

Quality in Action: Test Management

Christophe Telep
Product Manager, IBM Rational
Christophe.Telep@fr.ibm.com



IBM Rational Software Development Conference 2008

WHERE TEAMS ARE **R-HEROES**



Rational. software

Battling
the Super
Villains

Quality
Management
updates
2007 - 2008

Quality
Throughout
the Life
Cycle

Expanded
Environment
Support

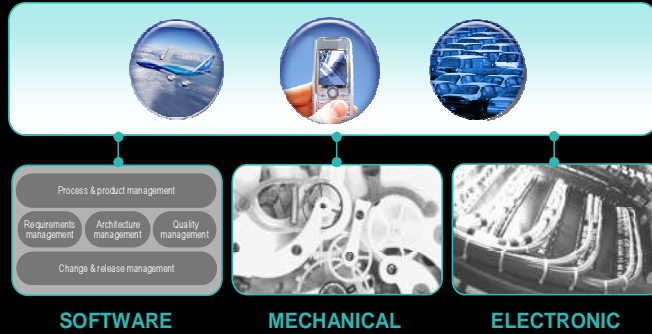
Enhanced
Productivity



Rational. software

New Offerings

Quality for Systems and Software



Telelogic

Tau Tester
Logiscope
Rhapsody TestConductor

AXIS	LOW	HIGH	SEMI	MAX	AVERAGE
VOICE	0.00	9.00	3.30	1.00	0.24
SEMI	1.00	50.00	2.30	18.00	24.00
AVIS	1.00	50.00	1.30	2.00	5.00
CCMP	0.00	0.00	0.30	30.00	1.26
LEVEL	0.00	0.00	0.30	18.00	2.14
PATH	0.00	5.00	0.30	8.00	0.85
RETU	0.00	5.00	0.30	3.00	0.63
NBCALLING	0.00	7.00	0.30	14.00	3.33
DIRECT_CALLS	0.00	1.00	0.30	1.00	0.95
PARA	0.00	5.00	0.30	14.00	1.93
TAXAR	0.00	80.00	1.30	1.000.00	234.8
GOTO	0.00	4.00	1.30	4.00	2.23



Rational. software

Expanded Environment Support

Packaged Applications



Siebel

Version 7.9 & 8.0



Oracle Forms GUI Proxy

New



SAP JCo Batch Tests

Unequaled Scalability



Rational. software

Expanded Environment Support

Web 2.0



Flex

Functional GUI testing



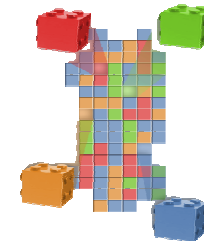
AJAX

Functional GUI testing



SOA

RESTful Architectures *SOAP 1.2*
MQ Transport *Custom security*



Rational. software

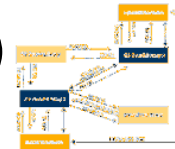
Expanded Environment Support

Proxy and Protocol Extensions



Session Initiation Protocol (SIP)

