nallas
ACCELERATING VALUE DELIVERY

CORPORATE OVERVIEW

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Citi – Current State

- American multinational investment bank and financial services corporation headquartered in New York.
- The Enterprise Chief Data Office (ECDO) drives and enforces data quality across Citi and addresses the challenges related to the end-to-end data architecture for risk, financial, regulatory, and management information.
- ECDO is driven to improve Citi's risk management practices, including compliance risk management, data quality management and internal controls
- Multi-year remediation projects in progress
- You have already embarked on a digital journey as follows:
  - You have implemented a secure cloud environment offering auto-scale capabilities
  - You use Machine Learning for fraud detection
  - You use predictive analytics for compliance

Citi – Future State

Goals

1. Safety & Soundness
2. Operational Efficiency
3. Client Growth Support

Potential Work Streams?

Continuous improvement in:

- o Risk and Controls - proactive and preventative
- o Data Linkage – improved linkages across data sets
- o Compliance – anticipate and better enforce
- o Infrastructure – more automation

NALLAS AT A GLANCE

Nallas is a software services company creating value for every client through effective use of technology, purposeful engineering models, and adaptive methodologies. We provide data, cloud, product, and quality engineering services for enterprises that need to transform with confidence. We partner with our clients on high-priority, highly-significant efforts where success is paramount.

What makes us tick?

We are driven by, and invested in, your business outcomes: Your measure of success is our measure. **We are so single-minded about this that if we don't believe the outcomes are achievable, we won't pursue the business**

We deliver with stable, empowered, and accountable teams: From our most junior developer to our most senior executive, you can ask "What is the purpose of this project, what is the desired business outcome?" and they will tell you. And unlike other providers, you won't suffer from team churn - **the team you start with is the one that will be with you at the end**.

We provide unparalleled transparency and predictability: Complex engineering projects always come with risks and unknowns, and so having a reliable forecast for success is key. We offer a unified delivery platform called ValueScope, the glass wall between you and the Nallas delivery team. You will have complete visibility on progress against the desired outcomes, key risks, mitigation plans and quality trends with our real-time transparent scoreboards.

Corporate Overview

HISTORY OF 87% PREDICTABLE OUTCOME DELIVERY

HEADQUARTERED IN NJ, USA
with value delivery centers in

40+ CLIENTS

valuescope
Global Value Delivery Platform

Reservoir of

DEEP TECHNICAL
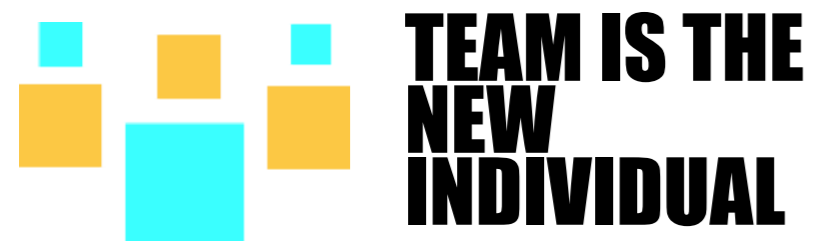
120+ ENGINEERING

EXPERIENCE
EXPERTISE
EXPERIMENT &

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OUR GUIDING PRINCIPLES

These principles are the north star for Nallas. They embody how we function, define our work ethic and culture, and enable us to consistently deliver exceptional value to all our partners.

PROGRESS OVER PERFECTION

Are we taking strides to learn everyday, and in every way? Excellent. Are we innovating on the go? Fantastic. Are we delivering perfect output? We hope so, but that's subjective and always secondary. As long as we keep evolving as professionals and as a company, pivoting when needed, always staying relevant and ahead of the curve, we'll sacrifice a bit of perfection for the sake of progress.

DRIVING WITH TRUST

Every project and every partnership must rest on a foundation of trust - trust in abilities, in the shared objective, in solving and succeeding together. This elevates our work to more than just transactions, and gives rise to the best solutions and outcomes.

