



Real Teams, Real Insights, Real Results

With two **real** hosts:
Roy Yoong and Bryan Bryson on Remote!
Quality Management

Rational. software

Quality Management Keynote

- Welcome
- Real Challenges for real Teams
- Real Results
- Real Insights
- Wrap Up



Quality Management Keynote

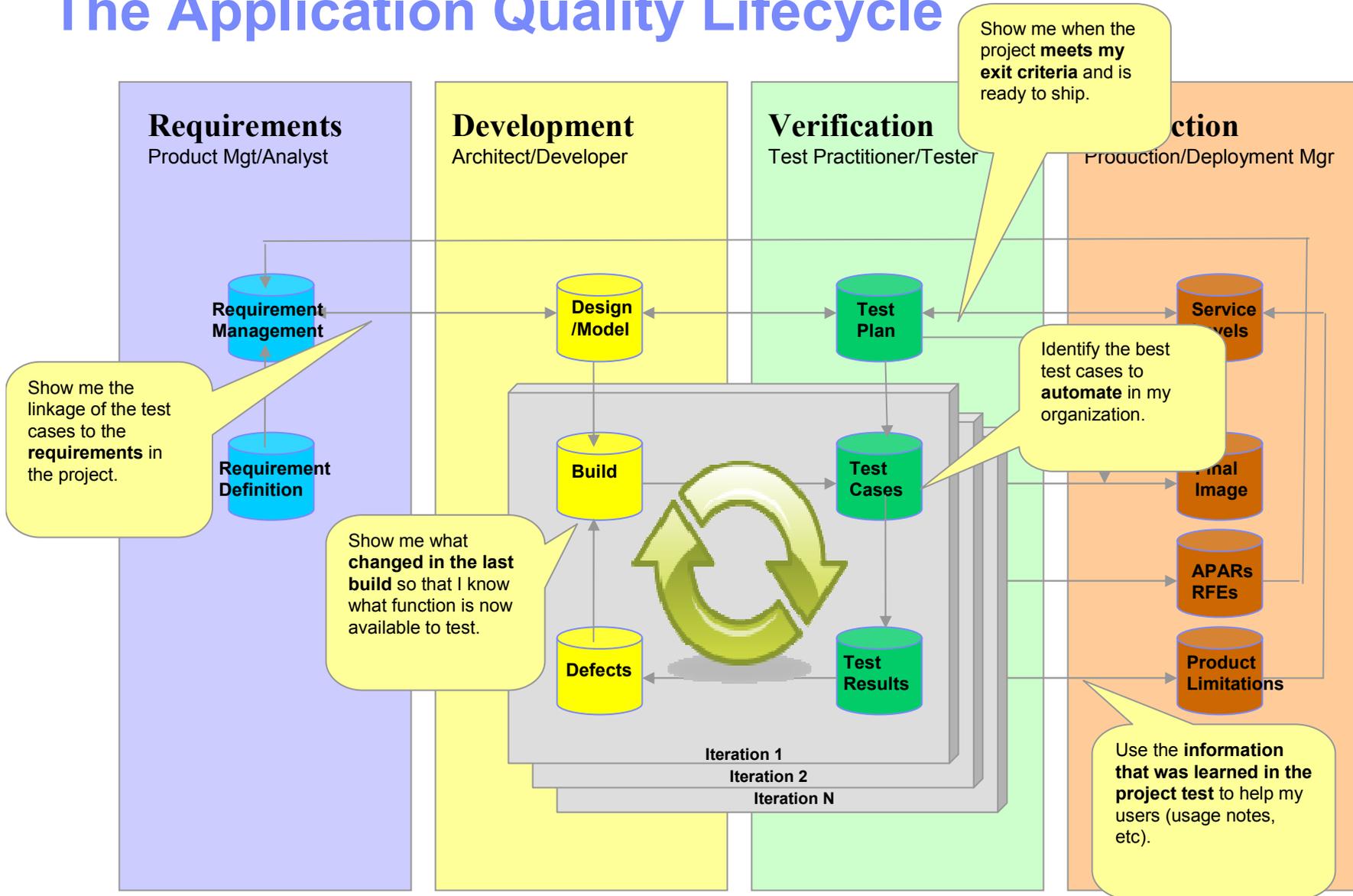
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Today's Challenges to Software Quality

- Enterprise pressure to **reduce cost**
- Competitive demand to **deliver faster**
- Worldwide geographical **dispersed development**
- **Unpredictable/unknown use** of application
- Increasingly **complex software** ecosystems
- New requirements for **government standards**
- Lack of **domain knowledge/content**
- Inability to **search/reuse test assets**
- Lack of leveraging **previous test experiences**
- Unclear **business goals** for test criteria
- Limited use of **real customer data** in verification
- Lack of published **open standards** for vendor integration

The Application Quality Lifecycle



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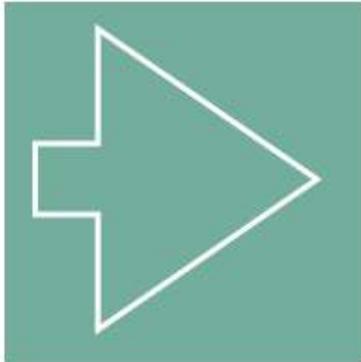


Real results: 2008 Year in Review

- Rational Service Tester



As **REAL** as It Gets!
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IBM RATIONAL SERVICE TESTER

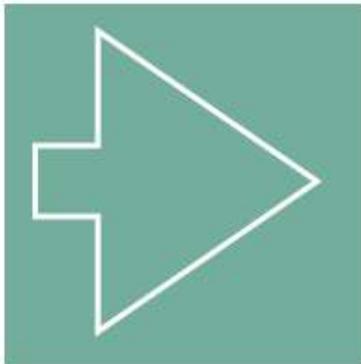


Real results: 2008 Year in Review

- Rational Service Tester
- Rational Performance Tester



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IBM RATIONAL PERFORMANCE TESTER



Real results: 2008 Year in Review

- Rational Service Tester
- Rational Performance Tester
- Rational Functional Tester



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IBM RATIONAL FUNCTIONAL TESTER



