The Approach to QA Transformation
Introduction

The global software testing market is experiencing changes that are enforcing the move from product centric to customer centric. This trend has led to an increased focus on quality assurance and testing processes that are key to software development, and ensuring the quality of products. Organizations are under immense pressure to drive automation, improve workflows, traceability, and metrics capabilities in order to move up the ladder of maturity levels in testing and contribute to QA (Quality Assurance) transformation. Factors such as growing business needs, rapid product/application launches, fast paced changing technologies, modernization of systems, and operational efficiency enhancements have become key drivers for the growing need in application testing services. This whitepaper explores the methodology behind achieving exceptional QA transformation that scales with the expectations of today’s businesses.

Business Drivers:

**Improve Software Quality** – Software Quality can be achieved when qualified and dedicated professionals utilize defined and repeatable processes. Software quality goes up when the application development and production maintenance go down. This reduces the total cost of ownership and risk, which in turn increases customer satisfaction.

**Contain Testing Costs** – Traditional testing is seen as an expense incurred near the end of the Software Development Lifecycle. For every hour of testing, IT and company costs increase. For every defect found, companies must repeat testing, which further increases costs.

**Meet Compliance Requirements** – Software development compliance is becoming increasingly complex with new regulations. Clients look for qualified companies that utilize mature, repeatable testing processes to independently test and ensure audit and regulatory compliance.

**Achieve Efficiency and Scalability** – New implementations and major releases require large testing efforts. If these efforts require quick ramp up/ramp down, outside help may be needed to quickly mobilize resources, deploy processes and tools, and conduct testing from a standardized testing approach to increase an application “speed to market”.

The QA Transformation Approach:

Clients achieve higher quality through a combination of quick wins and incremental improvements, all while targeting long-term strategic goals. With reusable templates, custom tools, test methods and accelerators refined through hundreds of real-world engagements and frameworks to promote speed, reuse, ease of maintenance, and rapid defect isolation, measurable results can be ensured. Specifically, continuous improvement is achieved through the following:

- Creation of a scalable test framework to meet the evolving demands of the business by leveraging industry best practices
- Implementation of repeatable processes to ensure proper test coverage and reduce wasted cycles
- Reduced labor costs over time through modern test automation techniques
- Continuously evolved and matured QA processes through innovation, reusable frameworks, and custom tools
Benefits of this Approach

- Reduce testing costs by 30%-50%, while releasing 4X-8X faster
- Collapse test cycle time over 90%, while reducing overall resources
- Create broader coverage with test optimization while using fewer test cases – slashing maintenance costs by 60%-80%
- Early defect detection reduces application time-to-market by 25%
- On average test data management decreases production bugs by 20%

Ciber’s Unique Approach

Our approach includes ready-to-use automation frameworks with best practices, tools and accelerators for test automation and optimization. Our Plug N Play model includes Ciber’s Conditional Test Model (CTM) and Ciber Optimal Pathing (COP) as described below:

CTM & COP Framework Overview

Ciber Conditional Test Model (CTM) and Ciber Optimal Pathing (COP) are proven methods for deriving optimized combinations of realistic circumstances. CTM is developed using Industry best practices such as CMMI and TMMI. COP process is a technique used for improving test coverage. This results in maximum test coverage with the minimal number of test cases.

3 Step Test Optimization and Automation Process

1. Ciber Modular Rapid Automation
   - Plug and play framework to automate the efficient coverage
   - Designed to quickly address your needs while providing more accurate, robust, and efficient coverage
   - Low-maintenance shared libraries and repositories designed for high re-use

2. Ciber Conditional Test Model (CTM)
   - Unique mapping from requirements to test for more useful test coverage
   - Flexible coverage footprints allow rapid re-planning when release content shifts; accelerating testing
   - Isolates defects faster for quicker repair and less defects released into production, reducing operational costs

3. Ciber Optimal Pathing (COP)
   - Reduction in Product Development costs drive more competitive pricing
   - Shorter time to market impacts profitability
   - Better process reduces defects entering production thus improved product quality
Conclusion

Implementing quality assurance and testing at lower cost with higher quality, greater speed to market, and improved regulatory and audit compliance allows the firm to focus on its core business. Functional testing need not be a time-consuming or expensive proposition. By adopting a test optimization methodology, IT can take major steps forward in enhancing testing processes. Development and QA teams can increase both the speed and accuracy of the testing processes, and an organization’s IT department can achieve a higher ROI from software projects while reducing risk.

About the Author

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