SIMPLE IS BEAUTIFUL
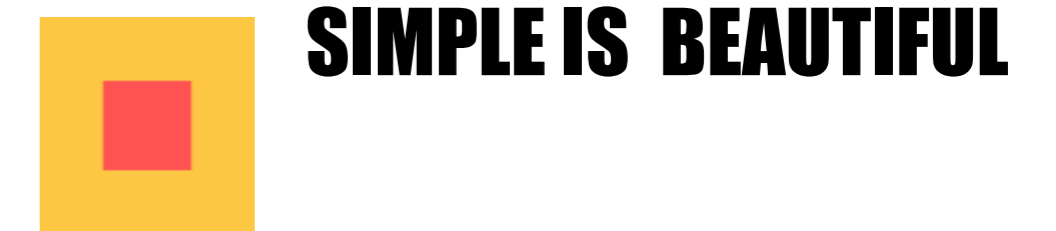
Kick complexity to the curb, focus on smart and simple work. This way, you'll likely find the most elegant solution to any given challenge and move on to new initiatives to invest your time in, for creating the next new simple solution.

TEAM IS THE NEW INDIVIDUAL

Every individual in our team is part of a glorious system bursting with talent. We leverage each other's strengths, we bring out the best in each other, we are dependent yet autonomous. Our standalone work might be impressive, but it excels when done together, creating the highest value possible for our clients.

VALUE THE YOU

We are a team of diverse members, opinions, perspectives and mindsets. All the better to innovate with! Put your point of view forward, let us debate, discourse, learn, unlearn and create value with the unique skills that every individual member has to offer.

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DATA ENGINEERING – Services Overview

Service	Deliverables	Benefits
Data Integration and Management. Integrate, streamline and manage the entire data lifecycle for both internal and external consumers.	• Cloud-native data lakes, marts, and enterprise data warehouse solutions • Auto-aggregation of data across IoT, social, enterprise apps and external partners • Adopters and pipelines to source data • 24×7 monitoring and operations for data integration and management, including archival and destruction • Assurance of data privacy and security	**Cost Avoidance** • Reduced manual effort to aggregate and resolve data discrepancies • Reduced human error rework **Cycle Time Reduction** • Months to days/weeks to prepare data for analysis **Long-Term Revenue** • Shorter path to valuable insights **Risk Avoidance** • Mitigation of risk from outside intrusions and breeches
Data Transformation. Prepare, curate and transform data to illuminate actionable insights.	• Unified format and location of data • High quality and consistency of data • Obfuscation and concatenation of data, where required • Data validation • Support to keep your ETL pipelines healthy	**Cost Avoidance** • Further reduced manual effort to resolve data discrepancies • Further reduced human error rework **Cycle Time Reduction** • Days/weeks to minutes/seconds to prepare data for analysis **Long-Term Revenue Gain and/or Mission** • Further expedited path to valuable insights

DATA ENGINEERING – Services Overview (cont'd)

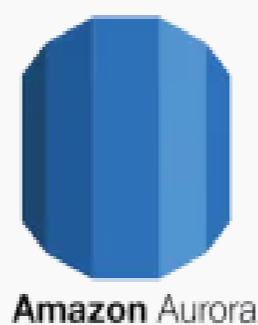| Service	Deliverables	Benefits
Data Analytics. Create, distribute and act on data-driven business intelligence.	• Thought partnership in defining your business goals, revealing the insights needed • Implementation of Analytics and Visualization platforms and tools • Data science solutions like AI and Machine Learning for predictive and real-time analytics	**Cost Avoidance** • Overall better decision-making (less rework) • "Flight Control" for key strategic initiatives (real-time process intelligence leading to less rework) **Short and Long-Term Revenue Gain** • Points to a business strategy from the ground up • Fosters better customer relationships • Can increase sales • Can enable new product and service revenue streams • Identifies financial drivers and enables financial forecasting
Data Governance and Master Data Management Define data structures, owners, SOPs and metrics, and abide by them.	• Design, implementation, and management of data governance and MDM strategies and solutions • Data lineage solutions • Data cleansing and merging • Workflow, audit and compliance solutions	**Cost Avoidance** • More reliable decision support resulting from consistent, uniform data across the organization • Clear rules for modifying processes and data, minimizing churn and delay in the organization **Risk Avoidance** • Improved compliance with data regulations • Safeguards against security breaches • Safeguards against unauthorized distribution