Rational Functional Tester Environment Support

- Microsoft .NET Framework 3.0
- Dojo Toolkit
- Adobe Flex 3.0
- SAP GUI 7.1
- Siebel 8.0
- Eclipse Graphical Editing Framework
- PowerBuilder 11 .NET & Win 32
- Java 1.6



Real results: 2008 Year in Review

- Rational Service Tester
- Rational Performance Tester
- Rational Functional Tester
- Rational Quality Manager



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IBM RATIONAL QUALITY MANAGER



Real results: 2008 Year in Review

- Rational Service Tester
- Rational Performance Tester
- Rational Functional Tester
- Rational Quality Manager
- Rational Test Lab Manager



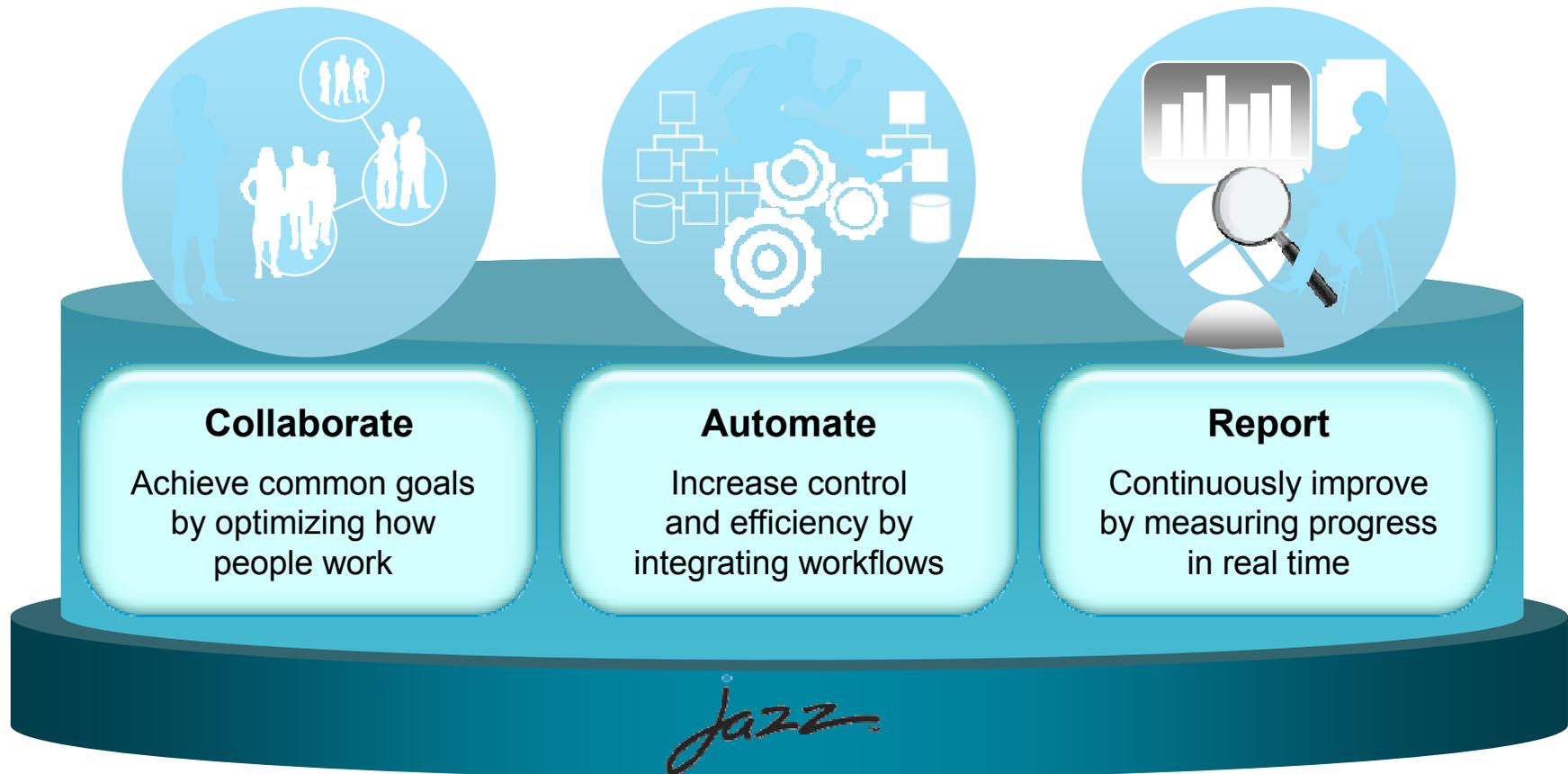
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IBM RATIONAL TEST LAB MANAGER



Quality Management Imperatives



Improve knowledge and practice maturity with an environment that develops individual and team talent.



