NEAT EVALUATION FOR NTT DATA:

Cognitive & Self-Healing IT Infrastructure Management

Market Segment: Overall

Introduction

This is a custom report for NTT DATA presenting the findings of the 2023 NelsonHall NEAT vendor evaluation for *Cognitive & Self-Healing IT Infrastructure Management Services* in the *Overall* market segment. It contains the NEAT graph of vendor performance, a summary vendor analysis of NTT DATA for cognitive & self-healing IT infrastructure management services, and the latest market analysis summary.

This NelsonHall Vendor Evaluation & Assessment Tool (NEAT) analyzes the performance of vendors offering cognitive & self-healing IT infrastructure management services. The NEAT tool allows strategic sourcing managers to assess the capability of vendors across a range of criteria and business situations and identify the best performing vendors overall, and with specific capability in server-centric services and cognitive service desk.

Evaluating vendors on both their 'ability to deliver immediate benefit' and their 'ability to meet client future requirements', vendors are identified in one of four categories: Leaders, High Achievers, Innovators, and Major Players.

Vendors evaluated for this NEAT are: Accenture, Atos, Cognizant, DXC Technology, Getronics, Infosys, Kyndryl, LTIMindtree, Movate, Mphasis, NTT DATA, TCS, Unisys, and UST.

Further explanation of the NEAT methodology is included at the end of the report.

NEAT Evaluation: Cognitive & Self-Healing IT Infrastructure Management (Overall)

Cognitive & Self–Healing IT Infrastructure Management 2023
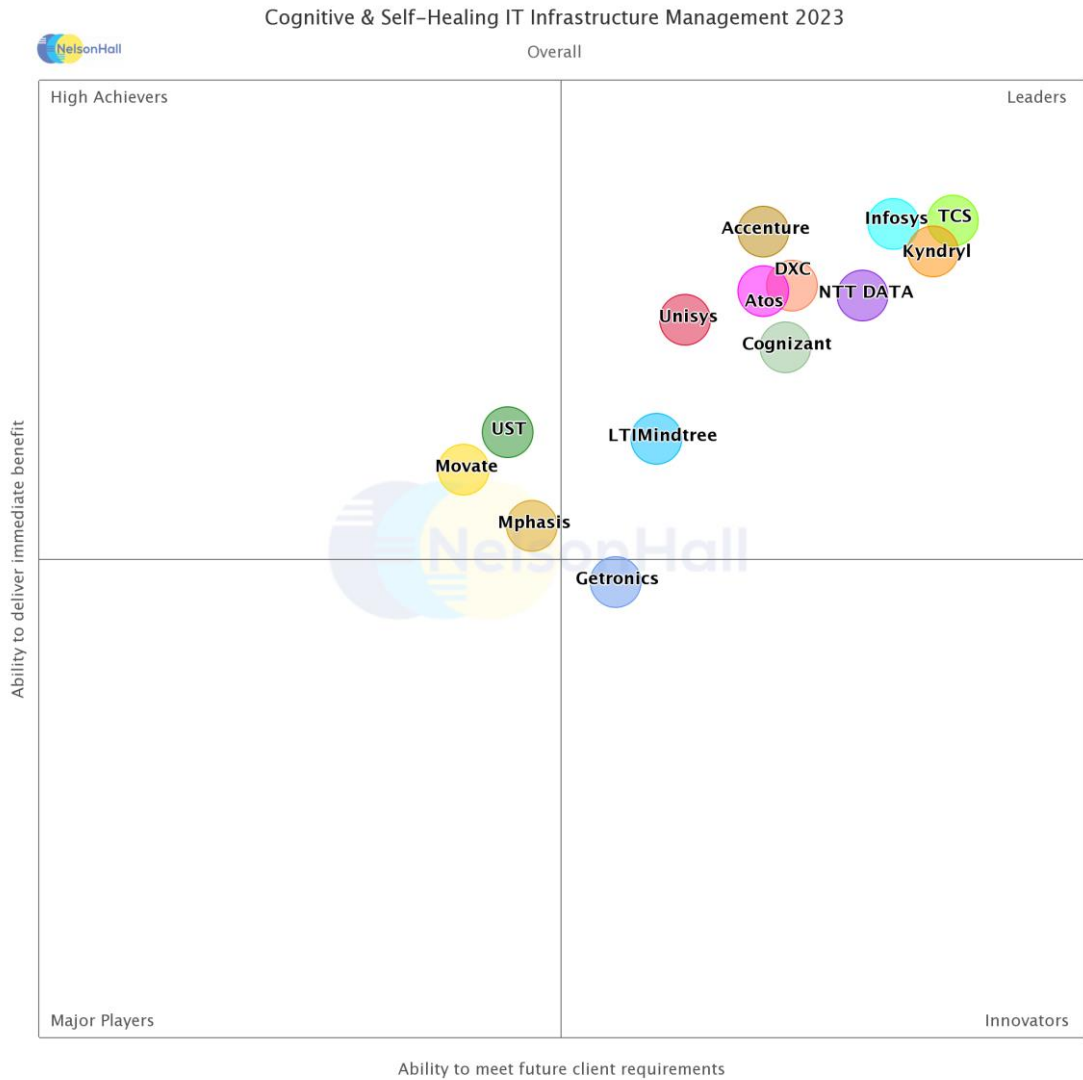
Overall

