NEAT EVALUATION FOR UNISYS:

Cloud Infrastructure Brokerage, Orchestration & Management

Market Segment: Overall

Introduction

This is a custom report for Unisys presenting the findings of the NelsonHall NEAT vendor evaluation for *Cloud Infrastructure Brokerage, Orchestration & Management* in the *Overall* market segment. It contains the NEAT graph of vendor performance, a summary vendor analysis of Unisys for cloud infrastructure brokerage, orchestration & management, and the latest market analysis summary.

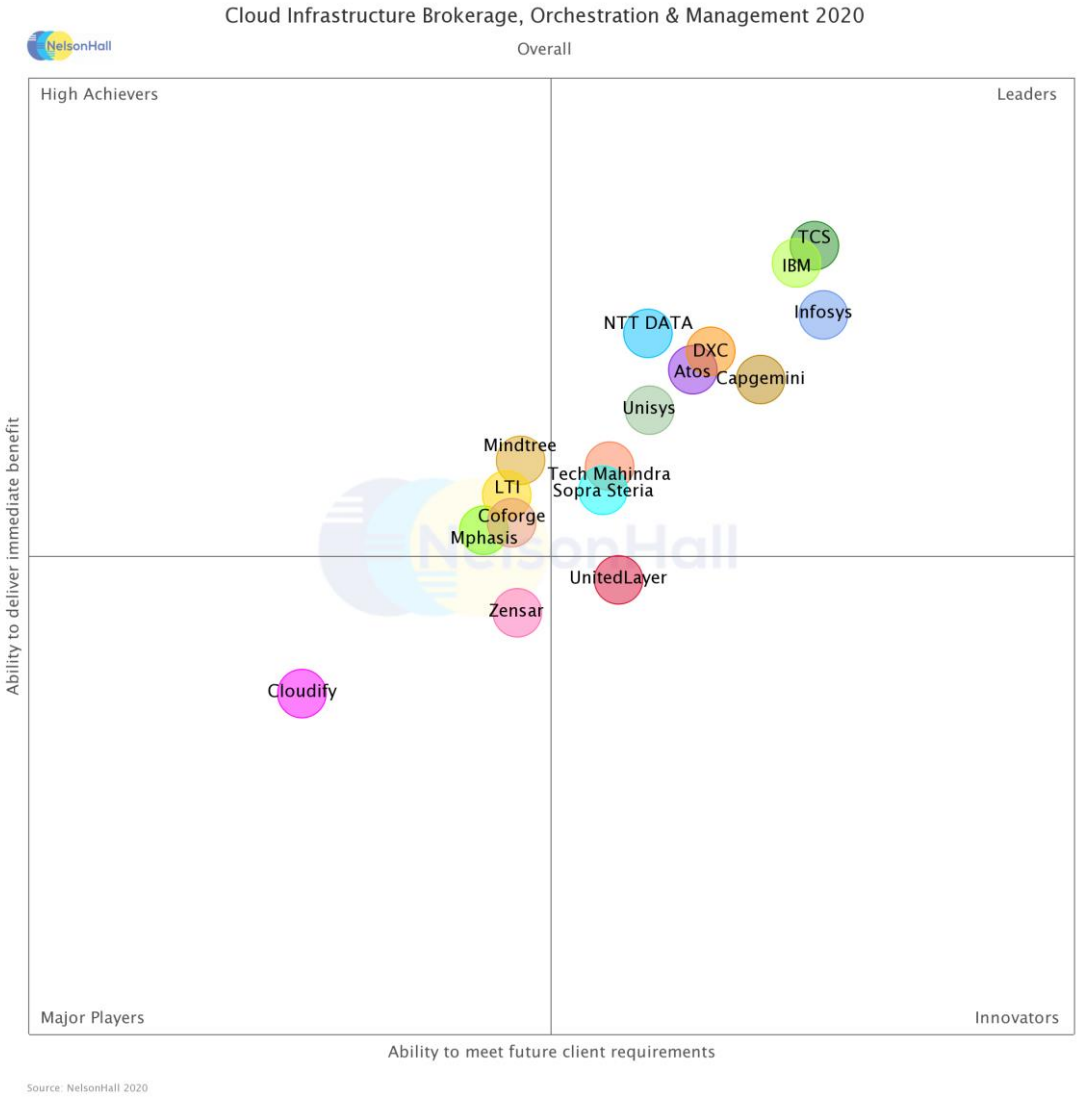
This NelsonHall Vendor Evaluation & Assessment Tool (NEAT) analyzes the performance of vendors offering cloud infrastructure brokerage, orchestration & management services. The NEAT tool allows strategic sourcing managers to assess the capability of vendors across a range of criteria and business situations and identify the best performing vendors overall, and with specific capability in brokerage services and orchestration services.