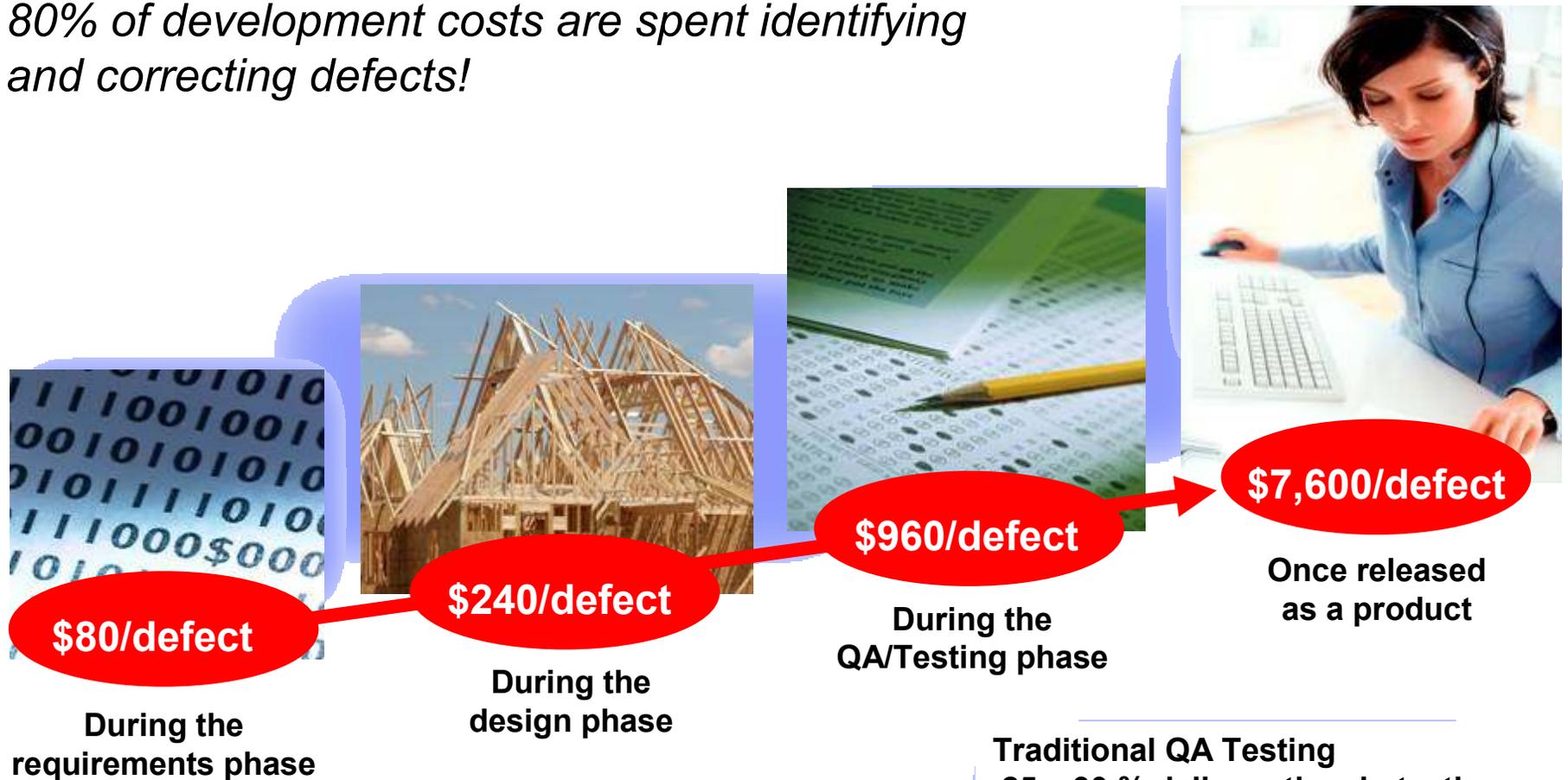
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The increasing costs of fixing a defect

80% of development costs are spent identifying and correcting defects!



Traditional QA Testing
25 – 30 % delivery time in testing
Poor upstream quality yields rework
Compressed schedules make it worse

Source: GBS Industry standard study
Defect cost derived in assuming it takes 8 hrs to find, fix and repair a defect when found in code and unit test.
Defect FFR cost for other phases calculated by using the multiplier on a blended rate of \$80/hr.

Rain sensing wiper system design failure

Individual Systems Worked, But Failed When Integrated

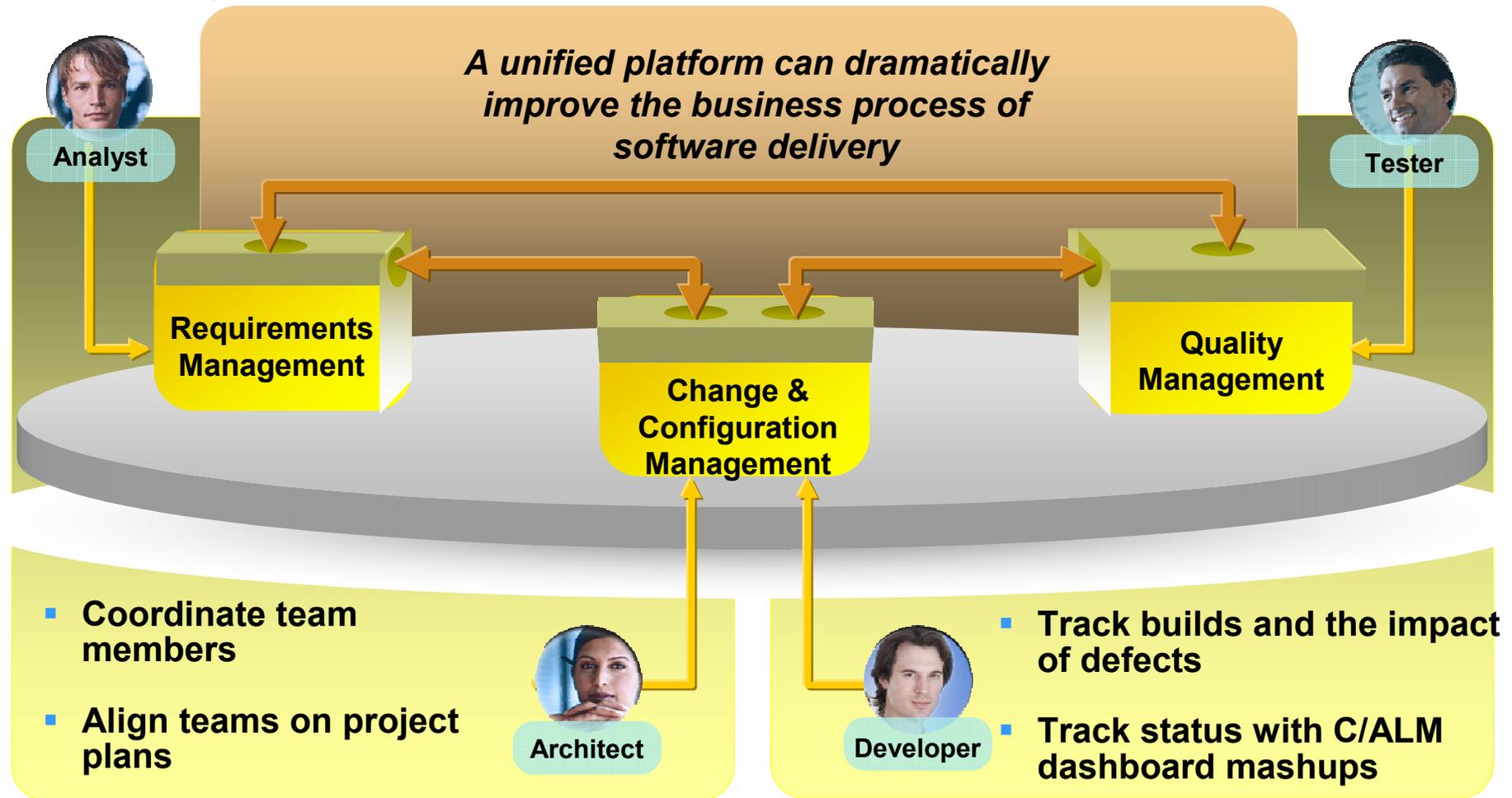
- Windshield provided by local supplier
 - ▶ Incompatible with the operation range of the sensor
 - ▶ *Cars were sent to customers with non-functioning wiper system*

