NEAT EVALUATION FOR TECH MAHINDRA:

Advanced Digital Workplace Services

Market Segment: Run Services Capability

Introduction

This is a custom report for Tech Mahindra presenting the findings of the NelsonHall NEAT vendor evaluation for *Advanced Digital Workplace Services* in the *Run Services Capability* market segment. It contains the NEAT graph of vendor performance, a summary vendor analysis of Tech Mahindra for advanced digital workplace services, and the latest market analysis summary for advanced digital workplace services.

This NelsonHall Vendor Evaluation & Assessment Tool (NEAT) analyzes the performance of vendors offering advanced digital workplace 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 build services and run 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, Cognizant, CompuCom, Computacenter, CSS Corp, DXC Technology, Fujitsu, Getronics, IBM, Infosys, LTI, NTT DATA, Stefanini, TCS, Tech Mahindra, Unisys, and Yash Technologies.

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

NEAT Evaluation: Advanced Digital Workplace Services (Run Services Capability)
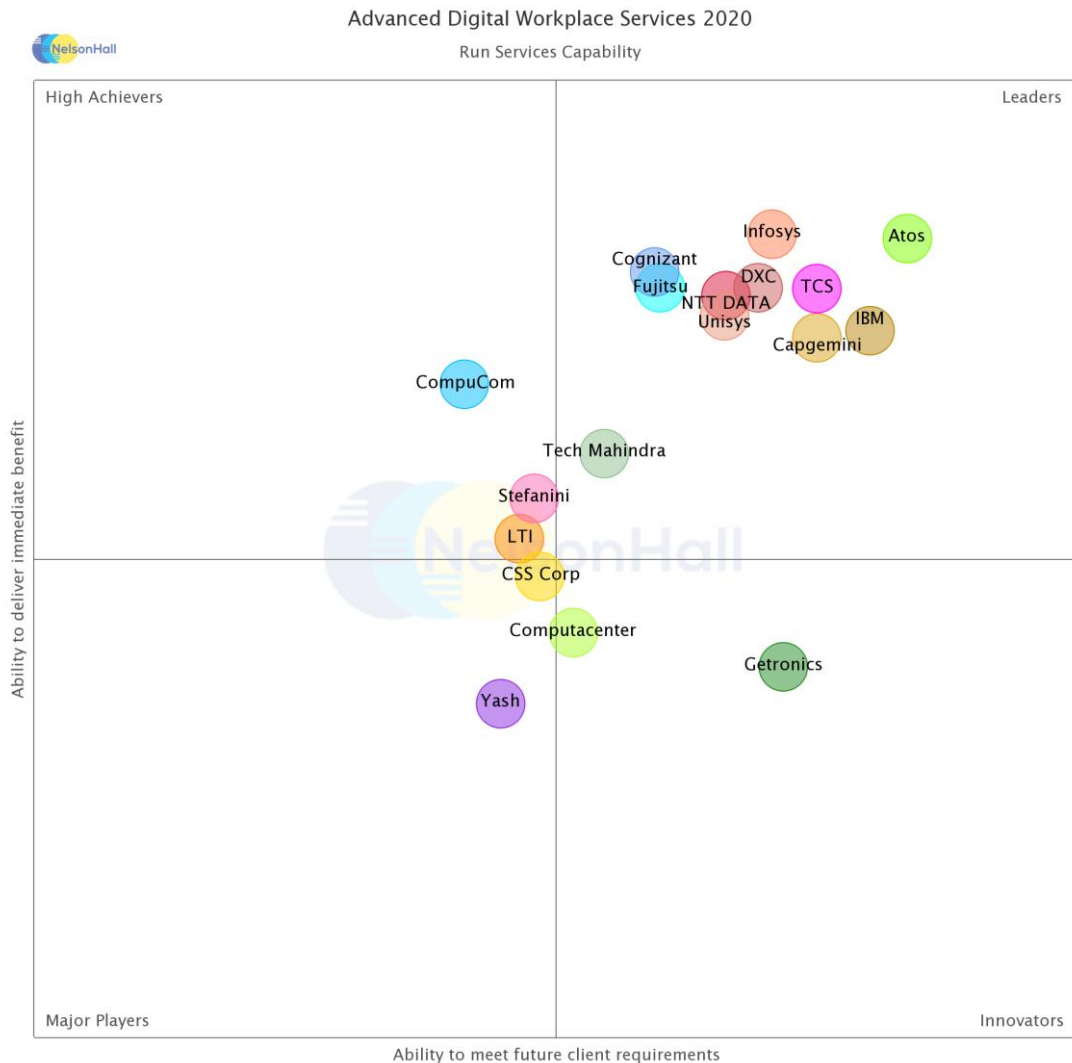
NelsonHall has identified Tech Mahindra as a Leader in the *Run Services Capability* market segment, as shown in the NEAT graph. This market segment reflects Tech Mahindra's ability to meet future client requirements as well as delivering immediate benefits to its digital workplace services clients, with specific capability in run services.