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, Capgemini, Cloudify, Coforge, DXC Technology, IBM, Infosys, LTI, Mindtree, Mphasis, NTT DATA, Sopra Steria, TCS, Tech Mahindra, Unisys, UnitedLayer, and Zensar Technologies.

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

NEAT Evaluation: Cloud Infrastructure Brokerage, Orchestration & 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's overall ability to meet future client requirements as well as delivering immediate benefits to its cloud infrastructure brokerage, orchestration & management 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 *Cloud Infrastructure Brokerage, Orchestration & Management* NEAT tool (*Overall*) here.

Vendor Analysis Summary for Unisys

Overview

Unisys provides cloud infrastructure brokerage, orchestration, and management services through its CloudForte platform, a combination of IP, third-party tools and cloud-native tools. It is provided through a hybrid cloud-agnostic approach and reference architecture (a combination of best practices, blueprints, and templates across hybrid, cloud migration, and cloud-native architectures). CloudForte includes a Cloud Management Platform (CMP) providing a single-pane console for multi-cloud and hybrid-cloud deployments and management and operations. It uses accelerators to utilize the CMP into the cloud, with the CMP becoming the lynchpin for any management and operations going forward through fully managed services capabilities. It enables hybrid cloud automation with rapid provisioning and self-healing.

Through CloudFortre security and compliance and Stealth, it provides a comprehensive automated continuous hybrid cloud security and compliance management solution. In addition, through AI-Ops, it provides ML-enabled operations and management capability to drive cost optimization, SLA management through incident management, event correlation, and a zero-incidents system.

Unisys has also developed CloudForte Experience Centers to showcase CloudForte capabilities depending on the client context. This includes rapidly prototyping cloud-based solutions through dedicated client workshops.

Across CloudForte, Unisys effectively manages its clients' hybrid cloud journeys, whether this is hybrid cloud automation or hybrid cloud security and compliance. It enables the client to assess their current posture and manage security and compliance through continuous assessment, prioritization, remediation, and monitoring. Through Cloud Navigator and accelerators, it enables clients to fast track their journey into the cloud, providing provisioning with guardrails, with security policies pre-built into it and migration of applications or infrastructure that may have taken months or weeks now taking only a few days or hours.

Unisys is also investing in CloudForte AI-Ops and ML to ensure the entire client journey is ML-enabled, whether in support of posture assessments, a recommendation of remediations, or operations. In addition, hybrid cloud automation through blueprints (reference architecture) is a key automation capability based on Unisys' experience of working with multiple clients over many years. It helps Unisys automate and migrate clients to the cloud, whether it is infrastructure or applications, or just to manage the posture today.

CloudForte

CloudForte's GTM strategy includes:

- *Cloud migrations and transformations*: Cloud-Native Services & Apps, and Cloud Accelerators
- *Multi-cloud and hybrid-cloud*: AI-Led Cloud Management Platform, and Cloud Security
- *Containers*: Microservices and Container management
- *Cloud Analytics*: Cloud Data Lakes and AI/ML.

Key capabilities within CloudForte includes:

CloudForte Advisory

- Discovery, assessment and strategy services assessment of where a client is on its IaaS, PaaS, or SaaS cloud transformation journey. Key IP utilized includes Unisys CloudForte Navigator to assess cloud systems and processes and deliver periodic advice on how to enable a client's digital transformation. Here, six critical components are regularly assessed, including cost, security, performance, compliance, efficiency, and application modernization. It will also provide recommendations and remediation to aid the client journey further
- Cloud Security Audit, and CloudForte Digital Transformation workshop.

CloudForte Migration

Cloud migration, transformation, and application modernization is a big focus area for Unisys with clients in various stages of their cloud journey. Here, it seeks to accelerate this through rapid migration, and transforming and picking out PaaS and SaaS, and using the cloud to transform and innovate. A recent example in the U.S. federal sector included the creation of an AI-enabled chatbot using Azure services deployed within days, handling 16m queries (unemployment claims) within six weeks.

CloudForte Management and Operations

Hybrid Cloud management is a key go-to-market strategy for Unisys, enabling brokerage across multiple cloud providers, both public (AWS, Azure, and GCP) and private (VMware, Azure Stack, AWS Outposts, HPE, Dell and Nutanix). With a single click, the CloudForte platform can go into ServiceNow and deploy on any of its landing zones and perform along with all of the day-two operations built-in. This enables clients to cut down on provisioning times significantly. For a U.S. state government client, it previously took three months for provisioning as it had to go to multiple providers to get things done, where one provider took up to three weeks to provision an IP. It can now provision this across private cloud (Azure and AWS) and on Azure and AWS cloud landing zones within 15 minutes. Unisys is also in the process of adding GCP landing zones. It uses ServiceNow for orchestration and is bringing Morpheus into the reference stack and also brings cloud security and compliance tools integrated into its stack, including Stealth.

Unisys' Cloud Management Platform, accessible through a self-serve user portal, provides a single pane view across all cloud personas and workloads. It enables a user (based on persona) to launch a stack from a catalog, manage stacks, perform lifecycle operations, view all activities, and view the resource dashboard.

Unisys is further making investments in containers, where a recent client example includes a U.S. State Government client where it wants to keep its production in-house in the private cloud but containerized, with pre-prod, staging and development in Google cloud. Through Unisys' Cloud Management Platform, it can provision containers across both.

In addition, Unisys is focusing on cloud analytics, AI, and ML across CloudForte, with AI enabling the platform to enable operations with predictive management (predicting incidents 24 hours before they occur through the identification of trends in data). Through AI-Ops and automation, including Terraform, Ansible, and Puppet, it has 500 routines used for landing zones. When the AI-enabled system tells Unisys there is an incident that will occur, it does a full-loop and triggers its automation, fixing the incident before it happens, through the correct remediation. It also utilizes its library of accelerators and automation artifacts. If, for example, the AI-system triggers there is going to be a capacity issue, it will trigger its automation to auto-remediate and fix the capacity issue. Unisys aims to create a zero-incidents system for clients

and improve the cloud operations experience. In addition, it brings AI to clients to solve business challenges.

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. NelsonHall further estimates that ~90% (~$216m) of these revenues relate to cloud infrastructure brokerage, orchestration, and management services.

NelsonHall estimates the geographical breakdown of Unisys' cloud infrastructure brokerage, orchestration, and management services revenues in CY 2019 to be:

- North America: 48% (~$104m)
- EMEA: 30% (~$65m)
- APAC: 12% (~$25m)
- Latin America: 10% (~$22m).

NelsonHall estimates the vertical industry breakdown of Unisys' cloud infrastructure brokerage, orchestration, and management services revenues in CY 2019 to be:

- Commercial: 40% (~$86m)
- Public sector: 31% (~$67m)
- Financial services: 29% (~$63m).

Strengths

- Extensive IP and accelerators including CloudForte Navigator, CloudForte Cloud Management Platform (CMP), CloudForte Compliance, CloudForte Optimization, and CloudForte Migration
- Developing LeanBiz culture-based approach to drive modernization through scaled agile
- Growing 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
- Integration of the Stealth security offering in CloudForte
- Strong public sector footprint across cloud services.

Challenges

- Increasing partnerships with start-ups and digital ISVs in support of cloud-native services
- Needs to expedite its AI and cognitive capabilities
- Ramping dedicated cloud resources and certifications

- A limited number of business consultants.

Strategic Direction

Unisys is looking to expand its cloud infrastructure brokerage, orchestration, and management services capabilities through the following initiatives over the next 12-18 months:

Investing in and Expanding IP and Accelerators

- Investing in hybrid cloud automation, orchestration, and management, including AI-Ops in particular in support of predicting issues and enabling auto-remediation and self-healing capabilities
- AI-enabled CloudForte journey across posture assessment, pre- and post-migration, and forecast client journeys to the cloud and predict using 'what if' scenarios to able a proactive and predictive approach
- Further development of DevSecOps, microservices, and blueprints capabilities
- Growing footprint of cloud service providers
- Investing in IoT and related technologies, and low-code, no-code platform development
- Increasing accelerators in support of CloudForte, in particular in support of containers.

Expanding Cloud Experience Centers

- Increasing the footprint of cloud experience centers to showcase partner capabilities (e.g. AWS Outposts), and helping clients to realize their business outcomes.

Increasing Skillsets in Support of CloudForte

- Expanding agile squad resources in support of CloudForte and certifications through Unisys University
- Increasing public cloud provider certifications across AWS, Azure, and GCP.

Outlook

Unisys takes a cloud-agnostic approach through its CloudForte products and services to enable a client's cloud journey and deliver the business outcomes they require. It provides CloudForte advisory services to assess where a client is on its cloud journey and further utilizes its CloudForte experience centers to co-innovate with partners. We expect Unisys will continue to ramp its cloud experience centers in support of client initiatives and support of their cloud transformation roadmaps. It will also need to ramp its dedicated cloud consulting resources in support of these initiatives too.

Unisys has multiple IP and accelerators, third-party and cloud-native tools to accelerate clients' digital transformation roadmaps, including self-service blueprints and automated workflows and provisioning. It is also investing further in CloudForte AI-Ops to enable more predictive management across operations, including auto-remediation and self-healing. Unisys will need to expedite its capabilities in this area.

Its CloudForte CMP enables brokerage across multiple public and private cloud providers and single-click provisioning. It is also making further investments in containerization, and we expect Unisys will also increase its ecosystem of partners, in particular with start-ups in support of this initiative.

Unisys is further developing its LeanBiz methodology to drive a culture-based path to modernization through agile at scale. It has deployed this methodology with a few clients to date, and we anticipate further traction in this area moving forward as clients look to drive an agile approach and automate CI/CD pipelines. Another key feature for Unisys within DevSecOps is the ability to integrate its Stealth security capability, which provides embedded security across all its CloudForte offerings and addresses a key client challenge.

Unisys is further developing agile squads that contain dedicated cloud resources (i.e. cloud engineers, cloud architects, cloud AI/ML engineers) with infrastructure, applications, and analytics resources. This is an area Unisys will need to continue to ramp. Although it is utilizing the Unisys University to upskill and multi-skill resources in support of CloudForte, it also needs to continue to grow its headcount possessing certifications in support of cloud services providers.

Finally, Unisys is investing in cloud-native services, microservices, and containers, which will also require Unisys to ramp its skillsets in support of these capabilities in the future. We also expect Unisys will develop joint IP with cloud partners, in particular with AWS across the public sector, and with Azure and GCP.

Cloud Infrastructure Brokerage, Orchestration & Management Market Summary

Overview

Cloud infrastructure brokerage, orchestration and management services are enabling clients to expedite, manage, secure, and govern hybrid multi-cloud environments, and expand cloud-native capabilities. COVID-19 is increasing the uptake of cloud services in response to both business continuity and remote homeworking requirements, and improving collaboration and UX.

Vendors are increasingly focused on utilizing cloud to deliver value across every business function within an enterprise, for example, enabling HR to drive positive employee engagement and experience, and improving security, compliance and governance for the CSO. In addition, through cloud management and FinOps providing CFOs with greater visibility and management of cloud ecosystem to control and optimize cloud costs. Vendors are further creating cloud-native industry-specific solutions to expedite an enterprise's ability to create and develop new products and services by sector, and developing dedicated CoEs and innovation centers in support.

