) interview, John Hermans, Head of Europe Cybersecurity and Risk Services at Wipro, explains why manual processes fall short when it comes to governance, risk, and compliance (GRC) programs. Automation, he says, is key to reducing errors, ensuring repeatable results, and improving the overall user experience by eliminating tedious tasks. To build a sustainable, continuous compliance program, Hermans advises organizations to start by eliminating, simplifying, standardizing, and automating existing processes. Leveraging cloud environments and standardized frameworks can provide easy access to high-quality data, enabling organizations to build scalable and efficient automated solutions. Key insights from the interview include: Download the full interview to learn how to shift towards automation and unlock greater efficiency in your GRC efforts. Download the Paper
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Kibo

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/kibo/ ----- Contact Wipro Please fill the required details to access the content Kibo Wipro's expertise and proven experience in consulting, solution implementation and technology modernization for Digital Commerce, combined with Kibo's leading composable eCommerce and Order Management solutions, allow brands and retailers to achieve digital transformation and rapid growth with flexible technology designed to meet the evolving needs of complex omni-channel business models. This partnership facilitates business outcomes starting with capability and implementation road mapping, through phased implementation of identified capabilities, and finally to post-implementation managed services such as application support and value-realization advisory. Kibo was recognized as a Strong Performer in The Forrester Wave™ Order Management Systems Q2 2023 report. Kibo attained the highest scores possible in 11 of 34 criteria – including supporting products and services, delivery model and number of live installations – and was the only vendor to attain the highest possible score in the subscriptions management category. Read the full report here.
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How to Choose the Right Order Management System

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/kibo/how-to-choose-the-right-order-management-system/ ----- Contact Wipro Please fill the required details to access the content How to Choose the Right Order Management System Consumers are becoming less and less loyal to brands and retailers. In order to delight customers and boost loyalty, it is essential to deliver seamless omnichannel experiences from browsing to order capture to fulfilment. As retailers manage a complicated balance of in-store, online and omni-channel initiatives (such as Buy Online Pickup In Store, curbside pickup, etc.), they need a powerful order management system (OMS) that can keep up with the pace of change. Advanced order management, in other words, is now a key component of a positive customer experience. Poor and outdated order management, on the other hand, will lead directly to customer attrition – especially if inventory data is inaccurate, extending false promises and incorrect ETAs to customers. In this new environment, choosing an order management system is a profoundly strategic decision. Yet with so many options available on the market, selecting the best OMS can be a daunting task. In response, Wipro and Kibo have teamed up to clarify the OMS landscape. Download our comprehensive guide to learn how you can identify the right OMS for your own enterprise. Download the guide =====================

Xceptor

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/xceptor/ ----- What We Think Contact Wipro Please fill the required details to access the content Xceptor As new regulations, accelerated trading schedules, open finance and AI/ML tools reshape the financial sector, data has become the coin of the realm. Financial institutions need to get their data houses in order, and they need to do so with speed and efficiency. Together, Wipro and Xceptor bring trustworthy, flexible, and intuitive data ecosystems to financial services clients. This partnership brings together Wipro's deep financial services domain expertise and delivery excellence with Xceptor's data automation platform, a solution purpose-built for the unique end-to-end data needs of the financial sector. Through a single platform, Xceptor helps clients achieve accelerated automation across lines of business, while enabling them to meet business and operations transformation objective, driven by growing and shifting customer demands. Trusted by some of the world's biggest banks, Xceptor allows clients to create trusted data flows by ingesting, enriching, and validating data. Digitizing processes and linking systems within processes to achieve end-to-end visibility and interoperability across the operations, customer and trade lifecycle. =====================

Powtoon

Powtoon A Visual Native Company Powtoon is a leading video communications platform that empowers over 40 million active creators worldwide. Supporting 96% of Fortune 500 companies, its parent company - Visual Native - is an Innovation Center that harnesses visual tools, AI, and Deep Learning technologies to power workplace solutions, including its Enterprise platform for knowledge engagement. The Powtoon Enterprise platform empowers professionals to easily create, collaborate, and share engaging videos across their organization. Deliver compelling content at scale. Create all stages of learning communications, on-demand and async video training across the whole learning lifecycle, engaging all people across your organization, from anywhere. Make content that's truly for everyone. Personalize and localize your training with translation tools, AI-powered text-to-speech, closed captions, lipsync, and diverse and accessible characters. Level up your L&D toolbox seamlessly Easily use Powtoon in your flow of work with leading LMSes (such as Articulate and 360learning), Zoom, YouTube, Kaltura, Wistia, Vimeo, Google Meet, and more. Drive measurable value across teams, securely   Create high-impact, branded video training inside your team's dedicated and secure workspace.
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Kong Partnership

Services News, Awards & Recognitions Contact Wipro Legacy Modernization Modernization with Microservices Kong Introduces Enhanced Partner Program Amid 10x Growth in Partner Ecosystem Please fill the required details to access the content Kong Build and manage an agile, scalable and cloud native API architecture The Wipro and Kong partnership is a multidimensional relationship. The partnership provides business leaders with for Kong APIM and Service Mesh implementation and support, as well as solution assurance, architecture and design reviews, capacity planning, project delivery and execution excellence with a dedicated pool of resources. Wipro also leads strategic engagements with Kong, Cloud Service Providers and frameworks for API Creation for hybrid/multi-cloud adoption and migration projects. Partner Level Featured Global Partner Approach Cloud Native Connectivity Partner Award GSI Partner of the Year, 2022 Migrate from complex legacy systems to a cloud-native landscape for client's enterprise ecosystem. Break up monolith deployments to microservices-based architecture for nimble, scalable footprint. Contact Us
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Digital integration for Applications, Cloud and Enterprise

Services Contact Wipro Consulting and Migration to Boomi Business-to-Business Integration Application-to-Application Integration End to End implementation & AMS Please fill the required details to access the content Boomi Our partnership is driving faster time to market and greater agility for our clients Our partnership is driving faster time to market and greater agility for our clients Wipro is global Elite Partner for Boomi and together, we are helping organizations to drive faster business outcomes through data readiness, extensive connectivity, and user engagement. Wipro has a decade old relationship with Boomi providing consulting and services across all tools and offerings from Boomi. Wipro and Boomi have a joint solution DIaaS, which helps in providing a single pane of glass view of entire enterprise integration landscape. Together we are helping customers around the globe to discover and synchronize data across disparate systems while automating workflows and processes. This aid enterprises to streamline operations, achieve a faster time to market, and become more competitive while keeping low cost with a light-weight integration platform. Partner Level Elite+ Partner Approach Integration Modernization Awards Boomi Partner Spotlight Award for DIaaS, 2021 End to end consulting to define future architecture with design principles. Design and development of partner portal with hyper care and service for runtime monitoring and management. Platform adoption, planning and implementation to increase agility. Platform Ops supported with marketplace & monetization abilities for fast realisation of investments. Contact Us

