

Digital Transformation(AI Consulting):

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Data Data is the fuel that powers digital transformation. But just having data isn't enough. Across industries, enterprise leaders must tap into their treasure troves of data to improve decision-making, build new products and services, and get closer to their customers. At Genpact, our global team of data analytics experts makes this aspiration a reality, turning data into actionable insights at speed. What's more, our data-engineering team architects and governs data processes in data lakes and warehouses. We then optimize data ecosystems to ensure agility and accuracy in decision-making. PowerMe— our data intelligence platform – is at the heart of our analytics solutions, helping you manage and make sense of all your data. With PowerMe, teams can confidently discover, trace, trust, and

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Point of view

Machine learning (ML) is the backbone of artificial intelligence (AI) development, empowering systems to learn from data, adapt to changing environments, and make informed predictions. Yet, most organizations struggle to capture the full benefits of ML and AI because of inadequate processes. This lack of structure often results in suboptimal model performance, inefficient business data management, and other missed opportunities. That's why machine learning operations, or MLOps, is crucial in providing a framework for scalable and efficient AI implementation across the business. With ML operations at the heart of AI development, organizations can quickly turn data into insight and insight into action – the type of decisions that keep customers and employees coming back for more. It might not be a surprise that AI and ML are among the leading technology investments for Global 2000 enterprises, according to HFS.¹ But it's not enough to simply prioritize AI and ML – the way business leaders approach its use needs to change too.

Business applications driven by AI models support faster and more intelligent decision-making. However, from our experience working with enterprises across industries, we've witnessed that roughly only half of all AI proofs of concept ever make it to production. With the swift evolution of AI applications like generative AI, enterprise leaders are under mounting pressure to expedite AI projects and align AI investments with business

value. Many organizations also focus on IT modernization to fully exploit AI capabilities. In short, there has been a shift in how senior executives approach artificial intelligence in the enterprise (figure 1). Today, AI innovation needs to move beyond experimentation to operationalization – fast.

A new approach to AI development is the only way to demonstrate significant top-line and bottom-line benefits connected to better customer experiences, competitive advantage, and business growth.

ML models that go into production must handle large volumes of data, often in real time. Unlike traditional technologies, generative AI and ML technologies deal with probabilistic outcomes – in other words, finding the most likely or unlikely result. Therefore, the moving parts of the ML model development need close monitoring and quick action when deployed to ensure accuracy, performance, and user satisfaction. Data scientists must grapple with three key influencing factors to ensure the proper development of ML models: Data quality: In production environments, the quality, completeness, and semantics of data are critical because ML models rely on data from various sources in different volumes and formats. Model decay: As the business environment evolves, data patterns in ML models change. This transformation reduces prediction accuracy for models trained and validated on outdated data. Such degradation of predictive model performance is known as concept drift, which makes creating, testing, and deploying ML models challenging. Data locality: Employing data locality and optimizing access patterns enhances the performance of a specific algorithm. Nonetheless, these ML models may not function accurately in a production setting due to disparities in quality metrics. These factors push ML practitioners to adopt a change-everything, change-everything approach – but these decisions often lead to more problems. As a result, data scientists waste time and effort navigating technology and infrastructure complexities. Costs increase due to communication and collaboration issues between engineering and data science teams. And because of the trade-off between achieving business goals and providing stable and resilient infrastructure platforms, projects slow. On average, it could take three months to a year to deploy ML models due to changing business objectives that require adjustments to the entire ML pipeline.

The machine learning life cycle needs to evolve to tackle these challenges. Data and analytics leaders must look for repeatable and scalable data science development processes. In other words, enterprise leaders must rely on machine learning operations. MLOps help organizations achieve automated and reliable ML model deployment, consistent model training, model monitoring, rapid experimentation, reproducible models, and accelerated model deployment (figure 2). Enterprise leaders can only achieve these benefits through continuous and automated integration, delivery, and training.

The implementation of MLOps in the enterprise aligns business and technology strategies, delivering multiple benefits such as: Rapid innovation: Faster, effective collaboration among teams and accelerated model development and deployment lead to rapid innovation, enabling speed to market. Consistent results: Repeatable workflows and ML models support resilient and consistent AI solutions across the enterprise. Increased compliance and data privacy: Effective management of the entire ML life cycle, data, and model lineage optimizes spending on data privacy and compliance regulations. High return on investment: Efficiently

managing ML systems and monitoring model metrics ensures a high return on investment by prioritizing viable use cases and preventing implementation failures. Enhanced decision-making: IT and data asset tracking, coupled with improved process quality, creates a data-driven culture where employees make decisions based on facts.

A healthcare equipment manufacturer struggled with delays in invoice payments and lacked a solid accounts receivable process. Genpact used MLOps to design a streamlined data-processing and ML model pipeline using open-source tools for rapid integration into existing infrastructure. The solution used 3.6 million invoice metrics for preprocessing and subsequent ML model training. As a result, we developed an automated pipeline with daily data feeds to reduce overdue invoices to less than 12% from 20% to 25%.

Every organization can reap the benefits of MLOps, particularly as AI adoption continues to grow – more than doubling since 2017, according to McKinsey's research.² So, how do you develop MLOps in your enterprise? It starts with five steps (figure 3):

Data engineering: Ensures the foundational data used for machine learning is of high quality and relevance, crucial for accurate and meaningful model outcomes.

Algorithm development: Creating and refining mathematical models is essential for machines to learn patterns and make accurate predictions.

Model deployment: Integrating ML solutions into a production environment enables AI models to make real-time predictions and continuously learn from user interactions.

Model monitoring: Continuous oversight of machine learning solutions increases accuracy and reliability, resulting in the delivery of consistent and trustworthy results.

Model hypercare: Postdeployment support and fine-tuning address any issues, maintaining the ongoing effectiveness and performance of AI models. To be sure, several factors, such as evolving regulatory requirements, unstandardized data collection, and unstable legacy systems, can impact AI model performance. These challenges often result in frequent redeployments in live production environments, which are inefficient and disruptive. On the other hand, effective implementation of MLOps from the start of each project streamlines the entire ML model life cycle, allowing you to pivot and adapt seamlessly.

By incorporating machine learning operations from the earliest design phases of any AI project, enterprise leaders can harness the full potential of ML – without the headaches. These ML solutions can then be effectively scaled and replicated across the enterprise for greater return on investment and competitive advantage.

1. "H1 HFS Pulse Survey," HFS Research, 2021. 2. "The state of AI in 2022—and a half decade in review," McKinsey & Company, December 6, 2022.

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Looking to the future of digital transformation

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Moving generative AI from possibilities to productionGenpact, in partnership with NASSCOM, brings you a playbook on everything you need to know about making a winning generative AI solution.[Access the report](#)[About](#)

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Discover a framework for responsible generative AIExplore how businesses use responsible generative AI to maintain their reputations, increase data security, and enable ethical decision-making.[READ OUR POINT OF VIEW](#)[About](#)

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How to scale large language modelsA hero's guide through the epic journey of LLM implementation.[READ OUR POINT OF VIEW](#)[About](#)

A hero's guide through the epic journey of LLM implementation.

We help companies move from incubation to the democratization of gen AI thanks to our ethical AI approach and AI center of excellence.

Gen AI for the enterpriseIncubate, democratize, and scale the generative AI center of excellence, with guardrails for data strategy, contextualized private LLMs, and an end-to-end responsible AI operating model.

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Generative AI for business processesAutomate, optimize, and redefine business processes with generative AI capabilities, like search, generate, classify, cluster, summarize, and extract.

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Generative AI for Tech and Digital OpsGenerative AI for developers, coders, testers, and analysts in technology services and digital operations, with co-pilots and gen AI tools for maximum efficiency and productivity.

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Sales and commercialGenerate content for sales enablement, lead generation, customer segmentation, personalized sales recommendations and emails, and customer service.

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Insurance underwritingMatch applicant data with underwriting guidelines, extract key information, check for missing information or data mismatch, and personalize settlement communications.

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Supply chain managementOptimize pricing through competitor analysis, develop new products with market research, detect product anomalies, assess suppliers' risk, and expedite demand forecasting analysis.

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Finance and accountingSummarize financial statements, search reports for risk spread, generate credit packs, manage AP helpdesk queries, and streamline financial report writing.

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Customer careDeliver personalized recommendations, build business intelligence dashboards, create social media content, find opportunities for upsell and cross-sell, and improve customer service.

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Change managementExplore gen AI's impact on organizations and uncover best practices for navigating the human aspects of integrating new technology.Learn moreAbout

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From building comprehensive tech stacks to embedding frameworks for ethical AI, our work allows businesses to develop, implement, and launch innovative AI solutions at speed and scale. Explore our case studies.