Key investment areas include increasing development of container support and cloud native capabilities with a greater focus on DevSecOps to support cloud native applications and AI-Ops to drive automation across cloud operations.

Buy-Side Dynamics

The key decision factors in selecting a vendor to deliver cloud infrastructure brokerage, orchestration and management services are:

- Ability to manage increasing cloud infrastructure consumption across hybrid multi-cloud through single cloud management platform (CMP)
- Enhancing security, governance and compliance through increased monitoring (secure & compliant ops)
- Enabling business continuity plans (remote working capabilities), and flexibility in engagements (driven by COVID-19)
- Increasing productivity of cloud environments to expedite new cloud services, and improving time to market for new products and services
- Ability to scale and optimize workloads; and increased agility, flexibility and resiliency, with improved visibility, control and optimization of usage through FinOps
- Driving infrastructure and application modernization, and enabling DevSecOps and agile, including CI/CD pipeline automation and infrastructure as code integration
- Driving cloud-native development capabilities and architecture, including container management (docker, Kubernetes, OpenShift), microservices, mesh services and serverless
- Ability to expedite ERP migration to cloud (e.g. SAP)

- Accelerating adoption of Device as a Service, Workspace as a Service, VDI, Office 365, G-Suite, MMD, MVD, Amazon Workspaces, ServiceNow, VMware Workspace ONE; and enabling a more collaborative and productive workforce through the enablement of social and collaboration platforms
- Enabling AI-Ops (use of resolver bots and diagnostics engine to drive further insights), including use of auto-remediation and ML
- Creation of cloud industry blueprints and templates and providing an open approach to orchestration including cloud-native provisioning and discovery with cloud APIs (e.g. CloudFormation, Azure ARM, Terraform).

Market Size & Growth

The global cloud infrastructure brokerage, orchestration and management services market is estimated by NelsonHall as ~$155,790m in 2020. It is expected to grow at 10.0% CAGR to reach ~$227,950m by 2024.

North America will account for 45% of overall cloud infrastructure brokerage, orchestration and management services market in 2024, with overall growth of 9.0%, with EMEA growing at 11.3% and making up 33% of the overall market by 2024. LATAM will see higher growth through to 2021 driven by greater propensity to adopt cloud in support of remote working, with APAC maintaining steady growth through 2024.

Success Factors

The key success factors for cloud infrastructure brokerage, orchestration and management services vendors include:

- *Increasing skill-sets*: building a bench of resources with cloud-native development capabilities and expand hyperscaler capabilities and certifications. In addition, ramping cloud architects, hybrid cloud SMEs, integration SMEs, and site reliability engineers (SRE) in support of cloud operations
- *Consulting and advisory services*: offering onshore consulting and advisory services, supported by cloud SMEs, providing a design thinking and collaborative approach to define clients cloud transformation roadmap. This includes modernization from monolithic to microservices, landing zone and platform build, including cloud-native, and adoption of DevOps and serverless architecture
- *Cloud Management Platform (CMP)*: providing 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. Enhancing FinOps capabilities in the management of cloud costs, and increasing monitoring and observability to enhance dashboard performance across the cloud ecosystem
- *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, infrastructure as code (IaC) integration with templates and API-driven architecture, and container as a service (CaaS) with DevOps
- *Increasing AI-Ops and automation*: using AI-Ops 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 AI-Ops to No-Ops cloud managed services and developing more complex use case creation through ML and training for orchestration and resolver bots

