NEAT EVALUATION FOR INFOSYS:

Quality Engineering

Market Segment: Overall

Introduction

This is a custom report for Infosys presenting the findings of the 2024 NelsonHall NEAT vendor evaluation for *Quality Engineering* in all the *Overall* market segment. It contains the NEAT graph of vendor performance, a summary vendor analysis of Infosys for quality engineering services, and the latest market analysis summary.

This NelsonHall Vendor Evaluation & Assessment Tool (NEAT) analyzes the performance of vendors offering quality engineering services (formerly referred to as software testing 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 RPA-based automation, AI-based analytics & automation, GenAI use cases, application migration to cloud testing, and SAP testing.

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: Accenture, Amdocs, Apexon, Aspire Systems, Atos, Capgemini, Cigniti, Coforge, Cognizant, EPAM Systems, Expleo, IBM, Infosys, LTIMindtree, Movate, NTT DATA, Planit, Qualitest, QualiZeal, TCS, Tech Mahindra, TestingXperts, Trigent, Virtusa, Wipro, and Xoriant.

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

NEAT Evaluation: Quality Engineering (Overall)
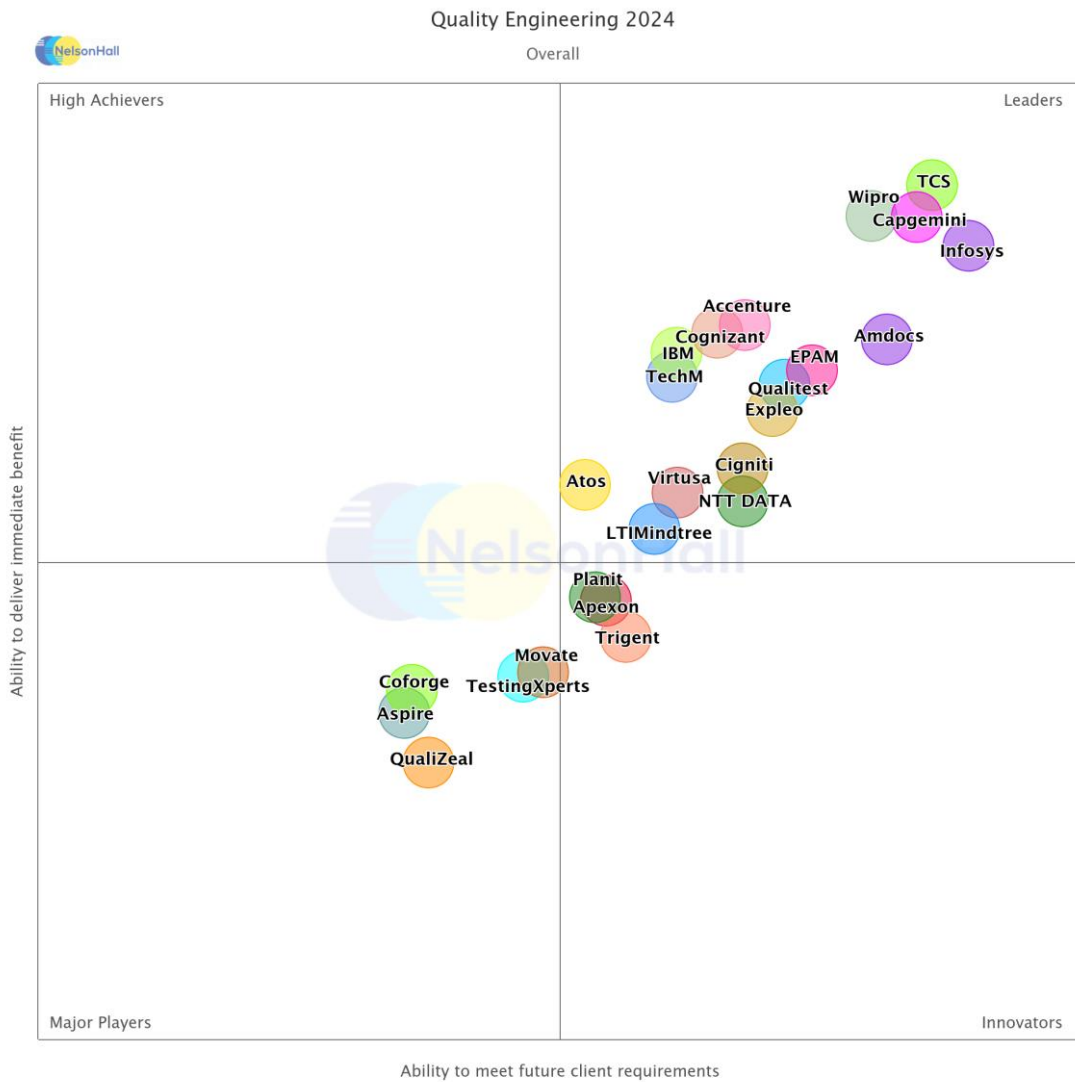
NelsonHall has identified Infosys as a Leader in the *Overall* market segment, as shown in the NEAT graph. This market segment reflects Infosys' overall ability to meet future client requirements as well as delivering immediate benefits to its quality engineering clients.

