NEAT EVALUATION FOR UNISYS:

Cognitive & Self-Healing IT Infrastructure Management

Market Segment: Overall

Introduction

This is a custom report for Unisys presenting the findings of the 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 Unisys for cognitive & self-healing IT infrastructure management services, and the latest market analysis summary.

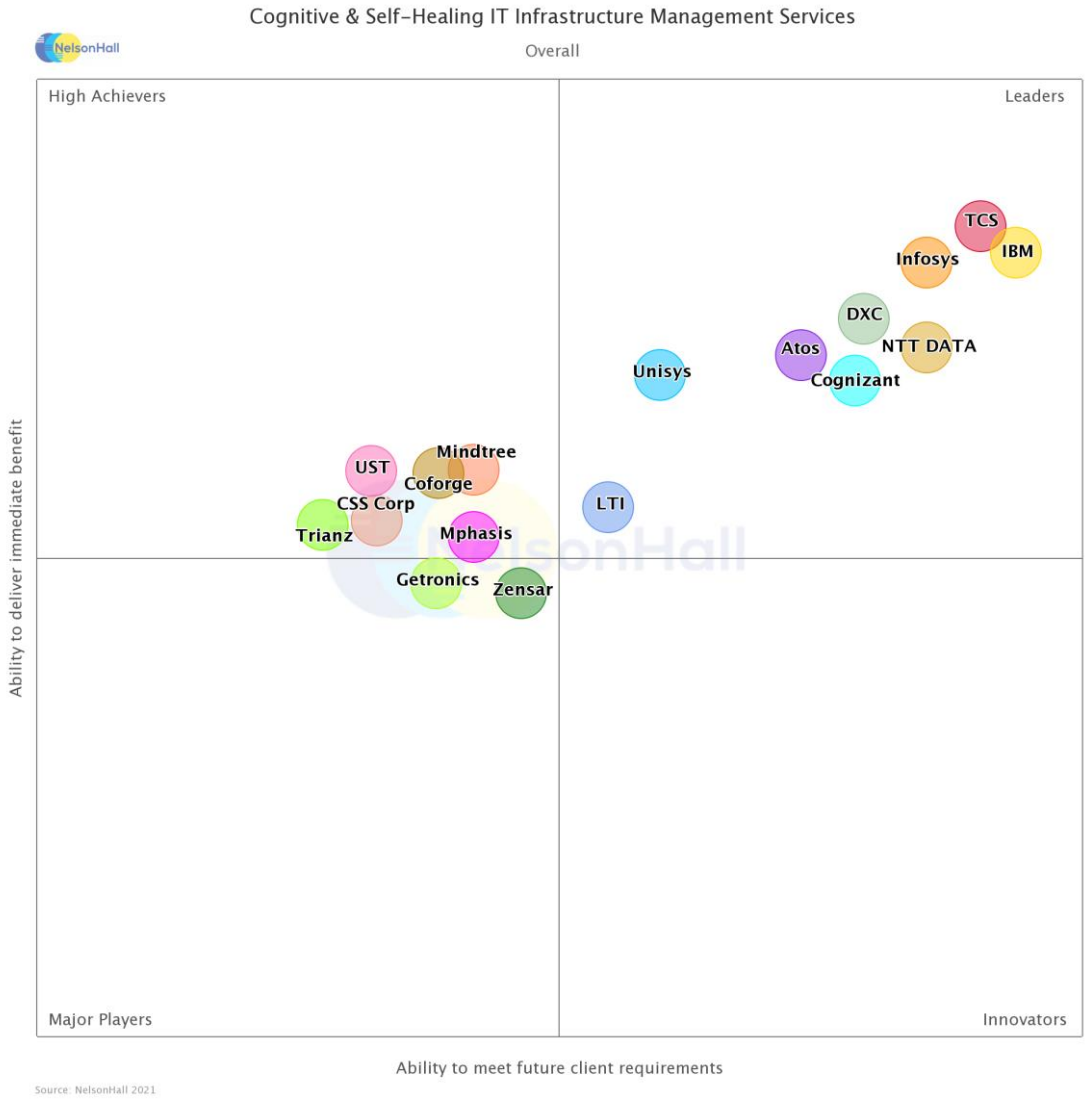
This NelsonHall Vendor Evaluation & Assessment Tool (NEAT) analyzes the performance of vendors offering cognitive & self-healing IT infrastructure management services. The NEAT tool allows strategic sourcing managers to assess the capability of vendors across a range of criteria and business situations 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: Atos, Coforge, Cognizant, CSS Corp, DXC Technology, Getronics, IBM, Infosys, LTI, Mindtree, Mphasis, NTT DATA, TCS, Trianz, Unisys, UST, and Zensar Technologies.