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 *Advanced Digital Workplace Services* NEAT tool (*Run Services Capability*) here.

Vendor Analysis Summary for Tech Mahindra

Overview

Tech Mahindra provides end-user computing and workplace services as part of its Infrastructure and Cloud Services division. This also includes cloud services, data center services, enterprise network services, and enterprise security services. It supports ~425k end-users and deals with ~2.2m incidents per annum. Its Digital Workplace Services portfolio covers the following areas:

- *Desktop Virtualization* (WaaS NxT): BYOD/CYOD anywhere, any device, any networks access, and device & app provisioning on the go, VDI support, and mobility

- *Messaging & Collaboration*: cloud messaging and collaboration, Office 365 support, G-Suite implementation and support, Windows 10, AD, and SharePoint management

- *Service Desk*: self-service and automation, self-heal, self-help, virtual assistant, and analytics, remote desktop support, user provisioning, and account management

- *Deskside Support*: Tech Cafe, EUC vending machines, break-fix and IMACD support for end-user devices, spares management, and OEM coordination

- *Workstation Management*: app rationalization and packaging, workstation readiness, automation, unified portal, software distribution, patch & image management

- *Enterprise Mobility*: instant mobile devices, secure access to apps and devices, mobile device management, mobile app and content management, mobile data management, and mobile security management.

Design thinking approach

Tech Mahindra's approach to the digital workplace in the first instance is not aligned to a technology or infrastructure viewpoint; rather, it starts with a UX view of the workplace. Here, design thinking forms the basis of its approach, where it puts the user first, understanding what they require, their behavioral archetypes, what stages they are going through. Based on the Stanford *d.school* approach, the Tech Mahindra approach is grounded in empathy to enable designing for purpose.

It essentially starts with a qualitative + quantitative approach to define UX and persona profiling, where it seeks to go deeper in its persona defining and understanding what actually constitutes making work easier for end-users; in essence, how can access and collaboration be made easier for them, and productivity be easier. It will also utilize its recently acquired capabilities from Mad*Pow Media Solutions, which provides UX and design services, along with content strategy, mobile app and website development, and analytics services.

From a UX journey perspective, it seeks to understand where the client is today and what their future aspirations are. It will then identify goals to be achieved in support of what the client wants to achieve. It also wants to make UX more tangible and has introduced a digital user experience index, to serve as the single version of the truth as to where Tech Mahindra and the client are today from a UX perspective, and where they want to be.

Workspace as a Service (WaaS NxT)

Tech Mahindra visualizes workspace across five major pillars, aligned to key targeted outcomes across user experience, security, and cost reduction. These are:

- *Device & OS*: managing and transforming device lifecycle management and provisioning in a simpler way, delivering operating systems (Windows, iOS, Mac, or Android) which are configured to ensure it is enterprise-ready for enterprise end-users, and automating the overall device provisioning to the user. In order to provide an out-of-the-box experience on devices, it uses Microsoft Autopilot for Windows, and Device Enrollment (Apple Business Manager) program to manage Apple devices. If further seeks to replace fixed desktops with thin/zero clients and Chrome boxes to enable hot desking

- *Identity & Access*: orchestrating and managing the lifecycle of identity, which includes role-based access, privilege management, and password management

- *Application delivery*: focus on the global delivery of applications and related data, includes Windows, web and SaaS application delivery front-ends such as thick windows client, and browsers. It seeks to create one standardized application delivery model across an enterprise whether it may be BYOD, SaaS, or virtual VDI

- *Collaboration*: enabling secure collaboration with internal and external users, which includes store, share, and sync capabilities, SharePoint team sites, and OneDrive

- *Tools and automation*: provision of monitoring and self-service tools including web portal, mobile apps, automation managers, and in-house developed scripts.