NelsonHall has identified NTT DATA as a Leader in the *Overall* market segment, as shown in the NEAT graph. This market segment reflects NTT DATA's overall ability to meet future client requirements as well as delivering immediate benefits to its IT infrastructure management services clients.

Leaders are vendors that exhibit both a high capability relative to their peers to deliver immediate benefit and a high capability relative to their peers to meet future client requirements.

Buy-side organizations can access the *Cognitive & Self-Healing IT Infrastructure Management Services* NEAT tool (*Overall*) here.

Vendor Analysis Summary for NTT DATA

Overview

NTT DATA provides cognitive and self-healing IT infrastructure management services through its Nucleus platform and products. The Nucleus team has expanded into NTT DATA's broader automation efforts to adopt an automation-first go-to-market methodology. As NTT DATA takes the platform to its clients to learn about their requirements, it thinks first about the types of automation tools it can bring (Nucleus and non-Nucleus). It adopts a practice-led GTM by vertical, with multiple horizontal offerings under this, and then its products and capabilities.

NTT DATA focuses on being use case-driven, with Nucleus products for individual use cases and the Nucleus platform for hyper-automation to bring independent business motions into a hyper-automated solution effectively; for example, enabling HR, finance, and manufacturing teams to work together to adopt end-to-end processes.

The Nucleus platform provides a consolidated view of IT operations across the data center and cloud, application management, and the workplace. It also supports business operations. It provides an integrated tool suite (third-party, IP, and open source) and looks to reduce platform complexity with configuration interfaces to enable client-specific SLAs, compliance, and orchestration rules. End users access via a self-serve portal, through both catalog and API-based approaches. NTT DATA provides fully managed services.

NelsonHall estimates NTT DATA has ~16k FTEs supporting global cloud and infrastructure management services across global delivery centers, including in Mexico, India, U.S., Canada, U.K., and Romania.

NTT DATA's Cloud Center of Excellence (CoE) supports clients' most complex cloud initiatives and helps them design cloud-native architectures using modern design principles. It also enables the senior-level member in the CoE to be layered on top of NTT DATA managed services or the client's CoE. They will provide thought leadership and feedback, providing one point of contact for consulting, advisory, and delivery teams.

NTT DATA also has experts across automation, blockchain, customer experience, agile, DevOps, IoT, AI, and quantum computing in Innovation CoEs. It also has several digital innovation labs providing a design thinking-led, collaborative approach to workplace and cloud transformation.

NTT DATA has ~150 Nucleus clients. Examples of Nucleus industry-specific use cases include:

- Public Sector: a separate instance of the Nucleus platform helps government agencies create, operate, maintain and evolve their mission-critical IT systems and operations. It is hosted in Microsoft Azure Government and is in the process of obtaining FedRAMP moderate compliance and has NIST 800.54-compliant code. Use cases include application development and modernization and infrastructure deployment and management

- Manufacturing: enhances shopfloor productivity, maximizes asset time, and enables optimal resource utilization. Use cases include managing factory output, managing factory utilities, managing factory infrastructure, and managing just-in-time materials

- Healthcare: open data platform integrating multiple technologies and vendors to accelerate healthcare providers' patient access, care, engagement, revenue cycle, and population health management. Use cases include simplifying patient access, accelerating revenue cycles, enriching patient care, and visualizing population health KPIs.