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

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



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

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

Vendor Analysis Summary for Unisys

Overview

Unisys' CloudForte AIOps platform enables clients to manage their cloud journey, whether greenfield, brownfield, hybrid-cloud, or multi-cloud. CloudForte is comprised of products and services with Unisys' objective to demystify the cloud journey using a combination of people, products, and partnerships delivered through managed services. It is cloud-agnostic with three primary uses cases supported by CloudForte client journey capability, including:

- Cloud migration
- Application migration through DevSecOps
- Hybrid cloud management to optimize current deployments and operations.

Another key use case supported includes a virtual data center.

Unisys is looking to AI-enable the cloud journey through platforms and services. This could include advisory, strategy and recommendations, migration, operations, and optimization or security. It wants to AI-enable the decision-making process across whichever category so that it is optimized and leverages the historical data, and uses this to make predictions for next steps, or migration, and decide and optimize based on the client context and historical data.

Through AIOps, Unisys provides continuous management and operations capability to manage cost and reduce incident handling cost by minimizing false positives. It provides ML-enabled operations and management capability to drive cost optimization, SLA management through incident management, event correlation, and zero-incidents system through AIOps.

Unisys has also built a number of accelerators, including single-cloud, hybrid-cloud, and multi-cloud, with the ability to rapidly onboard clients and provision them with guardrails to ensure security and compliance issues are not compromised. It further helps clients fine-tune their cloud journey using CI/CD or DevSecOps, including integrating security into the DevSecOps cycle.

A key focus area includes cloud security and compliance to ensure hybrid cloud security. This includes the capability to ensure hybrid cloud security, whether from a cloud infrastructure perspective or cloud workloads, cloud instances, or on-premise workloads.

Key AIOps use cases include:

- *Intelligent Capacity Management*: optimizing cloud infrastructure with recommendations on rightsizing hybrid/multi-cloud resources
- *Incident Clustering and Root Cause Analysis*: identifying incidents clusters and resolution through root causes analysis
- *Automate Predictive Insights*: workflow automation to implement validated and approved recommendations.

Unisys focuses on cloud analytics, AI, and ML across its CloudForte platform, with AI enabling operations with predictive management. Unisys sees three broad approaches to AIOps, including domain agnostic, domain-centric, and a custom approach, and is focused on the domain agnostic approach. CloudForte offerings include:

- *CloudForte AIOps*: a mix of IP and third-party tools in a SaaS environment, which aims to replace multiple, separate, IT operations tools with a single, intelligent, and automated IT operations platform
- *CloudForte Navigator*: Unisys' advisory and recommendation tool with multiple questionnaires and the ability to assess Well-Architected framework related benchmarks. It also provides security and compliance posture assessment and application modernization
- *CloudForte Assure*: a multi-cloud security and compliance solution providing cloud security posture management and cloud workload protection, looking across all cloud services, operating systems, Pass, IaaS, Kubernetes configuration, and SaaS.

Financials

Unisys' CY 2019 revenues were ~$2.9bn, and of this, Cloud & Infrastructure services revenues were ~$1.6bn. NelsonHall estimates that ~15% (~$240m) of the C&IS revenues are associated with cloud services, and further estimates that ~30% (~$72m) of these revenues relate to cognitive & self-healing IT infrastructure management services revenues.

NelsonHall estimates revenues in this area in CY 2020 will be ~$85m, with the following geographical breakdown:

- North America: 48% (~$41m)
- EMEA: 30% (~$26m)
- APAC: 12% (~$10m)
- Latin America: 10% (~$8m).

NelsonHall estimates the vertical industry breakdown of Unisys' cognitive & self-healing IT infrastructure management services revenues in CY 2020 as:

- Commercial: 40% (~$34m)
- Public sector: 31% (~$26m)
- Financial services: 29% (~$25m).