Strengthening data center security with gen AI and autonomous robots
Novva Data Centers needed extended functionality for its Boston Dynamics Spot robots, including conversational AI and enhanced security. Learn how Rightpoint used generative AI to unlock the potential of data center robots to communicate with humans, provide premier security, and dance.[READ THE CASE STUDY](#)[About](#)

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Creating better experiences for everyone with generative AI
A global media and entertainment company wanted to delight customers with best-in-class customer service and improve its revenue stream. Learn how it used generative AI to turn data into insight, helping employees deliver a superior customer experience, and spot and act on cross-sell and upsell opportunities.[READ THE CASE STUDY](#)[About](#)

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Bring generative AI to regulatory compliance for a competitive edge
A global consumer healthcare company needed faster and more accurate ways to gather insights on regulatory and competitor information, to stay ahead of competition. Learn how the company used generative AI to transform how teams monitor, collect, and report insights to guide decision-making.[READ THE CASE STUDY](#)[About](#)

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Our strong network of technology partners enables us to build secure, robust, and innovative gen AI solutions.

Amazon Web Services (AWS)
Deliver new levels of business resilience and agility through cloud-enabled solutions built on Amazon Web Services.[Learn more](#)[About](#)

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Celonis
Genpact and Celonis empower companies with powerful tools and resources to turn process data into real-time action.[Learn more](#)[About](#)

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Dataiku
Genpact and Dataiku help organizations accelerate artificial intelligence (AI) and machine learning (ML) initiatives to transform their businesses at scale.[Learn more](#)[About](#)
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Microsoft Use the power of data and AI to drive actionable business insights with Genpact expertise and Microsoft Azure OpenAI Service. [Learn more](#) [About](#)

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ServiceNow As an Elite partner, Genpact provides end-to-end services for the entire suite of ServiceNow solutions, including design, configuration, deployment, and support. [Learn more](#) [About](#)

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While gen AI presents a massive opportunity, it's not without challenges. We believe establishing a culture of responsible AI, building auditing capabilities, creating centers of excellence, and preparing for dynamic data demands can help companies make the most of gen AI.

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Consumer goods and retail Integrated, intelligent operations that forecast and act on fast-changing consumer needs [Learn more](#) [About](#)

Integrated, intelligent operations that forecast and act on fast-changing consumer needs

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Reimagining media and entertainment operations

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Fuse the power of digital and data with the right operating model to grow at speed and scale

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Ignite innovation and deliver enterprise value with foundation models

Generative AI (gen AI) is not only accelerating how businesses adopt AI but how they innovate, too. Companies want to deliver products and services anytime, anywhere and the rapid rise of AI can make that a reality, but there are risks to avoid. Customizing large language models (LLMs) for the enterprise requires data quality and security and a responsible approach to AI.

Our AI solutions have ethics, transparency, and accountability at the core. We take a four-stage approach with LLMs to help organizations move seamlessly from prototypes to fully scaled gen AI applications:

How do we deliver AI success? Our expertise is deeply rooted in business and industry knowledge from our experience creating data foundations and leading digital transformation for global companies.

With our team of data scientists and AI experts and a broad ecosystem of partners, including AWS, Dataiku, Google Cloud, and Microsoft, we deliver sustainable business growth and competitive advantage to our clients. Fast.

Access podcasts featuring three Genpact senior leaders, offering expert guidance on maximizing generative AI's potential.

Learn effective strategies for harnessing the power of generative AI while mitigating risks.

Don't miss out on the full potential from gen AI. Access critical learnings all business leaders need to embrace to rethink the nature of work.

Genpact, in partnership with NASSCOM, brings you a playbook on everything you need to know about making a winning generative AI solution.

Explore how businesses use responsible generative AI to maintain their reputations, increase data security, and enable ethical decision-making.

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Deliver new levels of business resilience and agility through cloud-enabled solutions built on Amazon Web Services.

Genpact and Celonis empower companies with powerful tools and resources to turn process data into real-time action.

Genpact and Dataiku help organizations accelerate artificial intelligence (AI) and machine learning (ML) initiatives to transform their businesses at scale.

Genpact and Google Cloud create agile, scalable, cost-effective solutions for every industry. Use the power of data and AI to drive actionable business insights with Genpact expertise and Microsoft Azure OpenAI Service.

As an Elite partner, Genpact provides end-to-end services for the entire suite of ServiceNow solutions, including design, configuration, deployment, and support.

MLOPS consulting and implementation:

Digital technologies – from machine learning to generative AI – unlock unprecedented business opportunities in the enterprise. Unfortunately, technology leaders often struggle with multiple standalone, short-term solutions that entail lengthy development cycles, high costs, and disappointing outcomes. As a result, 87% of artificial intelligence (AI) projects never make it into production, leaving organizations grappling with untapped potential and missed opportunities.

At Genpact, we do things differently. By combining our expertise in digital solutions and industry knowledge, our global team of data experts streamlines the entire machine learning operations (MLOps) lifecycle, aimed at delivering faster development times, better customer experiences, higher ROI, and greater agility. What's more, our responsible AI framework enhances transparency, accountability, and governance, so you can confidently deploy AI solutions at scale. Watch our video to learn more.

Responsible AI:

Artificial intelligence (AI) is drastically changing how we live and work. From prioritizing patients for emergency medical care to checking employment and housing eligibility or even selecting the information we view on social media, the use of AI is everywhere. Yet, rooting out potential biases like gender and race discrimination remains a significant challenge. At its core, AI aims to replicate human intelligence in a computer or machine with greater accuracy and speed. And over the next decade, AI's influence could exponentially grow as enterprises deploy the technology in banking, transportation, healthcare, education, farming, retail, and many other industries. Research firm Fortune Business Insights predicts the global AI market could reach \$2.74 trillion by 2032 from \$621 billion in 2024, an increase of 341%. But as AI becomes a central part of society, concerns around its ethical use have taken center stage. For the enterprises that fail to act, legal and reputational consequences could follow. Here, we'll review the responsible AI challenges and how to overcome them.

Concerns behind the growing role of AI
The lack of clear ethical guidelines in AI and machine learning (ML) systems may have several unintended consequences for individuals and organizations (figure 1).

Potential risks of AI

Enterprise leaders cannot ignore these risks because the potential damage to people and organizations can prove significant, as these two examples show: In 2019, Apple's credit card processing practices came under fire for gender discrimination. Danish entrepreneur David Heinemeier Hansson received 20 times more credit than his wife, even though they filed joint taxes and she had a better credit history.^[1] The same year, the US National Institute of

Standards and Technology (NIST) found that facial recognition software used in areas like airport security had trouble identifying certain groups. For example, some algorithms delivered significantly higher rates of false positives for Asian and African American faces relative to images of Caucasians.[2] These are just a couple of examples, among many others, that contributed to a global debate around the use of AI, prompting lawmakers to propose strict regulations. A lack of trust has forced AI practitioners to respond with principle-based frameworks and guidelines for the responsible and ethical use of AI. Unfortunately, these recommendations carry many challenges (figure 2). For example, some enterprises have developed insufficient or overly stringent guidelines, making it difficult for AI practitioners to manage ethics across the board. Or even worse, other organizations have inadequate risk controls because they don't have the expertise to create responsible AI principles. At the same time, algorithms are constantly changing while ethics vary across regions, industries, and cultures. These characteristics make rooting out AI biases even more complex.

Challenges in responsible AI/ML development

A new approach: The responsible AI center of excellence To develop AI solutions that are fair, trustworthy, and accountable, enterprises are building AI centers of excellence that act as ethics boards. By connecting diverse groups of AI custodians – who can oversee the development of artificial intelligence from start to finish – enterprises can proactively prevent issues down the road. Put simply, teams of people with different experiences, perspectives, and skill sets can catch biases upfront compared to homogenous groups. Thankfully, with a practical framework in place (figure 3), AI practitioners can establish ethics-as-a-service to assist and guide organizations through AI implementation and development.

Responsible AI in practice

The four pillars of a responsible AI framework Developing a comprehensive framework is the first and most crucial stage of a responsible AI journey, and it usually consists of four pillars:

1. **Governance body** Enterprise leaders must establish an AI/ML governance body (figure 4) of internal and external decision makers to oversee the responsible use of AI continuously. In addition, C-suite executives should prioritize AI governance – other business leaders can then be held accountable for developing governance policies alongside regular audits.