Financials

NelsonHall estimates NTT DATA's CY 2021 revenues from cloud services at ~$2.4bn, of which ~35% (~$840m) are related to cognitive and self-healing IT infrastructure management. NelsonHall estimates revenues in this area in CY 2022 will be ~$950m. The estimated geographical split of NTT DATA's CY 2022 cognitive and self-healing IT infrastructure management services revenues is:

- North America: 55% (~$523m)

- EMEA: 25% (~$237m)

- Asia-Pacific/Japan and APAC: 20% (~$190m).

Estimated vertical market revenues for cognitive and self-healing IT infrastructure management services in CY 2022 are:

- Financial services and insurance: 35% (~$333m)

- Manufacturing/telco/energy: 25% (~$238m)

- Healthcare: 15% (~$142m)

- Government/public sector: 15% (~$142m)

- Commercial industries (including retail and others): 10% (~$95m).

Strengths

- Strong toolsets across proprietary (Nucleus platform and products), acquired IP (Flux7, acorio, Nexiant, Postlight, Chainanalytics), and third-party in support of hybrid multi-cloud services and hyper-automation

- Development of industry-specific Nucleus use cases and ongoing investment in automation, AI, ML, and analytics in support of the Nucleus platform

- Ongoing investment in automation, AI, ML, and analytics

- Driving XLA outcome-based approach

- Increasing digital re-skilling and up-skilling initiatives

- Broad global delivery footprint across cloud and infrastructure services

- Expanding global CoEs and innovation centers

- NTT Group innovation fund and planned combination of NTT DATA, NTT Inc., and NTT Ltd.

Challenges

- Limited client footprint in EMEA

- Expanding cognitive consulting & advisory capability

- Expediting digital re-skilling initiatives across NTT DATA, including site reliability engineering (SRE) capabilities

- Need to expedite cognitive and AI capabilities in support of cloud services.

Strategic Direction

NTT DATA is looking to expand its cognitive and self-healing IT infrastructure management services capabilities through the following initiatives over the next 12–18 months:

Investing in Nucleus Platform

- Enhancing DIF quality framework, management, integration, data governance, and security. Also, standardizing DIF data ingestion

- Re-designing the platform to leverage more native Azure functions

- Standardizing application security and platform APIs, and consolidating command center experiences

- Investing in preventive maintenance and predictive analytics in support of the infrastructure environment, with more sophistication around failures and incident prevention and real-time reaction to data analytics workload

- Onboarding a new engineering factory model

- Expanding its ecosystem of integrated third-party tooling providers within the established reference architecture of Nucleus.

Nucleus Cloud & Hybrid Products

- Launching composable cloud management platform (CCMP)

- Expanding StackStorm capabilities, standardization, and controls to improve usage, adoption, and results

- Increasing investment in AI/ML to deliver AIOps.

Nucleus Workplace Products

- Extending and enhancing Command Center for Service Desk

- Enhancing Nucleus Storefront for Workplace.

Nucleus Industry-Specific Products

- Enabling FedRamp certification

- Increasing investment in Nucleus for Healthcare and smart manufacturing (smart factory).

Developing Skillsets

- Increased investment in Agile PODs and CoEs in support of hyper-automation

- Expanding skills, including agilists, SRE, DevOps, and app development, from college hires, digital re-skilling, and hiring, with a clear focus on in-house training, development, and retention.

Outlook

NTT DATA continues to invest in its Nucleus platform and products, where it has ~30 products automating ~100 use cases. It seeks to provide a hyper-automated approach to enterprises through a vendor-agnostic approach utilizing Nucleus products and third-party products. NTT DATA will need to continue to expand its consulting and advisory resources in support of this.

