NEAT EVALUATION FOR INFOSYS:

IoT Services

Market Segment: Overall

Introduction

This is a custom report for Infosys presenting the findings of the 2017 NelsonHall NEAT vendor evaluation for Internet of Things (IoT) Services (Overall market segment). It contains the NEAT graph of vendor performance, a summary vendor analysis of Infosys in IoT Services, and the latest market analysis summary for IoT Services.

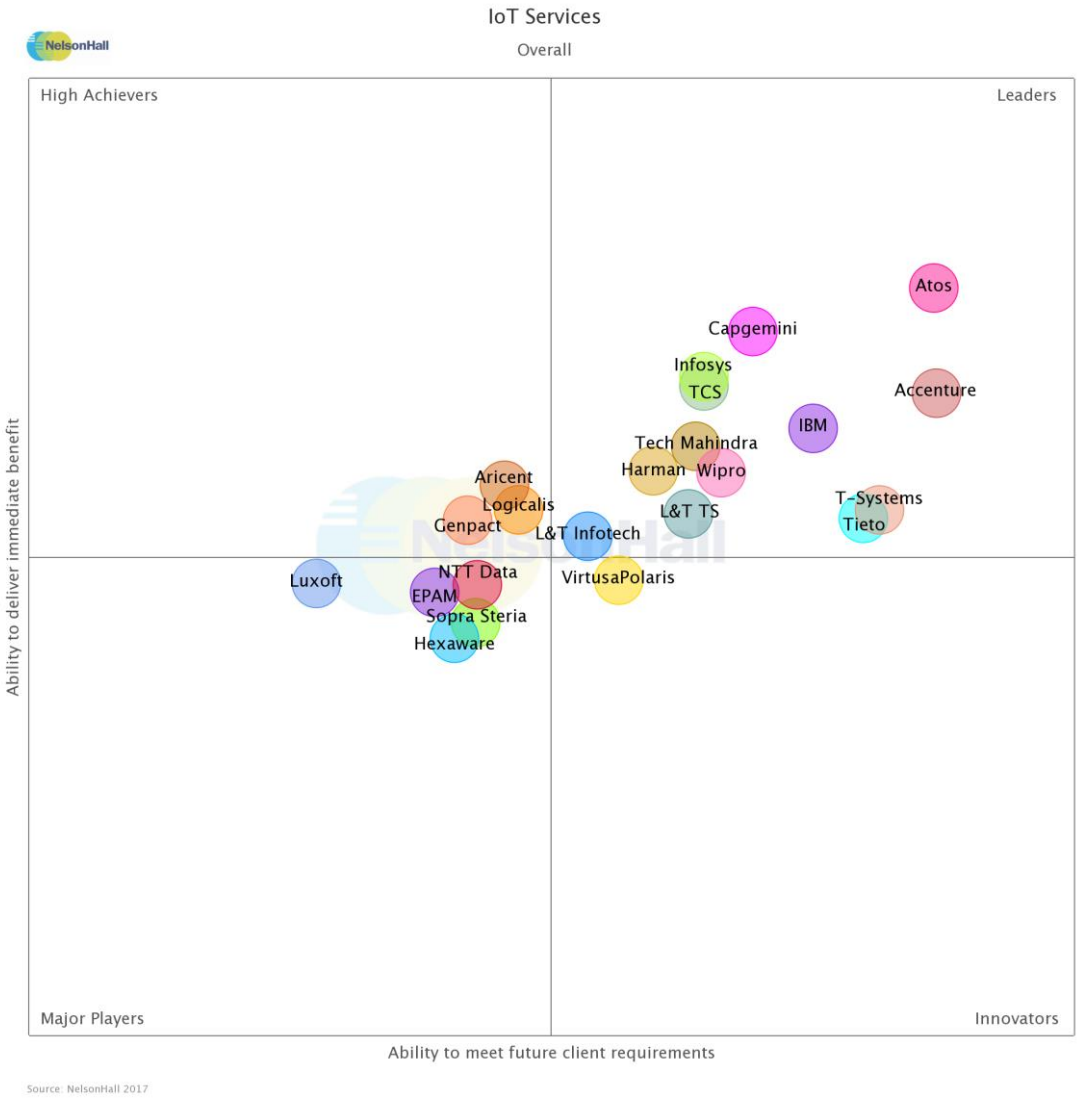
This NelsonHall Vendor Evaluation & Assessment Tool (NEAT) analyzes the performance of vendors offering IoT Services as part of their IT services portfolio. The NEAT tool allows strategic sourcing managers to assess the capability of vendors across a range of criteria and business situations and identify the best performing vendors overall, and with a specific focus on customer engagement, improved efficiency, and the creation of new business models.

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

Vendors evaluated for this NEAT are Accenture, Aricent, Atos, Capgemini, CSS Corp, EPAM Systems, Genpact, Harman Connected Services, Hexaware Technologies, IBM, Infosys, L&T Infotech, L&T Technology Services, Logicalis, Luxoft, NTT Data, Sopra Steria, TCS, Tech Mahindra, Tieto, T-Systems, VirtusaPolaris, and Wipro.