Responsible AI governance body

2. **Guiding principles** Transparency and trust should form the core principles of AI. We've identified seven characteristics to help enterprise leaders form a strong foundation for safe, reliable, and non-discriminatory AI/ML solutions:

1. Domain-specific business metrics evaluation
2. Fairness and legal compliance
3. Interpretability and explainability
4. Mitigation of changes in data patterns
5. Reliability and safety
6. Privacy and security
7. Autonomy and accountability
8. Traceability

Similarly, a governance body can help enforce these principles throughout the development of AI technology (Figure 5).

Matrix of AI governance body

3. **Realization methodology** AI solutions will inevitably touch multiple areas of the organization. As a result, enterprise leaders must account for and involve all stakeholders, from data scientists to customers. This process also requires having clear risk controls and a framework for responsible AI (figure 6).

Realization methodology for Genpact's responsible AI framework

4. Implementation overviewThe inherent complexities in developing AI algorithms make interpreting models challenging. However, enterprise leaders can embed responsible AI considerations throughout the process to help mitigate potential biases and follow best practices (figure 7).

Genpact's responsible AI framework implementation

Case StudyA global bank puts responsible AI theory into practiceA bank wanted to streamline loan approvals while removing potential biases from its loan review process. As a first step, Genpact improved the bank's data management and reporting systems. Then, with a robust data taxonomy in place, we applied our responsible AI framework. For example, removing variables like gender and education increased the probability of reaching a fair decision. We also improved the quality of the reports, helping employees enhance transparency by showing the data behind their decisions. Finally, we developed a monitoring system that could alert the AI ethics board of any potential issues. The success of this project has led the bank to deploy similar AI ethics models across the organization. Embracing the responsible AI opportunityCustomers, employees, partners, and investors increasingly expect organizations to prioritize AI ethics to build safe and reliable products. With a responsible AI framework in place, organizations can continue innovating, building trust, and increasing compliance. These benefits will help organizations sustain long-term growth, improve competitive advantage, and create value for all.AI helps enterprises make informed and responsible decisions.Discover how data-driven sustainability influences financial, social, and environmental change.

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[1]<https://www.reuters.com/article/us-goldman-sachs-apple/apple-co-founder-says-apple-card-algorithm-gave-wife-lower-credit-limit-idUSKBN1XL038>[2]<http://nist.gov/news-events/news/2019/12/nist-study-evaluates-effects-race-age-sex-face-recognition-software>

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Building ethical products and services for everyone

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But as AI becomes a central part of society, concerns around its ethical use have taken center stage. For the enterprises that fail to act, legal and reputational consequences could follow. Here, we'll review the responsible AI challenges and how to overcome them.

The lack of clear ethical guidelines in AI and machine learning (ML) systems may have several unintended consequences for individuals and organizations (figure 1).

Enterprise leaders cannot ignore these risks because the potential damage to people and organizations can prove significant, as these two examples show:

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At the same time, algorithms are constantly changing while ethics vary across regions, industries, and cultures. These characteristics make rooting out AI biases even more complex.

To develop AI solutions that are fair, trustworthy, and accountable, enterprises are building AI centers of excellence that act as ethics boards. By connecting diverse groups of AI custodians – who can oversee the development of artificial intelligence from start to finish – enterprises can proactively prevent issues down the road. Put simply, teams of people with different experiences, perspectives, and skill sets can catch biases upfront compared to homogenous groups.

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Customers, employees, partners, and investors increasingly expect organizations to prioritize AI ethics to build safe and reliable products. With a responsible AI framework in place, organizations can continue innovating, building trust, and increasing compliance. These benefits will help organizations sustain long-term growth, improve competitive advantage, and create value for all.

AI helps enterprises make informed and responsible decisions. Discover how data-driven sustainability.

Prediction System:

Case study Turning an energy business into a predictive-maintenance powerhouse How to keep crucial turbines running with more accurate forecasting

Who we worked with A leading original equipment manufacturer (OEM) that provides turbines, spare parts, and services to utility companies worldwide How we helped We used machine learning (ML), artificial intelligence (AI), and advanced analytics to predict turbine-equipment issues and maintenance needs more accurately

What the company needed To help its utility-company clients increase turbine availability using predictive maintenance What the company got Higher customer satisfaction from improved turbine up-time Data-driven insights for smarter business decisions More effective use of resources

Challenge Increase turbine up-time by making maintenance more predictable and reliable This global energy leader provides turbine engines to large-scale utility companies around the world. Typically, half of all parts failures occur unexpectedly at utilities' operations. And when problems arise, power generation suffers while companies wait for replacement pieces and field-worker repairs. Meanwhile, if there are turbine stoppages, utility companies may experience power outages that impact their commitments to their own customers. Part of the problem was that until now, maintenance forecasting had been limited to using simple extrapolation models. To be effective, these models needed to interpret a diverse array of structured and unstructured data. But that was not an easy task. But it's changing. The energy firm knew it had to find a better, more comprehensive way to analyze its data. Its operational and inspection records, machine specifications, and equipment-imaging devices held a wealth of intelligence. Using such rich, science-driven information was the only way the company could boost customer satisfaction by accurately predicting parts failures to keep the turbines running. This data could even reveal new business opportunities, while also helping the company allocate maintenance resources at the right time and level of detail. Solution Digitally powered technology that improves prediction capabilities Genpact had already been working with businesses to improve maintenance predictability and created our unique Smart Event Forecasting solution. The technology combines process knowledge, digital technology, and predictive analytics to sharply improve the accuracy of parts-breakdown forecasts. Smart Event Forecasting combines natural language processing

(NLP), ML, neural networks, and advanced visualization to interpret a range of structured and unstructured data. After it deciphers all the factors influencing potential parts failure and machine breakdowns, it delivers predictive maintenance scenarios to decision makers. It also uses accessible visualization with charts and images so they can also understand the information quickly and easily. The solution interprets and integrates data, such as inspection reports, operational information, specifications, and equipment images, and uses the following key components:

- Text mining:** Our NLP model interprets unstructured inspection reports to determine the current state of equipment and classify opportunities for anticipating events
- Machine learning:** Our model integrates process data with historical operating intelligence to predict future parts failure. The system then selects the best fit from more than 50 possible distributions
- Deep learning:** The solution analyzes equipment images using a deep-learning neural network to classify damaged parts and identify the scope of potential interventions
- Advanced visualization:** The results from these tools are then integrated and presented to operators through a dashboard using advanced visualization to identify potential actions.

Key elements include:

- Classification of maintenance concerns** into those that need action, continued monitoring, or no action. It also identifies processes with single or multiple concerns
- Image displays** of machine parts showing wear or damage
- Calculations of future event probabilities** based on equipment operating hours

The system incorporates decades of reports and generates best-fit probability distributions based on techniques that Genpact has developed with leading universities. This makes the solution considerably more accurate than similar tools. In fact, it predicts future events with more than 90% accuracy, compared to about 80% using traditional modeling techniques. Smart Event Forecasting can be scaled and used in any manufacturing process. But its remarkable versatility extends beyond manufacturing. In fact, it's effective in almost any operation, such as accounting or IT, where the parameters driving failure can be identified and have relevant data available. Its potential applications are vast.

Impact

- Cutting downtime. Increasing customer satisfaction
- By predicting events in manufacturing processes more accurately, our client has:
- Delighted its customers by reducing turbine downtime
- Cut the penalties that its utility-company clients must pay their customers when turbines fail
- Kept the lights on for end users around the world
- Made smarter business decisions using data-driven insights
- Generated greater efficiency from resources and maintenance planning
- Saved \$3 million in field-service costs in less than one year

This global manufacturer is extending the benefits of Smart Event Forecasting by rolling it out at many of its production sites. It also has plans to extend these sharper insights and efficiencies throughout its operations.

Visit our industrial manufacturing page [Learn more](#)

About
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How to keep crucial turbines running with more accurate forecasting

A leading original equipment manufacturer (OEM) that provides turbines, spare parts, and services to utility companies worldwide

We used machine learning (ML), artificial intelligence (AI), and advanced analytics to predict turbine-equipment issues and maintenance needs more accurately

To help its utility-company clients increase turbine availability using predictive maintenance
Challenge

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But it's changing.

The energy firm knew it had to find a better, more comprehensive way to analyze its data. Its operational and inspection records, machine specifications, and equipment-imaging devices held a wealth of intelligence. Using such rich, science-driven information was the only way the company could boost customer satisfaction by accurately predicting parts failures to keep the turbines running. This data could even reveal new business opportunities, while also helping the company allocate maintenance resources at the right time and level of detail.