NTT DATA focuses on being use case-driven, with Nucleus products for individual use cases and the Nucleus platform for hyper-automation. It invests in Nucleus products and use cases supporting cloud and hybrid infrastructure products, workplace, data center, application, data intelligence, BPaaS, and security. NTT DATA invests in a command-center approach, AIOps, and data and intelligence fabric (DIF). It will need to continue ramping its capabilities across automation, AI, ML, and analytics to support these capabilities.

The company is also focused on the agile delivery of cloud services, with an agile methodology for custom consulting projects. Here, it creates an agile pod that utilizes the best engineering automation (DevOps/SRE) and resource mix to maximize large programs' modularity, scalability, and manageability. It is also investing in new skills, including college hires, re-skilling, and up-skilling to meet use case demand. NTT DATA is also increasing its digital re-skilling through its Nucleus Academy program to facilitate on-demand and in-person training. It is also re-skilling across its existing employee base. This is further supported by dedicated CoEs, training, and retention programs, and NTT DATA will need to continue expediting SRE resources to support this approach.

NTT DATA is expanding industry-specific use cases across the public, manufacturing, and healthcare sectors. We expect it to target additional verticals through M&A, with potential bolt-on acquisitions providing vertical-specific and technology capabilities. We also expect it to further support its XLA-based business outcomes approach.

Finally, NTT DATA invests in joint open-source projects with cloud services providers supporting hybrid multi-cloud capabilities. We expect NTT DATA to continue enhancing its joint GTM capabilities with hyperscalers and key ecosystem partners to target cloud-native and industry-specific use cases.

NelsonHall
TRANSFORM THROUGH INSIGHT

Cognitive & Self-Healing IT Infrastructure Management Market Summary

Overview

Cognitive and self-healing IT infrastructure management services enable clients to drive operational transformation and enhance employee experience. This includes providing a single platform for delivering automation, AI, and analytics to drive business outcomes. Key user requirements include increased monitoring and observability across the full stack, reduction of incidents, and improved remediation and MTTR; in addition, driving an agile delivery model and building a pervasive automation culture across the enterprise.

Vendors are increasingly focused on utilizing AI and automation to deliver value across every business function within an enterprise; for example, vendors look to enable CIOs to focus beyond TCO reduction and drive agility and quality, or they aim to provide CFOs with contractual commitments on automation-led savings. Digital leaders are looking for consumption-led models and hyperautomation, and business leaders are placing an increased focus on enhanced experience. Infrastructure and application leads want to leverage existing automation investments and utilize tooling in line with security requirements.

Key investment areas include greater focus on a real-time data insights-driven approach with site reliability engineers (SRE) approving self-healing solutions and machine recommendations, expanding AIOps uses cases, increasing DevSecOps and citizen development for automation assets. There is also a greater focus on digital re-skilling, strategic ecosystem partnerships, and XLAs to support clients' digital transformation initiatives.

Buy-Side Dynamics

Buyers want vendors to enable AI-based operations, utilizing ML, predictive analytics, and AIOps platforms to enable full-stack monitoring of resources on-premise and in the cloud. Clients also want their vendors to deploy cognitive patterns to detect anomalies and reduce noise and alerts across operations. They want to utilize an SRE-led cloud operating model combined with DevSecOps and AIOps to enable integrated programmable infrastructure. Clients also seek to increase the number of automation bots across their IT infrastructure to self-heal. They need a single control plane for monitoring and observability in support of multi-cloud management and AIOps across hybrid multi-cloud environments. In addition, they seek greater use of self-healing and analytics to support AIOps to NoOps.

Buyers are looking to align talent strategies to business needs, market, and technology trends. They want vendors to help them to develop a cloud-native culture across the enterprise to attract the skills required. In addition, they want to use cloud units as a catalyst for change across the enterprise; for example, through the reskilling of infrastructure specialists to become full-stack architects. They need to increase access to hyperscaler-certified resources to support infrastructure and application modernization roadmaps.