Tech Mahindra's Workspace as a Service (WaaS) NxT offering aims to provide clients with a virtual workspace, allowing dedicated, pooled or shared virtual desktops or applications to be accessed anytime, from anywhere, using any device. Tech Mahindra seeks to provide a consistent user experience across WaaS NxT regardless of the device used. The design principle is to deliver the service in a XaaS model in a simple, modular, plug-and-play model.

It can be hosted in Tech Mahindra data centers, on-premise, public (Azure/AWS), or hybrid. Tech Mahindra has ~100k users on WaaS NxT. The offering uses Citrix XenDesktop for desktop virtualization in addition to Microsoft virtualization tools, including Windows Server, HyperV, App-V, System Center, and Azure Resource Manager. It also uses Citrix XenApp for application presentation. Tech Mahindra will also use VMware Horizon. It also incorporates Enterprise Mobility Management: a suite for Mobile Device Management as a Service, with access to enterprise services via a mobile device, using the WaaS NxT mobile app store. Key EMM services include mobile device management, mobile security management, mobile application management, mobile content management, mobile data management, and mobile lifecycle management. Key tooling used across EMM includes Intune, VMware Airwatch, Citrix, DMI, Mobile Iron, Wandera and MaaS360.

Windows 10 migration

Tech Mahindra has a dedicated practice for Windows 10 migration, with ~750 employees, and takes a consultative-led approach. Tech Mahindra also uses its own IP tooling (including for application testing and packaging) and automation and image build tools, including SWAT, Qgate, and VbSCrip. Tech Mahindra has developed a knowledge repository and reusable scripts. It also initiates continuous skill development through cross initiative training, POC and knowledge-sharing workshops. Plus, it has a global technology migration center in Hyderabad, India which is utilized for Windows 10 and Office 365 migrations.

Office 365

Tech Mahindra has a dedicated practice for Office 365 with ~320 employees, of which 60% (~192) are certified personnel across various tools. For deployment of Office 365 services, Tech Mahindra uses IP, including MigXps, a migration factory platform as the framework and tooling to facilitate migration to Office 365. It also supports Google, Lotus Notes, and Archive Solution in a consumption-based model that is offered per mailbox or per user.

Digital Service Desk

Tech Mahindra views the digital service desk as the combination of people, process, and automation, and it seeks to embed innovation and UX within the digital service desk layer. It brings a combination of tools and automation, and a focus on chat ops. Here, it applies its BRAC (basic, robotic, autonomous, and cognitive) model to determine the client's automation maturity and, based on this, proposes tools and an automation journey map to attain cognitive chat capability.

It is also placing increasing focus on device analytics through Aternity and Nexthink to understand what is happening across end-user devices (including app usage, data, security, installed software). It will then use this data to proactively identify issues and resolve them before the end-user contacts the service desk.

The key elements of the digital service desk include:

- *Self-enablement*: Tech Mahindra's IT store is a self-service portal

- *Webb*: intelligent virtual assistant (VA) uses NLP and AI based on COTS, with an interface through Skype for Business and web

- *Hubble Analytics*: Tech Mahindra's end-user analytics offering utilizes third-party capabilities to monitor device, network, and application performance

- *Intelligent IVR*: Tech Mahindra's solution for IVR-based self-service

- *UNO*: RPA solution, which Tech Mahindra claims can automate 85% of mundane tasks using scripts and bots deployed in endpoints, reducing L2 and L3 repetitive tasks.

Financials

Tech Mahindra's CY 2019 revenues were ~$5.1bn, and of these, NelsonHall estimates ~20% (~$1.0bn) is associated with infrastructure and cloud services. NelsonHall further estimates ~40% (~$400m) of these revenues relate to digital workplace services.

NelsonHall estimates the geographical breakdown of Tech Mahindra's digital workplace services revenues in CY 2019 to be:

- North America: 39% (~$156m)

- EMEA: 31% (~$124m)

- Rest of World: 30% (~$120m).