Solution

Genpact had already been working with businesses to improve maintenance predictability and created our unique Smart Event Forecasting solution. The technology combines process knowledge, digital technology, and predictive analytics to sharply improve the accuracy of parts-breakdown forecasts.

Smart Event Forecasting combines natural language processing (NLP), ML, neural networks, and advanced visualization to interpret a range of structured and unstructured data. After it deciphers all the factors influencing potential parts failure and machine breakdowns, it delivers predictive maintenance scenarios to decision makers. It also uses accessible visualization with charts and images so they can also understand the information quickly and easily.

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Impact

By predicting events in manufacturing processes more accurately, our client has:

This global manufacturer is extending the benefits of Smart Event Forecasting by rolling it out at many of its production sites. It also has plans to extend these sharper insights and efficiencies throughout its operations.

Recommendation and forecasting system:

Solution overview Chart your company's path to success with confidence Adopt forecasting solutions, powered by AI, to make decisions at speed

The business world is complex. To properly plan for growth – and contingencies – enterprise leaders need reliable forecasting solutions. From quickly predicting cash flow metrics and supply and demand trends and updating your team on the latest sales figures, forecasting capabilities can give you a 360-degree view of your business. Powered by artificial

intelligence (AI), advanced analytics, and machine learning, forecasting accuracy has reached a new level of precision.

ChallengeMaking timely and accurate business forecastsThe gold standard for forecasting is often hard to achieve. A combination of outdated information, systems, and processes makes it difficult to strategize and deliver long-term value for customers. And as market volatility increases and customer behaviors evolve, accurate forecasting becomes harder to deliver. And as market volatility increases and customer behaviors evolve, accurate forecasting becomes harder to deliver. To stay ahead in this ever-changing business landscape, you need a dedicated strategy for optimal forecasting.

SolutionAdvanced forecasting techniques powered by AI and machine learningTechnological advancements over the past decade have significantly improved forecasting. By relying on the power of data analytics and deep business acumen, companies can merge and analyze vast amounts of data at speed, producing data-driven insights and improving forecasting accuracy. These technological advancements mean enterprise leaders no longer need to rely on historical patterns when planning. Instead, they can turn to new solutions. The type of solutions that generate forward-looking metrics that are precise and relevant. Thanks to AI and machine learning capabilities, the static approach that characterized forecasting in previous business cycles is now a thing of the past. Genpact's forecasting solutions are at the crest of these developments. Our forecasting capabilities are applicable across business functions such as supply chain, workforce management, finance, and operations.

Here's a detailed look at what we offer:

- Workforce planning accelerator**Client configurable accelerator to help clients control their personnel costs and boost customer satisfaction. This feature is highly responsive to changing service requirements and quickly mitigates staff shortages or other personnel issues, including work-from-home challenges
- Financial forecasting for cash flow accelerator**Client configurable accelerator that uses AI and machine learning to help companies update their forecasts in real time, support short-term working capital needs, and boost longer-term business resilience. It also helps enterprises predict price variances based on demand, calculate capital requirements that impact production planning and equipment delivery, and gain more complete visibility into the cash conversion cycle
- Inventory planning accelerator**Client configurable accelerator to help clients reduce costs and improve asset use. This accelerator can be used to assist with calculating potential fallout from temporary closures of manufacturing and assembly facilities, and be used to help identify potential impacts of short-term material shortages
- Sales, revenue, and demand forecasting accelerator**Client configurable accelerator to help identify and interpret the demand signals of SKUs from different regions, helping enterprises manage fulfillment orders
- Integrated visualization capabilities**Ability to pull cross-functional data and insights to present each employee with a customized view of relevant sales metrics, revenue figures, and customer satisfaction scores

The nuts and bolts of our forecasting solutionsOur approach relies on four core principles:

- 1. Quantitative and qualitative data**We assess non-traditional indicators such as industry averages, government policies, and social media commentaries, along with internal sales, marketing, and inventory information. We then integrate this information with commercial data repositories to deliver faster insights.
- 2. Statistical analysis**Our pre-built accelerators and technology partnerships utilize the latest advancements in time series analysis, AI, and machine learning. Additionally, we track the latest thought leadership from academia and forecasting competitions to bring you the latest technological advancements.
- 3. Human and machine intuition**We convert business intuition into an analytical framework: We manage risk by creating and testing different scenarios and assumptions We deploy pilot models and

measure the resultsWe blend machine-driven insights with human expertise to make innovative forecasting solutions4. Efficient processesOur comprehensive approach to forecasting speeds up decision-making by streamlining processes. Our team of data scientists, engineers, and subject-matter experts carefully assess each process to deliver tailored solutions.What's more, newly standardized processes heighten efficiencies, so firms make more precise use of their assets, reduce logistics and operating costs, and conduct collections more effectively.

ImpactMaximize forecasting accuracy without compromising on speedEquipped with these capabilities, teams can make accurate decisions at speed to grow the business, build resilience, and maximize value for customers and all stakeholders.But don't take our word for it. Companies using our solutions improved forecasting accuracy by up to 80%, reduced inventory excesses by up to 63%, and enhanced manufacturing efficiency by up to 15%.Whether you're looking days, weeks, or months ahead, we have some of the most advanced forecasting solutions – so you can confidently steer your business into the future, even during turbulent times.

Case studyA digital supply chain for a leading audio equipment manufacturerChallenge:A global manufacturer lacked visibility into its supply chain while new product introductions failed 50% of the time. These challenges trickled down to other departments, such as sales and marketing, resulting in high operational costs.Solution:We implemented a whole stack of advanced analytics to solve these pain points, enabling accurate forecasts, supply-network planning, and inventory management.Result:Forecasting accuracy for new products improved by 65% and could be generated 30% faster. With crystal-clear visibility into the supply chain, the firm reduced planning time by 40% and inventory levels by 15%.

The right cash flow cure for a global pharmaceutical companyChallenge:A global pharmaceutical company struggled to accurately predict cash flow operations, resulting in disparate metrics and frustration over missed opportunities.Solution:We jumped into action and tested several modeling techniques. When we identified the best solution, we deployed a suite of forward-looking predictive analytics that improved forecasting accuracy and increased productivity.Result:Cash flow forecasting became objective, removing bottlenecks from manual, subjective workflows. With our help, the finance team allocated resources effectively, accounting for seasonal trends and other market fluctuations.

Why GenpactWe're a complete one-stop shop for all data-driven forecasting services. Our multidimensional teams bring insights from our extensive experience working with Fortune 500 companies across industries and sectors. Through advanced analytics and digital innovation, we help enterprise leaders drive maximum business value.

Visit our artificial intelligence solutions pageRead moreAbout

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We're a complete one-stop shop for all data-driven forecasting services. Our multidimensional teams bring insights from our extensive experience working with Fortune 500 companies across industries and sectors. Through advanced analytics and digital innovation, we help enterprise leaders drive maximum business value.

Optimization Engines:

Case studyGenerative AI accelerates growth for a global cloud provider

Who we worked withA global cloud provider best known for its digital platform and storage solutions.

What the company neededAccess to reliable information to grow its data center business

A scalable, accessible, and centralized solution that extracts, cleanses, and enriches data for the bill of material (BOM) used for setting up data centers worldwide

How we helpedDesigned and implemented a generative AI solution to fetch and validate the

part numbers of components used in the setting up of data centers and generate an

accurate BOM needed to order the partsImproved data validity to increase trust in the

system of records and reduce the time previously spent checking for errors or

inaccuraciesWhat the company gotA viable solution to accelerate data center growth and

achieve faster speed to marketIncreased operational efficiency and lower costs with the help

of generative AIImproved spending and inventory visibility, leading to a reduction in total cost of ownership and working capital optimization

ChallengeScattered information limits growthThis global company provides essential infrastructure to centralize and secure client data effectively. Recognizing the growing demand for data centers, the company set ambitious plans to expand its business. One of the key challenges limiting this growth was the availability of material data in a centralized ERP/MDM solution. In its current format, material data was scattered across various documents and templates, making extracting and consolidating information difficult. As a result, teams had to prepare the data and feed it into the BOM manually. While this manual process was manageable for a few data centers, it was not scalable to support the

company's ambitious growth plans. Plus, with an extensive part catalog, even minor errors in the part numbers could lead to costly mistakes, such as ordering the wrong-sized or incorrectly specified components, which then impacted project timelines. Recognizing the need for a more efficient and error-free solution, the company approached Genpact for assistance in building a scalable and flexible system.