Instant Messaging, Gaming, Telco



TCP/IP Socket Protocol

Performance testing



GUI Control Proxy SDK

ORACLE

APPPOINT

Infragistics
Powering The Presentation Layer

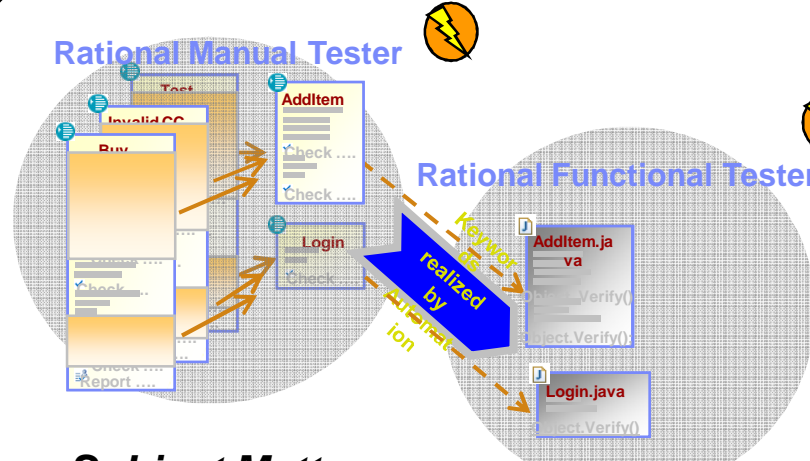


Rational. software

Enhanced Productivity