Strengths

- Extensive IP and accelerators including CloudForte Navigator, CloudForte AIOps, CloudForte Cloud Management Platform (CMP), CloudForte Assure, and DevSecOps
- Developing LeanBiz culture-based approach to drive modernization through scaled agile
- Growing AI CoEs and cloud experience centers to showcase partners' capabilities and innovation to drive client outcomes
- Increasing investments in microservices and container management
- Commercial pricing models based on client outcomes

- AI/ML capabilities of Stealth security offering
- Developing XLAs to resolve issues and measuring productivity gains proactively.

Challenges

- Continuing to increase AIOps use cases and ramping clients on AIOps platform
- Increasing use cases in support of the virtual agent
- It needs to continue to expedite its AI and cognitive capabilities
- Ramping dedicated automation resources and certifications
- A limited number of business consultants.

Strategic Direction

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

Investing in and Expanding IP and Accelerators

- Further development of DevSecOps, and quickly bringing applications into production, and automation across the entire lifecycle, including security
- Increasing automation library artifacts, templates, and catalog items into CMP and providing hyper-automation
- AI-enabled CloudForte journey across posture assessment, pre-and post-migration, and forecast client journeys to the cloud and predict using 'what if' scenarios for a proactive and predictive approach to AI-enable the entire process, driven by data
- Expanding AIOps use cases across IP and third-party tools to optimize several operational- and business-related capabilities
- Investing in hybrid cloud automation, orchestration, and management, in particular in support of predicting issues and enabling auto-remediation and self-healing capabilities
- Increasing accelerators in support of CloudForte, in particular in support of containers.

Expanding AI CoEs

- Increasing the footprint of AI CoEs and supporting skillsets across AI and cloud architects, data scientists, AI/ML engineers, and automation engineers
- Continued focus on measurement of automation effectiveness across assisted automation and auto-resolution and outcomes-driven
- Expanding agile squad resources in support of CloudForte and certifications through Unisys University.

Outlook

Unisys is increasing its focus on AI, analytics, and ML through its IP, including CloudForte AIOps platform and third-party tools. It currently has two use cases in support of capacity management and root causes analysis, and is increasing use cases in support of AIOps across operations and also business-related capabilities. It will need to expedite its use cases in support and ramping the client base across its AIOps platform. It is also investing in expanding its automation library artifacts, templates, and catalog items to drive hyper-automation further.

Unisys is also focusing on DevSecOps and the enablement of automation across the entire lifecycle, including security. Here, it can further leverage the AI/ML capabilities CloudForte Assure and Stealth. Through CloudForte Navigator, Unisys is looking to further AI-enable strategy and recommendations supporting consulting and advisory services. It will also need to ramp its consulting resources to support its focus on AI, analytics, and automation.

In support of digital workplace services, Unisys is expanding its virtual agent (Amelia) in partnership with IPsoft and integrating with Nexthink to enhance self-healing capabilities. It is also expanding its use cases in support of the virtual agent, including joint IP with IPsoft, and a triage model (currently in pilot mode). It will need to continue to ramp its use cases to support its virtual agent to enhance UX further.

Unisys further invests in dedicated AI CoEs and supporting skillsets across analytics, AI/ML, and automation. It will need to continue to ramp its dedicated resources in these areas and support digital re-skilling across the company.

Also, it is further developing XLAs to drive business outcomes further and measure productivity improvements. Finally, we expect Unisys to expand its ecosystem of partners in support of IP, particularly across start-ups in AI/ML. We also expect Unisys to develop joint IP with strategic ecosystem partners, particularly with AWS across the public sector and with Azure and GCP.

Cognitive & Self-Healing IT Infrastructure Management Market Summary

Overview

Cognitive and self-healing IT infrastructure management services are enabling clients to utilize AI and ML capabilities to improve provisioning, remediation and business outcomes. Key user requirements include the reduction of incidents, false alerts and MTTR to improve service reliability, and increasing agility through consumption-led software models and hyper scale; and, in addition, the ability to provide industry-specific expertise across automation, AI and analytics.

Vendors are increasingly focused on utilizing AI and automation to deliver value across every business function within an enterprise; for example, enabling CIOs to focus beyond TCO reduction, and expedite to cloud native. Vendors are adopting a consulting-led approach through design thinking to collaboratively develop automation and AIOps solutions with clients.