Solution Using gen AI to cleanse, enrich, and validate data We immediately knew generative AI could achieve the speed and scale required for this Herculean task. Our two main goals were to: Consolidate the data: We wanted to compile the data from all document types into one accessible and understandable format Cleanse and enrich the data using AI: To increase the accuracy of information, we had to guide the AI algorithms and reduce / mitigate false data The first step was to use advanced machine learning algorithms and natural language processing to extract data from various source documents. Next, we employed optical character recognition (OCR) and machine learning models to extract information from image-based documents. And finally, to enrich the data, we trained a large language model (LLM) using PaLM 2, a next-generation LLM from Google. The implemented generative AI tool began swiftly collecting and cross-referencing data like never before. What's more, to maintain the integrity of the information, we conducted thorough manual checks using a human-in-the-loop (HIL) approach. These checks validated the LLM models were working as expected resulting in more reliable outputs. By harnessing the power of generative AI, we improved the part-ordering process. The combination of advanced algorithms, OCR, machine learning models, and manual checks allowed us to achieve the necessary speed and accuracy in processing data, ultimately leading to a successful outcome for our client. Take a copy for yourself [Download PDF](#) [About](#)

Impact Scaling expansion plans with ease Our gen AI system expedited part-number data collection, down from months to weeks. Working together with our client's teams, we delivered a future-proof solution that supports: Faster speed to market: With generative AI doing the heavy lifting, our client can enjoy a faster turnaround time on data center builds Improved decision-making: Clean and enriched data allows our client to plan timelines for data center setup more accurately Improved spending and inventory optimization: With reliable and quickly generated material data and the BOM, teams can order the right materials at the right time, enhancing operational efficiency, lowering the total cost of ownership, and optimizing working capital Scalability for future demands: The power of gen AI allows the solution to seamlessly adjust to any changes in parts due to supply chains, location requirements, or customer needs For this company and others in the industry, it's evident that reliable data delivered by gen AI is the future of data centers' expansion. Learn how generative AI can deliver solutions to help your organization achieve scale and improve efficiency [Read more](#) [About](#)

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The future of AI for healthcare and Bupa Hear Bupa's views on the potential for AI and generative AI to transform the healthcare industry. Watch the video Empowering insurers: AI's heroic impact on extreme weather and NatCat events Learn how AI helps insurers adapt to climate change, improving claims processes, risk assessment, and resilience against extreme weather and NatCat events. Read the article Genpact RapidReplace: A gen AI-driven solution disrupting contents fulfillment Genpact and Amazon Business have created Genpact RapidReplace, a contents fulfillment solution that drastically reduces replacement time and carrier costs. [Read the solution](#)

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A global cloud provider best known for its digital platform and storage solutions.

Challenge

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While this manual process was manageable for a few data centers, it was not scalable to support the company's ambitious growth plans. Plus, with an extensive part catalog, even minor errors in the part numbers could lead to costly mistakes, such as ordering the wrong-sized or incorrectly specified components, which then impacted project timelines. Recognizing the need for a more efficient and error-free solution, the company approached Genpact for assistance in building a scalable and flexible system.

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Genpact partners:

Our partners
There's no such thing as going it alone, which is why we partner with industry-leading businesses

Our partner ecosystem
We blend our deep business and industry knowledge and expertise with data, tech, and AI with our partners' innovative technologies. Together, we focus on delivering outcomes that shape the future.

See how our partnerships create lasting value for our clients and their customers
We partner with companies that complement our industry and functional expertise with best-in-class technology to help our clients meet their goals.
Fueling business transformation
Learn

moreIDC recognizes how Genpact's partner ecosystem enables finance transformationLearn moreDropbox cuts its procurement cycle by 50% and counting, with Genpact and ServiceNowLearn moreTransforming data and technology with rapid cloud migrationLearn more

"AI is revolutionizing the finance industry by enabling unprecedented levels of efficiency, accuracy, and innovation. We are thrilled to partner with Genpact to combine their domain expertise with Microsoft Azure OpenAI Service to empower finance organizations to harness the power of data to drive business transformation."Nicole DezenChief Partner Officer, Microsoft"Genpact is an Elite partner of ServiceNow, and together, we have built best-in-class industry solutions and differentiated offerings. Through our ongoing collaboration, we look forward to delivering compelling business outcomes to clients as they accelerate their digital transformation initiatives."David ParsonsVP, Global Alliances and Partner Ecosystem, ServiceNow"Amazon Bedrock is rooted in secure data handling, encrypting all data and allowing users to customize models privately. Integrated with Genpact's riskCanvas, this powerful combination enables our mutual customers to enhance productivity in investigating, detecting, and preventing financial crime threats."Atul DeoGeneral Manager, Amazon Bedrock at AWS

Meet our partnersMeet the industry-leading companies we partner with to scale the impact we generate for clients.

AdobeTransform customer experiences with Adobe Experience Cloud and Rightpoint. Discover tailored solutions for marketing and customer engagement.Learn moreAboutAnaplanWith connected planning, Anaplan and Genpact help clients develop intelligent insights and improve strategic decisions.AppZenWith AppZen's AI technology and Genpact's compliance-as-a-service solution, clients identify fraud and maintain compliance.LEARN MOREAboutAutomation AnywhereGenpact and Automation Anywhere deliver robotic process automation (RPA) services to CXOs.AWSDeliver new levels of business value and resilience through cloud-enabled domain solutions and our partner, AWS.Learn moreAboutBarkawi GroupGenpact and Barkawi Group design, implement, and run global supply chains through end-to-end supply chain management and digital transformation services.Learn moreAboutBlackLineGenpact and BlackLine help clients transform their mission-critical finance processes.LEARN MOREAboutBlue PrismBlue Prism and Genpact develop intelligent automation and RPA solutions for global clients.Blue YonderGenpact's partnership with Blue Yonder revolutionizes supply chain planning to drive resilience and sustainable growth.Learn moreAboutCelonisThe combination of Genpact's process expertise and Celonis' process-mining technology accelerates transformation for clients.LEARN MOREAboutDatabricksUnleash the power of Databricks' Data Intelligence Platform with Genpact's industry, data, and AI expertise to accelerate business transformation.LEARN MOREAboutDataikuLearn how the Genpact and Dataiku partnership is set to revolutionize the adoption of responsible AI and machine learning by global enterprises.Learn moreAboutDeloitteA strategic alliance between two best-in-class service providers delivering end-to-end business transformation solutions.LEARN MOREAboutEskerTransform customer-service operations with order automation solutions from Genpact and Esker.E2openE2open and Genpact partner to optimize transportation, logistics, global trade management, and control tower operations.Google CloudGenpact and Google Cloud create agile, scalable, and cost-effective solutions for every industry.Learn moreAboutGuidewireInsurance carriers can deliver cost-effective claims handling and improve client satisfaction with Guidewire and Genpact.Learn moreAboutHighRadiusLooking to automate accounts receivable and treasury processes? Talk to Genpact and

HighRadius. [LEARN MORE About Kinaxis](#) Kinaxis and Genpact help clients transform their supply chains into truly digitized strategic assets. [Learn more About Microsoft](#) Transform employee experiences with Microsoft Viva and Rightpoint. Discover how our innovative solutions boost engagement and productivity. [Learn more About o9 Solutions](#) Genpact-o9 strategic alliance helps organizations digitalize supply chain processes and transform planning for superior performance. [LEARN MORE About OneSource Virtual](#) Genpact and OSV transform how companies run their finance functions. Oracle As a platinum partner, we work with Oracle on enterprise resource planning to uncover intelligent insights for more strategic decisions. Salesforce Our strategic alliance with Salesforce and deep experience in sales strategy, user experience design, technology, and operations enables us to deliver world-class Salesforce transformation solutions to our clients. [Learn more About SAP Gold Partner](#) - Genpact designs and implements SAP solutions that increase productivity and operational efficiency. [Learn more About ServiceNow](#) As a ServiceNow Elite partner, Genpact offers a wide range of pre-built accelerators across multiple industries. [Learn more About Snowflake Drive](#) exponential growth, scale, and agility with Genpact's industry experts and data and analytics technology accelerators on the Snowflake data cloud platform. [Learn more About Stibo Systems](#) Stibo Systems and Genpact help customers optimize master data management leading to improved business outcomes. Syniti Data projects need data quality, migration, replication, and governance to succeed. Find out how Syniti and Genpact can help. [Tradecraft](#) Tradecraft and Genpact help clients transform procure-to-pay (P2P) processes and use data for competitive growth. [LEARN MORE About UiPath](#) Genpact and UiPath deliver the value of RPA to CXOs around the world. Veeva Genpact and Veeva partner with regulatory affairs teams to streamline operations and get drugs to market faster. We also advance commercial excellence for sales, medical, and marketing teams. [Workday](#) Genpact and Workday help clients explore the future of finance.