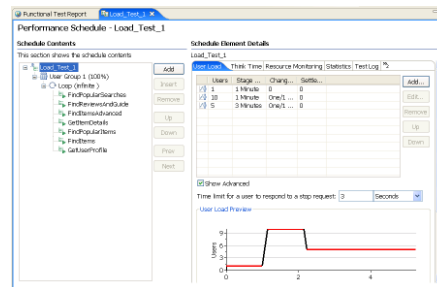
Keyword testing
Smart Load
Improved UI

Rational Manual Tester

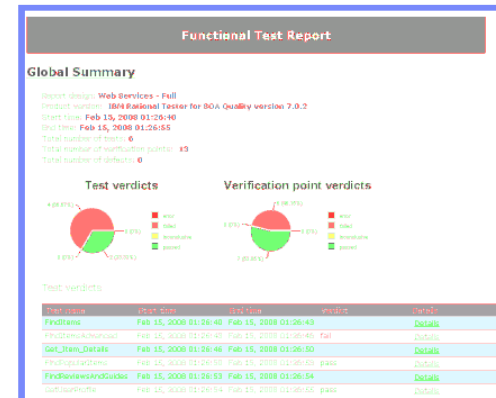


Subject Matter Experts

Automation Specialists



Rational Performance Tester

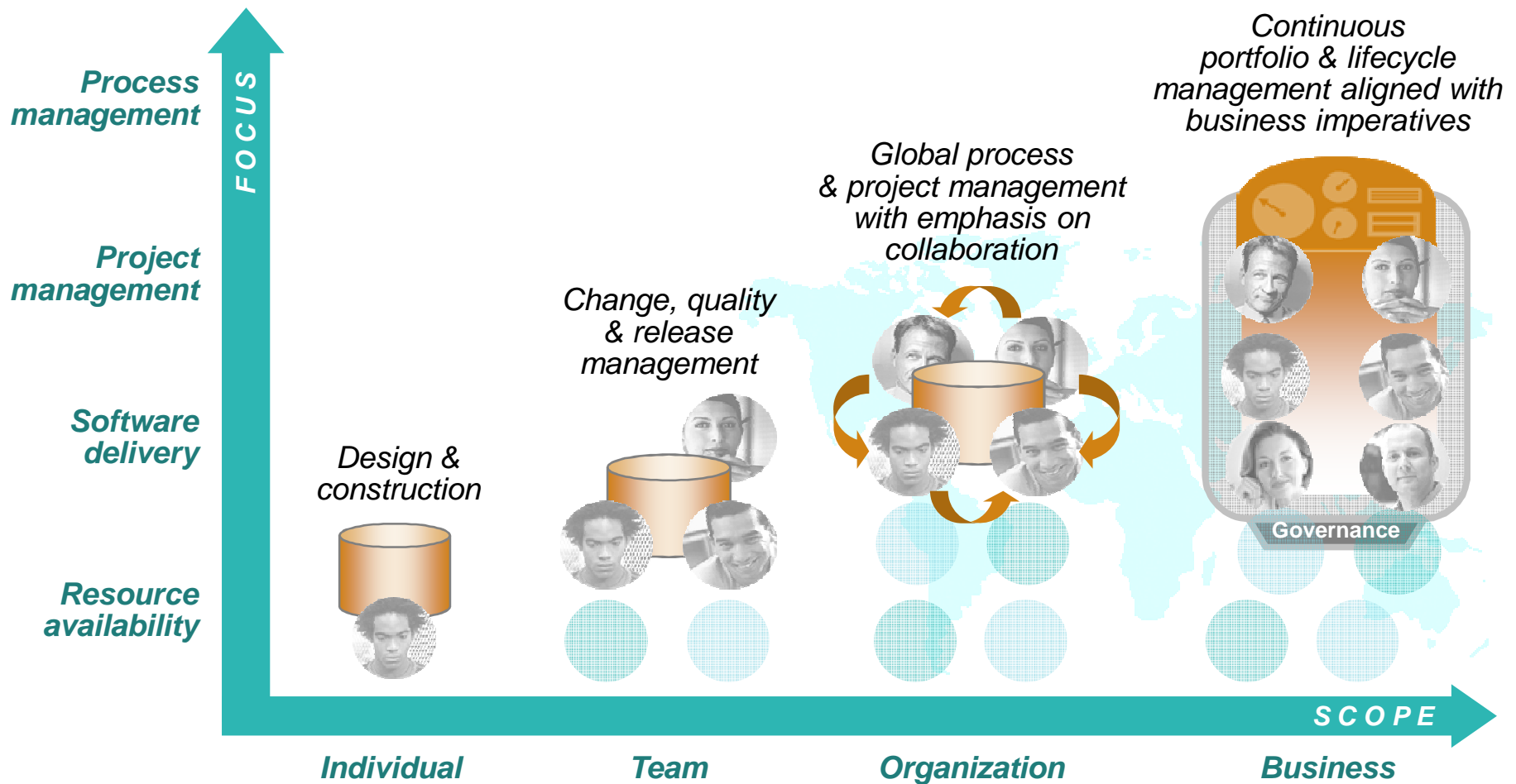


