

NEAT EVALUATION FOR TRIGENT:

Quality Engineering

Market Segment: AI-Based Analytics & Automation

Introduction

This is a custom report for Trigent presenting the findings of the NelsonHall NEAT vendor evaluation for *Quality Engineering* in the *AI-Based Analytics & Automation* market segment. It contains the NEAT graph of vendor performance, a summary vendor analysis of Trigent 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 application security testing, RPA-based test automation, AI-based analytics & automation, UX testing, cloud migration testing, and ERP & COTS testing.

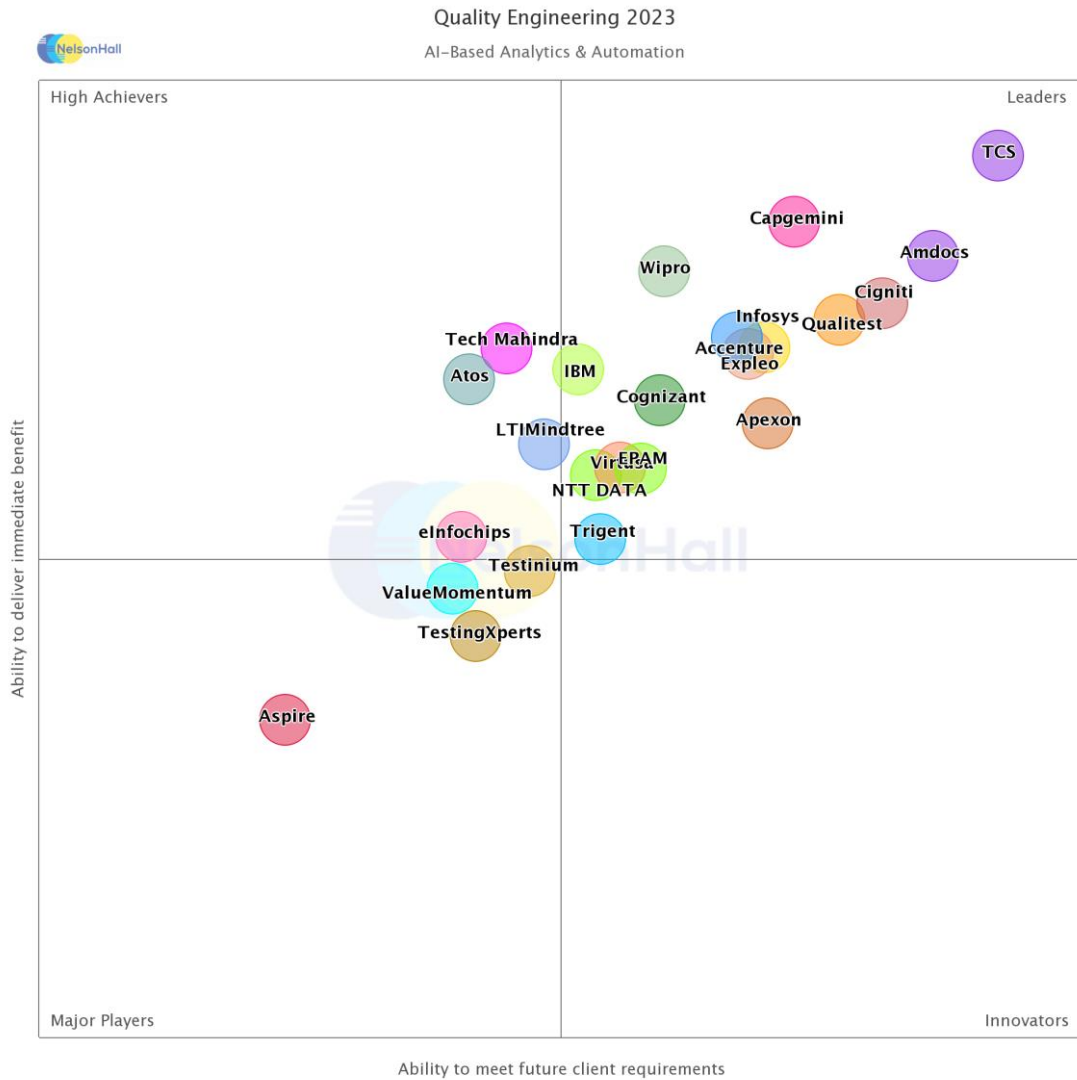
Evaluating vendors on both their ‘ability to deliver immediate benefit’ and their ‘ability to meet client future requirements’, vendors are identified in one of four categories: Leaders, High Achievers, Innovators, and Major Players.

Vendors evaluated for this NEAT are: Accenture, Amdocs, Apexon, Aspire Systems, Atos, Capgemini, Cigniti, Cognizant, eInfochips, EPAM Systems, Expleo, IBM, Infosys, LTIMindtree, NTT DATA, Qualitest, TCS, Tech Mahindra, TestingXperts, Testinium, Trigent, ValueMomentum, Virtusa, and Wipro.

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



NEAT Evaluation: Quality Engineering (AI-Based Analytics & Automation)



NelsonHall has identified Trigent as a Leader in the *AI-Based Analytics & Automation* market segment, as shown in the NEAT graph. This market segment reflects Trigent’s ability to meet future client requirements as well as delivering immediate benefits to its quality engineering clients with specific capability in AI-based analytics & automation.

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 (AI-Based Analytics & Automation)* [here](#).



Vendor Analysis Summary for Trigent

Overview

Trigent was founded in 1995 and has its headquarters in Southborough, MA, close to Boston. The company has a headcount of 2k and has an India-centric delivery model, with its main delivery center in Bangalore.

Trigent provides software testing services through its Quality Engineering practice, QA&T. QA&T is Trigent's largest practice by revenue. NelsonHall estimates that Trigent has ~500 personnel in its testing practice, the majority of which are in Bangalore.

The company has structured its QE service portfolio across several core categories: QA consulting, CX testing, intelligent automation, essentials testing, next-gen technology testing, and enterprise testing.

Trigent has been in high-growth mode, primarily thanks to the following:

- Expanding into new geographies, e.g., Canada
- Hiring senior profiles, including sales profiles in Canada, the U.S. (New Jersey), and India
- Shifting its overall portfolio to digital, such as RPA, AI, and analytics
- Conducting marketing campaigns and events.

Looking ahead, the company, which has a client base weighted towards high-tech clients, is expecting some delayed decision-making. It remains optimistic about its potential with high-tech start-ups, data & analytics, and QA in particular.

Trigent highlights its investments in the following areas where it has strengths:

- Intelligent automation across test design automation, automation-as-a-service, test data management, and AI (qAlzen)
- Essentials testing, e.g., performance and security testing. For instance, the company promotes a consulting approach to performance engineering to help clients analyze the traffic reaching their website and web applications, to assess their performance to understand the nature of transactions (including their length, number, traffic, and outcome of the transaction), and to identify the transactions on which Trigent should focus its QE activities. Trigent relies on its internally developed tool, currently named Monitor, Logger, and Debugger (MLD)
- Next-gen QE offerings, such as connected devices/compatibility testing, blockchain, and AI model testing.

Trigent QA&T primarily targets the insurance, healthcare, high-tech, transport, and logistics sectors.

Financials

Trigent had \$12m in testing revenues in 2022, up 30% y/y.



Strengths

- *Continuous testing*: the offering is in line with the market. The company has expanded from pure QA in DevOps to aggregating over time all other IPs and services, with recent developments including AI-based automation, merging MBT and BDD, and integrating its main testing framework, AutoMATE, with open-source software Cypress and Playwright
- *AI-based automation*: Trigent meets the primary needs of clients with automated test script generation and maintenance
- *Application security testing*: Trigent has the basis of a comprehensive offering, with assessments and execution through the right tools. The company has started incorporating SAST testing at the developer level in continuous testing. We expect more there.

Challenges

- *RPA capabilities* are nascent
- *Enterprise application testing* offering is nascent. We think that AI offers a lot of potential for progression testing
- *UX testing*: the offering is not comprehensive and has limited automation.

Strategic Direction

Trigent is prioritizing AI and automation over the next year. The company is evaluating COTS and open-source software for automated test script generation and maintenance. It will favor open-source software driven by technology and clients' demand for cost savings.

Along with AI-based automation, Trigent focuses on:

- QAOps, e.g., continuous testing through enhancing reporting and monitoring
- Container-based execution of functional testing to accelerate execution
- Performance testing for critical applications through traffic analysis
- Customer experience, focusing on compatibility testing and improving cloud device labs
- Expanding COTS testing to ServiceNow testing following its recent Xcelnet acquisition. Trigent wants to make further acquisitions, leading to testing portfolio expansion. It is also targeting similar COTS testing service expansion organically. The company counts on its large ISV client base to expand from software product testing to functional testing
- Verticals: expanding to the U.S. federal sector, targeting energy and transportation logistics and services through IoT/telemetry.



Outlook

We think the emergence of digital testing, continuous testing, and even more AI is a true paradigm shift for clients and vendors. AI, in particular, promises to automate the creation of test scripts. Technologies are not all fully ready, and client adoption will require several years. However, the QE industry has reached an inflection point where smaller QE vendors have a role to play.

Trigent is progressing well on this journey. The company is relatively small by IT services standards and needs to be selective in its investments. It has covered continuous testing well and is proactive with MBT, complementing BDD approaches. Trigent has articulated its AI-based automation, e.g., a next-gen record-and-playback tool for test script generation and maintenance. The company must now invest in AI-based analytics and showcase use cases such as test case optimization. Finally, we would like to see Trigent invest in UX research and testing, which offers a high potential for automation.

Quality Engineering Market Summary

Overview

The quality engineering (QE) market, also called software testing or quality assurance, is going through an extended growth cycle focused on continuous testing (i.e., testing under agile methodologies, using DevOps tools, and deploying automation). This cycle has been going for five years and still has significant growth potential: spending continues to grow in mid- to high-single digits.

QE vendors continue to invest in their continuous testing platforms, driving automation beyond functional testing to support services such as test environment and test data management, and non-functional testing.

AI is playing an increasing role, initially using analytics to conduct more selective and informed testing, driving productivity up. We think QE is on the verge of disruption with the pending introduction of AI-based automation to generate test scripts automatically. AI-based automation, combined with BDD and once-promising technologies such as model-based testing, will automate the 'requirements>test cases>scripts' cycle and shorten functional testing significantly.

Finally, quality engineering is becoming increasingly technical across existing and new areas (such as API testing and chaos engineering). This increasing technicality is driving major workforce reskilling investment in the context of talent shortages.

Buy-Side Dynamics

The three major client segments for QE services are:

- 'Agile Mainstream': organizations that are transitioning to hybrid agile (with digital projects adopting agile and non-digital remaining on waterfall methodologies). They are currently implementing DevOps tools (i.e., continuous testing) to increase their level of automation
- 'Advanced Automation': organizations that are engaged in an agile and continuous testing transformation like Agile Mainstreams. However, they look at emerging automation opportunities (e.g., AI-based automated test script creation, RPA tools) to reach new levels of automation, initially in functional testing
- 'Digital Matures': organizations that have several digital programs and look to automate digital technologies (e.g., Salesforce, application cloud migration).

'Agile Mainstream' clients select their QE vendors based on their past performance in similar projects, including internally and externally (with other clients); vendors must also demonstrate their ability to:

- Deploy continuous testing technologies to drive automation to serve agile projects
- Expand automation outside of functional execution and experiment with new functionality such as test support services (e.g., test data and environment management) and AI use cases
- Reskill manual testers towards technical services.



'Advanced Automation Organizations' select their QE vendors based on their ability to demonstrate:

- Their investment in AI use cases, initially around AI-based analytics and expanding to automation
- Best practices and sharing a clear view of the art of the possible
- Change management capabilities to drive tester buy-in.

For 'Digital Matures', vendors must demonstrate the following:

- They either specialize in testing digital technology (e.g., Salesforce, applications migrated to the cloud) or have both build and test capabilities. If the digital technology comes from an ISV, vendors must demonstrate they have formalized their partnership with the technology vendor. They also need to articulate their status level and what that level means
- Their QA capabilities can effectively play the role of a quality gate and must be independent of the implementation/development team
- They bring automation capabilities rather than manual functional expertise.

Market Size & Growth

The global software testing services market size in 2023 is ~\$42bn.

NelsonHall expects a deceleration in 2023 (+6%), led by mediocre GDP growth projections. This deceleration comes after solid growth in 2022 (+8%) driven by the digital and cloud catch-up that followed the 2020 pandemic.

Spending will reach \$52bn in 2027, representing a +6% CAGR in the period 2022-2027.

Outlook

Functional testing represents most software testing services spending (82%). Its spending has specific dynamics resulting from the secular decline in manual testing, the rise of automation, the fast growth of digital testing, and the steadier acceptance of COTS 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), consider the benefits of AI applied to QA, and emphasize non-functional. Overall specialized testing has a 10% CAGR, twice as fast as testing services overall.



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
Offerings	<ul style="list-style-type: none"> Continuous testing Application migration to the cloud QA AI-based analytics AI-based automation RPA-based automation UX research and testing: Usability UX research and testing: Accessibility UX testing: other Application security testing Enterprise application testing
Delivery	<ul style="list-style-type: none"> Indian delivery capability U.S. onshore capability EMEA onshore capability Offshore leverage
Presence	<ul style="list-style-type: none"> Customer presence globally Customer presence in N. America Customer presence in EMEA Customer presence in APAC Customer presence In LatAm
Benefits Achieved	<ul style="list-style-type: none"> 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
Levels of Investment	Continuous testing Application migration to the cloud QA AI-based analytics AI-based automation RPA-based automation Usability testing Accessibility testing UX testing: Other Application security testing Enterprise application testing
Ability to Innovate	Mechanisms in place to deliver client automation innovation Extent to which client perceives that automation innovation has been delivered Suitability of vendor to meet future continuous testing needs of clients Suitability of vendor to meet future cognitive testing needs of clients Suitability of vendor to meet future UX testing needs of clients Perception of suitability to meet future needs for other technologies
Other	Market momentum Financial security

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



research.nelson-hall.com

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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