Want to learn more about Partner Plus? Check out our Elite, Premier, and Select levels of partnership opportunities, and more. [READ MORE About](#)

Ready to transform your business? [CONTACT US](#)

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We blend our deep business and industry knowledge and expertise with data, tech, and AI with our partners' innovative technologies. Together, we focus on delivering outcomes that shape the future.

Transform customer experiences with Adobe Experience Cloud and Rightpoint. Discover tailored solutions for marketing and customer engagement.

With connected planning, Anaplan and Genpact help clients develop intelligent insights and improve strategic decisions.

With AppZen's AI technology and Genpact's compliance-as-a-service solution, clients identify fraud and maintain compliance.

Genpact and Automation Anywhere deliver robotic process automation (RPA) services to CXOs.

Deliver new levels of business value and resilience through cloud-enabled domain solutions and our partner, AWS.

Genpact and Barkawi Group design, implement, and run global supply chains through end-to-end supply chain management and digital transformation services.

Genpact and BlackLine help clients transform their mission-critical finance processes.

Blue Prism and Genpact develop intelligent automation and RPA solutions for global clients.

Genpact's partnership with Blue Yonder revolutionizes supply chain planning to drive resilience and sustainable growth.

The combination of Genpact's process expertise and Celonis' process-mining technology accelerates transformation for clients.

Unleash the power of Databricks' Data Intelligence Platform with Genpact's industry, data, and AI expertise to accelerate business transformation.

Learn how the Genpact and Dataiku partnership is set to revolutionize the adoption of responsible AI and machine learning by global enterprises.

A strategic alliance between two best-in-class service providers delivering end-to-end business transformation solutions.

Transform customer-service operations with order automation solutions from Genpact and Esker.

E2open and Genpact partner to optimize transportation, logistics, global trade management, and control tower operations.

Genpact and Google Cloud create agile, scalable, and cost-effective solutions for every industry.

Insurance carriers can deliver cost-effective claims handling and improve client satisfaction with Guidewire and Genpact.

Looking to automate accounts receivable and treasury processes? Talk to Genpact and HighRadius.

Kinaxis and Genpact help clients transform their supply chains into truly digitized strategic assets.

Transform employee experiences with Microsoft Viva and Rightpoint. Discover how our innovative solutions boost engagement and productivity.

Genpact-o9 strategic alliance helps organizations digitalize supply chain processes and transform planning for superior performance.

Genpact and OSV transform how companies run their finance functions.

As a platinum partner, we work with Oracle on enterprise resource planning to uncover intelligent insights for more strategic decisions.

Our strategic alliance with Salesforce and deep experience in sales strategy, user experience design, technology, and operations enables us to deliver world-class Salesforce transformation solutions to our clients.

Gold Partner - Genpact designs and implements SAP solutions that increase productivity and operational efficiency.

As a ServiceNow Elite partner, Genpact offers a wide range of pre-built accelerators across multiple industries.

Drive exponential growth, scale, and agility with Genpact's industry experts and data and analytics technology accelerators on the Snowflake data cloud platform.

Stibo Systems and Genpact help customers optimize master data management leading to improved business outcomes.

Data projects need data quality, migration, replication, and governance to succeed. Find out how Syniti and Genpact can help.

Tradeshift and Genpact help clients transform procure-to-pay (P2P) processes and use data for competitive growth.

Genpact and UiPath deliver the value of RPA to CXOs around the world.

Genpact and Veeva partner with regulatory affairs teams to streamline operations and get drugs to market faster. We also advance commercial excellence for sales, medical, and marketing teams.

Genpact and Workday help clients explore the future of finance.

Client-stories:

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Dropbox cuts its procurement cycle by 50% and counting, with Genpact and ServiceNowDiscover how Dropbox is building a highly efficient, cross-functional, transparent purchasing experience for all employees and vendorsRead the case studyStrengthening data center security with gen AI and autonomous robotsHow security robots are using generative AI to enhance their monitoring, reporting, and interactions with peopleRead the case studyAccelerating finance transformation for MarelliDiscover how Marelli transformed its finance function, enhancing performance, control, and cost-efficiency with a new GBS center of excellenceWatch the video

Mondelēz International: Cutting-edge transformation in record to report. By blending AI and automation, finance professionals can now focus on more value-adding tasks thanks to a streamlined, more accurate finance function.

Filter by...Clear AllTopicTopicAI and data analyticsChange managementCustomer and employee experienceEnvironmental, social, and governanceGrowthIntelligent automationNew business modelsOperational excellenceResilienceRiskIndustryIndustryAerospace and defenseAuto financeAutomotiveBanking and capital marketsBrokers and agentsCapital marketsCloud and SaaS providersCommercial bankingConsumer bankingConsumer electronicsConsumer goodsConsumer goods and retailE-commerceEnterprise technologyFintechHealthcareHealthcare and life sciencesHigh techIndustrial manufacturingInsuranceLife and annuityLife sciencesManufacturingMedia, publishing and entertainmentOn-demand and marketplacesPaymentsProperty and casualtyReinsuranceRetailSemiconductorsSocial media, advertising platforms, and gamingSoftware and digital platformsServiceServiceAccounts payableApplication and infrastructure modernizationArtificial intelligenceAutomationCloudContent moderationCustomer careData and analyticsEnterprise applicationsEnterprise performance management (EPM)Enterprise risk and complianceExperienceF&A consultingFinance and accountingFinancial crime risk managementFinancial risk managementGenerative AIInvoice to cashRecord to reportRisk and complianceSales and commercialSourcing and procurementSupply chain managementSustainability servicesTechnology servicesTrade promotions managementTrust and safety

All insights

Operational excellencePenske + Genpact: Driving innovation and growthSee how Penske's partnership with Genpact has helped it increase market share through better insights, digital efficiencies, and operational excellence.#ClientStory#FinanceTransformationWatch the videoOperational excellenceA procurement health kick for a new spin-offGenpact transformed source to pay for a global consumer health company with a streamlined procurement model with less tech and more controls. Read how.#ClientStoryRead the case studyCloud technologiesGenpact's AI-powered leap into the future: Transforming

background check validation Genpact's scalable generative AI solution, built on Amazon Bedrock, automates employee background checks and enables compliance with client requirements. #Claims #ClientStory #CloudTransformation Read the case study

Get the inside track on how we bring our digital operations and data, tech, and AI to businesses around the world

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Dropbox cuts its procurement cycle by 50% and counting, with Genpact and ServiceNow: Case study Dropbox cuts its procurement cycle by 50% and counting, with Genpact and ServiceNow

Who we worked with Dropbox's software is used by 700 million users in 180 countries to collaborate seamlessly and deliver work faster. What the company needed Replace disconnected processes requiring multiple, time-consuming manual interventions with a user-friendly, end-to-end, automatically orchestrated, and integrated system.

How we helped Dropbox selected ServiceNow, alongside Genpact as its consulting and implementation partner, to deploy Sourcing and Procurement Operations to build a highly efficient, cross-functional, transparent purchasing experience for all employees and vendors. What the company got A 50%+ reduction in procurement cycle 1,000+ ERP and risk assessments automated 99% compliance rate with the new process

Challenge Turning procurement into a strategic asset Dropbox is pursuing a relentless digital transformation program. Across all business teams, the aim is to drive speed, agility, and efficiency and equip its talented people with tools to maximize productivity and provide great services. ServiceNow is a long-term partner on this journey, supporting the company to achieve its vision across numerous domains, including IT, HR, and finance. When Dropbox reviewed its procurement activities, it identified a unique opportunity to redesign its entire approach. Its vision was to replace disconnected processes requiring multiple, time-consuming manual interventions with a user-friendly, end-to-end, automatically orchestrated, and integrated system. The potential to unlock enterprise-wide savings and benefits was significant. Dropbox's procurement activities are substantial, spanning budgeting, sourcing, risk management, contracting, purchasing, vendor management, and payments. Reunan Varene is Dropbox's Director, Source to Pay: "Our goal is to 'get to simple' as quickly as possible, to yield speed, focus, and efficiency. Continuous innovation is vital for Dropbox's ongoing success." At the start, our teams had to overcome significant challenges due to a heavy reliance on people, multiple systems and policies, unique practices, and varying levels of digitization. "The employee experience offered opportunities for improvement across many teams trying their best to navigate complex, manual processes. A lack of transparency and visibility left colleagues feeling unsure where to start, who to engage with, and how their request was progressing." Says Reunan: "We want to support our teams to get the goods and services they need to do great work in a seamless, fast, and cost-effective way. To achieve that, we needed innovative technologies to create a great user experience, to turn corporate spend into an asset, and to use it to fuel employee productivity and top-line growth."