Clients are increasingly looking for vendors to demonstrate the innovation they bring to IT infrastructure services and cloud RFPs through IP, methodologies, toolsets, innovation hubs, and ecosystem partnerships. They want vendors to focus on innovation in cloud and automation roadmap planning stages to develop solutions to meet specific business requirements. They want to utilize operational savings to reinvest in the transformational journey to a future NoOps environment and expedite business outcomes. Clients are looking for innovation in support of infrastructure, development, governance, and security.

In summary, the key decision factors in selecting a vendor to deliver cognitive & self-healing IT infrastructure management services are:

- Driving pervasive automation, change, and culture across the enterprise

- Enabling self-service playbooks for delivery to design, define, and execute automation initiatives in accounts

- Provision of a single platform for the delivery of automation, AI, and analytics

- Enabling a real-time data insights–driven approach, with site reliability engineers (SREs) approving self-healing solutions and machine recommendations

- Developing new skillsets including machine coaches, business value specialists, automation and AI architects, CX leads, service resiliency engineers, cloud architects, and cloud DevSecOps orchestrators

- Expediting resources, building automation use cases and system capability by industry and dedicated automation and AI leads by client account

- Enabling DevSecOps and agile, including CI/CD pipeline automation and infra-as-code integration

- Increasing monitoring and observability across the full stack

- Focusing on low code/no code, including the use of Microsoft Power Platform to empower developers, and transforming the traditional model to an SRE-based model

- Provision of consulting and advisory services to assess client cloud and automation journeys and understand what they have, what they have done in the past, the current business imperatives, and what the future looks like

- Organizational Change Management (OCM) to support cloud transformation roadmaps, including cultural and mindset shift in the increasing adoption of hybrid multi-cloud and cloud-native capabilities

- The ability to support clients' ESG initiatives and drive carbon-neutral agendas

- Providing a marketplace and curated content for the user to compare and order services including provisioning and orchestration of cloud services

- Avoiding vendor lock-in through the utilization of existing investments and unified experience

- Enabling the reduction of incidents, false alerts, and MTTR to improve service reliability

- Providing contractual commitments on automation-led savings

- The ability to provide industry-specific expertise across automation, AI, and analytics.

Market Size & Growth

The global cognitive & self-healing IT infrastructure management services market is worth $66.3bn in 2023 and will grow at 13.6% per annum to reach ~$98.5bn by 2026. Growth over the next 12 months will be driven by accelerated enterprise-wide adoption of hybrid multi-cloud, with enterprises focusing on reducing operating costs and increasing innovation in the face of both uncertain revenues and an unknown economic recovery timeline.

North America will account for 46% of the overall cognitive & self-healing IT infrastructure management services market in 2026, with growth of 13.7%. EMEA will grow at 14.6%, making up 33% of the overall market by 2026. APAC will see double-digit growth through 2026, with LatAm experiencing lower double-digit growth in the same period.

BFSI, manufacturing, retail, healthcare, and the energy & utilities sectors will see the highest growth in cognitive & self-healing IT infrastructure management services through to 2026.

Success Factors

Critical success factors for vendors within the cognitive & self-healing IT infrastructure management services market are:

- Ramping automation assessment architects, client success engineers, and cloud-native development resources. In addition, vendors are ramping machine-first developers, cloud architects, business value specialists, hyperscaler SMEs (AI/ML), and SREs in support of legacy and hybrid multi-cloud operations

- Utilizing consulting and advisory services early in the process to define the client's cloud and automation transformation roadmap. Vendors should utilize data insights to provide deep discovery of assets and automation matrix, define an agile delivery model, and build an automation culture

- Expanding agile and DevSecOps capabilities, AI insights, recommendations, and automated actions for the DevOps process, including governance in support of SDLC. In addition, vendors should offer CI/CD automation, including CI/CD toolchain integration, infra-as-code (IaC) integration with templates and API-driven architecture, and container as-a-service (CaaS) with DevOps

- Using intelligent OCM to drive digital adoption and using device and sentiment insights to inform training methodologies and technology adoption rates. Top vendors are applying AI to OCM engines to target and tailor technology adoption and updates, training, and enhanced experience by persona

- Using AIOps to trigger automation and enable automated remediation, enacting event and incident automation to diagnose and remediate (self-heal) incidents through AI, cognitive bots, and proactive and predictive analytics. Vendors are expanding AIOps to NoOps cloud managed services and developing more complex use case creation through ML and training for orchestration and resolver bots