NelsonHall estimates the vertical industry breakdown of Tech Mahindra's digital workplace services revenues in CY 2019 to be:

- Telecom, Media & Entertainment: 26% (~$104m)

- Healthcare & Life Sciences: 25% (~$100m)

- Manufacturing: 20% (~$80m)

- BFSI: 19% (~$76m)

- Retail & CPG: 5% (~$20m)

- High-Tech: 3% (~$12m)

- Travel & Transportation: 2% (~$8m).

Strengths

- Investing in IP (Webb AI-virtual assistant, Hubble Analytics, UNO RPA) in support of digital workplace services

- Dedicated migration factory for Microsoft 365 and Windows 10

- Taking a design thinking approach to user-centricity across the workplace, with the ability to utilize acquired capabilities (i.e. Mad*Pow, BIO, and BORN)

- Developing ecosystem of digital start-ups, ISVs, and broadening digital skills capabilities across the organization through its TechMNxt initiative

- Repositioning as a 'next generation' IT services player.

Challenges

- Limited onshore footprint to support transformational initiatives

- Expanding the use of AR/VR in support of smart buildings and field services

- Limited industry vertical-focused offerings

- Needs to expedite the use of cognitive and AI capabilities.

Strategic Direction

Tech Mahindra is looking to grow its digital workplace services capabilities over the next 12-18 months through the following initiatives:

Digital workplace investments

Tech Mahindra will continue to develop IP, processes, and best practices in transforming end-user environments into a digital workplace, including:

- Taking a user-centric view to the digital workplace through a design thinking approach, and utilizing acquired UX/UI and experience consulting acquisitions to further enhance capabilities in this area

- Developing a hybrid cloud solution for Workspace as a Service (WaaS) offering, which may include a public cloud partnership to complement current private cloud capability in WaaS

- Investing in a heterogeneous ecosystem in support of workplace which will consist of elements of client virtualization (public or private cloud), and traditional compute (i.e. high capacity, or where there are unique requirements that cannot be replaced with virtualization), and application as a service, delivered in a pure SaaS model (i.e. which may be O365 suite to onboard users to). The automation layer will then cut through any private,

public, or on-premise solution it is building. It then intends to build a layer of standardization around tools and automation, where the management pane, tools, and automation will be universal

- Expanding Webb virtual assistant capabilities in NLP and ML, and use case development

- Moving to XLAs from traditional SLAs, and a greater focus on UX measurement

- Developing Hubble analytics capabilities, and partnerships with Aternity and Nexthink for end-user experience monitoring, and in driving more predictive capabilities across the workplace to further improve UX

- Expanding Tech Café capabilities with technician bays, UX bay, and training & collaboration bays; AR/VR capabilities and immersive technologies in the field.

Deeper personalization

Tech Mahindra is developing the capability to bring together additional capabilities in the ITSM, where the ITSM system would understand the end-user at a persona level. This will enable the service desk analyst to recognize the device the end-user has, when the end-user last called, whether the issue was resolved, and the type of channel the end-user engaged on. If, for example, this was through a chatbot, having the transcript available.

Outlook

Tech Mahindra is taking a user-centric approach to digital workplace driven by design thinking-led engagements. It also has the ability to utilize recent acquisitions in digital experience consulting, including Mad*Pow, BIO, and BORN. As it seeks to focus on a consulting-led approach to business outcomes, it will also need to ramp its onshore consulting and advisory services capabilities in support of the client's digital transformation roadmaps.

It is further expanding its IP to increase its capabilities across the digital workplace, including AI-based virtual agents, workspace as a service, analytics, and automation. It will need to expedite its capabilities across AI and ML as it seeks to enable greater predictive remediation across the workplace environment and enabling a cognitive workplace. We expect Tech Mahindra will increase its ecosystem of key strategic partners, including startups and digital ISVs, in support of these capabilities, and the expansion of WaaS beyond the private cloud. Its TechMNxt initiative will also further support this.

Although it has a strong dependence on the telecoms sector, a result of its heritage, this could also present opportunities for Tech Mahindra in targeting UC&C opportunities, and in its provision of Enterprise Mobility Services (EMM) within WaaS. Finally, we expect Tech Mahindra will continue to ramp its digital re-skilling across its workforce, which will also be key in enabling greater user-centricity and improved UX across the workplace environment.