"Enabling a seamless and automated end-to-end purchasing experience is a multi-year journey. Thanks to ServiceNow and Genpact, we're well on our way, with huge potential to unlock so much more value." Reunan Varene, Director, Source to Pay, Dropbox

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Solution Unifying procurement and building a shared vision Dropbox selected ServiceNow, alongside Genpact as its consulting and implementation partner, to deploy Sourcing and Procurement Operations to build a highly efficient, cross-functional, transparent purchasing experience for all employees and vendors. Recognizing the strategic significance of automating its entire end-to-end procurement process, teams from across the organization came together to ensure alignment and coordination. These teams worked toward achieving a consensus on process standardization, policy, budgets, and technologies – and to define what collective success looked like. Applying its procurement and supply chain expertise, Genpact shaped the solution to solve the procurement challenges and ensure it supported Dropbox's overall procurement transformation program, Purchasing 2.0. This included implementing workflow best practices and orchestration to increase self-service, transparency, and reliability. "ServiceNow and Genpact understood our vision, and both have a culture of collaborative problem-solving. In partnership, they built an integration with our Oracle ERP system for financial control and purchase order approval, which was critical to the project's overall success."

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Impact One system used by everyone The procurement experience across the business has been completely transformed. Now, employees log in to their ServiceNow Help Me portal, click on purchasing, and fill out a request form using drop-down menus and other self-guided prompts. From one single intake, the teams that need to respond to the request are automatically engaged, and actions are triggered. Users have complete visibility to track the progress of their request, where it sits in the process, what's going on, and when it will be completed. "Purchasing 2.0, powered by ServiceNow, is a single intake and platform for connected, end-to-end procurement, one place where all purchasing activity takes place," explains Reunan. "By automating the purchase order creation process, our people don't have to go into our ERP system anymore, they don't have to do accounting tasks. The level of excitement about this was through the roof! There's no need to go anywhere else." In all, more than 1,000 ERP and risk assessment processes have been automated, with a 99% compliance rate across the organization. "By updating policies, automating workflows, and integrating applications, everything is much faster and more efficient. Colleagues have a single point of entry with a simple, intuitive interface, and now they have time back to focus on what they do best – adding value for the company and customers." SPO benefits our organization as a whole and at the same time helps individual teams to achieve their own targets, whether that's about savings, managing risk, or ensuring we are purchasing ethically and sustainably. "Reunan Varene also expects Dropbox's new procurement model to enhance relationships with its supply chain. "We want to be a customer of choice and work with the very best suppliers and partners. With ServiceNow, they have a transparent process too, with a clear view of the sales or renewal cycle, and a system that cuts administrative costs. By being a great customer, easy to do business with, our suppliers and partners are more likely to invest in us, using their best people and resources on our projects."

Complete control In the first eight weeks following launch, more than 200 Dropbox employees initiated more than 500 purchasing workflows on the new system. "With

ServiceNow, we've cut procurement cycle times by more than 50% in just eight weeks, and we have complete control of our corporate spend," says Reunan. "Now our teams can use this new corporate asset to drive value and maximize return on procurement investment, with the support of the company's collective expertise, for the benefit of their own areas of operation."Generative AI is also on Reunan's radar screen, to further enhance and simplify the user experience. "We're excited to also explore how generative AI can enable conversation, provide insights, and help reach conclusions more quickly. This will raise the quality of support, save time, and improve consistency and ease of use for everyone."Enabling a seamless and automated end-to-end purchasing experience is a multi-year journey. Thanks to ServiceNow and Genpact, we're well on our way, with huge potential to unlock so much more value."

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Share

Dropbox's software is used by 700 million users in 180 countries to collaborate seamlessly and deliver work faster.

Replace disconnected processes requiring multiple, time-consuming manual interventions with a user-friendly, end-to-end, automatically orchestrated, and integrated system.

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Challenge

Dropbox is pursuing a relentless digital transformation program. Across all business teams, the aim is to drive speed, agility, and efficiency and equip its talented people with tools to maximize productivity and provide great services. ServiceNow is a long-term partner on this journey, supporting the company to achieve its vision across numerous domains, including IT, HR, and finance.

When Dropbox reviewed its procurement activities, it identified a unique opportunity to redesign its entire approach. Its vision was to replace disconnected processes requiring multiple, time-consuming manual interventions with a user-friendly, end-to-end, automatically orchestrated, and integrated system.

The potential to unlock enterprise-wide savings and benefits was significant. Dropbox's procurement activities are substantial, spanning budgeting, sourcing, risk management, contracting, purchasing, vendor management, and payments.

Reunan Varene is Dropbox's Director, Source to Pay: "Our goal is to 'get to simple' as quickly as possible, to yield speed, focus, and efficiency. Continuous innovation is vital for Dropbox's ongoing success.

"At the start, our teams had to overcome significant challenges due to a heavy reliance on people, multiple systems and policies, unique practices, and varying levels of digitization. The employee experience offered opportunities for improvement across many teams trying their best to navigate complex, manual processes. A lack of transparency and visibility left colleagues feeling unsure where to start, who to engage with, and how their request was progressing."

Says Reunan: "We want to support our teams to get the goods and services they need to do great work in a seamless, fast, and cost-effective way. To achieve that, we needed innovative technologies to create a great user experience, to turn corporate spend into an asset, and to use it to fuel employee productivity and top-line growth."

Solution

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Improve user experience and take control of spend

Grow profits, mitigate risk, and transform spend management with our strategic sourcing and procurement services.

Strengthening data center security with gen AI and autonomous robots:

Strengthening data center security with gen AI and autonomous robots

Who we worked with Novva Data Centers, a provider of state-of-the-art data centers across the US, including in Utah, Colorado, and Nevada. What the company needed Advanced functionality, integration, and operational efficiency for Novva's fleet of robots that physically patrol and monitor critical assets and infrastructure Greater security of its data centers by equipping the robots with features capable of detecting and reporting potential threats and vulnerabilities Improved employee and customer experiences with robots

How we helped Gave the robots features like facial recognition, license plate monitoring, and AI-driven anomaly detection for greater security Used natural language processing, hardware integration, and generative AI to give the robots unique personas and equip them with conversational features to facilitate employees' interactions Designed a custom-branded skin for Novva's robots What the company got Advanced, adaptable robots with a deeper alignment to Novva's security needs Enhanced protection against security breaches and other malicious activities A workforce comfortable engaging with the robots and often amused by their unique personalities A framework to quickly deploy additional robots across various locations and facilities

"Rightpoint's expertise in generative AI transformed innovative ideas into impactful real-world solutions." Van Allen EVP of Operations and Technology, Novva Data Centers

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ChallengeBringing humans and machines together to enhance securityData lies at the heart of every successful organization. That's why safeguarding this organizational lifeblood can be the difference between success and failure. For companies like Novva Data Centers, investing heavily in the most advanced security measures is vital. This commitment extends to incorporating technologies such as 24/7 robotic patrols to monitor and protect their premises. This is why Novva made significant investments in Spot robot dogs – four-legged mobile and autonomous robots – manufactured by Boston Dynamics to bolster security and operational capabilities. However, Novva found there was limited value to be gained with the out-of-the-box experience because it lacked integration tailored to Novva's existing services and systems. This is understandable, as Boston Dynamics prides itself in creating some of the most advanced robotics commercially available and relies on organizations like Rightpoint, a global experience leader and Genpact company, to integrate these capabilities for enhanced operational effectiveness. For us, the goal was to equip the robots with advanced security features while also promoting trust in the technology through friendly interactions between robots, employees, customers, and visitors. Novva knew tackling this task would be difficult because it involved technical, design, and user experience considerations. Plus, seamlessly coordinating these improvements across multiple vendors added another layer of complexity. Novva's team also wanted to explore how recent advances in generative AI could detect potential security threats and enable natural voice interactions with the robots. Additionally, they sought ways to improve security on both internal and external perimeters, presenting an even greater challenge.