Rational Tester for SOA Quality



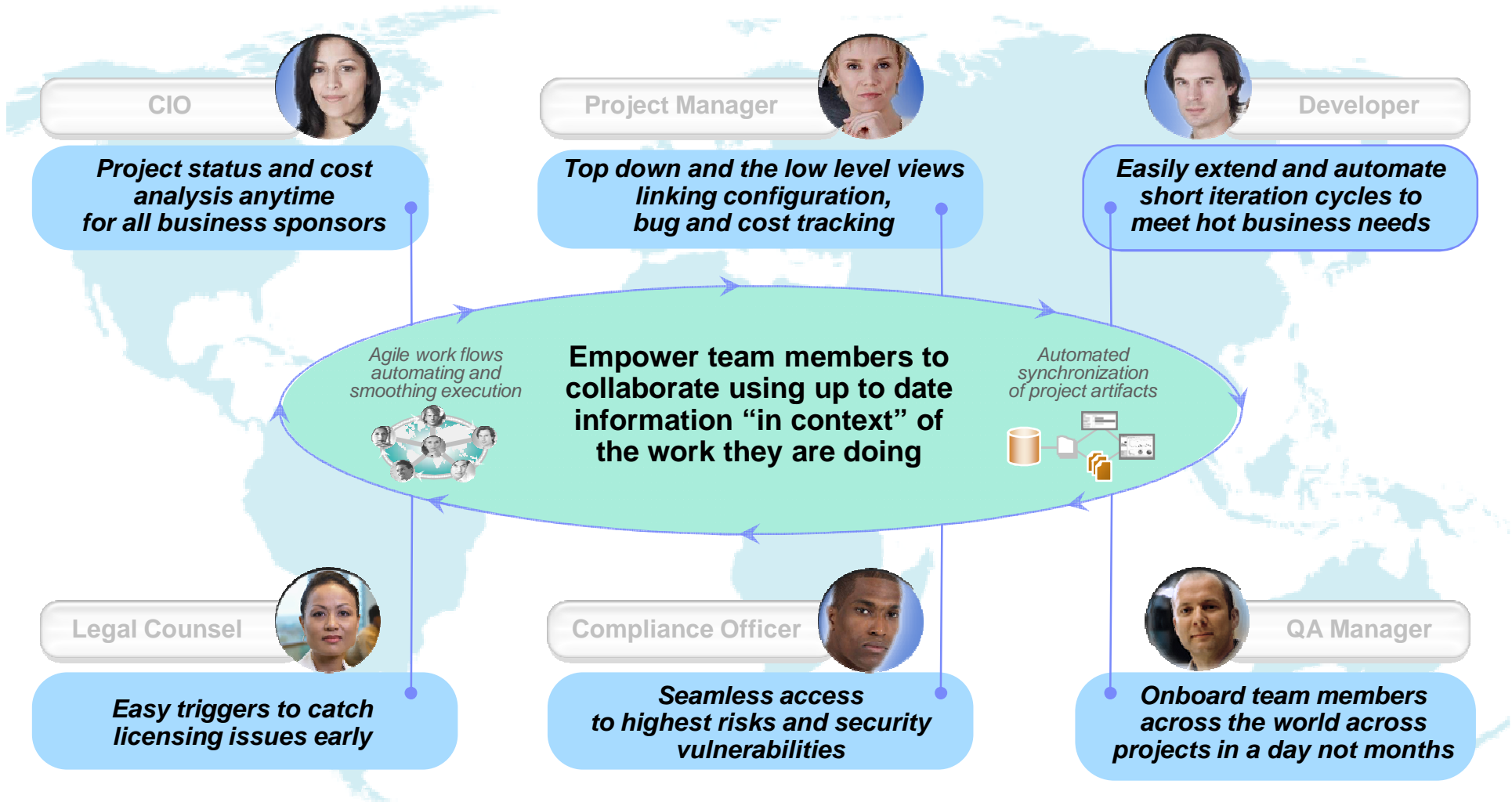
Evolving Systems and Software Delivery

Driving the convergence of business drivers and software delivery



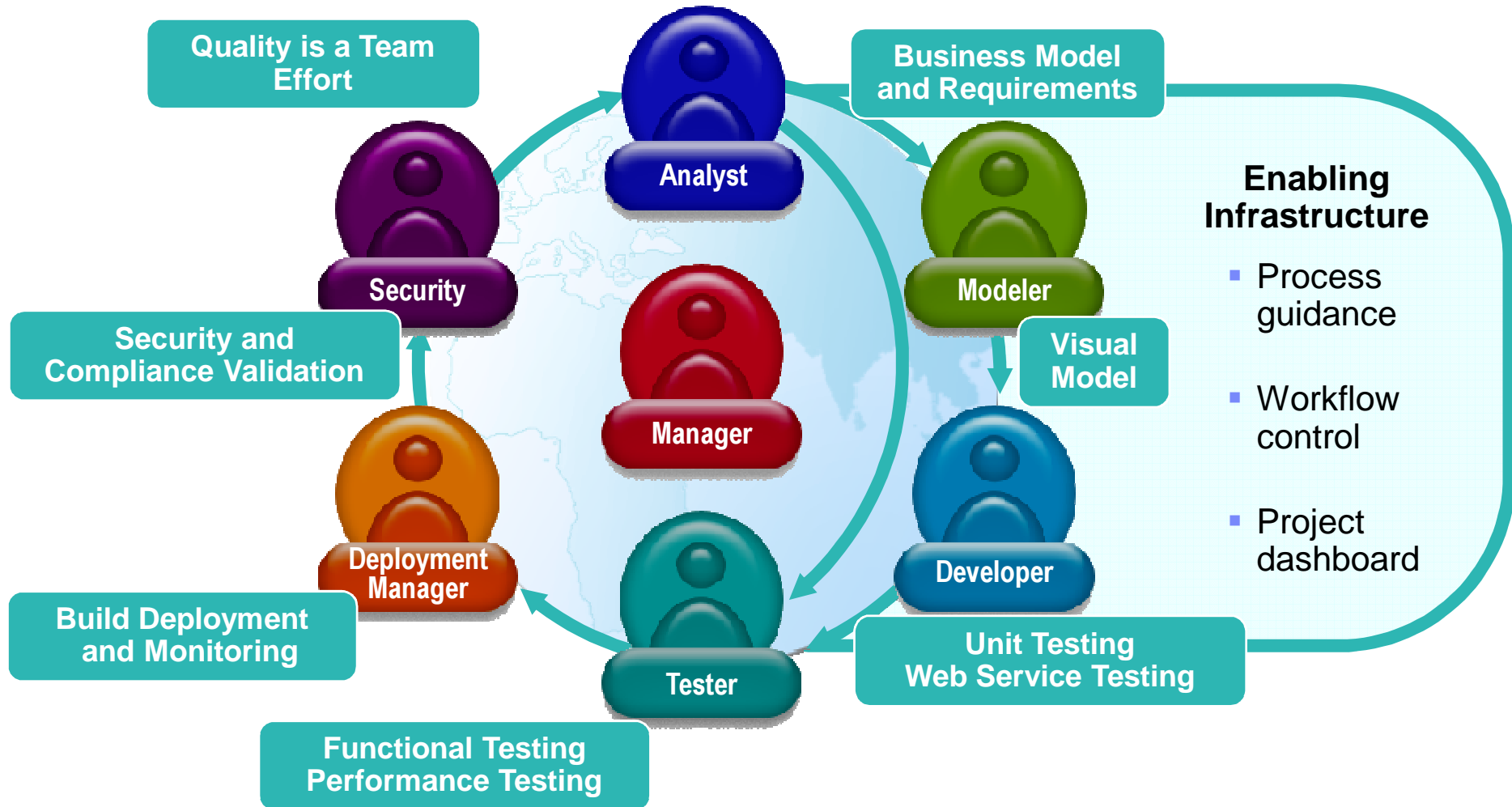
Manage the Application Quality Lifecycle

