

QUALITY ENGINEERING SERVICES



Analysis

A process to examine something in detail in order to explain it as a result of discussion or interpretation.

Planning

A detail or a process of thinking and organizing step by step to achieve a desired goal.

Improve

To make something better in a particular way.

Evaluate

To estimate the significance or value of assessment.

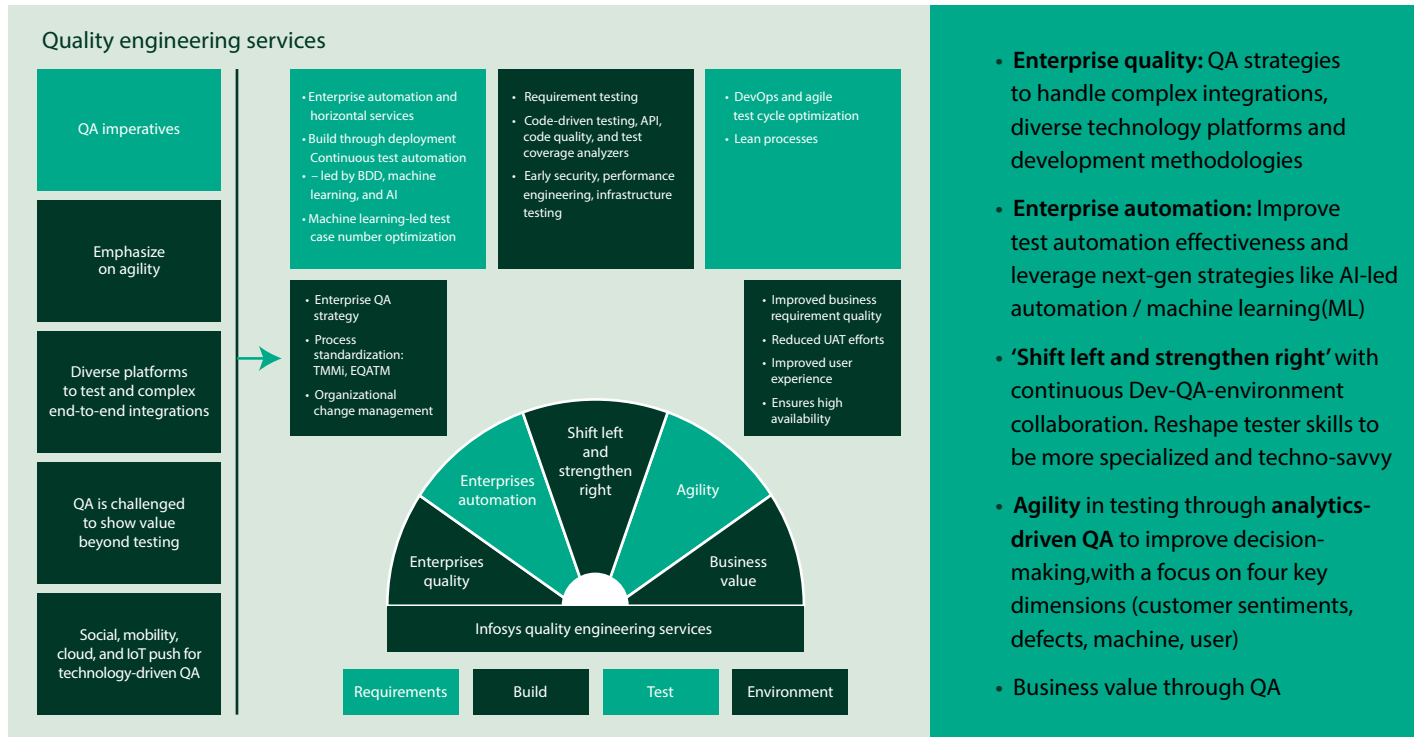
The need for quality engineering services

In today's digital world, 'change' is the only constant and organizations are grappling with ways to meet the ever-changing expectations of key stakeholders – especially ubiquitous consumers. Additionally, changes in market dynamics — like mergers and acquisitions, global app rollouts, emphasis on risks and compliance, mobile commerce, as well as data and analytics — are reshaping expectations from IT. To achieve the required pace and flexibility, organizations are now adopting agile methods and DevOps principles.

Testing groups thus face the challenge of presenting value beyond just testing and Shift-Left. Hence the need to transform from a typical quality assurance (QA)-driven function to one that is quality engineering (QE)-focused.