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Pricefx

Contact Wipro Please fill the required details to access the content Pricefx Ready to seize the benefits of profit-increasing pricing software? Pricefx – a leading platform – makes price optimization easy. Its price optimization and management solution helps firms grow profits by enhancing pricing capabilities. The cloud-native platform simplifies pricing by providing a unified solution across customer segments, products, and channels. The Wipro and Pricefx partnership Whether you're looking to help a salesperson in manufacturing or a finance professional reporting on the retail forecast, Wipro and Pricefx can deliver the pricing solution you need. Together, we can help you solve challenges such as pricing and margin leaks. We're committed to delivering the best-in-class pricing software to boost your profitability and increase your market share. Our partnership combines Wipro's delivery excellence and deep industry expertise in pricing / quoting optimization, with Pricefx's award winning platform. We

work together to ideate, design, build, and successfully deploy future-proof pricing solutions, and provide training and support. Key industries: Chemicals, manufacturing, distribution and wholesale, healthcare, food and beverage, and energy. Start a conversation today by contacting us at info@wipro.com ======================

WalkMe

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/walkme/ ----- Contact Wipro Please fill the required details to access the content Walkme Traditional approaches to change management have evolved dramatically in the last few years. Employees expect technology in the workplace to be as easy to use as the technology in their personal lives. WalkMe provides our clients with a frictionless digital experience that is user-friendly, always available and easily accessible, and that adapts to the way they work. About WalkMe WalkMe's cloud-based digital adoption platform enables organizations to measure, drive and act to ultimately accelerate their digital transformations and better realize the value of their software investments. Our platform leverages proprietary technology to provide visibility to an organization's Chief Information Officer and business leaders, while improving user experience, productivity and efficiency for employees and customers. Alongside walkthroughs and third-party integration capabilities, our platform can be customized to fit an organization's needs. ======================

IFS

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ifs/ ----- Contact Wipro Please fill the required details to access the content IFS The partnership will focus on Enterprise Service Management (Field Service Management solutions) and grow to other areas, including ERP (Enterprise Resource Planning) and EAM (Enterprise Asset Management). As a partner, Wipro will work closely with IFS to deliver complete and scalable solutions to clients across different sectors. This partnership strengthens Wipro's expertise in providing end-to-end solutions for businesses, ensuring that clients benefit from best-in-class digital transformation and business process optimization. As part of this partnership, Wipro has established an IFS Center of Excellence, demonstrating its commitment to providing enhanced solutions to clients. Wipro will also be setting up an Innovation Center for IFS solutions to feature cutting-edge technologies, methodologies and expert teams to develop new, innovative solutions. Here's what IFS says about us on their partner page. ======================

Boundary Less Data Management powered by NetApp

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/netapp/ ----- Services Boundary Less Data Management powered by NetApp Contact Wipro Cloud Consulting Cloud Modernization and Migration Cloud Security Cloud Operations Data, Analytics & AI services Please fill the required details to access the content NetApp Migrate quickly, deploy instantly and achieve cloud storage optimization Wipro and NetApp together have helped thousands of global companies in every industry unlock the full value of cloud to drive business and digital transformation and go FullStride. With our joint solutions, you can: Wipro's deep strategy, industry and technology experience, combined with Wipro FullStride Cloud Services, are joined with NetApp's market-leading data storage and management solutions. Building your hybrid cloud on NetApp's seamless, consistent storage operating system, the industry's only system that is natively embedded across Azure, AWS, and Google Cloud, means you have the freedom to move applications and data anywhere you need to either on-premises, hybrid cloud, or multicloud with a single, consistent data services experience. With no new skills to learn, you can accelerate projects and time to value all while reducing risks. Accelerate your business process with our cloud consulting services. Quickly realize the full potential of the cloud with end-to-end strategic support and advanced digital capabilities. Accelerate resilience during the cloud journey and mitigate threats responsibly in hybrid multicloud environments. Leverage our cloud operations and management support for a flexible & scalable cloud solution. Create new business models and revenue streams while ensuring security, quality and regulatory data compliance. Migrate quickly, deploy instantly and achieve cloud storage optimization. Contact Us =====================

Ignite Innovation with Wipro and IBM

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ibm/ ----- Contact Wipro VMware on IBM Cloud Wipro SLICE Wipro's Enterprise AI Ready Platform Wipro IBM Novus Lounge BLUE powered by IBM Edge Application Manager Red Hat Alliance Storage Modernization VMware Workload Migration & Modernization with IBM Cloud Revolutionizing Customer Service with Wipro and IBM Electrical Vehicle Battery Health Forecasting Crowd to Modernize Mainframe Applications Wipro announced as the Global Winner of the 2024 IBM Partner Plus Awards Wipro wins IBM Partner Plus Awards 2024 in the Sustainability category in Asia Pacific Wipro Named a Leader in Everest Group's Cloud Services PEAK Matrix Assessment 2023 – North America Wipro Named a Leader in the 2023 Gartner® Magic Quadrant™ for Public Cloud IT Transformation Services Wipro cited as a 'Leader' in IDC MarketScape: Worldwide Cloud Professional Services 2020 Vendor Assessment Wipro looks to accelerate