- Initial diagnostics designated software as culprit for malfunction
 - ▶ Mechanics couldn't test software behavior
 - ▶ *Failure was not of individual components, but in the interaction at a system level*

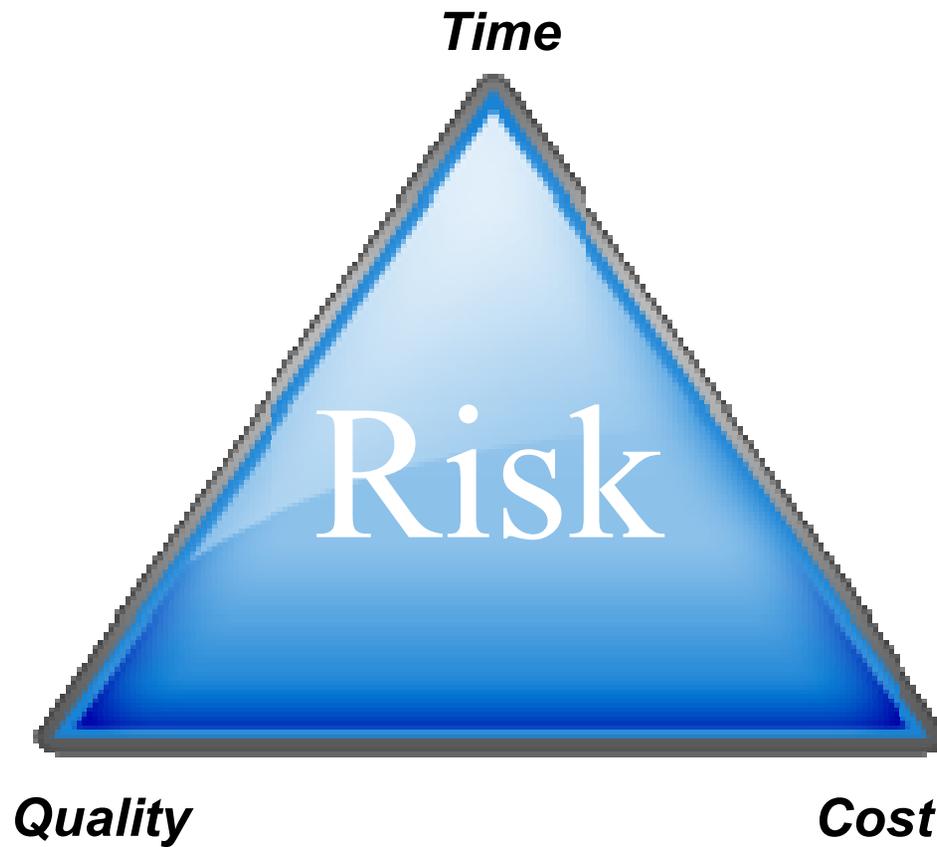


Unified platform for software delivery

Moving beyond individual tools



Elements of Risk: Time, Quality, Cost



**Each of the vertices is
an embodiment of risk:**

**Time Risk
Cost Risk
Quality Risk**

Risk cannot be removed

**But it can be understood
and controlled**

With IBM Rational Quality Management...

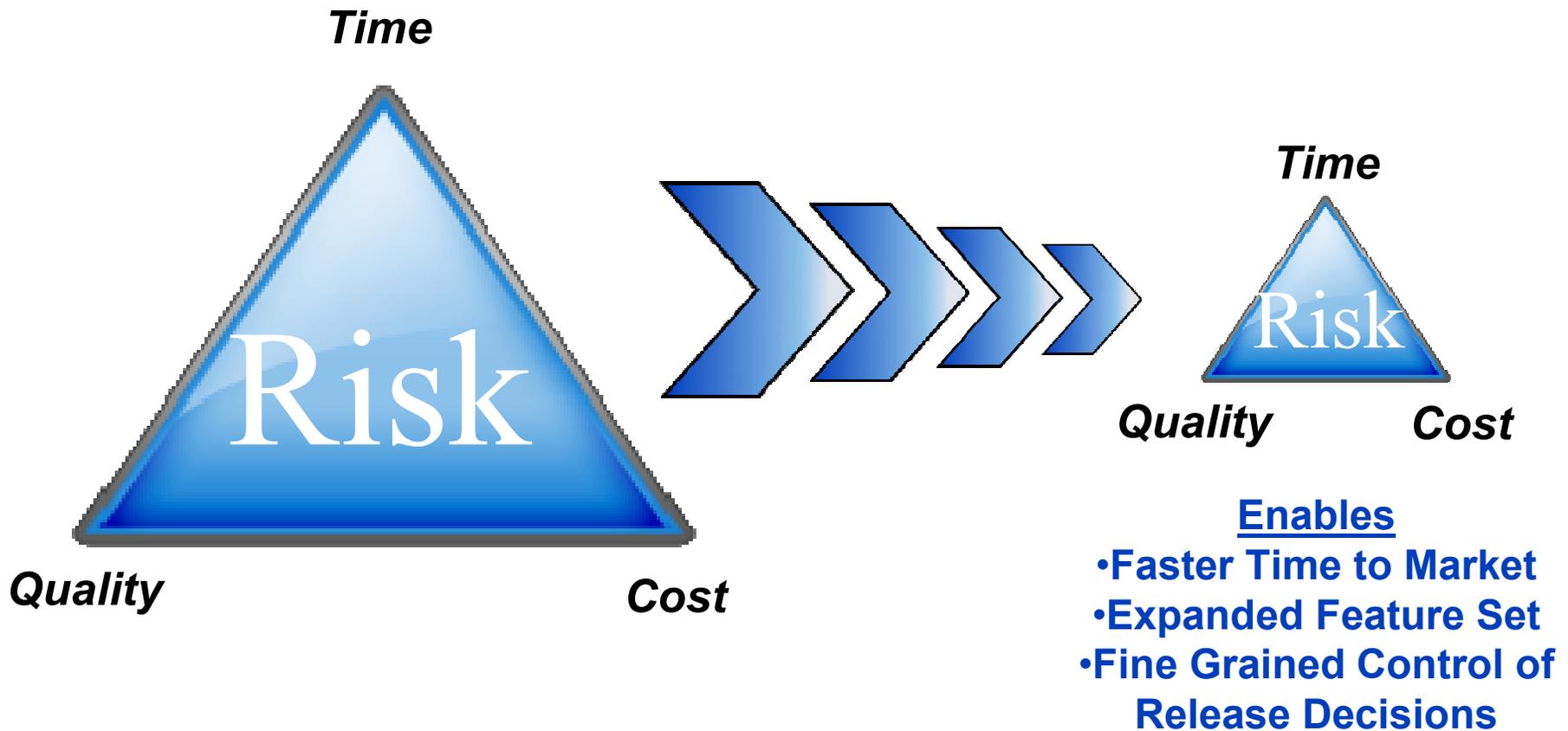
Risk Management through Process Improvement



*Process Improvements and Tooling efficiencies **Reduce your Risk and Cost***



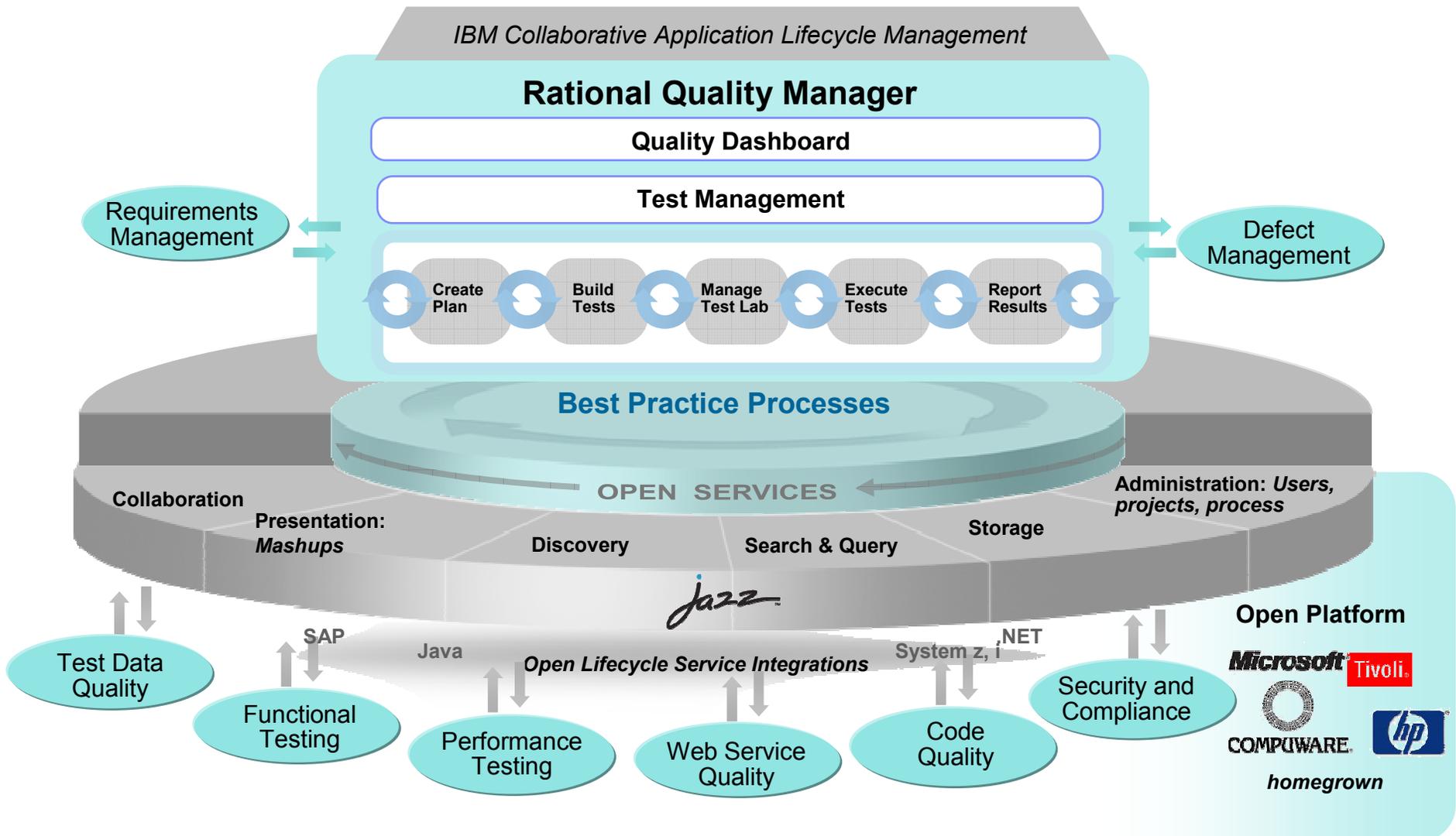
Risk Management through Process Improvement