Why choose Infosys for quality engineering?

Infosys provides a comprehensive approach to address the QE transformation needs of a testing organization. Our approach encompasses the following areas, covering people, processes, and technology:



Enterprise quality

It is critical that organizations define and implement tools, technologies, and methods that are in line with their business goals and aspirations. The 'Infosys ASSURE' framework provides a comprehensive approach to testing and quality assurance, encompassing aspects of enterprise-wide QA strategy, maturity assessment – based on Infosys-patented EQATM (Enterprise Quality Assurance Transformation Model), QA tools, infrastructure strategy, and organization change management.

Case in point

Infosys partnered with one of the world's largest consumer and corporate banks to lead their testing transformation, in order to overcome challenges around compliance, standards, and governance; leading to US\$11.5 million in savings through a 74 percent reduction in production incidents



Enterprise automation

As organizations move towards achieving rapid delivery of services to fulfill customer demands, 'time-to-market' becomes a key factor. Our enterprise automation strategy augments traditional testing strategies with artificial intelligence (AI) to help organizations mature in test automation. The Infosys AI-led automation solution is a key accelerator for organizations striving to achieve continuous automation in DevOps, implementing robotics automation for peripheral testing and leveraging machine learning to optimize testing.

Optimize test case inventory

- Problem statement: An inventory of thousands of large, inefficient, and time consuming test cases
- Solution: Test Case Optimizer
- Benefits: Infosys test optimizer, deployed for various clients, has helped them identify redundancies to the tune of 30 percent

Predict quality of a module

- Problem statement: While testing in agile mode, there is a need to prioritize the testing of modules
- Solution: Defect prediction tool
- Benefits: Infosys defect prediction tool predicted a number of job failure modules for a bank with an accuracy of over 85 percent

Identify hotspots and auto-test (AUTUMN)

- Problem statement: Early detection of potential failure areas can help organizations take preventive action, reducing potential defects
- Solution: AUTUMN (AUtomed Testing Using Machine learNing)
- Benefits: : Reduced effort by over 20 percent for our clients, by ensuring early warning of hot spots

Shift left and strengthen right

With the shift to global program rollouts, mobile commerce, social, cloud, and IoT-adoption, QA is expected to shift left and strengthen right in order to embrace technology and business priorities. We propose the adoption of transformational strategies, which cover test-driven development, analytics-driven QA, virtualization and API testing, performance engineering, static and dynamic security testing, and continuous automation to achieve the objective of managing quality upstream.

Agility

While automation is the key lever to address technology, agile and DevOps capabilities have been identified as the key process levers to meet business goals. Based on our experience from several hundred implementations across the globe, and by leveraging industry best practices, we can help your business accelerate the adoption of QA agile processes.

Business value

Infosys brings a unique value proposition to help catalyze innovation-driven business transformation, leveraging the Zero Distance and Design Thinking approaches. While defining the QA solutions, we offer customer-centric innovation and enhance business value through reduced User Acceptance Testing efforts, reduced production defects, and high availability of systems.



Case study: Testing services transformation for a large bank

Context: We have partnered with one of the largest regional banks in the APAC region for the last eight years, in order to centralize their testing services and transform their service offerings by enabling enterprise automation and achieve continuous delivery through adoption of agile and DevOps.

Infosys solution:

- Infosys defined and implemented a roadmap for setting up a centralized TCOE with standardized test processes and governance structures
- Established a standard and comprehensive test tools architecture with HP ALM, QTP, PerformanceCentre, Tosca, and CA LISA
- Automated 80 percent of the regression suite
- Adopted highly mature practices, such as early validation, progressive automation, orthogonal array, risk-based testing, and integrated acceptance testing
- Implemented a robotic automation solution for teller peripheral testing
- Innovation charter for continuous innovation and implementation of 4D analytics, machine learning, and AI in testing for test cases Optimization and Defects Prediction

Key benefits:

- Successfully transitioned from Staff Augmentation to Time & Material to a multiyear, SLA-driven Outcome-based Model (OCB), providing cost benefits to the client
- Achieved 50 percent reduction in the cost of quality
- Zero Severity 1 and 2 production incidents
- Improved testing effectiveness to 98 percent
- Delivered cumulative savings worth millions of dollars through automation



For more information, contact askus@infosys.com

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