NEAT EVALUATION FOR INFOSYS:

Smart IT Services in Utilities

Market Segments: Overall, Smart Asset Services, Retail Services

Introduction

This is a custom report for Infosys presenting the findings of the NelsonHall NEAT vendor evaluation for *Smart IT Services in Utilities* in the *Overall, Smart Asset Services,* and *Retail Services* market segments. It contains the NEAT graphs of vendor performance, a summary vendor analysis of Infosys for smart IT services in utilities, and the latest market analysis summary for smart IT services in utilities.

This NelsonHall Vendor Evaluation & Assessment Tool (NEAT) analyzes the performance of vendors offering smart IT services in the utilities sector. 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 a specific focus on smart asset services and retail 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, DXC Technology, Enzen, IBM, Infosys, Luxoft, NTT Data, TCS, and Tech Mahindra.

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

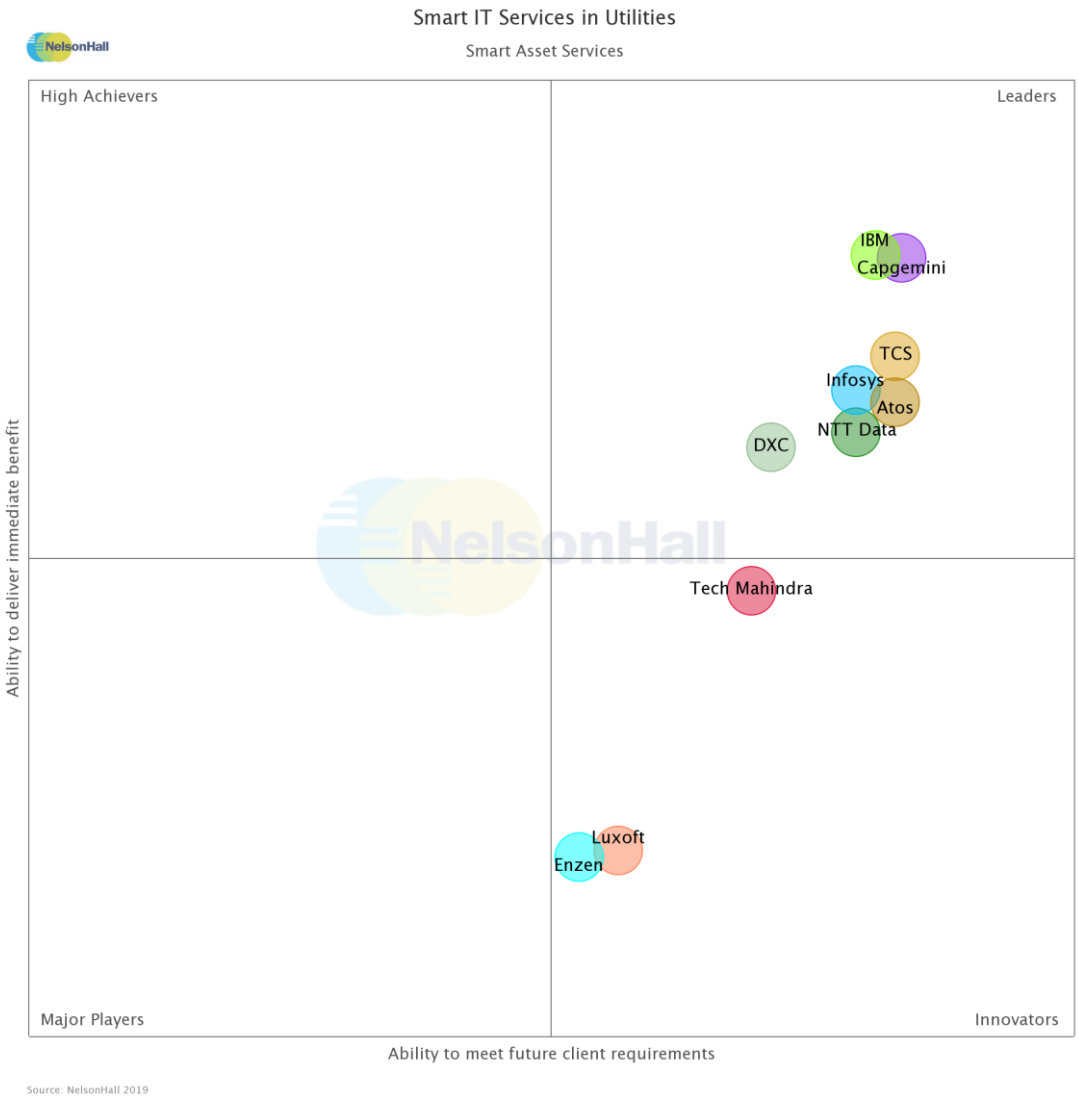
NEAT Evaluation: Smart IT Services in Utilities (Overall)

NelsonHall has identified Infosys as a Leader in the *Overall* market segment, as shown in the NEAT graph. This market segment reflects Infosys' overall ability to meet future client requirements as well as delivering immediate benefits to clients of smart IT services in the utilities sector.

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

Buy-side organizations can access the Smart IT Services in Utilities NEAT tool (Overall) here.

NEAT Evaluation: Smart IT Services in Utilities (Smart Asset Services)



NelsonHall has identified Infosys as a Leader in the *Smart Asset Services* market segment, as shown in the NEAT graph. This market segment reflects Infosys' ability to meet future client requirements as well as delivering immediate benefits to clients of smart IT services in the utilities sector, with specific capability around smart asset services.

Buy-side organizations can access the Smart IT Services in Utilities NEAT tool (Smart Asset Services) here.

NEAT Evaluation: Smart IT Services in Utilities (Retail Services)

NelsonHall has identified Infosys as a Leader in the *Retail Services* market segment, as shown in the NEAT graph. This market segment reflects Infosys' ability to meet future client requirements as well as delivering immediate benefits to clients of smart IT services in the utilities sector, with specific capability around retail services.

Buy-side organizations can access the Smart IT Services in Utilities NEAT tool (Retail Services) here.

Vendor Analysis Summary for Infosys

Overview

Infosys views the digital journey for utilities across two key pillars:

- *Industrialize*: for efficiency, agility, safety, and resilience
- *Digitize*: for newer business models with customer, smart grid and digitizing workforce experience.

Infosys targets outcomes of digital initiatives across five dimensions, with weightings tailored to the priorities of each vertical. As an example, within utilities, the *Assure* dimension (*see below*) is highly weighted because of the regulatory, safety, and reliability requirements of the utility. This leads to greater focus in areas including cybersecurity, assurance of ITO integration programs, and complex transformation programs. The five focus areas (outcomes and offerings) across Infosys' agile digital services architecture for utilities are:

- *Accelerate*: ERP-led process transformation and cloud migration outcomes. Offerings include Smart Bots for utility processes, open APIs for integrated utility platform, PACE pre-configured IP for customer services and billing transformation, and training the workforce of the future
- *Insight*: grid energy intelligence, smart asset management, and customer 360-degree outcomes. Offerings include KRTI 4.0 Artificial Framework powered by Pöyry and Infosys NIA, and digital data warehouse and analytics
- *Experience*: driving digital experience for both employees and customers. Offerings include cognitive chatbots, robo-advisory, smart video chat, and mobile-first customer solutions. Infosys has recently implemented its first utilities cognitive chatbots (in pilot stages), robo-advisory implementations, and smart bills for utilities, which are interactive and embed customer-specific information on their bills through barcodes and videos
- *Innovate*: use of AR/VR integration in the field, AMI in a box, and use of drones for asset and field inspection. Offerings include grid for the future, digital strategy for utilities, and one-click contact center processes
- *Assure*: ensuring regulatory compliance, grid security, customer information security, and cloud security architecture. Offerings include cybersecurity services for critical infrastructure, environmental, health, and safety compliance.

These digital offerings are converging into four distinct vertically-integrated solutions for utilities, underpinned by automation, AI, analytics, mobility, AR/VR, CX transformation, cloud, IoT and blockchain. They are:

- Digital Customer Service
- Digital Grid & Assets
- Digital Enterprise & Workforce
- Digital Operations & Energy Supply.

Infosys is providing digital customer service offerings for multiple utility clients across all domain areas. In addition to providing customer options across multiple channels, it is also

looking internally at how it can digitalize its own call center, back-office, and field force in order to effectively service this segment. Key focus domains include:

- *Smart meter integration*: AMI and MDM integration, beyond the meter services and net metering
- *Billing modernization*: Smart billing – time of use, dynamic pricing, GRC, digital bill presentment
- *Customer service transformation*: Omnichannel digital self-serve portal, contact center, and back office optimization, CX and UX strategy
- *Field service transformation*: Mobile workforce management solution and integration, mobility strategy.

Across Digital Grid & Assets, Infosys is working across the entire value chain from planning and engineering, to grid modernization initiatives, including how new distributed generation players and new DER systems are all going to be brought to the grid, and making sense of the grid data and RPA deployments.

With Digital Enterprise & Workforce, key offerings include: ERP migration to the cloud, ERP managed services, mobile workforce management, RPA in call center and back office, IoT-based work and asset management.

Infosys is placing greater focus on creating greater efficiencies across routing, planning, and scheduling, and enabling the field force to be more effective in representation of the utility companies. It is also providing the field force with predictive analytics solutions and integration with back-end CRM systems, including Salesforce.

Across Digital Operations & Energy Supply, key offerings include: ERP for supply chain, generation asset management, trading automation, and blockchain for wholesale operations.

Infosys has ~6.5k FTEs globally across utility services, split by geography as follows:

- APAC: 68% (~4,420)
- North America: 21% (~1,365)
- Europe: 11% (~715).

Financials

Infosys' CY 2018 revenues were $11.5bn. NelsonHall estimates that ~6% (~$690m) is associated with energy & utilities, and of this, ~65% ($450m) relates to utilities IT services.

NelsonHall estimates the geographical breakdown of Infosys' utilities IT services revenues in CY 2018 to be:

- North America: 60% (~$270m)
- EMEA: 35% (~$158m)
- Rest of World (inc. APAC): 5% (~$22m).

Strengths

- Investments in IP in support of utilities IT services including Infosys PACE for utilities, smart bot repository, RPA capabilities through AssistEdge, and AI and cognitive with NIA
- End-to-end vertical offering in support of customer, grid, enterprise, and operations
- Partnerships with academic institutions to seed skilled workforce
- Significant investment in the training of personnel
- Enhancing consulting and advisory capabilities through design thinking approach and utilization of digital acquisitions, labs, and utility innovation centers.

Challenges

- Increasing onshore presence in EMEA
- Needs to expedite cognitive chatbot pilots to full production across utilities.

Strategic Direction

Infosys is looking to grow its utilities IT services capabilities over the next 12-18 months through the following initiatives:

IP and accelerators

Infosys is continuing to invest in developing IP and accelerators, including:

- Pre-configured accelerator for customer experience (PACE) for Oracle Customer Care and Billing (CC&B) based on Oracle utility stack. Also available on SAP
- Expanding smart bot repository for utilities; and increasing use of automation and AI, including AssistEdge RPA capabilities
- Investing in more complex use cases for cognitive chatbot in support of utilities, including in NLP and ML, and Infosys NIA-based chatbot for anomaly root cause and resolution
- Investment in robo-advisory and smart video chat services
- AR/VR in support of field services
- AI-based RAMS capability through KRTI 4.0 Artificial Framework powered by Pöyry and Infosys NIA.

Investment in 'Expand Localization' initiative in support of utilities IT services

- Developing further utilities-specific innovation hubs globally to complement existing utility hubs for gas and electric in the U.S.
- Enhancing consulting, advisory and design thinking capabilities through utilization of WONGDOODY and Brilliant Basics acquisitions to support utility transformation initiatives
- Expanding digital studios and innovation hubs globally (to provide localized support), and investing in digital skills, and in partnerships with academia to better enable clients' utility services transformation roadmaps and initiatives.

Expanding digital skill-sets

- Growing skill-sets and agile capabilities across Infosys to support client utility transformation initiatives, and in their becoming a smart utility for the future
- Expanding partnerships for curriculum design and training in support of utilities.

Outlook

Infosys is focusing on enabling utility clients to become a smart utility for the future, through increased investment in automation, AI, ML, and cognitive capabilities – to enable utility clients to further increase productivity and efficiencies in order to free the cash required to invest in digitalization across customer, grid, and workforce.

Infosys is investing significantly in IP and accelerators, including PACE for utilities, and smart bot repository, to further drive the industrialization of process and technologies for utility clients while enhancing UX. It has further aligned these capabilities into four verticalized offerings including Digital Customer Service, Digital Grid & Assets, Digital Enterprise & Workforce, and Digital Operations & Energy Supply, providing a full end-to-end capability for the utilities sector.

Infosys is placing increasing focus on a design thinking approach to utility transformation and has also developed a design thinking workshop facilitation approach that was designed in partnership with Stanford University design school. It has utilized this approach with its WONGDOODY and Brilliant Basics acquisitions to enact workshops for recent utility client projects. It is further investing in utilities-specific innovation hubs (electric & gas) and is an area where it will need to expedite this capability outside of the U.S. to provide local support in EMEA and APAC.

We expect Infosys to further increase its ecosystem partnerships, in particular with digital ISVs and start-ups as it seeks to enable and support its utility clients' transition to a smart utility.

Smart IT Services in Utilities Market Summary

Overview

Utilities clients are engaging vendors to strengthen and improve core legacy systems and infrastructure and provide the capabilities for the decentralization of energy, including smart grid, and management of distributed energy resources (DER) – wind, solar, battery, EV charging; and to improve CX within retail services, including developing new business models and services through the adoption of smart IT services.

Clients want vendors to enable the transformation of their retail services businesses through utilization of SaaS-based applications including SAP S/4HANA and Oracle Customer Care & Billing (CC&B) to automate and improve CIS and billing systems. They are also piloting chatbots and virtual agents to further enable self-serve, and utility-in-a-box modular SaaS capability for new entrants to quickly enter the markets, and automating meter-to-cash capabilities. In addition, providing micro-segmentation services and analytics to offer best plan prices and value-added services to further drive CX.

Clients are engaging vendors to provide a collaborative approach to innovation through a design thinking consulting-led approach. They need to develop new products and services to generate new revenue streams, re-skill an aging workforce for the new environment, get more insights from data, and improve UX. They also need to automate existing legacy infrastructure. However, they have to adhere to strict regulatory guidelines which makes it harder for vendors to innovate within this framework.

Buy-Side Dynamics

The key decision factors in selecting a vendor to deliver smart IT utilities services are:

- Improving customer experience, including through SaaS applications (including SAP S/4 HANA, Oracle Utilities Customer Care and Billing) to enable ERP-led process transformation and modernization of billing systems; plus virtual agents, self-serve and cloud-based omnichannel customer interactions
- Increasing use of analytics to improve insights to enable grid energy intelligence, predictive maintenance across transmission & distribution, and customer analytics to improve utilities' understanding of customer requirements
- IoT/IIoT, to improve predictive-based maintenance through the use of IoT-enabled sensors, and placing sensors at the edge, beyond the meter, in the network or a centralized asset
- Deploying agile methodologies and ways of working to quickly launch new products and services
- Increasing the use of intelligent automation to make sense of the complexity of DER and electric vehicle (EV) charging infrastructure
- Vendors having extensive utility industry knowledge and sector-specific application platforms
- Enabling new business models (solar, wind, battery, EVs, EV charging, e-mobility services, smart homes and communities)

- Developing platform services for vegetation management and T&D line inspection through the use of drones and AI
- Increasing use of AR/VR to facilitate digital field services capabilities, including mobility to drive greater user experience
- Ability to provide UX consulting and design thinking methodology in support of digital roadmap
- Developing cognitive and machine learning across the smart grid, deploying self-heal capabilities to auto-remediate grid infrastructure issues
- Ability to re-skill workforce with relevant digital skills
- Using end-user analytics tools (such as Nexthink) and processes to monitor end-user consumption and understand behaviour
- Providing onshore/nearshore delivery services for utilities IT services
- Increasing efficiency in the billing and supply chain process
- Reducing spend on maintaining and running existing systems by automating and digitalizing IT ops
- Accelerating the adoption of cloud-based capabilities (aaS offerings, Windows 10, Office 365, SharePoint, Skype for Business, and UCaaS) to improve efficiency, flexibility (consumption-based billing), and UX.

Market Size & Growth

The global utilities IT utilities services market is estimated by NelsonHall to be ~$8,900m in 2018. It is expected to grow at 6.0% CAGR to reach ~$11,895m by 2023.

Outlook

The future direction for smart IT utilities services will include:

- Utility clients will have a greater focus on cognitive operations, providing greater customer intimacy and simplified self-service; cognitive virtual agent capability will be increased with greater use of ML, NLP/NLU, multiple language support and expanding use cases to deal with more complex support issues. The propensity to adopt SaaS-based applications in support of CX, billing and CIS modernization (i.e. SAP, Oracle, Microsoft) will increase, including the development of new business models and services (i.e. Energy aaS, EV charging aaS, Microgrid aaS, Smart home, energy efficiency)
- Enhancement of AI and ML in support of smart asset management, enabling self-healing of assets, including smart grid and micro grid; combining AI, ML and DL to drive insights from drone activity
- Vendors' use of IoT and analytics will increase in support of predictive-based maintenance, digital twins, and for renewables monitoring and diagnostics
- Vendors will increase capabilities in support of DER (wind, solar, battery, EV charging) and AI-led RPA tools to automate new entrants to the smart grid

- Changing market dynamics with EV manufacturers becoming retailers to sell electricity to their EV customers, and utility companies manufacturing EVs; more digital entrants to the market
- Vendors focusing on digital field workers (mixed reality, wearables, digital remote support), and digitally empowering the workforce through collaborative working
- Development of prosumer platforms through smart and micro grid, and the move toward transactive energy
- Increased investment in cybersecurity (critical infrastructure intrusion detection, biometrics for workers)
- Greater use of blockchain and peer-to-peer energy transactions and energy trading
- Increased adoption of public cloud, and use of agile and DevOps to expedite the launch of new products and services, and enable greater collaboration across the workforce
- Vendors will ramp utilities-specific innovation labs and increase the use of start-ups and digital ISVs within the strategic partner ecosystem.

NEAT Methodology for Smart IT Services in Utilities

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

Exhibit 1

'Ability to deliver immediate benefit': Assessment criteria

Assessment Category	Assessment Criteria
Offerings	IoT and analytics services capability
	Utilities-specific SaaS capability
	Mobile workforce management capability
	Hybrid cloud migration and managed services capability
	Utilities-specific smart asset management capability
	Utilities-specific smart grid capability
	Utilities-specific cognitive IT infrastructure management capability
Delivery	North America delivery capabilities
	EMEA delivery capabilities
	APAC delivery capabilities
	LatAm delivery capabilities
	Dedicated resources for utilities
	Dedicated CoEs and labs in support of Utilities
	Ability to provide Cognitive, AI and ML in support of next-gen insights (i.e., DER, drones, EV charging)
	Extent of IP and accelerators in support of Utilities smart IT services
	Ability to incorporate DevOps principles and agile methodologies in Utilities IT services
	Access to ISV's for smart IT Utilities services
Presence	Scale of Ops - Overall
	Scale of Ops - NA
	Scale of Ops - EMEA
	Scale of Ops - APAC
	Scale of Ops - LatAm
	Number of utility clients overall
Benefits Achieved	Level of cost savings achieved
	Increased end-user/business satisfaction and experience
	Improved speed of problem resolution
	Increased speed to market for next-generation digital initiatives
	Improvement in asset management

Exhibit 2

'Ability to meet client future requirements': Assessment criteria

Assessment Category	Assessment Criteria
Overall Future Commitment	Financial rating
	Commitment to smart IT services in Utilities
	Commitment to innovation in smart IT services in Utilities
Investments in Utilities Smart IT Services	Investment in IP and platforms, including cognitive and AI in support of Utilities smart IT services
	Investment in support of IoT and analytics services
	Investment in support of Utilities-specific SaaS capability
	Investment in support of mobile workforce management
	Investment in support of smart asset management
	Investment in support of hybrid cloud & new business services
	Investment in support of utilities-specific cybersecurity
Ability to Partner & 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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