Advanced Digital Workplace Services Market Summary

Buy-Side Dynamics

The key decision factors in selecting a vendor to deliver digital workplace services are:

- Providing end-users a greater choice of engagement and more personalized service support across the workplace through proactive and predictive (self-healing, RPA, intelligent automation, RPA), self -serve (portal access to knowledge articles, virtual agents and automated provisioning through a catalog-based approach), on-site (tech cafes, smart lockers and IT vending machines)

- Accelerating the adoption of cloud-based capabilities (i.e. Device as a Service, Win10 (Evergreen), O365, VDI, Workspace as a Service, Microsoft Teams, MMD and WVD, Cisco WebEx, Citrix Collaboration, Amazon WorkSpaces, and VMware Workspace One)

- Using gamification methods to drive adoption of digital workplace services

- Provision of XLAs (i.e. workplace experience across device, application and networks) and sentiment analysis to further enhance employee experience, and driving a human-centric approach across digital workplace services

- Expansion of virtual agent to HR (onboarding, offboarding, employee wellbeing), finance, and facilities management (smart buildings)

- Creating intelligent buildings (smart meeting rooms, smart reservations, wayfinding solutions, beacons and sensors); and using AR/VR and immersive technologies for remote support and field services

- Using proactive and predictive analytics to prevent incidents before they occur; monitoring devices, looking at trends in machine or ticket data, and using ML to identify recurring incidents, and deploying self-heal capabilities to auto-remediate

- Enabling business continuity plans (remote working capabilities), and flexibility in engagements (driven by COVID-19)

- Increasing cognitive capabilities in virtual agents to better understand end-user needs and integrate with business applications to provide automated knowledge and proactive remediation

- Ability to enact AI ops and AI-led service desk environment

- Flexibility in approach and cultural alignment of the vendor across the client organization

- Ability to provide industry-specific expertise across digital workplace services.

Market Size & Growth

The global digital workplace services market is estimated by NelsonHall as ~$38,258m in 2019. It is expected to grow at 4.8% CAGR to reach ~$48,309m by 2024.

Success Factors

The key success factors for digital workplace services vendors include:

- *Increasing sill-sets*: develop supporting skill-sets, including employee experience engineers, bot developers and trainers, automation consultants, and UX designers to support future digital workplace requirements; and use gamification methods to drive the adoption of training initiatives

- *Consulting and advisory services*: offer onshore consulting and advisory services, supported by digital workplace SMEs, providing a design thinking and collaborative approach to define the client's digital workplace transformation roadmap, and in support of future BC and ongoing remote working requirements (post COVID-19)

- *Modern management*: provide Windows as a Service (WaaS) Evergreen services to enable feature updates and new capabilities across Windows, Pro Plus, and O365 through modern management toolsets including Microsoft Autopilot, Intune, and VMware Workspace ONE

- *Intelligent collaboration*: provide digital collaboration solutions augmented with digital adoption services to maximise the efficient and effective use of cloud-based productivity suites including O365 and G-Suite to support new approaches to collaboration utilizing the latest technologies (i.e. Microsoft Teams, Yammer, Google Hangouts, etc.)

- *Increasing automation and AI*: enable zero-touch service desk and support through self-healing, self-service, and AI-chat, including the expansion of AI virtual agent use cases. Providing one-click resolution of common issues, and IVR-led automation capabilities (AI-enabled voice for automation). In addition, enacting event and incident automation to diagnose and remediate (self-heal) incidents through AI, cognitive bots, and proactive and predictive analytics

- *Defined XLAs*: create a defined set of XLAs (i.e. effectiveness of automation, and virtual agents, performance of apps & infra, technology adoption etc.), and dedicated teams to monitor the sentiments of end-users as they engage across XLAs and services. In addition, working with clients to create specific XLAs, and by persona, to improve employee experience and business outcomes

- *Focus on innovation*: expand digital transformation centers, innovation hubs and CoEs in support of Smart Office (IoT, AR/VR), cognitive virtual agents, AI, analytics and automation. Expand digital workplace services initiatives across the enterprise (e.g. HR). In addition, create dedicated experience centers to monitor XLA performance and end-user satisfaction across the workplace environment

- *Vertical-specific offerings*: create vertical-specific digital workplace offerings across healthcare (telemedicine, wearables for digital patient care), manufacturing (device monitoring and self-heal), utilities (mobile workforce management)

- *Expanding workplace IoT*: develop smart building concepts using wayfinding solutions to locate assets or colleagues, and facilities maps enabled through beacons and sensors, and interacting with AR, tech bars and smart lockers, and using analytics to manage office usage. In addition, deploying AR-enabled field services solutions, including smart glasses for remote guidance supported by central command teams, and computer vision-based issue identification and automation-based anomaly detection

- *Unified Endpoint Management*: bringing all endpoint management together in a single unified service, through cloud-based management toolsets including VMware Workspace ONE and Microsoft Intune; including the full lifecycle of all endpoints from on-boarding to retirement. Includes identity and access management, and advanced threat protection,

enabling a device-agnostic approach and, providing the security risk, governance and protection of IP.