enterprise transformations with FullStride Cloud Services Please fill the required details to access the content Wipro IBM Cloud Practice Supercharge your digital journey Wipro and IBM have been fueling innovation through our 20+ year partnership helping leading enterprises leverage our unparalleled expertise and proven success in addressing their complex business challenges. Combining the power of IBM's best-in-class platforms and Red Hat's open-source technologies, Wipro and IBM have been collaborating on groundbreaking solutions in AI, analytics, cloud, security, IoT, and more. As a business leader, Wipro and IBM bring you leading enterprise solutions across the multiple digital environments whether on prem or in the cloud whether private, hybrid or multi. Partnering with you to determine how to best position your enterprise for success and most responsibly manage transformational technology investment. These solutions extend to embracing the power of AI with Wipro to leverage pre-built, industry-specific AI models for areas like predictive maintenance, fraud detection, and customer churn analysis. We manage the entire AI journey, from ideation and development to deployment and optimization, ensuring seamless integration and ROI. Harness the power of IBM Watson, tapping into its full potential for cognitive computing, machine learning, and natural language processing. Collaborate with IBM researchers and developers in dedicated AI innovation labs to push the boundaries of AI technology and explore cutting-edge applications. Utilize IBM's comprehensive suite of AI tools and frameworks, including AutoML and Cloud Pak for Data, to accelerate your AI initiatives. Unleash Unprecedented Advantages Wipro and IBM empower you to become an AI leader, unlocking exponential growth and innovation through cutting-edge technologies. On this transformative journey, we take you towards a future driven by intelligent solutions. Partner Status Platinum Business Partner. Differentiator Helping enterprises address their complex business challenges through 20+ years of partnership. Partner Awards IBM Partner Plus Award 2024 – Sustainability Wipro IBM Partnership Competencies Our Solutions Accelerate transformation on IBM Cloud on VMware by harnessing the power of Wipro Cloud Studio. Suite of innovative hybrid multicloud management and optimization solutions across public-cloud & private cloud environments. Increase visibility, maximize resources, manage utilization and reduce cloud costs. Facilitating the integration and connection of diverse data sources and systems to accelerate the development and implementation of AI/Gen AI across enterprises. Delivering exceptional experiences with Wipro & IBM Cloud. Intelligent EDGE application lifecycle management. Charting unprecedented growth through the years. Streamline your operations in a single platform. Featured Resources News, Awards & Recognitions Contact Us ===================== ----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ibm/videos/wipro-and-ibm-offering-innovative-joint-solutions-in-cloud-automation-and-generative-ai/ ----- Contact Wipro Please fill the required details to access the content Wipro and IBM, offering innovative joint solutions in cloud, automation and GenerativeAI Watch Gaurav Parakh, Global Head - Strategy & Emerging Offerings, Wipro FullStride Cloud with Alison Say, VP for IBM Ecosystem - speak about transforming digital journeys with comprehensive hybrid cloud services. Partnering with IBM, offering innovative joint solutions in cloud, automation and GenerativeAI. =====================

Wipro CloudBees Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ cloudbees/ ----- Application Release Orchestration Feature Flag Management CloudBees Compliance BT's Journey to a Global, Multi-Vendor DevOps Ecosystem News, Awards & Recognitions Contact Wipro Continuous Integration /Continuous Delivery Wipro Wins Cloudbees 2022 Partner of the Year Award CloudBees Unveils Highly Anticipated Software Delivery Management Modules in Online Launch Event Please fill the required details to access the content Wipro CloudBees Partnership Accelerating Digital Transformation with Continuous Delivery, Cloud and DevSecOps Wipro and CloudBees provide end-to-end software delivery solutions to transform how businesses operate, deliver value to their customers, compete in the marketplace, and drive innovation. Our state-of-the-art DevSecOps solutions can solve complex organizational challenges and help clients deliver more efficient, secure cloud-native apps to accelerate time to market and enhance customer experience while reducing costs. Partner Level Elite Global Partner Approach From code to customer, continuously advancing business performance Partner Award Global Partner of the Year 2022 Services Enhance overall platform setup, application onboarding and estate maintenance with DevOps pipeline. Orchestrate applications, services and their related pipelines for real-time transparency across the DevOps ecosystem. Accelerate software delivery and deployment with enterprise feature-flag management integrated across the CloudBees software delivery platform. Get continuous compliance support throughout the software delivery process with an out-of-the-box regulatory control framework. Featured Resource BT is the oldest telecommunications company in the world, dating back to the mid-1800s. Contact Us ======================

Powering Innovation to Realize Ambition

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/dell/ ----- Wipro Fullstride Cloud with Dell Azure WaaS360 (Workplace-as-a-Service) Edge and IoT Optimized Procurement and Managed services Mitigate Ransomware Threats with Cyber Recovery News, Awards & Recognitions Contact Wipro Wipro Enterprise AI-Ready Platform Wipro Vault Solution Wipro VirtuaDesk™ Powered by Dell Technologies Wipro Boundaryless Data Protection Wipro Digital Database Platform Services Wipro Forms New Partnership to Strengthen Its Enterprise AI-Ready Platform Wipro Wins Dell Best Operational Partner Award 2023 Please fill the required details to access the content Dell Technologies Wipro's Dynamic Partnership with Dell For more than two decades, Wipro and Dell Technologies have helped organizations fuel transformative strategies driving growth and innovation. This 360-degree partnership combines Dell's trusted technology with Wipro's comprehensive capabilities and consultancy services to empower clients across areas of Gen AI, Multicloud, Data Infrastructure, Edge

Computing, Hybrid Work and Cyber. By channeling global resources to co-develop and deliver, Wipro and Dell Technologies can accelerate outcomes, deliver real-world value, and maximize return on investment. Partner Level Regional Gold Level & Global Strategic Partner serving 200+ Joint Customers Differentiator Wipro's unique assets combined with Dell's durable competitive advantage Partner Award Best Operational Partner Award 2023 Wipro's Dell Competencies The Wipro Dell Technologies Proven Professional Certification framework leverage the latest Dell and industry intelligence to build relevant certifications aligned to the rapidly changing IT landscape.   The competencies developed through these certifications, which span sales, pre-sales, technology and services help ensure that Wipro resources have the appropriate knowledge and skillset to meet our customers' needs with the flexibility to specialize in certain Dell solution areas. Services Access leading hybrid cloud solutions for legacy modernization and Azure transitions. Leverage AI-generated content, predictions, and insights in an on-prem/edge, dedicated, and private cloud environment. Safegaurd business-critical data assets. Build a future-ready workplace with devices, services and optimizations that boost digital dexterity. Ensure a seamless transition to certified virtual desktop cloud infrastructure. Implement holistic data protection for modern and legacy workloads. Address database sprawl with a Dell-validated cloud-based platform. Wipro's Smart iConnect IoT platform combined with Dell's Edge portfolio delivers smart space solutions across manufacturing, retail, energy and utilities, and more. Augment service delivery capabilities, improve customer-centricity and create differentiation Featured Resources This IDC Whitepaper, sponsored by Wipro and Dell Technologies, elaborates on the best practices that enterprises can implement to build an effective cyber recovery strategy. The Wipro Enterprise Resiliency Solution Powered by Dell Technologies is a program that is geared toward the unique challenges of performing a cyber-recovery function Contact Us
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Mitigate ransomware threats with cyber recovery