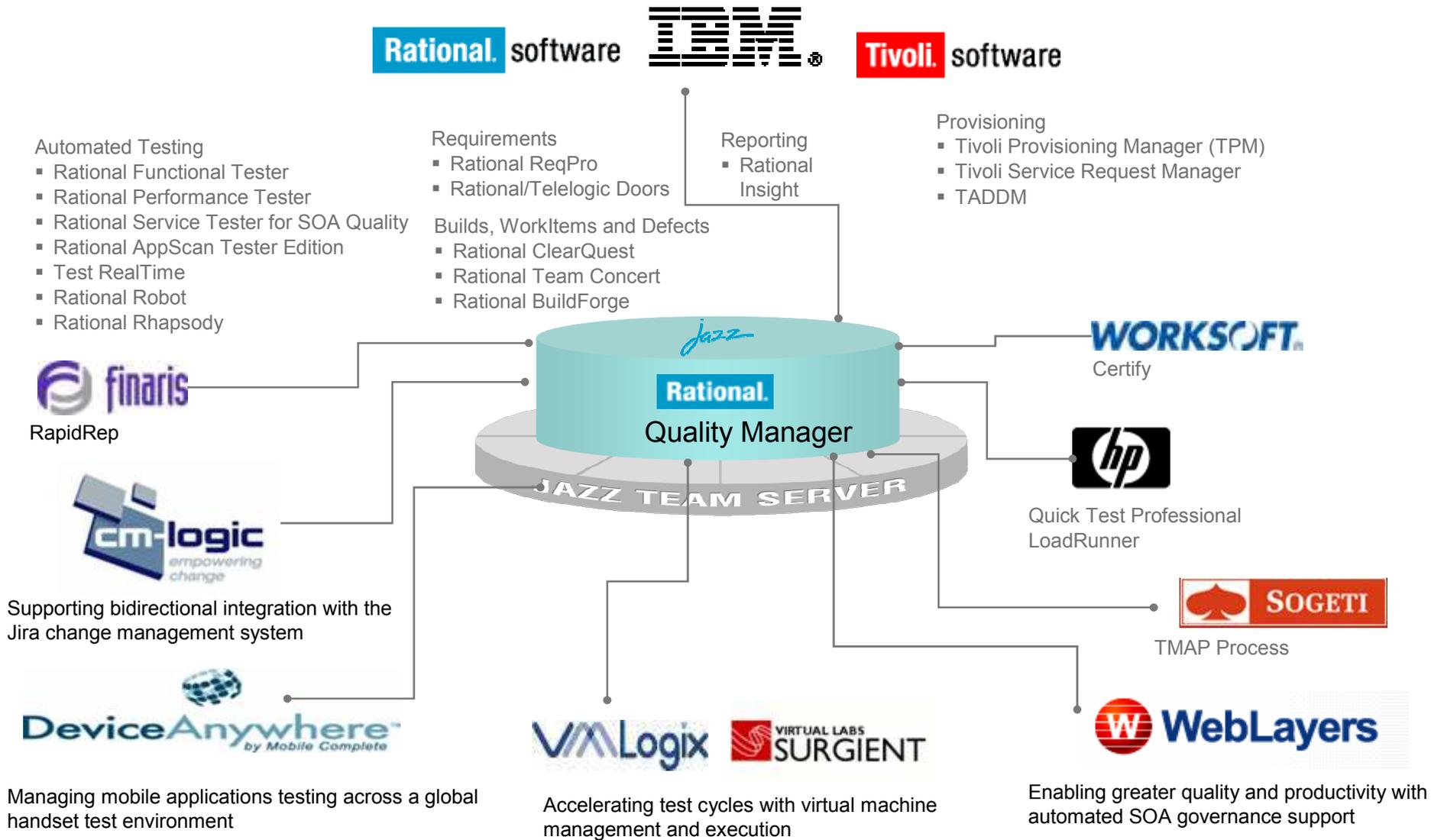
With IBM Rational Quality Management...



Collaborative Application Lifecycle Management



Rational Quality Manager Open Ecosystem Today



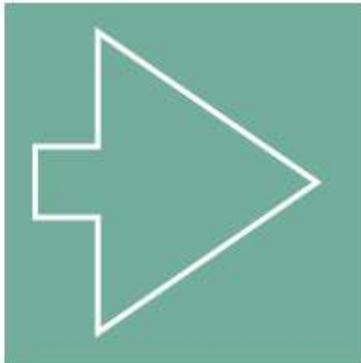
Integrating DOORS with IBM Rational Quality Manager

Enabling requirements driven testing



- **Tests based on requirements ensure deliverables meet customer expectations**
 - ▶ Plan Tests Early
 - ▶ Conduct Tests Early
 - ▶ Relate Tests to Requirements
 - ▶ Relate Defects to Requirements
 - ▶ Measure Progress against Requirements

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RATIONAL QUALITY MANAGER & DOORS