Data Engineering - Benefit Examples

Company	Services	Benefits
Companies with frequent M&A	Data Analytics	**Increased Deal Value.** Access to more data than the seller provides, such as consumer sentiment (social media) and salesforce effectiveness (CRM) data. **Cost Avoidance.** Operational efficiencies such as Talent Management: • 3rd party skill search for recruitment • Identification of high-performing employees for retention and development opportunities **Short-Term Revenue** Integration and culling of R&D pipelines to reduce redundancy and go to market faster
Companies with Product-Led Growth Strategies	Data Analytics	**Long-Term Revenue** A product-led growth strategy facilitated by analytics embedded in software.
Companies Subject to Regulatory Compliance	Data Analytics Data Lineage	**Risk Avoidance** • Industry best-practice data programs (reports, metrics, data elements) to satisfy regulatory requirements of the Fed in the US and the EBA in Europe • Data lineage documentation **Cost Avoidance** Data aggregation to automate reporting described above

DATA ENGINEERING – Preferred Tools

CLOUD ENGINEERING – Services Overview

Service	Deliverables	Benefits
Cloud Migration: Lift-and-shift rehosting of on-premise application or workload to the cloud.	• Migration strategy development • Application modernization • Migration of databases, applications, and infrastructure to the cloud	**Cost Savings and Cost Avoidance:** • Reduced on-premises infrastructure costs – hardware, maintenance, and management • Reduced costs through ability to automatically spin-up and spin-down resources to match demand **Risk Avoidance:** Cloud security services such as role-based access control, multifactor authentication, and unified hybrid security processes
Cloud-Native Solutions: Design and development of modern architectures and more automated application lifecycles.	• Cloud strategy and architecture design • Development of Microservices and API-first architectures • Design, development, and implementation of DevOps solutions and implementation of cloud-based data platforms	**Long-Term Revenue** • API-ready environment to enable faster product development and personalized customer experiences • A platform and operating model to enable faster, more frequent application deployments **Cost Avoidance** Reduced time between when developers write the code and when it moves into production

Cloud Engineering - Benefit Examples

Company	Services	Benefit
Companies who have yet to begin their cloud migrations in earnest, **OR** **Companies who have experienced missteps in the coordination of their cloud migrations, e.g., cost overruns and timeline delays.**	Cloud Migration Strategy Development	**Cost Avoidance** Advanced planning predicts a reliable ROI for your cloud migration, considering the all the puts and takes of a migration—e.g., upfront costs, next-gen cloud skills recruitment, security and compliance requirements, and early termination fees.
Companies focused on customer experience	Cloud Native Solutions	**Long-Term Revenue** Cloud-enabled technologies like AI and Machine Learning deliver personalized customer journeys based on behavior patterns to retain customers. For example, in the banking industry, overdraft warnings based on spending patterns, and exchange-rate offers using geolocation data.
Companies more vulnerable to cyberattacks and/or subject to regulatory compliance	Cloud Migration, Cloud Security Services	**Risk Avoidance** RapidScale claims that 94% of businesses saw an improvement in security after switching to the cloud, and 91% said the cloud makes it easier to meet government compliance requirements.
Companies in need of improved disaster recovery planning	Cloud-Native Solutions	**Cost Savings** • No investment needed in duplicated software and hardware • No dedicated on-premise DR site staff **Cost Avoidance** Minimized downtime

CLOUD ENGINEERING – Preferred Tools

PRODUCT ENGINEERING – Services Overview

Service	Deliverables	Benefits
New Product Development. From ideation to product launch.	• UI/UX design • API development • Web and mobile app development • Agile engineering and DevOps	**Cost Avoidance** Reduced internal labor cost – internal Product Engineering resources can focus on current product set while dedicated set of resources evaluate and assess new product opportunities **Cycle Time Reduction and Short-Term Revenue:** Faster time to market – a full-service New Product Development (NPD) process can take a concept from Product Managers, validate via prototype, and then, if needed, scale to production grade.
Product Modernization. Deconstructed, updated applications designed for the cloud.	• Application re-architecture • Code rewrite to newer technologies • Migration to cloud	**Cost Avoidance** More targeted and contained functional updates – less risk of disrupting unrelated application functionality, fewer bugs for developers to resolve **Long-Term Revenue** Ability to consume a wide variety of innovative services that are available in the cloud, such as AI, industry, and domain services, leading to new insights or new products