- *Vertical-specific offerings*: developing service patterns and blueprints to enable repeatable service through a combination of hyperscaler technologies and IP to address a client-specific need. In addition, re-modernizing or re-factoring applications to align with client industry-specific trends
- *Focus on innovation*: Expanding digital transformation centers, innovation hubs and cloud CoEs in support of AI, analytics and automation. Combining CMP, DevOps and AI-Ops 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
- *Expediting Digital Workplace Services*: increasing support of modern management cloud-based management toolsets (e.g. Microsoft Autopilot, Intune and VMware Workspace One), and across Unified Endpoint Management (UEM). Ramping capabilities in virtualization support for remote working, including Microsoft WVD, and Amazon Workspaces and in collaboration tools, supporting longer-term business continuity requirements
- *Smart brokerage capabilities*: developing smart brokerage capability to expedite cloud comparison across IaaS and PaaS, with the utilization of a recommendation engine to decide on best-fit cloud based on client requirements (e.g. regulatory, compliance, industry-specific). Further applying ML to enable the engine to learn from consumption patterns to build real-time brokerage capability
- *Ecosystem partnerships and IP*: developing IP, joint GTM, and strategic cloud initiatives with hyperscalers in support of hybrid multi-cloud support from both an industry and client-specific level. In addition, providing cloud-native PaaS support, and expanding partnerships with start-ups, in particular in support of container management and mesh services.

Outlook

The future direction for cloud infrastructure brokerage, orchestration and management services will include:

- Greater focus on driving containerization (CaaS) and PaaS services at scale, including Kubernetes and Docker, mesh capabilities and serverless architecture services. This will increase adoption of cloud-native services including microservices, and utilizing DevSecOps to provide fully managed container services, and tooling to build complete solution in the cloud
- Vendors will increase investment in CMP with more focus on a single-pane view on the health and state of cloud environments across hybrid and multi-cloud, with a deeper focus by persona. In addition, through smart brokerage and recommendation engines learning from real-time data on cloud consumption patterns to build models for real-time brokerage functionality
- 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
- Expanding AI-Ops to No-Ops cloud managed services, and developing more complex use 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

- Increasing hybrid management capabilities in partnership with cloud providers (e.g. VMware/Pivotal) to enable private cloud for on-premise business-critical workloads (although public cloud consumption will increase significantly)
- Greater focus on the development of industry-specific personas to create solutions and use cases to fit specific industry requirements for cloud services
- Vendors will increase joint GTM approaches with strategic ecosystem partners, and build dedicated business units (e.g. Microsoft, AWS, VMware, Google)
- Vendors will increase networks of innovation hubs and Cloud CoEs to deliver collaboration sessions in close proximity to clients. They will expand the site reliability engineering (SRE) approach as the default to manage end-to-end cloud services in a highly automated way.

NEAT Methodology for Cloud Infrastructure Brokerage, Orchestration & 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
Offerings	Cloud management platform capability
	Cloud brokerage and FinOps capability
	Cloud orchestration capabilities including cloud-native provisioning
	Industry specific cloud offerings, including re-usable assets and blueprints
	Cloud AI-Ops capabilities
	API and data-driven services in support of hybrid multi-cloud
	Advanced analytics, cognitive and ML capabilities in support of hybrid multi-cloud
Delivery	Cloud Infra BOM North America delivery capabilities
	Cloud Infra BOM EMEA delivery capabilities
	Cloud Infra BOM APAC delivery capabilities
	Cloud Infra BOM LATAM delivery capabilities
	Dedicated cloud SMEs, architects, engineers, hyperscaler-certified, and SRE's
	Dedicated cloud CoEs, experience centers and innovation hubsAbility to provide IP and accelerators in support of Cloud Infra BOM
	Ability to incorporate DevOps and agile methodologies in cloud services
	Extent of third-party and hyperscaler partnerships in support of Cloud Infra BOM
	Ability to provide advanced analytics, cognitive, and ML in support of hybrid multi-cloud ecosystem
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 Cloud Infra BOM
Benefits Achieved	Improvement in infrastructure and application performance, reliability and availability
	Level of cost savings achieved
	Improvement in provisioning times
	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 Cloud Infra Brokerage, Orchestration and Management Services	Financial rating Commitment to Cloud Infra BOM Commitment to innovation in Cloud Infra BOM
Investments in Cloud Infra Brokerage, Orchestration and Management Services	Investment in IP and platforms in support of cloud infra brokerage, orchestration and management Investment in cloud brokerage capabilities including smart brokerage Investment in cloud orchestration including cloud native services Investment in industry-specific offerings, cloud assets and blueprints Investment in support of cloud AI-Ops managed services Investment in support of hyperscaler GTM initiatives 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.

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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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