Delivering successful results require guidance, predictability, collaboration



Quality Management in action

Continuous process, powered by automation to govern software delivery



Quality Management's strategic focus is enhanced by Jazz

Lifecycle collaboration, powered by automation, to govern software quality

A open technology initiative to *transform how people work together* to deliver greater value and performance from their software investments



Robust, extensible and scaleable

Globally distributed, fluid and dynamic

Community-based and open at Jazz.net

Collaborate in Context

- Enable team transparency of “who, what, when, why”
- Build team cohesion and presence
- Automate hand-offs so nothing falls through the cracks



Right-size Governance

- Automate team workflow improving productivity
- Automate data collection eliminating administrative overhead
- Real time reporting and alerts reduces project risk



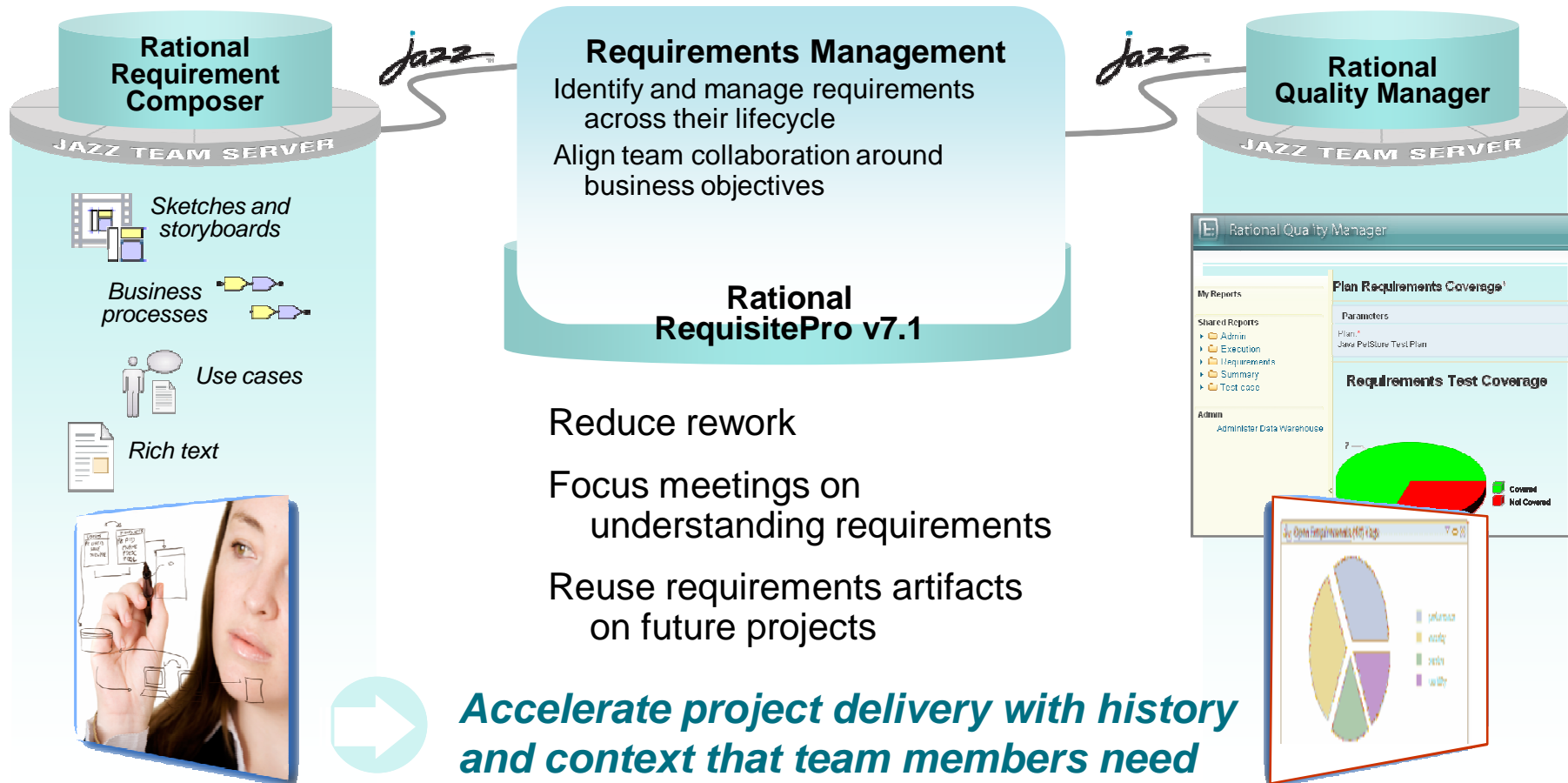
Day One Productivity

- Dynamic provisioning of projects and teams
- Real-time iteration planning and workload balancing
- Unify teams with tools choice