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

NEAT Evaluation: IoT Services



NelsonHall has identified Infosys as a Leader in the Overall market segment, as shown in the NEAT graph.

The Overall market segment reflects Infosys' overall ability to meet future client requirements as well as delivering immediate benefits to IoT Services clients.

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 IoT Services NEAT tool here.

Vendor Analysis Summary for Infosys

Overview

Infosys had revenues of ~$9.5bn in FY16, the period ending March 31, 2016. Infosys had calendar year (CY) 2016 revenues of ~$10.1bn.

Infosys created its Engineering Services (ES) unit ~20 years ago, through the combination of its mechanical engineering and embedded systems capabilities. Its headcount at the end of December 2016 was ~11k.

ES is structured into four main lines of business, including the IoT line launched in 2016. The IoT service line (ISL) is a horizontal service line with its own P&L, CoE, pre-sales, project solutioning, and delivery. Other service lines within ES include:

- Core engineering: e.g. mechanical engineering and PLM application services
- Networking and embedded: e.g. embedded systems
- Software products and platform development engineering: e.g. software product development.

Broadly speaking, ISL has positioned its IoT portfolio at the intersection of three core capabilities: IT services, engineering services, and analytics services. ISL provides all IoT services and works with other Infosys units on adjacent services including analytics, UX, and Infosys Consulting.

Infosys has ~50 IoT clients.

As part of its push towards software, in 2015 Infosys (through its $500m Infosys innovation fund) made a $3m investment in Cambridge, MA based fitness wearable manufacturer WHOOP. WHOOP's devices are used by athletes to capture heart rate and calculate their bodies' intensity and recovery capability after a workout. WHOOP is a spin-off Harvard i-Lab.

ISL provides a wide range of IoT services including consulting, solutioning, embedded systems, hardware design, platforms, systems integration, and managed services.

ISL provides systems integration services around the following five IoT layers:

- Intelligent devices
- Connectivity
- Device management
- Enterprise integration
- Analytics.

Infosys overall (not ISL specifically) has developed its big data, analytics, and machine learning/cognitive platform, MANA.

ISL expanded the functionality of MANA to create its own IoT platform, MANA for Hardware, which complements core analytics and cognitive capabilities with additional functionality such as data collection, IoT gateway, sensor management, and Enterprise Service Bus.

MANA for Hardware is complemented by three additional IPs:

- Infosys Information Platform (IIP): Infosys' big data platform
- Infosys Automation Platform (IAP): Infosys' RPA tool
- Infosys Knowledge Platform (IKP): created by Engineering Services, IKP focuses on capturing data from electronic documents (e.g. pdf files or service desk logs).

MANA for Hardware relies on open source software and additional functionality developed by Infosys.

Infosys sells MANA for Hardware under a traditional license agreement.

Broadly speaking, ISL's strategy is to drive the creation of accelerators. These include:

- IoT platform reference architectures
- The creation of models focusing on the manufacturing sector: Infosys is focusing on equipment and products that have a long lifecycle, up to 30 years
- Integration of IoT systems with other applications. Examples include integration with ERP systems, with PLM applications (for bills of material), with CRM for demand forecasting, and with IBM Maximo for asset tracking. Infosys is focusing specifically on several main challenges, including machine protocol management, real-time data collection, and data quality.

ISL has partnerships with FIR Aachen University on Industry 4.0 and two U.S. universities, Stanford University and MIT, for working around autonomous cars.

Financials

NelsonHall estimates the revenues of ISL to be ~$90m in CY 2016.

Strengths

- Scale, in terms of headcount and revenues, which will enable ISL to invest in developing its service portfolio and in creating IP and accelerators
- Executive-led sponsorship to support Infosys in developing new offerings including IoT, and creating IP and accelerators
- Broad and deep IoT service portfolio, including its industry 4.0 maturity index, engineering services, and several analytics models/vertical use cases.

Challenges

- Lack of onshore IoT consulting capabilities, in particular in Middle East and South America
- Does it make sense to have an IoT platform? Market vendors and ISVs have built and market their own IoT software products. With MANA for Hardware, Infosys is competing with these vendors, including heavyweights such as Microsoft, IBM, and AWS. On the positive side, MANA for Hardware relies to a large extent on open source software and non-Infosys proprietary code. While NelsonHall believes that fully proprietary IoT platforms have no long-term future, the jury is still out for platforms based on open source, COTS, and proprietary accelerators
- Lack of industry use cases, in the form of accelerators.

Strategic Direction

ISL is emphasizing its developments related to industrial IoT and manufacturing firms along with targeting consumer based offerings such as connected devices. The company targets several sectors including manufacturing, automotive, oil and gas, energy and utility, resource and CPG. ISL continues to highlight its roots in engineering services, to provide IoT services at the intersection of engineering, IT and industry knowledge. It is also investing in platforms and accelerators.

Outlook

In 2017 and onwards, NelsonHall expects a continued flow of investment in IP by Infosys; in the short term, this means technology based IP. In the next two years, NelsonHall believes that vertical use cases are the logical next step.