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/dell/mitigate-ransomware-threats-with-cyber-recovery/ ----- Contact Wipro Please fill the required details to access the content An IDC Whitepaper Powered by Dell Technologies and Wipro The rapid adoption of innovative and connected technologies is increasing the surface for sophisticated cyberattacks. This is a growing concern for enterprises across industries. $590 million ransomware-related suspicious activity reports (SARs) were identified in the first six months of 2021, which is a 42% increase over the previous year. Source: Financial Crimes Enforcement Network (FinCEN) The imperative right now is for enterprises to realize how they can strategize an effective cyber recovery roadmap that delivers a prescriptive, practiced, and proven option for surviving cyberattacks. The Technology Spotlight Whitepaper by IDC, sponsored by Dell Technologies and Wipro, elaborates on the best practices that enterprises can adopt to build an effective cyber recovery

strategy. A glimpse of the best practices elucidated in the whitepaper Wipro Enterprise Resiliency Solution powered by Dell Technologies In partnership with Dell Technologies, Wipro enables enterprises to bridge cybersecurity gaps by establishing a robust cyber recovery plan. The solution combines the systematic recovery capabilities of Wipro's services with the hardware and software expertise of Dell Technologies.   Download the white paper to discover how you can enhance your enterprise's cyber recovery capabilities. Download Whitepaper =====================

Wipro Digital Database Platform Services

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/dell/wipro-digital-database-platform-services/ ----- What we Do Contact Wipro Please fill the required details to access the content Confidently fix database sprawl with a Dell-validated cloud-based platform Consolidate and consume data with the click of a button using a solution running on PowerFlex, VxRail, or PowerStore from Dell Technologies A typical enterprise runs hundreds of applications to meet growing business needs. Over time, these applications use different databases (SQL and NoSQL) to assemble, retrieve, and share data to meet their unique needs. While convenient, the resulting database sprawl hinders flexibility, availability, scalability, security, and management. It also creates latency issues and makes just-in-time provisioning a challenge. It, therefore, becomes necessary to develop an optimal mix of SQL and NoSQL and use a DBaaS platform to overcome these challenges. Wipro's Digital Platform Services 2.0, powered by Dell, specializes in providing database management systems as a cloud service. We use Dell's state-of-the-art infrastructure to provide: Using our database-as-a-service offering on a Dell-validated platform running on PowerFlex, VxRail, or PowerStore, clients can consume their databases on a reliable cloud infrastructure. When security and performance issues demand it, the service can migrate databases back from hyperscalers to on-prem. Wipro's Digital Platform Services 2.0 delivers convenience and easy manageability through the complete automation of processes. Equally important is the fact that it also creates business value by consolidating databases and infrastructure for cost optimization, license rationalization, and innovative pricing. =====================

Wipro's DDPS 2.0, powered by Dell,
for faster and simpler database management

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/dell/wipros-ddps-2-0-powered-by-dell-for-faster-and-simpler-database-

management/ ----- Contact Wipro Please fill the required details to access the content Wipro's DDPS 2.0: A straightforward database management solution, enabled through a single control pane to scale all types of databases in a non-disruptive manner Databases are configured on a range of technologies, often leading to fragmentation and complex operations. Wipro's DDPS 2.0 simplifies database management through automation, one-click operations, and time-streaming to any point in time up to the last transaction. The solution helps customers resolve practical challenges seen during Day Zero, One and Two and delivers tangible results. Wipro's DDPS 2.0 helps customers transform the database ecosystem from complex to mature, with capabilities to disburse database as a service. It also seamlessly enables single touch provisioning of new databases and DB servers across open source and commercial database engines like MySQL, PostgreSQL, Redis and Mongo. Reduce your database footprint with consolidation and lower OpEx, delivering an enhanced experience. To learn more about Wipro's DDPS 2.0 solution, download the flyer here. =====================

Wipro's DDPS 2.0 for faster and cost-efficient database management

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/dell/wipros-ddps-2-0-for-faster-and-cost-efficient-database-management/ ----- Contact Wipro Please fill the required details to access the content Wipro's DDPS 2.0: A robust solution underpinned by automation and standardization to simplify database deployment, management, and operations Wipro's Digital Database Platform Services 2.0 (DDPS 2.0), powered by Dell, provides lifecycle management and operation support of database services. As global organizations grapple with managing databases to support multiple applications, they need to ensure performance, availability, security, flexibility, and scalability; all while ensuring costs are under control. Wipro's DDPS 2.0 helps customers to consolidate their relational & non-relational database workloads, manage database sprawl and allows users to provision and manage databases just in time. Application releases are accelerated as it does not require prior knowledge of hardware, database software and associated configurations. Customers can utilize and apply rich content catalogs and automation capabilities to accelerate service delivery and adoption of containers for microservice based deployments. If automation to reduce CapEx and OpEx, service delivery acceleration, and a performance driven experience are your goals, then click here to download Wipro's DDPS 2.0 brochure and learn more =====================

Wipro HPE Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/hpe/ ----- Power Your Business with SAP HANA as a Service from Wipro, HPE and

Equinix Contact Wipro Wipro HPE GenAI solution Wipro VirtuaDesk for VDI SAP Hana as a Service Next-Generation IoT Wipro's FluidIT on HPE Composable Infrastructure Wipro Enterprise Recovery Vault Storage Modernization Monetize and Modernize Everything as a Service Global Pharma Major Supercharges Its Ambitious Growth Plans with VDIaaS Reimagining the Future of Work: Boosting Collaboration, Flexibility, Agility and Security Through Desktop Virtualization Empowering the Workforce for a Dynamic New World Join Wipro at 6 Degrees.AI '24 in Sydney Wipro Launches On-Premise GenAI Solution with Hewlett Packard Enterprise Wipro, Citrix and Hewlett Packard Enterprise Partner to Accelerate Remote Working Solutions HPE and Wipro Partner to Deliver Hybrid Cloud and Infrastructure Solution as a Service with HPE GreenLake Hewlett Packard Enterprise and Wipro to Deliver Consumption Based IT for Customers Wipro Wins Top Six Partnership Honors from HPE Please fill the required details to access the content HPE Partnership Strong Legacy Partnership for Emerging Technologies The Wipro and Hewlett Packard Enterprise (HPE) strategic relationship spans over 25 years, combining HPE's industry-leading technology and complementary services portfolio with Wipro's leadership in delivering services and solutions across the IT landscape. Wipro and HPE build joint technology architectures and solutions with focus on hybrid cloud, virtualized desktop infrastructure, networking, edge computing, IoT, AI and hyper converged infrastructure. Our strength in solutioning is backed by a robust global sales and go-to-market network. Wipro offers highly flexible financial models for our clients with HPE, enabling them to consume all offerings as a service. Wipro partners with HPE for product engineering, R&D and technology support, making this partnership a truly comprehensive. The Wipro-HPE partnership is a winning combination of technology leadership with advanced solution capabilities, a unique advantage for our customers. Partner Level Global Strategic Partner Approach Helping enterprises accelerate their digital transformations and maximize business outcomes Partner Award HPE Global Service Provider of the Year 2021. OpsRamp Global Strategic Partner of the Year 2023 Partner Recognitions Services Unlocking Cloud Potential with AI Precision Deploy, update and customize desktops at will. Seamlessly transform your IT Infrastructure into a real-time enterprise. Enable real-time decision making leveraging AI-based predictions and actionable insights. Build cloud on-premises with unique accelerators and next-gen IT. Consolidate data management and eliminate data silos. Harness the full power of your data with a multi-hybrid cloud data fabric. Optimize the financial functions of your IT assets and operations. Bring cloud experience to apps and data everywhere with a single unified operating model. Case Studies Featured Resources A valuable solution for large enterprises, this cloud experience in the data center enables a smooth transition from CapEx to OpEx models. News, Awards & Recognitions Contact Us ====================

Power your business transformation with SAP HANA as a Service from Wipro, HPE, and Equinix

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/hpe/business-transformation-with-sap-hana-as-a-service/ ----- Contact Wipro Please fill the required details to access the content Large enterprises, due to their extensive IT landscape and specific pricing needs, typically prefer a mix of onsite solutions and hybrid models for their cloud requirements. Wipro, HPE and Equinix have just the right solution for these enterprises. They offer a cloud experience in the data center, enabling a smooth transition from CapEx to OpEx models. While HPE and Equinix provide the technology, co-location facilities and interconnection services, Wipro brings expertise in services such as migration, advisory, future-state realization, optimization, and SAP Basis support. This powerful combination benefits customers with reduced in-house data center footprint, optimized resources, accelerated provisioning time, and scalable architecture. By leveraging Wipro SAP HANA as a Service platform, customers can expect: To learn more about this powerful offering from Wipro, HPE and Equinix, check out this briefing with ISG. Download the Briefing
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Wipro HPE GenAI Solution

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/hpe/wipro-hpe-genai-solution/ ----- Contact Wipro Please fill the required details to access the content Wipro HPE GenAI Solution Unlocking Cloud Potential with AI Precision In a time when IT complexity and data security challenges loom large, businesses need streamlined operations and enhanced protection. Wipro and Hewlett Packard Enterprise (HPE) have come together to develop a GenAI-powered solution for modernizing IT infrastructures, combining industry-leading capabilities to tackle operational hurdles and ensure secure data management. Hosted at the newly inaugurated Customer Experience Center (CEC) within Wipro Cloud Studio's Kodathi office, this solution is designed to directly confront the issues of operational efficiency and security. It utilizes advanced, flexible large language models (LLMs) to offer businesses a way forward in reducing mean time to resolution (MTTR), decreasing incident rates, improving overall equipment effectiveness (OEE), and minimizing process cycle times. By integrating this GenAI solution, businesses can address their immediate operational challenges while positioning themselves for long-term success in a rapidly evolving digital landscape. This initiative marks a significant step towards operational excellence, ensuring that companies can navigate the complexities of cloud-based operations with greater confidence and security. Features To download the Wipro-HPE GenAI solution brochure, please click

here. To know about the Wipro-HPE partnership, click here. To schedule a visit at our GenAI center of excellence in Kodathi, Bangalore and know how the Wipro-HPE GenAI platform can help transform your business, contact us: Contact Us =====================

Elevate Enterprise Testing with Wipro and Functionize

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/functionize/ ----- Digital Experience Assurance Contact Wipro Product & Package Assurance Please fill the required details to access the content Functionize Leverage advanced AI-powered testing to elevate software quality, reduce costs and drive innovation. Wipro and Functionize are redefining end-to-end (E2E) testing by eliminating common bottlenecks in the software development lifecycle. Combining Functionize's self-healing E2E tests with Wipro's proven IT services, agile methodologies and global presence, this partnership accelerates development cycles, reduces operational expenses and elevates quality of software within continuous integration (CI) and continuous deployment (CD) environments. Wipro and Functionize provide top-tier software and a seamless user experience that enables clients to innovate confidently and stay agile in dynamic markets. Partner Level Strategic Venture Partner for Intelligent Test Automation & Gen AI for Packaged Apps Testing. Approach Provide a seamless transformation journey by reusing, measuring, and monitoring major touchpoints. Differentiator Ensuring superior product quality, speed to market & E2E testing. Services AI-driven automation catering to E-commerce and experience platforms, encompassing functionality, performance & visual tests with focus on seamless customer journeys. Ensuring coverage & reduced technical debt via production ready domain-oriented test cases/scripts for BFSI, Retail, healthcare domains with persona-driven automation. Contact Us =====================

Wipro Juniper Partnership: Modernizing Network Infrastructure with Cloud and AIOPs

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/juniper/ ----- Secured Wi-Fi NetBox Branch in a Box Software-Defined Data Center Contact Wipro Secure Network Access Please fill the required details to access the content Juniper Wipro Juniper Networks is a global leader in AI networking, cloud and connected security solutions. Wipro works with Juniper's best-in-class client-to-cloud networking infrastructure to deliver faster, more reliable network performance that transforms how people connect. Wipro leverages Juniper's flagship AI/ML-driven Mist solution to

address key issues for enterprises such as reducing deployment time and operational costs, enhancing user experience and client support. Other joint solutions boost performance across wired and wireless LAN, SDWAN, AIOps, secured Wi-Fi and software-defined data centers. After more than 12 years as partners, Wipro enjoys the highest level of partnership with Juniper and is one of the company's top 5 global system integrators. Wipro has more than 250 trained and certified Juniper professionals and is continuously building its competencies in Juniper solutions. Partner Level GSI Level Partner Approach From client to cloud, with network and data center modernization Partner Award 2023 Partner of the Year - Worldwide GSI emerging Services Ensure seamless user experience across devices (IoT) and elements. Securely manage the entire network from the cloud using Juniper Mist and Juniper Marvis. Satisfy the complex needs of remote users with a virtualized branch networks solution. Maintain a high-performing, reliable and secure DC network for on-demand connectivity. Contact Us

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Empowering Business Efficiency with Kibsi's Cloud-Native Computer Vision and AI

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/kibsi/ ----- Manufacturing Venues Contact Wipro Supply Chain Transportation Zoos & Aquariums Please fill the required details to access the content Kibsi Use your existing cameras to enhance efficiency, ramp up safety, slash costs, and drive ROI with real-time computer vision. Wipro and Kibsi are redefining computer vision and AI applications to create an integrated cloud-native, low-code platform. Kibsi's platform enables organizations across industries – manufacturing, supply chain, logistics, transportation, venues, and more – to transform their existing camera network into valuable insights and actionable data. The platform enables Wipro to help clients run their computer vision models and present the results in a way that matches the business intent, both in Kibsi's user interface and through an API. Kibsi infuses cameras with AI, transforming them from passive recording devices into proactive, real-time sources of business data. Partner Level Strategic venture partner for Cloud-Native low code platform with GenAI capabilities. Approach Provides seamless transformation with computer vision capabilities and video intelligence through GenAI. Differentiator Ensures streamlined operations and improves the guest experience for the existing camera network. Go to Market Use Cases Whether you're looking to optimize business processes, improve quality, enhance worker safety, or reduce errors and waste, Kibsi enables manufacturing organizations to gain a competitive edge. It enables organizations to resolve major hurdles within the logistics and supply chain industry such as tracking assets in real-time, providing up-to-date information and alerts on stock levels, shipping workflows, product quality, automated label reading, safety and PPE compliance, and more. Whether it's an airport, bus terminal, or train station, Kibsi enables organizations to optimize routes, enhance safety and

security, track and analyze luggage, and more so that organizations can improve the overall experience for passengers. Through advanced image and video analysis techniques, Kibsi amplifies event and crowd management, ensures smooth operations, and creates a safe and enjoyable environment for each visitor. Use existing camera networks to monitor and manage the well-being of animals, ensuring a thriving ecosystem within zoos and aquariums. For more details, please check link Contact Us
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Automate External Attack Surface Management and Continuous Testing with Wipro and CyCognito

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/cycognito/ ----- Contact Wipro Please fill the required details to access the content CyCognito Leverage a fully automated SaaS platform to perform multi-factor security testing. Wipro and CyCognito are helping clients improve their security posture by finding and fixing vulnerabilities with automated tools and managed services, saving time and resources and adding peace of mind knowing their external attack surface is protected. CyCognito is an exposure management platform that reduces risk by discovering, testing, and prioritizing security issues. The platform scans billions of websites, cloud applications and APIs, and uses advanced AI to identify the most critical risks and guide remediation. CyCognito's continuous attack surface monitoring discovers and maps 100% of the organization's external attack surface, including blind and abandoned assets. Partner Level Strategic Venture Partner for discovering, testing, and fixing critical security issues. Approach Leverage advanced AI-powered testing to secure and protect customers from growing threats. Differentiator Can detect CVEs, data exposures, and misconfigurations with a less than 5% false positive rate. Performs active, multi-factor security testing to detect CVEs, zero-day exploits, data exposures, and misconfigurations with a less than 5% false positive rate. For more details, please visit Contact Us
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Accelerate Cloud-Native Modernization with Wipro and vFunction

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/vfunction/ ----- Contact Wipro Please fill the required details to access the content vFunction Leverage vFunction's AI-driven architectural observability platform to elevate Wipro FullStride Cloud Services. Technical debt in enterprise applications negatively impacts feature delivery, quality, scalability, ROI, and predictability of release timelines. Wipro and vFunction

find and fix technical debt using vFunction's AI-driven architectural observability platform. Together, they identify and resolve critical architectural issues blocking innovation. Customers get real-time visibility into their software applications to continuously modernize, accelerate engineering velocity, and deliver powerful developer and customer experiences at scale. Partner Level Strategic Venture Partner for accelerating application modernization. Approach Provide a seamless transformation journey by finding and fixing architectural technical debt (ATD) Differentiator Identify architectural technical debt, enhance engineering velocity, and improve scalability. Wipro and vFunction work together to: Expand Application Management Services Move and Transform Offer New Architectural Observability Services Contact Us ======================

Wipro Equinix Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/equinix/ ----- SAP HANA as a Service Power Your Business with SAP HANA as a Service from Wipro, HPE and Equinix News, Awards & Recognitions Contact Wipro Boundaryless Cloud Exchange Based on Equinix Fabric SAP Hana as a Service with Wipro, Hewlett Packard Enterprise and Equinix Wipro Wins Equinix Social Impact Partner of the Year EMEA 2021 Please fill the required details to access the content Wipro Equinix Alliance Empowering IT Performance with Cloud-Adjacent Solutions Equinix and Wipro's cloud-adjacent solutions enable businesses to deploy their private cloud infrastructure at the intersection of cloud services, networks, and digital ecosystems. This proximity allows for more efficient, secure connections between private and public cloud environments, enhancing flexibility and performance throughout the enterprise. Combining Equinix's digital services strategy with Wipro's FullStride Cloud services, the partnership offers fast, targeted responses to industry challenges, empowering clients to lead more successful digital transformations. Managed services solutions for data centers and interconnection enable businesses across various industries to securely create and utilize infrastructure while connecting to a wide range of technology ecosystem partners, including major hyper-scalers. As an Equinix top 30 Global Partner, Wipro has cultivated a strategic relationship with Equinix for over seven years, with a presence in eight metros and four countries, including 13 data centers and ongoing expansion efforts. Partner Level Gold Partner Differentiator Leading the Transformation Journey Partner Award Social Impact Award EMEA, 2021 Services The power of public cloud with the security of private. An advanced software-defined solution that securely connects to distributed infrastructure and digital ecosystems on the Equinix platform. Featured Resources Harness seamless SAP S/4HANA transformation with Wipro, HPE and Equinix. Benefit from secure infrastructure, flexible architecture, and expert migration services. Contact Us =====================

Wipro's Strategic Partnership With PROS

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/wipros-strategic-partnership-with-pros/ ----- Contact Wipro End-to-End Implementation & Managed Services Consulting and Migration Services Please fill the required details to access the content Wipro's Strategic Partnership With PROS Unlocking pricing and commercial excellence through Cloud solutions built on a future-ready technology platform. PROS Holdings, Inc. (NYSE: PRO) stands at the forefront of AI-powered Software as a Service (SaaS) solutions, specializing in pricing, Configure-Price-Quote (CPQ), revenue management, and digital offer marketing. The PROS platform harnesses the power of AI to deliver real-time predictive insights, empowering businesses to enhance revenue and optimize margin. Wipro and PROS have forged a strategic partnership aimed at empowering organizations across various sectors. Together, we elevate pricing capabilities, enhance sales productivity, and drive profitability and market share. Our unified pricing and quoting solutions cater to use cases that span all customer segments, products, and channels. Here's how our collaboration adds value: Our partnership transcends mere pricing strategies. It's about innovation, profitability, and transforming business operations. Join us on this exciting journey as we redefine possibilities and shape the future of enterprise success. Partner Level Global Consulting and System Integration Partner. Approach AI-Driven Business Growth and Transformation. Competency 100+ trained/certified professionals. Services Consulting, implementation & management via future-proof PROS pricing, CPQ, & insight solutions. Pricing data migration, training, pricing operations, and analysis business services. Contact Us ======================

Wipro Harness Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/harness/ ----- Developer Experience Management Secure Software Delivery Cloud Spend Optimization Contact Wipro DevOps Modernization Please fill the required details to access the content Wipro Harness Partnership Simplified, AI-augmented software delivery, with a strong focus on engineering excellence and developer productivity Harness and Wipro enable seamless modernizations and business transformations by enhancing developer experience across all business domains. The partnership is committed to providing an end-to-end AI-augmented software delivery solution that offers a comprehensive view of the software delivery lifecycle, driven by actionable insights and business intelligence. Wipro's analytics-driven, customer-centric approach, combined with Harness' modern software delivery platform, ensures successful delivery of solutions and outcomes. Our focus on continuous integration, verification, security and governance safely accelerates business growth for our clients. Partner Level Expert Services, SI and VAR   Approach End-to-end AI augmented software delivery solutions

Focus solution AI- augmented software delivery platform Services State-of-the-art DevOps solutions to modernize SDLC through CI, CD and GitOps, feature flags, Infrastructure as Code, chaos engineering and service reliability management. Centralized tools with self-service automation and valuable SDLC insights, source code management and flexible governance. Software supply chain assurance and security testing orchestration. Intelligent cloud cost management with granular cost reporting, automated cost optimization, and robust cost governance. Contact Us ======================

Kognitos

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/kognitos/ ----- Contact Wipro Wipro and Kognitos Collaborate to Deploy GenAI-Based Business Automation Solutions Please fill the required details to access the content Kognitos GenAI-based business automation solutions to elevate business processes and achieve operational efficiencies at scale Wipro and Kognitos are redefining enterprise-ready, GenAI-based business automation solutions. Kognitos is an automation platform that combines the traditional, logic-driven approach of automation with the intuitive, creative capabilities of Generative AI to drive impact and efficiency for clients. With Kognitos, business users can automate business processes using plain language, reducing reliance on developers or IT for simple business processes. The platform's Natural Language Processing (NLP) and GenAI capabilities facilitate rapid deployment and support a wide range of use cases. Wipro leverages the Kognitos platform to automate complex business process workflows for clients across use cases like order management, contact centers, and finance and accounting services. 70% reduction in manual labor cost 4x faster speed-to-value   1000s of concurrent business processes Contact Us =====================

Transforming Procurement with Wipro and Raindrop Partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/transforming-procurement-with-wipro-and-raindrop-partnership/ ----- Contact Wipro Please fill the required details to access the content Transforming Procurement with Wipro and Raindrop Partnership Empowering Businesses with Seamless Source-to-Pay Solutions Wipro and Raindrop have joined forces to revolutionize procurement with a comprehensive Source-to-Pay suite. This collaboration aims to deliver rapid "Time to Value" for customers seeking a complete platform encompassing Spend Visibility, Strategic Sourcing, Contract & Supplier Management, and transactional Procure-to-Pay. The powerful Sourcing module, designed by Procurement practitioners for Procurement practitioners, seamlessly connects the entire Procurement lifecycle from spend planning to contract renewal. This approach simultaneously reduces spend leakage and ensures compliance, marking a significant shift in the industry. Raindrop, an industry-disruptive digital

spend management platform, serves as the central hub for managing all outflow of funds from a customer's company. Founded by highly experienced procurement practitioners, technologists, and operational experts, Raindrop brings a fresh user experience to a mature industry in need of change. It is designed for ease of use and speed to value attainment. The partnership's primary focus is on streamlining procurement for organizations by enabling more efficient spend management, enhancing risk and compliance mechanisms, reducing the cost of ownership, and enhancing savings by identifying and resolving spend leakages. =====================

Wipro UnitedLayer partnership

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/united-layer/ ----- Know Why Your Businesses Need Remote Hands Services Contact Wipro G3 Private Cloud/Hybrid Cloud United Connect United Secure United Edge UnityOne.AI Managed Services Data center infrastructure management (DCIM) Unified hybrid cloud management platform (HCMP) with network interconnections On-demand cloud migration Container management Managed backup and disaster recovery (DR) Cost management AIOps-led operations Key Considerations For Data Center Sustainability Practices Managed Colocation Services By UnitedLayer: Empowering Business With Resiliency And Reliability Disaster Recovery: A Way To Enhance Business Resiliency Please fill the required details to access the content UnitedLayer and Wipro A Unified Vision for Cloud Excellence Wipro and UnitedLayer have partnered to enhance cloud transformations and managed services across private, hybrid, and multicloud platforms. With more than 25 data centers and over 150 edge data centers, UnitedLayer extends Wipro's network capabilities, connecting more clients across five continents to industry-leading cloud support. Wipro commitment to the UnityOne Certified Professional (UCP) program showcases our industry leading capabilities and expertise in UnitedLayer technologies. This collaboration is dedicated to delivering future-ready B2B and B2C cloud services and managed services that are both innovative and customer-centric, ensuring businesses are equipped with the tools they need to succeed in the cloud. Next-gen G3 private cloud capabilities enable clients to deploy critical application workloads like SAP, Oracle and Citrix VDI on secure, high-performing G3 IaaS infrastructure. Carbon footprint analysis for hybrid/multicloud operations provides valuable insights and offer recommendations based on sustainability goals. Wipro and UnitedLayer are committed to providing hybrid cloud solutions that meet today's needs and anticipate future challenges. Services span consulting, migration and transformation, all aimed at accelerating cloud-centric business strategies. Partner Status Gold level partner Approach ROI-Focused Cloud Innovation Cloud Platforms Private, Hybrid and Multicloud, Managed Services Our Services IaaS and DC management with 100+ services and global multicloud operations. On-demand connectivity among global data centers, private and public clouds Physical and virtual protection for infrastructure, data, apps and endpoints. 150+ edge locations to process, store, and deliver data fast, with high availability. SaaS platform manages DCIM, AIOps, CMP, costs, sustainability across clouds. Fully managed services for improved

security, operations, and compliance. Our Offerings Featured Resources Data centers are at the heart of the digital transformation movement. Contact Us =====================