Real-time integration of people, process and projects across the lifecycle

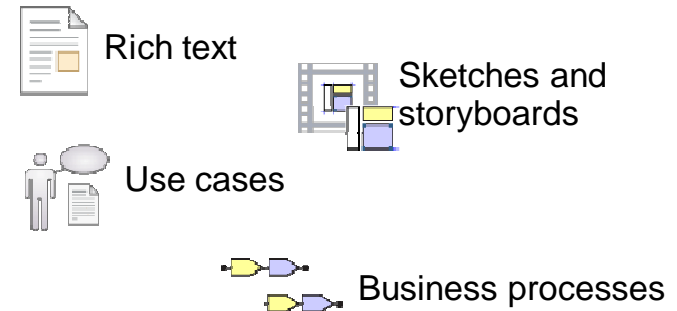
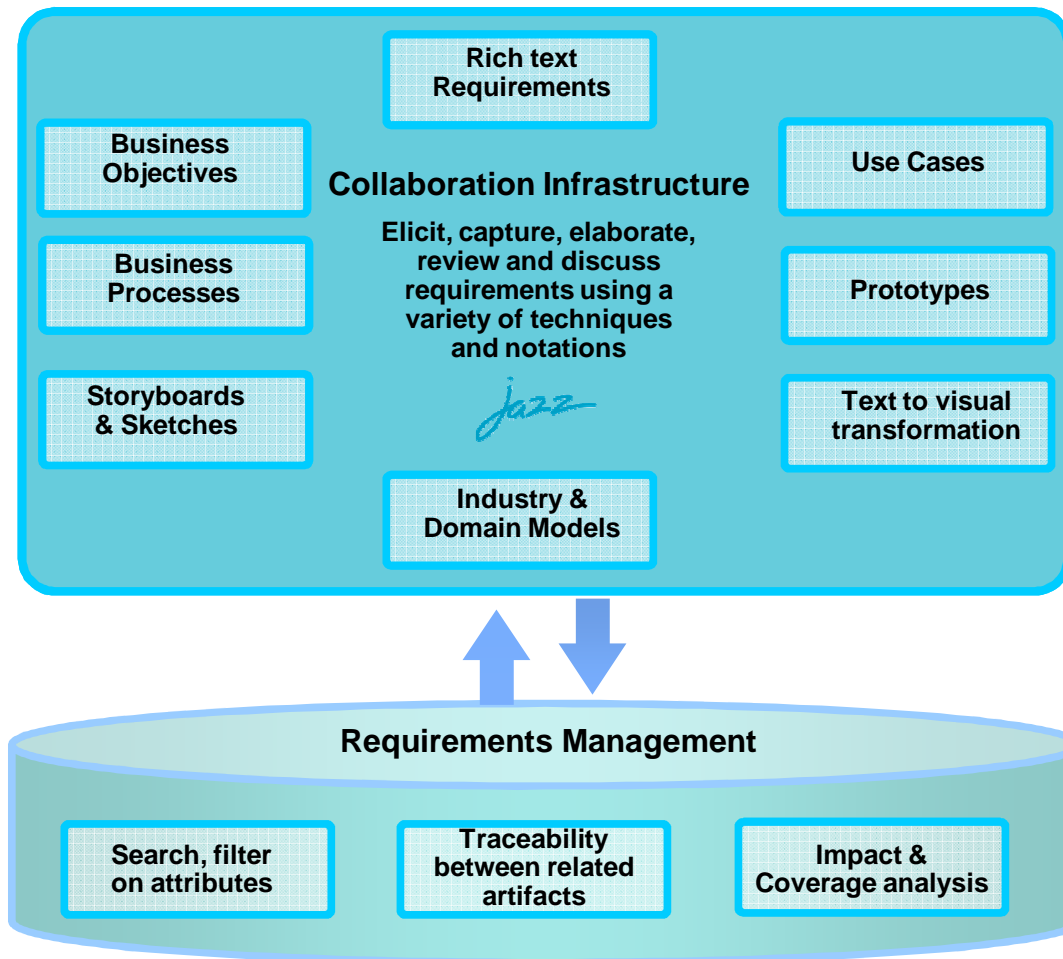
Visible and traceable requirements management reduces ambiguity and downstream rework