- Expanding catalog-based self-service and bot stores for reusable automation assets developed by cloud and automation CoEs. Vendors should pursue the continued development of solution accelerators based on repeatable patterns across their managed services client base. They should also provide a marketplace model, enabling clients to add their assets and solve their specific business challenges by choosing the service and capabilities required

- Expanding industry-specific offerings and automation, AI, and cloud CoEs and innovation labs. Top vendors drive an AI-led service desk, increase the complexity of cognitive virtual agent use cases, and target integration with self-healing solutions. They also utilize cloud services in support of clients' ESG initiatives and drive carbon-neutral agendas through Green apps

- Utilizing citizen development principles to reduce ongoing IT costs and increase the value of adopting low-code platforms (e.g., Microsoft Power Platform). Vendors need to ensure they have defined a robust and encompassing capability to support this transformation.

This capability should span training the individuals, building foundational tools and processes, and defining governance structures

- Providing a single-pane management view and cloud-native PaaS support including microservices and containers, utilizing APIs to bring tools into the cloud ecosystem, including cloud-native provisioning. Vendors should also enhance FinOps capabilities in the management of cloud costs and increase optimization, monitoring, and observability to enhance dashboard performance across the cloud ecosystem

- Developing IP, joint GTM, and strategic initiatives with hyperscalers, in particular across AI and ML, in support of hybrid multi-cloud support on both an industry- and client-specific level. Also, developing use cases in the management of hybrid edge data centers and 5G. Vendors are also expanding partnerships with start-ups, particularly in support of cloud-native PaaS services.

Outlook

The future direction for cognitive & self-healing IT infrastructure management services will include:

- A full-stack digital operations model and SRE-led operations by default, including a full-stack organizational structure for delivering digital transformation through productized offerings

- Ongoing investment in automation and IaC to enable a developer-centric model that extends from DevOps to DevSecOps to NoOps in an agile manner; and DevSecOps in support of cloud-native apps (DevOps and microservices)

- Vendors moving beyond self-healing and remediation to more self-assurance, with zero avoidable errors, enabling systems to operate in a resilient manner in relation to incidents, service requests, and capacity management

- Expanding AIOps to NoOps cloud infrastructure managed services and developing more complex use cases. Services will also incorporate next-gen cloud management observability based on AIOps and the use of ML for real-time data center monitoring

- Increasing data-driven proactive experience centers and proactive mass healing (L2/3), with service desk resolving data corrections or data validation errors and site reliability engineers approving solutions offered by self-healing and developing algorithms for AIOps and automation use cases

- Standardization of XLAs in support of a NoOps environment, and greater focus on the development of industry-specific personas and creation of AI solutions and use cases to fit specific personas by industry and business requirements

- More focus on automation in a box: self-service playbooks to enable account delivery teams to design, define, execute, and communicate automation initiatives in client engagements

- Greater use of AI across OCM to drive digital adoption and improve employee experience, and the targeting of OCM methods based on AI insights using real-time data analytics

- Increased collaboration and GTM with hyperscalers and ecosystem partners to develop use cases to solve client specific problems and developing POCs.

NEAT Methodology for Cognitive & Self-Healing IT Infrastructure Management

NelsonHall's (vendor) Evaluation & Assessment Tool (NEAT) is a method by which strategic sourcing managers can evaluate outsourcing vendors and is part of NelsonHall's *Speed-to-Source* initiative. The NEAT tool sits at the front-end of the vendor screening process and consists of a two-axis model: assessing vendors against their 'ability to deliver immediate benefit' to buy-side organizations and their 'ability to meet client future requirements'. The latter axis is a pragmatic assessment of the vendor's ability to take clients on an innovation journey over the lifetime of their next contract.

The 'ability to deliver immediate benefit' assessment is based on the criteria shown in Exhibit 1, typically reflecting the current maturity of the vendor's offerings, delivery capability, benefits achievement on behalf of clients, and customer presence.