Outlook

The future direction for digital workplace services will include:

- Development of proactive mass healing (L2/3) with super users resolving data corrections or data validation errors and site reliability engineers (SRE) approving solutions offered by self-healing systems

- Expansion of XLAs to enhance employee experience and drive business outcomes (overall split likely to be ~40% traditional SLAs vs ~60% XLA-driven agreements in next 12-24 months). Monitoring of employee experience and wellbeing will be key as remote working grows post COVID-19

- Acceleration of automation (i.e. using virtual agents for almost all L1 work, and most L2 work, and enabling autonomic fault recovery); and increased propensity to move to fully cloud-based digital workplace platform, which is further predicated by COVID-19 in the ongoing and future support of clients' business continuity and remote working requirements as more employees move to a homeworking model

- Vendors will expand proactive experience centers to analyze all data across the workplace environment and how it is aligning with XLA objectives; moving away from L1/2/3 mindset to a data-driven approach supported by dedicated skillsets (i.e. data scientists, AI, automation, experience reliability engineers) to focus on experience from 'hire to retire', and enabling the future delivery model

- Greater focus on the development of industry-specific personas to create solutions and use cases to fit specific industry requirements for digital workplace services

- Vendors will expand intelligent building and IoT workplace services concepts to adjacent industries

- Increasing the resolution capability of virtual agents with analytics integration (e.g. nexthink) to enact self-healing, and driving a deeper persona-based user experience. Greater use of preventive maintenance and predictive analytics in support of the workplace environment and real-time reaction to data analytics workload

- Vendors will increase joint GTM approaches with strategic ecosystem partners, and build dedicated business units (i.e. Microsoft, AWS, VMware, Google)

- Vendors will increase networks of innovation hubs and design studios to deliver collaboration sessions in close proximity to clients.

NEAT Methodology for Advanced Digital Workplace Services

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	Desktop and/or application virtualization capability
	Modern management and Evergreen services capabilities (inc. Win10 migration)
	XLA-based engagement capability
	Intelligent collaboration capability
	AI-enabled service desk and zero-touch support capability
	Managed Mobility Services (MDM/EMM/DaaS/UEM)
	Workplace security services
Delivery	DWS North America delivery capabilities
	DWS EMEA delivery capabilities
	DWS APAC delivery capabilities
	DWS LatAm delivery capabilities
	Dedicated resources for build capabilities
	Dedicated resources for run capabilities including CoEs
	Ability to provide proactive self-serve and self-healing capabilities
	Ability to automate service desk using RPA, Cognitive & AI
	Ability to deploy analytics to improve end-user insights and overall end-user experience
	Access to digital startups and ISV's for digital workplace services
Client 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 Digital Workplace Services
Benefits Achieved	Level of cost savings achieved
	Reduced number of service tickets
	Improved speed problem resolution
	Increased end-user/business satisfaction
	Pricing approach

Exhibit 2

'Ability to meet client future requirements': Assessment criteria

Assessment Category	Assessment Criteria
Overall Future Commitment to Advanced DWS	Financial rating
	Commitment to next generation DWS
	Commitment to innovation in digital workplace services
Investments in Advanced DWS	Investment in IP and platforms, including cognitive and AI in support of DWS
	Investment in support of desktop/apps virtualization
	Investment in support of modern management (inc. Evergreen and Win10 migration)
	Investment in support of XLA-based engagements
	Investment in support of intelligent collaboration
	Investment in support of AI-enabled service desk
	Investment in support of Managed Mobility Services (MDM/EMM/DaaS/UEM)
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 Enquiries

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

Guy Saunders at guy.saunders@nelson-hall.com

research.nelson-hall.com