Flexible integrated requirements-driven software quality





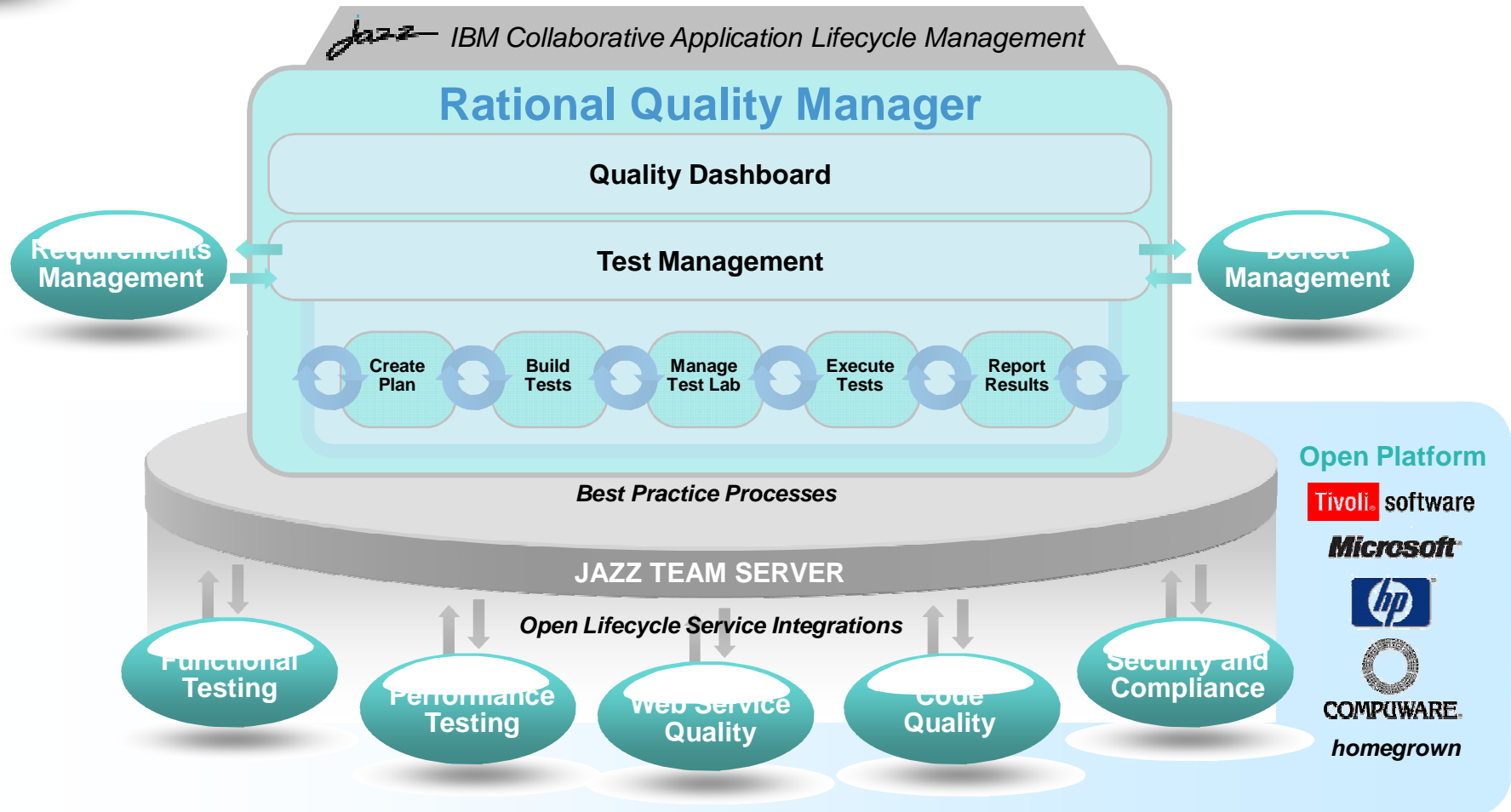
Rational Requirements Composer





Introducing the Quality Management offering portfolio

A centralized test management offering on the Jazz platform



Rational Quality Manager Key Features

Providing full control, execution, and governance to improve the quality

- **Web 2.0 interface designed for globally distributed teams**
- **Integrated Test Plan data**
- **Process Enactment that can be customer customized**
- **Work Item Collaboration across roles**
- **Test Plan/Case Versioning**
- **Customized dashboards for each user**
- **Dynamic linkages to requirements and defects**
- **Full feature Manual Tester in QM**
- **Management and execution of testing tools**
- **Open Test Framework with published schema and APIs**