The 'ability to meet client future requirements' assessment is based on the criteria shown in Exhibit 2, and provides a measure of the extent to which the supplier is well-positioned to support the customer journey over the life of a contract. This includes criteria such as the level of partnership established with clients, the mechanisms in place to drive innovation, the level of investment in the service, and the financial stability of the vendor.

The vendors covered in NelsonHall NEAT projects are typically the leaders in their fields. However, within this context, the categorization of vendors within NelsonHall NEAT projects is as follows:

- **Leaders**: vendors that exhibit both a high capability relative to their peers to deliver immediate benefit and a high capability relative to their peers to meet future client requirements

- **High Achievers**: vendors that exhibit a high capability relative to their peers to deliver immediate benefit but have scope to enhance their ability to meet future client requirements

- **Innovators**: vendors that exhibit a high capability relative to their peers to meet future client requirements but have scope to enhance their ability to deliver immediate benefit

- **Major Players**: other significant vendors for this service type.

The scoring of the vendors is based on a combination of analyst assessment, principally around measurements of the ability to deliver immediate benefit; and feedback from interviewing of vendor clients, principally in support of measurements of levels of partnership and ability to meet future client requirements.

Note that, to ensure maximum value to buy-side users (typically strategic sourcing managers), vendor participation in NelsonHall NEAT evaluations is free of charge and all key vendors are invited to participate at the outset of the project.

Exhibit 1

'Ability to deliver immediate benefit': Assessment criteria

Assessment Category	Assessment Criteria
Offering	Cognitive and self-healing IT infrastructure management capability
	Cognitive IT infrastructure remediation capability, and self-healing of assets
	Cognitive and self-healing server and cloud management capability
	Cognitive IT service desk capability
	AI-Ops capabilities
	Monitoring and observability services
	Advanced analytics, cognitive and ML capabilities
Delivery	Cognitive and self-healing IT infrastructure North America delivery capabilities
	Cognitive and self-healing IT infrastructure EMEA delivery capabilities
	Cognitive and self-healing IT infrastructure APAC delivery capabilities
	Cognitive and self-healing IT infrastructure LATAM delivery capabilities
	Dedicated SREs, automation architects, engineers, hyperscaler-certified, and SME's
	Dedicated automation/AI CoEs, experience centers and innovation hubs
	Ability to provide IP and accelerators in support of cognitive and self-healing IT infra management
	Ability to incorporate DevSecOps and agile methodologies in support of cognitive and self-healing
	Extent of third-party, hyperscaler, and ISV partnerships in support of cognitive and self-healing
	Ability to enact AI-enabled service desk, utilize cognitive agents and drive zero-touch automation
Presence	Scale of Ops - Overall
	Scale of Ops – N. America
	Scale of Ops - EMEA
	Scale of Ops - APAC
	Scale of Ops - LATAM
	Number of clients overall for cognitive and self-healing IT infrastructure management

Continued…

Benefits Achieved	Improved server availability
	Level of cost savings achieved
	Reduced service outages
	Increased end-user/business satisfaction
	Improved speed of problem resolution

Exhibit 2

'Ability to meet client future requirements': Assessment criteria

Assessment Category	Assessment Criteria
Overall Future Commitment to Cognitive & Self-Healing IT Infrastructure Management Services	Financial rating
	Commitment to cognitive and self-healing IT infrastructure management services
	Commitment to innovation in cognitive and self-healing IT infrastructure management services
Investments in Cognitive & Self-Healing IT Infrastructure Management Services	Investment in IP and platforms in support of cognitive and self-healing IT infra management
	Investment in support of cognitive and self-healing IT infrastructure remediation
	Investment in cognitive and self-healing IT infrastructure server and cloud management
	Investment in support of cognitive IT service desk
	Investment in AIOps capabilities and move to NoOps
	Investment in support of monitoring and observability services
	Investment in analytics, cognitive and ML services
Ability to Partner and Evolve Services	Key partner
	Ability to evolve services

For more information on other NelsonHall NEAT evaluations, please contact the NelsonHall relationship manager listed below.

Sales Inquiries

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NelsonHall will be pleased to discuss how we can bring benefit to your organization. You can contact us via the following relationship manager:

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