Key investment areas include a greater focus on automation and AI to drive cognitive service desk, agile, and DevSecOps, and deploying AIOps and use cases to increase autonomous infrastructure capabilities. There is a greater emphasis on enabling the skillsets and technologies required for a hybrid multi-cloud ecosystem and NoOps environment, with an increased focus on XLAs and automation outcome-based approaches.

Buy-Side Dynamics

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

- Enabling AIOps (use of resolver bots and diagnostics engine to drive further insights), including use of auto-remediation and ML
- Ability to deploy use cases and supporting algorithms for anomaly detection, outage prediction, root cause analysis, health prediction, and patch automation
- Providing an open approach to orchestration, including cloud-native provisioning and discovery with cloud APIs (e.g., CloudFormation, Azure ARM, Terraform)
- The development of new skillsets including machine coaches, business value specialists, automation and AI architects, CX leads, service resiliency engineers, cloud architects, and cloud DevOps orchestrators
- Ability to expedite resources building automation use cases and system capability by industry, and dedicated automation and AI leads by client account
- Ability to manage increasing cloud infrastructure consumption across hybrid multi-cloud through single CMP
- Driving infrastructure and application modernization
- Enabling DevSecOps and agile, including CI/CD pipeline automation and infra as code integration

- Expanding self-healing capability within cognitive virtual agents, and proactive guided resolution utilizing NLP and ML
- Deploying proactive and predictive analytics to support pattern recognition and anomaly detection to enable remediation and drive issue/solution recommendations
- Increasing end-user sentiment analysis and driving an XLA-based approach to client outcomes.

Market Size & Growth

The global cognitive & self-healing IT infrastructure management services market is estimated by NelsonHall as ~$41,200m in 2021. It is expected to grow at 12.1% CAGR to reach ~$65,150m by 2025.

North America will account for 46% of the overall cognitive & self-healing IT infrastructure management services market in 2025, with overall growth of 11.7%; with EMEA growing at 13.8% and making up 33% of overall market by 2025. APAC will see double-digit growth through 2025, with LatAm experiencing high single-digit growth in the same period.

Challenges & Success Factors

The key challenges faced by cognitive & self-healing IT infrastructure management services vendors include:

- Clients are engaging vendors to assess the use cases that can be created to enable transition to future NoOps environments. Many clients are still at the early stages of AI implementations, or using basic levels of automation. They need to better understand all the data generated from their IT environments and, acting on this, to stop issues in the first instance. Clients are developing use case automation into runbooks and design workflows to orchestrate their execution in response to monitoring incidents and requests. They want to support incidents and service requests across multiple clouds including AWS, Azure, and GCP, with APIs into existing ITSMs and monitoring to increase workflow automation
- Clients 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. Also, increasing automation bots across IT infrastructure to self-heal. Clients need to bring digital offerings to market faster and utilize an SRE-led approach to improve SDLC and AIOps engine capabilities. They also want to further enable a 'zero-touch' and AI-enabled service desk and improve business outcomes across the entire hybrid landscape
- Clients are increasingly looking for vendors to demonstrate the innovation they bring to cloud and workplace RFPs through IP, methodologies, toolsets, innovation hubs and ecosystem partnerships. In addition, they are adopting a more tailored approach to cloud and workplace services, developing an industry-specific and persona-based approach to improve UX. Clients want to co-innovate and co-create cloud-first solutions at pace in order to enable autonomous infrastructure environments. They want to utilize operational savings to re-invest in a transformational journey to a future NoOps environment and expedite business outcomes.

The key success factors for cognitive & self-healing IT infrastructure management services vendors include:

- *Increasing skill-sets*: build a bench of resources with cloud-native development capabilities. In addition, ramping automation architects, machine first developers, cloud architects, business value specialists, hyperscaler SMEs (AI/ML) and site reliability engineers (SRE) in support of hybrid multi-cloud operations
- *Consulting and advisory services*: offer onshore consulting and advisory services providing a design thinking and collaborative approach to define clients' NoOps transformation roadmap. This includes modernization from monolithic to microservices, platform build including cloud-native, to drive an autonomous infrastructure environment
- *Data analytics hub*: developing a single data hub framework with self-service access to mission-critical data and telemetry for the data user community. Also, creating data management utilities, bringing in data from all source systems to the single data hub. In addition, utilizing cloud-native capabilities including AWS Data Mover and Broker
- *DevSecOps and agile*: expanding agile and DevSecOps capabilities, AI insights, recommendations and automated actions for DevOps process, including governance in support of SDLC. In addition, 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
- *Increasing AIOps and automation*: 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. Expanding AIOps to NoOps cloud managed services and developing more complex use case creation through ML and training for orchestration and resolver bots
- *Automation library assets*: expanding catalog-based self-service and bot store for reusable automation assets. Continued development of solution accelerators based on repeatable patterns across managed services client base. Also, providing a marketplace model enabling clients to add their assets and solve their specific business challenges and choose the service and capabilities required
- *Focus on innovation*: expanding digital transformation centers, innovation hubs and cloud CoEs in support of AI, analytics and automation. Combining CMP, DevOps and AIOps to manage a hybrid multi-cloud environment. In addition, creating dedicated experience centers to monitor XLA performance and end-user satisfaction across a hybrid multi-cloud environment
- *Cloud management platform*: increasing focus on cloud-native PaaS support including microservices and containers. Utilizing APIs to enable a more open approach to orchestration including cloud-native provisioning. Increasing monitoring and observability across the full-stack to inform automation and drive remediation
- *AI-led service desk*: developing automation and AI capabilities to advance to L3 and above ticket resolution. Increasing complexity of cognitive virtual agent use cases, and integration with self-healing solutions to expedite autonomous resolution and move to a 'zero-touch' service desk
- *Ecosystem partnerships and IP*: developing IP, joint GTM and strategic initiatives with hyperscalers, in particular across AI and ML in support of hybrid multi-cloud from both an industry and client-specific level. In addition, expanding partnerships with start-ups, in particular in support of cloud-native PaaS services.

Outlook

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

- Expanding AIOps to NoOps cloud and infrastructure managed services, and developing more complex AI uses cases through ML and training for orchestration and resolver bots, serverless capability on top of orchestration platforms, and next-gen cloud management observability based on AI-Ops. In addition, developing real-time monitoring in a data center environment, utilizing ML technologies and AI on a video feed for object detection
- Developing single framework datahubs with data from all source systems with a greater focus on predictive analytics to enable data scientists and SMEs to self-serve. More focus on cloud native data management capabilities
- 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
- Greater focus on driving containerization (CaaS) and PaaS services at scale, including Kubernetes and Docker, mesh capabilities and serverless architecture services, and utilizing DevSecOps to provide fully managed container services
- Development of proactive mass healing (L2/3) with service desk resolving data corrections or data validation errors and site reliability engineers (SRE) approving solutions offered by self-healing
- Vendors will increase joint GTM approaches with strategic ecosystem partners, and build dedicated business units (e.g., Microsoft, AWS, Google), in particular in support of AI, ML, and automation
- Vendors will expand AI, ML, and analytics investments to provide greater insights on workflows and informed decisions on cost reduction, including landing zones and automating the decision on where deployments go
- 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
- Vendors will increase networks of innovation hubs and AI CoEs to deliver collaboration sessions in close proximity to clients. They will expand site reliability engineering (SRE) approach as the default to manage end-to-end cloud services in a highly automated way.

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 management capability
	Cognitive IT service desk capability
	AIOps capabilities
	API and data-driven services
	Advanced analytics, cognitive & 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 cognitive/AI CoEs, experience centers and innovation hubs
	Ability to provide IP and accelerators in support of cognitive & self-healing IT infra management
	Ability to incorporate DevSecOps and agile methodologies in support of cognitive & self-healing
	Extent of third-party, hyperscaler, and ISV partnerships in support of cognitive & 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 - NA
	Scale of Ops - EMEA
	Scale of Ops - APAC
	Scale of Ops - LATAM
	Number of clients overall for cognitive & self-healing IT infrastructure management
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 & self-healing IT infrastructure management services Commitment to innovation in cognitive & self-healing IT infrastructure management services
Investments in Cognitive & Self-Healing IT Infrastructure Management Services	Investment in IP and platforms in support of cognitive & self-healing IT infra management Investment in support of cognitive & self-healing IT infrastructure remediation Investment in cognitive & self-healing IT infrastructure server management Investment in support of cognitive IT service desk Investment in AIOps capabilities and move to NoOps, including observability Investment in support of API and data-driven services Investment in analytics, cognitive & 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.

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Sales Enquiries

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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