IoT Services Market Summary

Buy-Side Dynamics

Three main client profiles dominate the market:

- "Efficiency gain organizations": the largest client segment (representing ~65% of spending). These organizations focus on efficiency gains through resources and equipment usage optimization
- "Customer engagement improvement organizations": represent ~25% of client spending. Their primary objective is to enhance their customers' user experience, through IoT use cases including smart venues, or smart security
- "New business model organizations": the smallest client segment (~10% of IoT services spending). These organizations look to disrupt their industry through new business models, including usage based insurance, equipment as a service, and product as a service.

Key selection criteria for selecting an IoT services vendor by client segment include:

- "Efficiency gain organizations" require their vendors to:
  - Provide consulting services in a structured and repeatable manner (away from relying on a single person's expertise)
  - Navigate through their internal structure, across service lines and geographical units, to coordinate the many elements (big data, design thinking and UX, IoT platform-related services) that constitute a successful IoT project
  - Invest ahead of clients to create IoT platform-based use cases.
- "Customer engagement improvement organizations" require their vendors to back up their UX expertise by underlying IP and accelerators, and provide a repeatable service; implement fail fast and iterative approaches
- "New business model organizations" want their vendors to demonstrate their ability to conduct effectively an IoT and digital project; create relationships with top executives to ensure sponsorship; and make sure clients have accepted the fail fast approach to IoT projects.

Market Size & Growth

IoT services spending is currently modest, with ~$2.1bn spending in 2016. This is a niche market characterized by small engagements, whether consulting or PoCs, and few mid-sized contracts.

However, market conditions are favorable for fast IoT adoption, thanks to:

- Organizational focus on digital
- Falling prices of underlying technologies (in terms of connectivity, sensors/devices, data storage).

For the IoT services market, NelsonHall has assumed that organizations will move from a discovery phase to an implementation phase, and that this acceleration will be steady over the next five years.

Currently, most IoT services spending is around consulting (including business consulting and UX), and PoCs (systems integration).

Spending on consulting will keep growing as organizations continue to explore IoT opportunities. Systems integration spending will also accelerate, thanks to organizations moving from PoCs to implementation phases, by 2019.

Alongside this initial implementation, spending in application management will increase from 2020 onwards, as well as the need for monitoring services, traditional IT infrastructure services, and security consulting and SOCs.

In North America, the B2B, connected car, smart manufacturing market and smart energy markets account for ~70% of the market. Connected car and smart manufacturing lead growth, while B2C (e.g. connected watches) is slowest-growing.

In APAC, as in North America, B2B, connected car, smart manufacturing market and smart energy markets account for a large share of the IoT services market (~65%). APAC is characterized by government investment in smart cities/buildings (+33% CAGR) and e-healthcare (which, unlike in North America and in Europe, is not constrained by regulation). The majority of IoT-related projects in APAC are conducted in China, India, and Japan.

In Europe, EU and country-led directives and initiatives have furthered the use of IoT in the manufacturing and energy industries.

Outlook

Over the next few years, the market will gradually shift from demand for consulting to a mix of consulting and mid-sized IoT projects. The move from consulting to the implementation phase will expand demand for more implementation skills. Additionally, vendors will transition their IoT platforms progressively to add-ons to existing IoT COTS. They will also expand their IoT adjacent capabilities from digital, UX, and big data/analytics to engineering and R&D services.

Delivery will remain onshore-centric, especially for skills in consulting, UX, project management, and pre-sales consulting. Technology skills will be retained or sent offshore.

Over time, client organizations will expand their focus to customer engagement improvements, while continuing to target cost savings/service efficiencies. Appetite for new business models is niche, as the majority of large enterprises look for incremental changes and do not know how to create and handle business model changes.

Vendors will re-align their service portfolio.

NEAT Methodology for IoT 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 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	Range of IoT services capability IoT consulting IoT application implementation capability IoT & device security capability IoT monitoring services IoT analytics IoT UX IoT ER&D IoT business consulting Other IoT services
Delivery	IoT delivery platforms Standalone accelerators Scale of IoT delivery capability In the U.S. In the U.K. In Continental Europe in APAC In Central & Latin America In the automotive industry In manufacturing In support of buildings In government sector In agriculture & mining In logistics In energy sector In healthcare In oil & gas In insurance In banking & financial services In CSP In other sectors
Presence	Scale of overall IoT services presence Presence in U.S. Presence in Europe Presence in RoW

Continued…

Benefits Achieved	Level of cost savings Increased revenues achieved Improvement in UX/customer engagement Increase in device safety Pricing approach

Exhibit 2

'Ability to meet client future requirements': Assessment criteria

Assessment Category	Assessment Criteria
Services Investment	In IoT services overall In support of operational efficiences In support of new business models In IoT platform solutionsor COTS-based alternative In technology accelerators In IP-based use cases
Market Momentum	New client wins
Ability to Deliver Innovation	Mechanisms in place to deliver client innovation Client perception of innovation delivered Suitability of vendor to meet client future needs Suitability for IoT operations Suitability for new business models Suitability for customer engagements
Financial Security	Financial rating

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

research.nelson-hall.com

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:

Simon Rodd at simon.rodd@nelson-hall.com