SolutionCreating experiences that transform how people, technology, and organizations interactWe jumped into action. We had previously partnered with Boston Dynamics to create its first controller app experience for its Spot robots, so we were familiar with the company's technology. And our Total Experience approach, a human-first strategy that blends the customer, employee, and product experience with the latest technology, enabled us to tackle Novva's challenge head-on. We started by thoroughly understanding the robots' use cases and exploring opportunities to enhance processes, experiences, and technology. We optimized the robots' performance by continuously making small changes and updates based on users' feedback and data. Next, we added voice capabilities to build trust and enhance communication with the robots, integrating microphones, speakers, and text-to-audio features. Then, we incorporated large language models with OpenAI's ChatGPT API, training the models with Novva's company data. Finally, we gave the robots unique personalities, such as a cowboy accent, to make interactions more memorable and engaging. The upgrade also included: Collaborating with various existing vendors and making changes to improve video streaming for facial recognition and license plate monitoring Creating a new OpenAI ChatGPT-based service to supplement existing security systems for detecting vehicles with missing license plates Integrating OpenAI's API with existing systems for anomaly detection when the robots detect potential security threats to critical pieces of infrastructure Training the robots with critical information about Novva and its data center operations Designing branded skins for Novva's robots to increase brand recognition and awareness

IMPACTSophisticated, reliable, and friendly robots Not only did the Spot robots become more relatable, interactive, and engaging, but they also bolstered the safety and efficiency of Novva's operations. These new comprehensive capabilities improved decision-making and security procedures by generating consistent data and reducing the probability of human error. And our results went further: With generative AI, the Spot robots can detect and notify Novva employees of potential security threats. Using conversational AI, the robots can also

have natural conversations with people and provide information about the facilitiesSophisticated integration and optimization of predefined autonomous routes allow Spot robots to identify and report on vehicles in Novva's parking lots along with alerting security when vehicles are seen without front or rear license plates, enhancing situational awareness for security investigationsFacial recognition features allow the robots to greet employees and registered visitors by their first name, establishing trust and creating a personalized experienceIt didn't end there, because even robots need a break from time to time: we designed branding and choreographed dance moves for the robots to perform on command to create a more enjoyable workplace for both people and machinesFollowing the success of this project, Novva is looking to expand its collaboration with Rightpoint, building on the robots' capabilities with additional functionalities and features across new locations. Innovation with gen AIBy enhancing Novva's Spot robots, we have demonstrated the power of generative AI when applied thoughtfully and strategically. Through our trusted and transparent partnership, expertise in AI, and solution-oriented mindset, we have helped position Novva as a leader in technology adoption, setting a benchmark in the data center industry for intelligent security operations.

See how to make the most of gen AI in your enterpriseLearn moreAbout Share

Novva Data Centers, a provider of state-of-the-art data centers across the US, including in Utah, Colorado, and Nevada.

Challenge

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For us, the goal was to equip the robots with advanced security features while also promoting trust in the technology through friendly interactions between robots, employees, customers, and visitors. Novva knew tackling this task would be difficult because it involved technical, design, and user experience considerations. Plus, seamlessly coordinating these improvements across multiple vendors added another layer of complexity.

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AI at work:

Cross IndustryAmazon, Dropbox, and other top enterprises are innovating with AI. See how we help.High TechGen AI-powered robots step up security and human interactions at NovvaBanking and Capital MarketsAn investment management firm halves software development times with gen AInsuranceHow to blend technology and AI to speed up underwriting response timesHealthcareBring generative AI to regulatory compliance for a competitive edge in healthcareMedia and EntertainmentEmpowering chat agents and delighting customers with gen AIBanking and Capital MarketsWatch industry leaders discuss how AI technologies detect fraud fasterLife SciencesHear how AI is strengthening finance processes and user experiences at AstraZenecaHigh TechBoosting data center growth and speed to market with gen AIPreviousNextPanel 1Panel 2Panel 3

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Strengthening data center security with gen AI and autonomous robots:

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Who we worked with Novva Data Centers, a provider of state-of-the-art data centers across the US, including in Utah, Colorado, and Nevada. What the company needed Advanced

functionality, integration, and operational efficiency for Novva's fleet of robots that physically patrol and monitor critical assets and infrastructure. Greater security of its data centers by equipping the robots with features capable of detecting and reporting potential threats and vulnerabilities. Improved employee and customer experiences with robots.

How we helped: Gave the robots features like facial recognition, license plate monitoring, and AI-driven anomaly detection for greater security. Used natural language processing, hardware integration, and generative AI to give the robots unique personas and equip them with conversational features to facilitate employees' interactions. Designed a custom-branded skin for Novva's robots. What the company got: Advanced, adaptable robots with a deeper alignment to Novva's security needs. Enhanced protection against security breaches and other malicious activities. A workforce comfortable engaging with the robots and often amused by their unique personalities. A framework to quickly deploy additional robots across various locations and facilities.

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Challenge: Bringing humans and machines together to enhance security. Data lies at the heart of every successful organization. That's why safeguarding this organizational lifeblood can be the difference between success and failure. For companies like Novva Data Centers, investing heavily in the most advanced security measures is vital. This commitment extends to incorporating technologies such as 24/7 robotic patrols to monitor and protect their premises. This is why Novva made significant investments in Spot robot dogs – four-legged mobile and autonomous robots – manufactured by Boston Dynamics to bolster security and operational capabilities. However, Novva found there was limited value to be gained with the out-of-the-box experience because it lacked integration tailored to Novva's existing services and systems. This is understandable, as Boston Dynamics prides itself in creating some of the most advanced robotics commercially available and relies on organizations like Rightpoint, a global experience leader and Genpact company, to integrate these capabilities for enhanced operational effectiveness. For us, the goal was to equip the robots with advanced security features while also promoting trust in the technology through friendly interactions between robots, employees, customers, and visitors. Novva knew tackling this task would be difficult because it involved technical, design, and user experience considerations. Plus, seamlessly coordinating these improvements across multiple vendors added another layer of complexity. Novva's team also wanted to explore how recent advances in generative AI could detect potential security threats and enable natural voice interactions with the robots. Additionally, they sought ways to improve security on both internal and external perimeters, presenting an even greater challenge.

Solution: Creating experiences that transform how people, technology, and organizations interact. We jumped into action. We had previously partnered with Boston Dynamics to create its first controller app experience for its Spot robots, so we were familiar with the company's technology. And our Total Experience approach, a human-first strategy that blends the customer, employee, and product experience with the latest technology, enabled us to tackle Novva's challenge head-on. We started by thoroughly understanding the robots' use cases and exploring opportunities to enhance processes, experiences, and technology. We optimized the robots' performance by continuously making small changes and updates based on users' feedback and data. Next, we added voice capabilities to build trust and

enhance communication with the robots, integrating microphones, speakers, and text-to-audio features. Then, we incorporated large language models with OpenAI's ChatGPT API, training the models with Novva's company data. Finally, we gave the robots unique personalities, such as a cowboy accent, to make interactions more memorable and engaging. The upgrade also included: Collaborating with various existing vendors and making changes to improve video streaming for facial recognition and license plate monitoring Creating a new OpenAI ChatGPT-based service to supplement existing security systems for detecting vehicles with missing license plates Integrating OpenAI's API with existing systems for anomaly detection when the robots detect potential security threats to critical pieces of infrastructure Training the robots with critical information about Novva and its data center operations Designing branded skins for Novva's robots to increase brand recognition and awareness

IMPACTS Sophisticated, reliable, and friendly robots Not only did the Spot robots become more relatable, interactive, and engaging, but they also bolstered the safety and efficiency of Novva's operations. These new comprehensive capabilities improved decision-making and security procedures by generating consistent data and reducing the probability of human error. And our results went further: With generative AI, the Spot robots can detect and notify Novva employees of potential security threats. Using conversational AI, the robots can also have natural conversations with people and provide information about the facilities Sophisticated integration and optimization of predefined autonomous routes allow Spot robots to identify and report on vehicles in Novva's parking lots along with alerting security when vehicles are seen without front or rear license plates, enhancing situational awareness for security investigations Facial recognition features allow the robots to greet employees and registered visitors by their first name, establishing trust and creating a personalized experience It didn't end there, because even robots need a break from time to time: we designed branding and choreographed dance moves for the robots to perform on command to create a more enjoyable workplace for both people and machines Following the success of this project, Novva is looking to expand its collaboration with Rightpoint, building on the robots' capabilities with additional functionalities and features across new locations. Innovation with gen AI By enhancing Novva's Spot robots, we have demonstrated the power of generative AI when applied thoughtfully and strategically. Through our trusted and transparent partnership, expertise in AI, and solution-oriented mindset, we have helped position Novva as a leader in technology adoption, setting a benchmark in the data center industry for intelligent security operations.

See how to make the most of gen AI in your enterprise [Learn more](#) [About](#) [Share](#)

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Transforming the software development cycle with generative AI: