End-to-End Testing

Helping our Customers improve quality and reduce costs
Introduction

Concept Reply focuses on End-To-End (E2E) Testing, which means Testing, Validation and Quality Assurance (QA), specifically addressing several markets:

- Telco & Media
- Banking
- Automotive
- Extended Enterprise

The areas of intervention cover the full QA chain: from test methodology and process to design and execution via testing management, automation and tools.

The course of action can vary from professional services to turn-key projects, and even an innovative Test-as-a-Service (TaaS) approach.
A pragmatic approach to QA does not allow for certain key factors:

- Cost Of Poor Quality
- Identifying defects early
- Phase Containment Effectiveness metrics
- Phase Screening Effectiveness metrics
- Maturity Level of the organisation

But, based on our experience, the pursuit of Quality must be pragmatic: each organisation needs to find its own trade-off between Quality, Cost & Time-to-market.
Concept E2E Test: market intervention areas

Test Process

Test Tools

Test Design/Execution/Reporting

Telco & Multimedia Devices

Embedded System & M2M Solutions

Applications & Services

- Telco & Media
- Banking
- Automotive
- Enterprise

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Process Improvement: Methodological Approach

Observe
- Identify client’s target validation objectives, not only in the test area but also in terms of business impacts (e.g.: customer satisfaction/loyalty, liability in the event of critical incidents)
- Understand existing test process
- Analyse gathered data to identify most effective way for Reply to approach intervention (full process coverage, single/multi area improvement)
- Share and discuss proposed solution with the customer

Improve
- Define an optimised test process, according to customer’s needs and priorities
- Implement the process
- Deploy the process, and verify the application

Check
- Monitor improvement
- Perform lessons learned and corrective actions to drive continual process and quality improvements
Tool integration & development

Wide range of solutions:
- Integration of commercial tools
- Customisation of open source tools
- Development of ad-hoc solutions:
  - E.g.: Integration of different standalone customer tools in a unique dashboard

In different areas:
- Full test process management
  - Requirement management
  - Test management
  - Fault management
- Configuration management
- Test automation
Test Factory Model

GOVERNANCE
- Service, Turn-Key projects
- On-Site/Off-Site
- Project Management
- Logistic Management
- Vendor Management

TEST TOOLS
- Commercial, proprietary, open source customisation
- Requirement & Test Management
- Test Reporting, issue tracking
- Test Automation

REPORTS

Client
- REQUIREMENTS
- OBJECT UNDER TEST

Vendor
- Project Management
- Logistic Management
- Vendor Management
- Test Reporting, issue tracking
- Test Automation
Test as a Service

The Test-as-a-Service implements an innovative approach to Testing (TaaS):

- Full Customer control over process and plan with clear and optimised interfaces (Service Manager, Project Managers)
- A pay-per-use model within a general framework agreement
- A flexible and scalable level of service with guaranteed Quality of Service, milestones and Key Performance Indicators.
- Workload peak management
- 3rd party management
Test Engineering: Test Design & Execution

**Test Specification**
- Support to definition of requirements
- Risk and business impact analysis
- Definition of Acceptance criteria

**Test Design**
- Design of test architecture
- Definition of test environment
- Traceability of requirements
- Development of test cases and automation scripts

**Test Execution**
- Validation of test environment
- Scheduling of tests
- Test Execution (Manual or Automated)
- Defect/Incident management (Triage)
- First level troubleshooting
References