Product Engineering - Benefit Examples

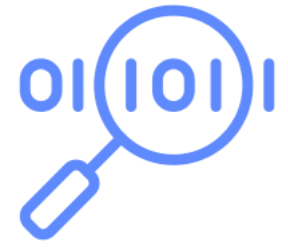| Company	Services	Benefit
Small or Startup Product Companies	Cloud Engineering Product Engineering	**Short-Term Revenue** • Faster time-to-market where engineering teams are fully committed with running the business • Faster time-to-market when no infrastructure for new product development exists – i.e., Agile and DevOps processes
Companies where bureaucracy prevents rapid standup of a prototype	Cloud Engineering Product Engineering	**Short-Term Revenue** Faster time-to-market for promising new product ideas **Cost Avoidance** Less time spent developing new product ideas less promise
Product Companies where IT is not the main line of business	Cloud Engineering Product Engineering	**Cost Avoidance** • Less time spent trying to build prototypes without prototyping expertise • Effort spent on core competency of business instead

QUALITY ENGINEERING – Services Overview

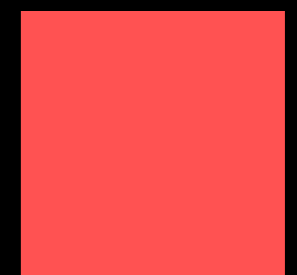| Service	Deliverables	Benefits
Test Design and Automation. Identify, design, and build the elements of the QA process that can be automated.	• **API and Web Services Testing.** Test automation services for functional, regression, and performance testing for API and web services. • **Web and Mobile App Testing.** Functional, regression, and performance testing for web and mobile applications. • **Security, Performance, and Load Testing.** Comprehensive load, security, and performance testing of your applications. • **DevOps integration**	**Cycle Time Reduction** An operating model to enable faster, more frequent testing cycles, and hence application deployments **Cost Avoidance** • Reduction in IT budget on QA testing costs • Redirection of staff to new, potentially revenue-producing development projects **Risk Avoidance** • Decreased downtime and increased SLA compliance • due to known operating capacity, infrastructure sufficiency, and resilience of an application • Early and automated exploitation of application security vulnerabilities
Crowd Testing. Real-world crowd testing with people across markets, locations, countries, and cultures.	Crowd Testing project planning according to demographic needs, testing requirements, and budget	**Risk Avoidance** Increased test coverage given large base of testers covering broad range of devices, browsers, and demographics **Cycle Time** Faster test cycles given 24/7 test activity **Cost Avoidance** Reduction in IT budget on QA testing costs

Quality Engineering - Benefit Examples

Company	Services	Benefit
Companies where application usage is high stakes and defects are unacceptable	Test Design and Automation	**Cost Avoidance** Secured reputation, no damage control
Small or startup companies	Test Design and Automation	**Cost Avoidance** Reduced fatigue and bias-related errors in favor of dedicated, impartial testers
Companies who recognize that the expertise needed for quality engineering is not just testing but also coding	Test Design and Automation	**Cost Avoidance, Risk Avoidance, Cycle Time Reduction** Testing has changed. It's no more about just the manual testing of monolithic applications but nowadays of automation and highly distributed architecture/systems/integration. This requires skills. Sets that are highly technical and can write code for testing.
Companies who see quality engineering as necessary - but not differentiating	Test Design and Automation	**Cost Avoidance** Our clients know that rigorous quality engineering is needed, but they don't see it as a differentiator for their product and therefore do not want to expend internal resources on it.

QUALITY ENGINEERING – Preferred Tools

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THANK YOU

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