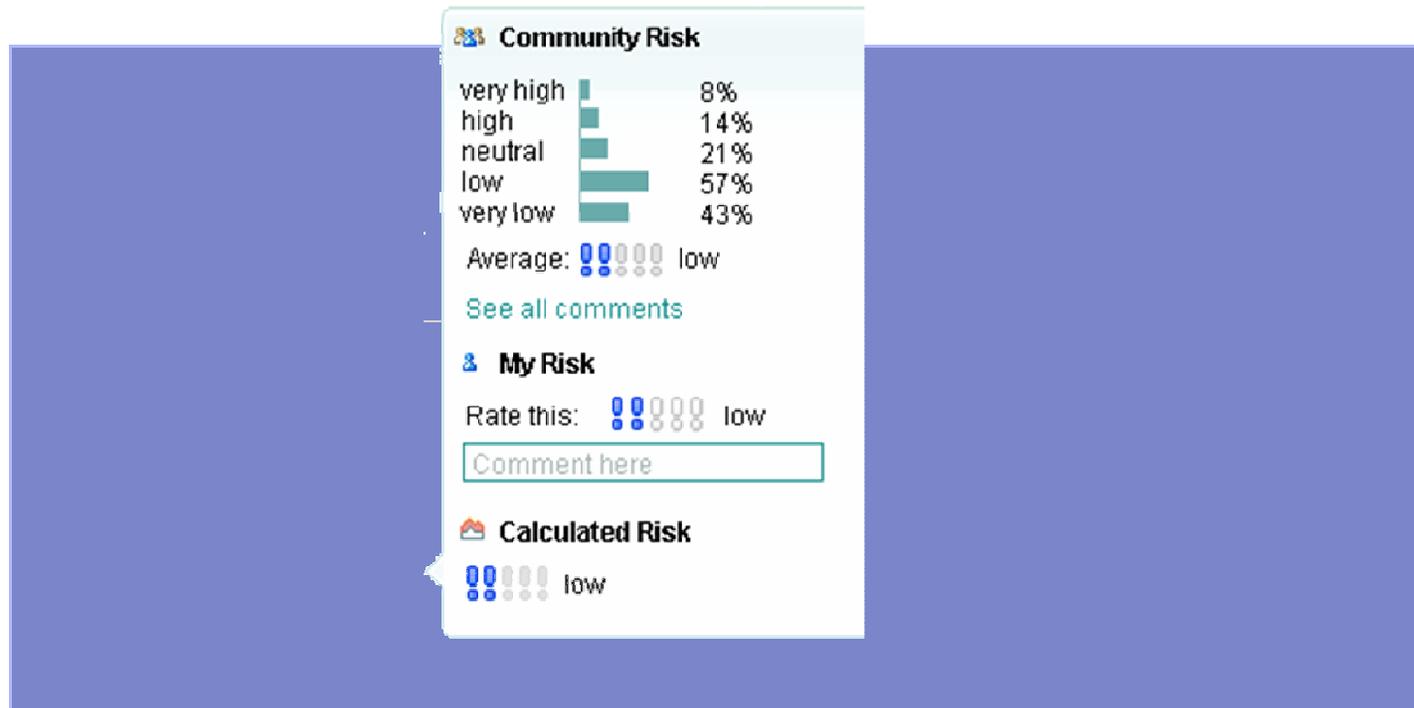
- Company DOORS Database
 - Company Standards
 - Product Division
 - New Family Car Project
 - Admin
 - Architecture
 - Planning
 - Reference
 - Requirements
 - Test Cases
 - Use Cases
 - Practitioner Course Exer

Name	Type	Description	Deleted?
Entertainment System	Formal	In-car entertainment user requirements	
Marketing Requirements	Formal	A Vision document of a typical journey...	
Stakeholder Requirements	Formal	Car user requirements	
System Requirements	Formal	Car system requirements	



Quality Manager: Risk Based Testing

Ensure Quality Management goals address Business Objectives



- Risk assessments captured in Test Plan and Test Cases
- Test Case will contain a risk failure score and a risk priority score

Base project decisions on qualitative risk analysis

Quality Manager: Closed Loop Analysis & Reporting

Reduce time to value Reduce Risk with Information Reporting



■ Customizable reports and dashboards

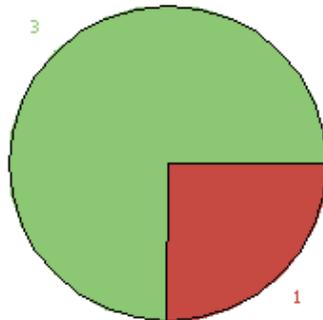
- ▶ Reduce escalating cost of information gathering
- ▶ Reduce risk by identifying trends before they become issues
- ▶ Raise enterprise visibility and transparency to **reduce costs and risk**, and make the **right decisions** at the right time
- ▶ Measures the effectiveness of processes and practices to **improve organizational and business outcomes**

Performance Tester: Service Level Agreement Reporting

Linking performance results to business objectives

- New reports summarize test run against performance requirements
- “Supplemental” requirements can be defined and reported separately
- Concept of “margin” helps visualize the quality of the results

Performance Requirements



■ Performance Requirements Passed
■ Performance Requirements Failed

Performance Requirement Margins

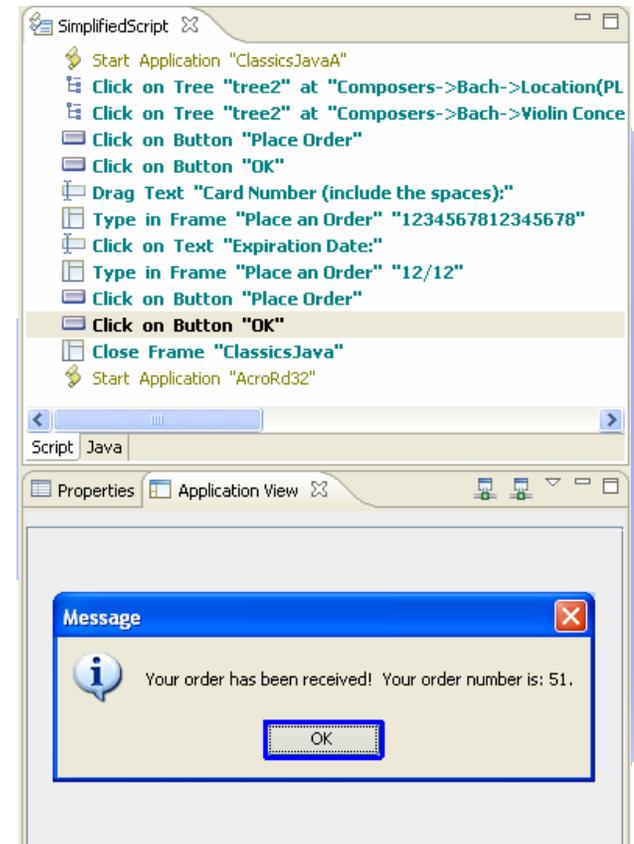
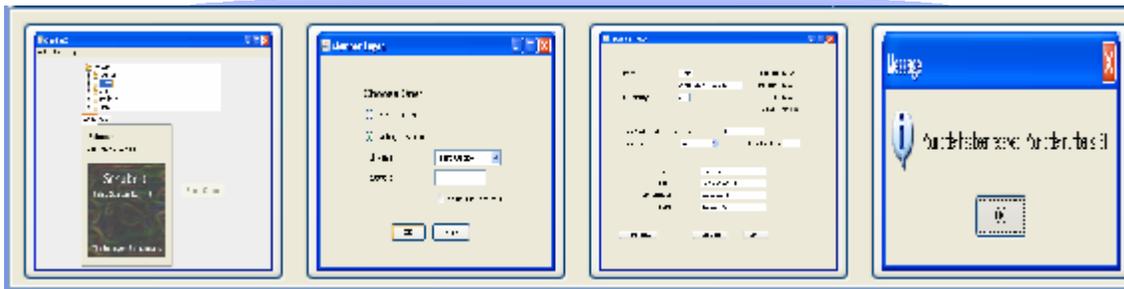


