



Leveraging Quality Engineering to Move the Enterprise Generative AI Needle Forward

April 2024: Complimentary Abstract / Table of Contents

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- ▶ Oracle Services
- ▶ Outsourcing Excellence
- ▶ Payer and Provider Business Process
- ▶ Payer and Provider Information Technology
- ▶ Price Genius – AMS Solution and Pricing Tool
- ▶ Pricing Analytics as a Service
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- ▶ SAP Services
- ▶ Service Optimization Technologies
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- ▶ Supply Chain Management (SCM) Services
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Contents

5	Introduction and overview		
6	Research methodology		
7	Background of the report		
8	Scope of the report		
9	Summary of key messages		
10	Quality engineering services market overview		
11	QE services market		
	By size and growth		
	By geography		
	By industry		
	By service type		
	By buyer size		
16	Commercial constructs in QE services		
17	Next-generation QE services trends		
18	Leveraging QE to move enterprise generative AI needle forward		
19	ACE framework to ace business assurance for enterprise generative AI adoption		
20	Role of quality function in assessment stage of enterprise generative AI adoption		
22	Role of quality function in implementation stage of generative AI adoption		
25	Role of quality function in post-implementation stage of generative AI adoption		
28	Remodeling quality engineering across 3Ps – People, Process, and Partnerships		
30	Skillset requirements for generative AI assurance		
31	Evolution in quality engineering function because of generative AI intervention		
32	Partnerships enterprises need to forge/deepen		
36	Implications for enterprises and service providers		
37	Implications for enterprises		
38	Implications for service providers		

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Contents

39 Quality engineering: technology providers

- 40 Key technology providers in the quality engineering space
- 41 Avo Automation
- 43 Functionize
- 45 GenRocket
- 47 Katalon
- 49 Testbirds
- 51 Tricentis

53 Appendix

- 54 Glossary
- 55 Research calendar

Introduction

Over the years, the quality of software as well as the quality of processes using which the software is built has gained traction. This has led enterprises to transition from Quality Assurance (QA) to Quality Engineering (QE). With this, enterprises have begun to link the outcomes of the quality function with business outcomes. The increased hype and adoption of newer technologies such as generative AI, it has become more important to understand the implications across processes, people, and technology as well as the new opportunities for the quality function. There is a huge surge of generative AI use cases across the Software Testing Life Cycle (STLC) as well as quality interventions in generative AI applications/systems. On the supply side, big giants such as Microsoft, Google, and Meta are investing aggressively to dominate the generative AI landscape. Additionally, the market is experiencing investments from leading QE-specific technology providers such as Copado, Katalon, QuerySurge, and Tricentis as

well. This is the apt time for enterprises to understand how the quality function can be a game changer in their generative AI journey

In this research, Everest Group has taken the opportunity to highlight the potential of generative AI in quality engineering and how QE can enable smoother adoption of generative AI in the IT landscape.

The scope of this report includes:

- Quality Engineering (QE) market size (split across geographies and industry verticals)
- QE buyer trends across geographies, industry verticals, and revenue sizes
- Key trends shaping the QE market

Scope of this report

Geography: Global

Provider: 35+ leading quality assurance service providers

Services: Application services

This report focuses on the quality engineering market

[NOT EXHAUSTIVE]

Services scope

Functional testing

Unit testing | Integration testing | System testing | Regression testing | Acceptance testing | API testing

Non-functional testing

Performance testing | Security testing | Compliance testing | Usability testing | Compatibility testing | Accessibility testing

Crowdsourced testing

QE advisory

Modernization testing

Test automation

Assurance of next-generation technology themes

Intelligent systems

(generative AI, advanced analytics, big data)

- Output validation
- Core algorithm testing
- Model performance testing

Connected ecosystems

(digital twin, IoT, 5G)

- Interoperability testing
- Compatibility testing
- Network connectivity testing

Extended reality

(AR/VR/MR, metaverse, Web 3.0)

- Immersion testing
- Interoperability testing
- Hardware compatibility testing

Decentralized ecosystem

(distributed ledger technologies, blockchain)

- Smart contract testing
- Node/peer testing
- Consensus testing

Modern applications

(low-code no-code, AI-assisted development)

- Microservices testing
- Continuous testing
- Chaos engineering

Cloud applications

(serverless computing, hybrid-cloud, multi-cloud)

- Scalability testing
- Multi-tenancy testing
- Disaster recovery testing

Key areas covered

Custom applications

Mobile | Desktop | Web

COTS applications

ERP | CRM | HCM | SCM

Phygital products and embedded systems

Drone | Smart wearables | Gaming consoles | Wireless devices | Medical devices | Point of Sale (PoS) systems

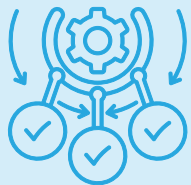
Summary of key messages



As next-generation technology proliferates in enterprises' technology landscape, **enterprises are leveraging QE services** to ensure optimum quality



Adoption of generative AI **will create new opportunities for the quality function** and spike the demand for QE services in the near term



Interventions will be required across people, processes, and technology to ensure the optimum impact of implementing generative AI in QE

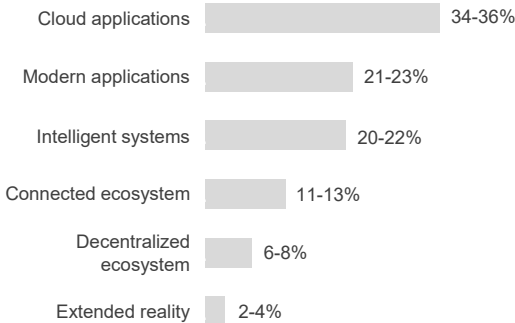


QE function will play an important role in **enabling enterprises scale their generative AI initiatives** by addressing the challenges around safety and security

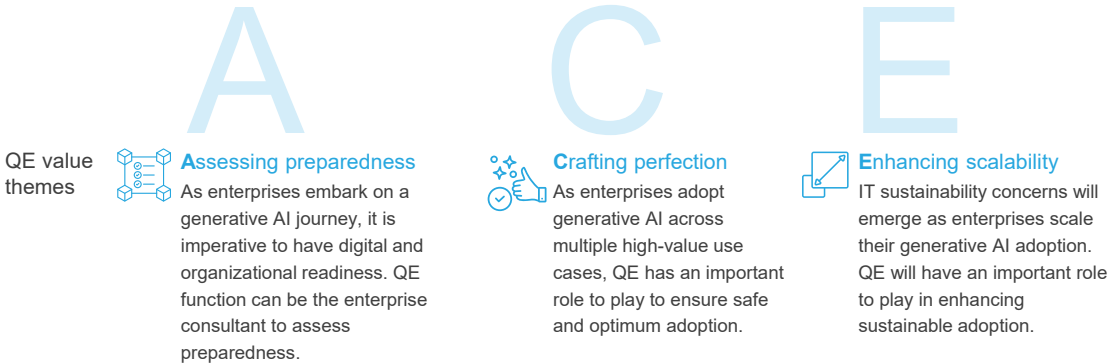
This study offers four distinct chapters providing a deep dive into key aspects of QE services market; below are four charts to illustrate the depth of the report

Trends in QE service market

Next-generation QE segments



Framework to enable quality across enterprises' Gen AI adoption journey



Interventions in QE function due to Gen AI adoption

- People** - What are the **evolved roles and the corresponding skillsets** where investments must be done for generative AI assurance?
- Process** - How would **quality engineering change** with generative AI intervention?
- Partnership** - Which **service and technology partnerships** need to be forged or deepened to further the generative AI assurance agenda?

Featured technology providers in the quality engineering space

Type of activity	Impact	Featured provider
Test automation	Improved productivity, test coverage, defect detection, resource utilization, and cost-optimization	AVO Automation, functionize, Katalon, Tricentis
Test data management	Ensures use of good quality of data for testing, and meets the data privacy and security guidelines	AVO Automation, GenRocket, Tricentis
Visual testing	Improved customer experience with focus on parameters such as accessibility, usability, and compatibility	functionize, Katalon, Tricentis
Crowdsource testing	Accelerates time to market by utilizing diverse testing resources with global coverage by obtaining rapid and real-world feedback	Testbirds

Research calendar

Application Services

	Published	Current release	Planned
Reports title	Release date		
Application Transformation Services PEAK Matrix® Assessment 2024 – North America			January 2024
Generative AI for the Future of Application Services – Propelling Productivity and Reshaping Cost Paradigms			January 2024
Next-generation Quality Engineering (QE) Services – Provider Compendium 2023			January 2024
Low-code Application Development Platforms – Provider Compendium 2024			February 2024
Enterprise Pulse – Top Five Emerging Application Service Providers 2024			February 2024
Application Transformation Services PEAK Matrix® Assessment 2024 – Europe			March 2024
Leveraging Quality Engineering to Move the Enterprise Generative AI Needle Forward			April 2024
Quality Engineering for Generative AI Adoption Excellence			Q2 2024
Quality Engineering as a Foundation for Sustainable IT			Q2 2024
Scaling Applications with Zero Ops			Q3 2024
Low-code Application Development Services PEAK Matrix® 2024 - Focus on Appian, Outsystems, and PowerApps			Q3 2024
Quality Engineering (QE) Services for Mid Market Enterprises PEAK Matrix® Assessment 2024			Q3 2024
Application Management Services PEAK Matrix® Assessment 2024			Q3 2024
Quality Engineering (QE) Services for AI Applications and Systems PEAK Matrix® Assessment 2024			Q4 2024
Application Monitoring and Observability Solutions PEAK Matrix® Assessment 2024			Q4 2024
Application Services 2024: Top 20 Technology Providers Delivering Superior Value			Q4 2024

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