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 future client requirements.

Buy-side organizations can access the *Quality Engineering* NEAT tool (*Overall*) here.

Vendor Analysis Summary for Infosys

Overview

Infosys' testing practice is now Infosys Quality Engineering (IQE). The practice is a horizontal service line with P&L responsibility serving Infosys' six main verticals: services, utilities, resources and energy; communications, media, and technology; manufacturing, retail, CPG, and logistics; banking and financial services; healthcare and insurance; and life sciences. An important element of IQE's strategy is its vertical-specific offerings.

IQE is an extensive practice within Infosys and had 29k career testers at the end of calendar year 2023. IQE's headcount does not include an additional 2k career testers working in other Infosys units.

IQE has ~550 clients. Major IQE clients include tier-one organizations Proximus, ArcelorMittal, Arizona Public Service, Dow Jones, E.ON, Honda, Kraft Heinz, National Australia Bank (NAB), Telenet, Prime Therapeutics, and VodafoneZiggo.

IQE has two primary platforms related to GenAI:

- *Infosys Applied AI QE* platform to use AI and GenAI to automate testing. It is role-based (e.g., admin, model engineer, QE prompt engineer, domain CoE team member, tester, and business user). The platform provides pre-set use cases and also the possibility of creating new use cases (apps). It relies on GPT-4, Amazon Bedrock, and Google Gemini. It also uses Falcon LLM, Mistral AI, and Meta LlaMa. Infosys says it has ~200 standard prompts and ten use cases. It can execute all use cases sequentially

- *Infosys AI Assurance* platform to test AI models.

IQE highlights that it has positioned RAG for applications under transformation and finetuning for stable applications. Within RAG, it supports several models: RAG Retriever, Fusion, Hypothetical Document Embeddings, and Knowledge Graph.

Infosys has created several GenAI models with the Infosys Applied AI QE platform.

Financials

IQE accounts for ~13% of Infosys' revenues and ~9% of its headcount.

NelsonHall estimates the revenues of IQE were ~$2,050m (up 15%) in calendar year 2023. The estimated growth for calendar year 2024 is ~+15%.

Strengths

- *AI-based analytics*: Infosys was one of the early vendors in this space and has a comprehensive offering. It has not added new use cases but has brought more depth to its existing use cases and deepened the effectiveness of its models

- *AI-based automation*: Infosys has made its service portfolio comprehensive. GenAI will cannibalize the AI-based automation, and we expect Infosys to bring further depth to its test script maintenance technology and iAUSM tool

- *GenAI use cases*: Infosys has a comprehensive offering, with specific services such as UML diagram generation

- *Application migration to cloud testing*: the company has expertise and has backed it up with IP—Infosys Cloud Infrastructure Validation, available on Microsoft Azure and AWS. The company is one of the few vendors with IP for validating infrastructure as code configuration files

- *RPA*: Infosys has backed its expertise with its BOT Café, a repository of 60 UiPath test bots

- *SAP testing*: Infosys now uses GenAI (with several use cases, including test scenario, case and script generation, RCA, and MBT) and configuration validations. NelsonHall is pleased to see Infosys expanding its automation capabilities in SAP testing in an industry that has traditionally hardly been innovative.

Strategic Direction

IQE's testing vision includes the following:

- Investment in shift-left and -right: predictive QE, integrated SDLC, and continuous testing

- AI: autonomous test creation, script development, and maintenance; intelligent test optimization; SDLC automation; real-time collaboration and communication on production systems; proactive NFT

- User centricity: model bias testing, AR/VR, user perception validation

- Upskilling with new roles such as data scientists, AI experts, ethical AI testers, and DevTestOps engineers.

With the above in mind, IQE's priorities include:

- Differentiating its service portfolio with CoEs bringing new ideas and innovations and investing in newer areas

- Building new IPs, along with technology partnerships

- Scaling up innovation, focusing on key accounts to proactively deploy IP, investing ahead in innovation, and conducting workshops, webinars, roadshows, and hackathons.

IQE is also shifting its pricing model to outcome-based. The practice estimates that ~5% of its revenues are risk & reward-based. These pricing models command IT output parameters such as a reduction in defect leakage. IQE expects that with the adoption of GenAI, new IT outcomes, e.g., time to release, will become more frequent.

At corporate level, Infosys has segmented its workforce into three types of capability:

- AI aware

- AI builder

- AI master.

It estimates that 265k associates (85% of its workforce) are AI aware, 7.2k are AI builders, and 154 are AI masters.

IQE is aligning its skills across the three horizons:

- Existing skills: redefining practitioner competencies with the impact of AI, e.g., reskill on GitHub Copilot, prompt engineering, Azure OpenAI API, Salesforce Sales, and ServiceGPT

- Emerging skills: aligning capabilities for developing solutions on AI technologies, e.g., Responsible AI, context engineering, AI product engineering

- Future skills (in six to 18 months), e.g., pre-trained model builder, AI regulatory, AI inferencing optimization.

With this approach, IQE wants to change the skills of its practitioners from AI consumers to creators.

IQE believes the rise of AI will give rise to new testing roles.

Outlook

Along with a few other IT services peers, Infosys continues to dominate in the QE space. The company has a track record of funding testing innovation and IP ahead of client demand. It has done so again by developing GenAI use cases, articulating its consulting and execution service portfolio. Infosys' investments in GenAI complement and accelerate previous efforts around traditional AI (mostly ML).

NelsonHall reiterates that AI, particularly GenAI, will disrupt the QE industry. Client evidence suggests, however, that despite GenAI being a focus at board level, organizations are still evaluating and piloting GenAI for QE projects. Deployments are still rare. Therefore, we expect Infosys to shift its focus from GenAI use cases activity to a commercial push. This commercial acceptance will drive a virtuous cycle, with deployments bringing best practices and modifications to the GenAI offering. With its GenAI consulting focus, Infosys has the right approach to favor GenAI deployments for testing.

Quality Engineering Market Summary

Overview

Clients want to automate manual functional testing and increase productivity through continuous testing/agile programs. The transformation toward agile and continuous testing continues. In parallel, testing has become specialized, requiring expertise for several activities, including performance engineering and SRE and test support services (e.g., test data and testing environment).

QE needs also to accommodate two significant trends:

- The migration of applications to the cloud. These projects, beyond traditional functional testing, require testing the cloud infrastructure, often involving different organizations: QE and cloud/hyperscaler specialists

- Platform testing, in particular SAP S/4HANA transformation projects from ECC. Despite the importance of SAP applications, SAP testing offerings are less advanced than for custom applications.

Also, GenAI has quickly emerged to be able to generate test cases and scripts from requirements/user stories ('test authoring'). If adopted by clients, GenAI-based test authoring will drastically affect how testing is currently done, reducing the human labor intensity. There are several other GenAI use cases for QE. NelsonHall expects GenAI will be pervasive, with many use cases anticipated.

GenAI will cannibalize other use cases based on other AI models (e.g., ML and NLP). LLMs bring the promise of test authoring off-the-shelf, while ML requires model training. RAG and other techniques will help bring context to GenAI. NelsonHall envisions a market where GenAI is the primary AI technology, and ML provides higher model accuracy at a higher cost than GenAI.

Buy-Side Dynamics

The three major client segments are:

- *Automation Latecomers*: companies that have not yet fully deployed (functional and other) automation. They therefore rely on manual testing and lack test coverage. Defect leakage in production is high, resulting in additional costs. These companies want to automate testing as part of agile projects

- *Automation Mainstreams*: companies that have progressed well on their functional automation journey. They follow agile methodologies and have deployed DevOps/continuous testing tools. Delivery is in India, and costs are under control. However, these companies face traditional challenges: automation is behind development, and large repositories of test assets are partially updated and little-understood. The automation opportunity remains significant outside of functional testing

- *Advanced Automation Adopters*: companies that have deployed continuous testing tools across non-functional testing (mostly performance and SRE) and UX testing (mostly accessibility). They are experimenting with AI use cases.

'Automation Latecomers' need a comprehensive assessment of their testing function. Vendors need to demonstrate:

- Continued investment in automation, tool adoption, and delivery presence in India

- Executive sponsorship and budget to drive the transformation of the TCoE and invest in automation and new skills

- Consulting and change management capabilities.

'Automation Mainstreams' need to continue their test automation journey while lowering costs. Successful QE vendors need to:

- Focus on HR and upskilling

- Invest in tool democratization to make technical tools more accessible in the agile teams, away from the TCoEs. This democratization will make the delivery teams more reactive to clients' needs.

'Advanced Automation Adopters' require innovation partners. Vendor success factors include:

- Not overselling: GenAI is not a silver bullet. Set expectations right with clients and partner with them, accepting some level of co-creation and reduced fees for creating new automation use cases

- Experimenting on a limited basis with pricing models, such as output-based pricing and, for front-office applications, business outcome-based pricing.

Market Size & Growth

The global QE services market size is ~$41bn (2024).

QE spending will rebound in 2025 led primarily by the U.S. and the financial services sector. It will reach $50bn in 2028, representing a +4% CAGR from 2023-28.

Cognitive spending will be incremental QE spending from 2026-27. Then, its benefits (primarily functional automation) will drive down manual and test automation spending from 2028.

Outlook

Functional testing represents most software testing services spending. This spending has specific dynamics resulting from the decline in manual testing, the rise of automation, and the steadier acceptance of platform and cloud migration testing.

Specialized testing activities cover non-functional, test support services, cognitive, and other activities (including UX testing). Organizations are turning to more specialized and technical testing activities as they expand their usage of automation (to test support services).

GenAI will disrupt the way testing is conducted. It will initially be an increased source of spending, bringing automation benefits from 2028 onward.

NEAT Methodology for Quality Engineering

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 future client 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 future client 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.

Note that, to ensure maximum value to buy-side users (typically strategic sourcing managers), vendor participation in NelsonHall NEAT evaluations is free of charge and all key vendors are invited to participate at the outset of the project.

Exhibit 1

'Ability to deliver immediate benefit': Assessment criteria

Assessment Category	Assessment Criteria
Offering	Application migration to the cloud QE AI-based analytics AI-based automation RPA-based automation SAP testing GenAI use cases
Delivery	Indian delivery capability US onshore capability EMEA onshore capability Offshore leverage
Presence	Customer presence globally Customer presence in N. America Customer presence in EMEA Customer presence in APAC Customer presence In LatAm
Benefits Achieved	Level of cost savings achieved Increased application quality/reduced production downtime Increased speed-to-market for digital initiatives Increased end-user/business satisfaction/UX Other benefits achieved Pricing approach

Exhibit 2

'Ability to meet client future requirements': Assessment criteria

Assessment Category	Assessment Criteria
Investments	Application migration to the cloud QA
	AI-based analytics
	AI-based automation
	RPA-based automation
	SAP testing
	GenAI use cases
Ability to Deliver Improved Outcomes	Overall performance
	Achievement of program business objectives
	Understanding of key company and industry requirements
	Timeliness of service delivery (project on time)
	Cost of service (project on budget)
	Use of innovative offerings
	Flexibility of service
	Value for money
Financial Security	QE financial security

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

Sales Inquiries

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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