■ HTTP Page Google Average Response Time for Page [for Run]
■ HTTP Page Google Maximum Page Response Time for Page [for Run]
■ HTTP Page Google Minimum Page Response Time for Page [for Run]
■ HTTP Page tree - Google Search Maximum Page Response Time for Page [for Run]

Functional Tester: Storyboard Testing

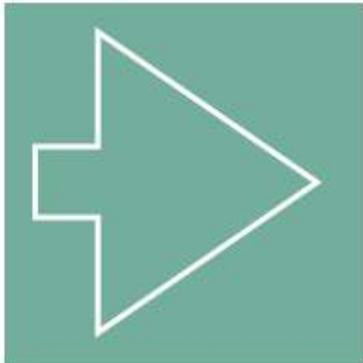
Visualize test actions through words and pictures

- Simplified Test Authoring
 - ▶ Story board navigation of test flow based on application screenshots
 - ▶ Natural language description of test actions
 - ▶ Edit anywhere: Script, Text, Screen



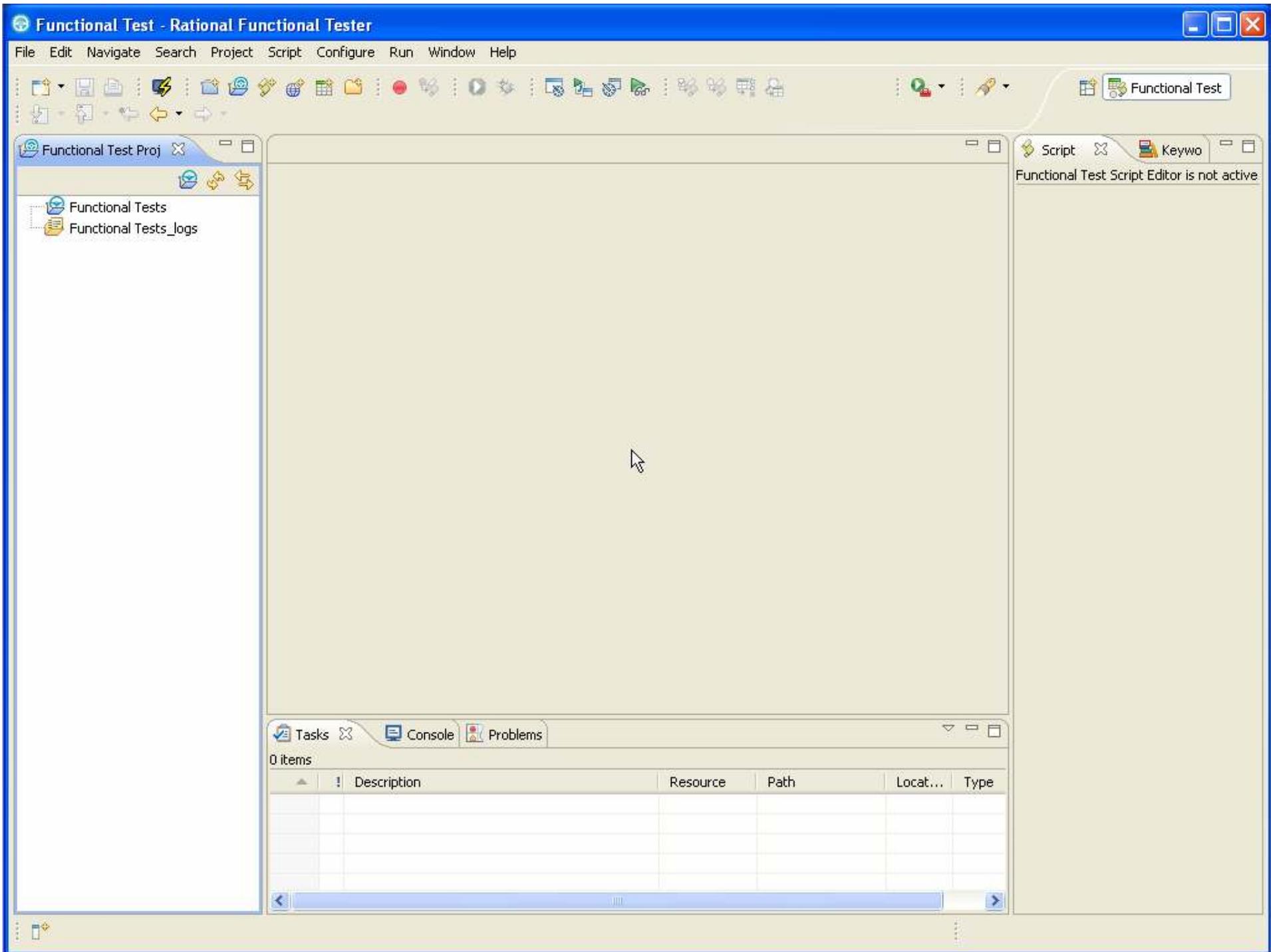
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FUNCTIONAL TESTER STORYBOARD TESTING





The Road Ahead

A peek into the Quality Management Labs

■ **Beta Availability**

- ▶ Rational Service Tester
 - ▶ Rational Performance Tester
 - ▶ Rational Functional Tester
 - ▶ Rational Quality Manager
 - ▶ Rational Test Lab Manager
- **Visit:** RationalTester.com



The Road Ahead

A peek into the Quality Management Labs

■ Research & Development

- ▶ SAP Integrations
- ▶ Oracle Solution integrations
- ▶ Centralized Data Management
- ▶ Data Integrity

■ Cloud Computing



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