Informatica Alliance

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/informatica-alliance/ ----- Contact Wipro Cloud led Data metamorphosis MDM Modernization Digital Data Trust Propelling to SAP S/4 HANA with IDMC Microsoft Fabric + IDMC Informatica GPTS Partner Award 2023 for Top Enablement Recognized as a leader in the 2022 Gartner Magic Quadrant for Data and Analytics Service Providers 2021 Regional CIO Award for MFI implementation Please fill the required details to access the content Informatica Alliance Pioneering Data Modernization for AI-Ready Enterprises As a premier Global Systems Integrator partner for Informatica, Wipro — a titan in data and AI-driven technology solutions — leverages its vast cross-industry acumen alongside Informatica's Intelligent Data Management Cloud. This powerful synergy is dedicated to propelling customers into the future by modernizing their entire data management systems and forging sophisticated data analytics capabilities enriched with AI-powered insights. Wipro's Informatica Centre of Excellence is an innovation hub, where seasoned experts collaborate with clients to architect, implement, and refine data management solutions that resonate with their strategic goals. Wipro's comprehensive approach ensures that each segment of the data lifecycle is meticulously fine-tuned for peak performance and efficiency. In unison, Wipro and Informatica are revolutionizing the data landscape, enabling organizations to liberate their data assets and thrive in the ever-evolving global market. 1000+ Implementations 3000+ Certified professionals 150+ Customers served Differentiator Approach Recognition Narayan Kamat, Global Head of Partnership, Data and AI, Wipro discusses Wipro's strategies for future-proofing enterprises with data and AI initiatives. Solutions IDMC migration and Informatica's cloud data quality adoption MDM Modernization accelerated by Wipro Data Intelligence Suite (WDIS) Trusted Data for Responsible Gen-AI leveraging Informatica SAP HANA modernization powered by IDMC, augmented by WDIS Enable enterprise Data Fabric with data management and insights Awards and Recognition Contact Us =====================

Wipro's MDM Modernization Framework

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/informatica-alliance/wipro-mdm-modernization-framework/ ----- Contact Wipro Please fill the required details to access the content Shaping the future of enterprise MDM Scaling and modernizing on-premise Master Data management (MDM) has been a formidable business challenge. Migration to cloud-based MDM has gained traction, enabling enterprise to spearhead

data modernization initiatives. The cloud-based MDM landscape aims at simplifying operations and reducing infrastructure costs by leveraging native AI capabilities. Wipro's MDM modernization framework integrates and enhances AI and ML capabilities, marking the advent of an era of automated data quality management and informed decision-making. Wipro enables the MDM modernization journey, beginning with legacy discovery and migration automation, while preserving the core MDM. The Wipro Data Intelligence Suite (WDIS) expedites the migration to Cloud MDM and strengthens the MDM Strategy with AI, resulting in increased efficiency, accuracy and improved time-to-market. MDM modernization elevates businesses with data-driven intelligence, driving strategic decisions and fueling innovations. Accelerated discovery 50% automatic discovery of legacy MDM systems and configurations Automated data generation 40% automatically generated target MDM metadata Accurate migration Error-free migration of configurations from legacy to modern MDM solution Contact Us =====================

Strengthening Data Foundations for Supply Chain Control Tower

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/informatica-alliance/strengthening-data-foundations-for-supply-chain-tower/ ----- Contact Wipro Please fill the required details to access the content Strengthening Data Foundations for Supply Chain Tower Accelerators powered by Informatica IDMC to augment data-driven processes Wipro's Approach and Solutions – At Wipro, we follow a business imperative-led approach that provides an end-to-end process view and user-centric transformation for diverse industry use cases. Our Data-Driven Supply Chain Management solution is a key part of this approach, enabling enterprises to create visibility on potential supply chain disruptions and proactively intervene to outperform challenges arising from market dynamics, inventory logistics, and customer demands. Role of Informatica's Intelligent Data Management Cloud (IDMC) - Informatica's (IDMC) lays the foundation for a business value-driven data governance framework. With IDMC, we connect, unify, and democratize organization data, advancing outcomes such as reduced costs, improved efficiency, and augmented customer experiences. Integration and Tangible Outcomes - For Wipro's supply chain tower, IDMC plays a critical role in democratizing data at scale and speed, integrating a hybrid cloud layout with ML-driven data discovery, delivering tangible outcomes. Our focus is on business value realization and prioritizing processes to sustain growth momentum for enterprises. 20-40% Inventory reduction across the value chain 10-40% Reduction in supply chain costs 10-20% Reduction in obsolescence cost Contact Us =====================

Redefining Protection from Edge to Cloud

----- Arcticle source ----- https://www.wipro.com/partner-ecosystem/ redefining-protection-from-edge-to-cloud/ ----- Contact Wipro IDC Spotlight on Cloud Security: Multi-Cloud Mastery Unveiled Accelerating Digital Transformation with SASE to Securely Move from Edge to Cloud Three modern cybersecurity strategies to navigate today's complex threat landscape Please fill the required details to access the content Wipro + Palo Alto Networks deliver cost-optimized multi-cloud security and compliance Wipro and Palo Alto Networks form a strong partnership that enables and secures enterprise digital transformation. We employ a holistic security approach built on integrated architecture and automation using cost-optimization methodologies. Wipro's industry-leading strategic advisory, customized integrations, and comprehensive managed security services are supported by Palo Alto Networks' next-generation security platform. We provide transformational security services for protecting mission-critical assets across hybrid/multi-cloud environments – ensuring meaningful wins in risk governance, compliance, situational awareness and threat remediation. Wipro Cybersecurists help you transform security operations by consolidating and integrating toolsets, accelerating incident resolution with AI-managed detection and response (AI-MDR), automating actions using playbooks and ensuring consistent cloud security and compliance. Next-Gen Security Protecting against intensifying threats with AI-managed detection and response Cost Optimization Reducing security complexity and solutions sprawl for most cost-efficient operations Cyber Talent Accessing a vast pool of skilled and experienced cybersecurity professionals Our Solutions Converging networking and security services into a unified, cloud-delivered solution based on Zero Trust principles Covering the lifecycle of cloud security — from planning, application modernization, migration and post-migration Providing SOC transformation for security monitoring and management through automation and orchestration Fortify your cloud security strategy with platform-driven solutions Gain a deeper understanding of SASE implementation challenges and solutions Learn how to protect your company's cyber transformation through integrated, accessible solutions that utilize best-in-breed technology for reduced complexity, a smaller attack surface Everest Group's latest research provides a comprehensive understanding of next generation security solutions that address the increasing cyber threats and risks experienced by businesses across all industries. Contact Us
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