Customizable Test Plans

Adaptive and automated test plan management



Table Of Contents

- Summary
- Business Objectives**
- Test Objectives
- Review and Approvals
- Requirements
- Application Security
- Test Iterations
- Sizing
- Environments
- Test Team
- Quality Goals
- Entry Criteria
- Exit Criteria
- Test Cases
- Attachments

Show All Sections

Live Documentation
Customizable
Test Plan sections
can be assigned to
individual user roles.

- Rich test plan captures dynamic data, **synchronizes team efforts**
- Every changing requirements and test cases are **captured in live documentation**
- **Testing tasks** can be assigned to owners and **tracked via the test plan**

Reviews and Approvals

Stakeholders remain actively engaged throughout the quality lifecycle

Artifact Reviews and Approvals

Web Based Acceptance Testing

#	Type	Result	Description
1			Login to web storefront
2		✓	Validate that the welcome page displays with customer name and account info
3			Enter pencil in the catalog search box and click Go
4		✓	Validate the search returns the correct information
5			Logout and close browser

- All project stakeholders can **review, refine and sign-off** on all quality related artifacts
 - Requirements, test plans, test cases, exit criteria, etc.
- **Business participation** in acceptance testing activities
 - Business can walk through the changes prior to deployment
 - Acceptance testing results are integrated and stored with all other test results

Collaboration Work Items

Task management for individuals and teams

Individual Task List

Id	Summary	Artifact
Authoring 3	The artifact has been approved	Classics CD
Authoring 3	Provide the Review and Approvals Section for Classics CD	Classics CD
Authoring 2	Provide the Summary Section for ClassicsCD	Classics Admin
Authoring 1	Provide the Summary Section for Classics CD	Classics CD

Team event log

[9]	Provide the Review and Approvals Section for Classics CD (3)	3 hours ago
*	Login window does not appear (38)	3 hours ago
*	Classics Request (37)	5 hours ago
*	Provide the Test Scripts Section for New Customer Order (36)	5 hours ago

Page 1 of 3

- Visualize commitments to **reduce rework**
 - Know what others are doing
 - Know what others expect from you
- **Monitor team events**
 - Event logs update automatically as activities occur
- **Track tasks** assigned to each team member

Traceability and versioning of all quality artifacts

Centralized history of artifacts and activities eases compliance exercises

- **Complete record** of quality related activities and artifacts
- Snapshots of quality artifacts provide a window into **how past decisions were made**
- History of results provide testers with insight on **how functionality has evolved over time**
- **Trace test results to changes in production** in Rational Team Concert or Rational ClearQuest

Artifact history

Start Date	Start Time	Total Run Time	Script Name	Script Type	Overall Verdict	Pass	Fail	Inconclusive	Blocked	Log
Jul 15, 2008	11:23:08	6 sec	Usability Web UI Test 1 Script #1	Manual	Passed	1	0	0	0	
Jul 15, 2008	11:22:00	12 sec	Usability Web UI Test 1 Script #1	Manual	Failed	0	1	0	0	
Jul 15, 2008	10:07:42	3 min	Usability Web UI Test 1 Script #1	Manual	Passed	0	0	0	0	
Jul 15, 2008	10:07:42	2 min	Usability Web UI Test 1 Script #1	Manual	Passed	0	0	0	0	
Jul 15, 2008	10:07:43	1 min	Usability Web UI Test 1 Script #1	Manual	Failed	0	0	0	0	
Jul 15, 2008	10:07:42	1 min	Usability Web UI Test 1 Script #1	Manual	Blocked	0	0	0	0	
Jul 15, 2008	10:07:41	1 min	Usability Web UI Test 1 Script #1	Manual	Inconclusive	0	0	0	0	

Artifact versioning

Java PetStore Test Plan [?] Saved successfully at: 20:47:42 [\[Create New Snapshot\]](#)

[Test Plan Overview](#) | [View Snapshots](#)

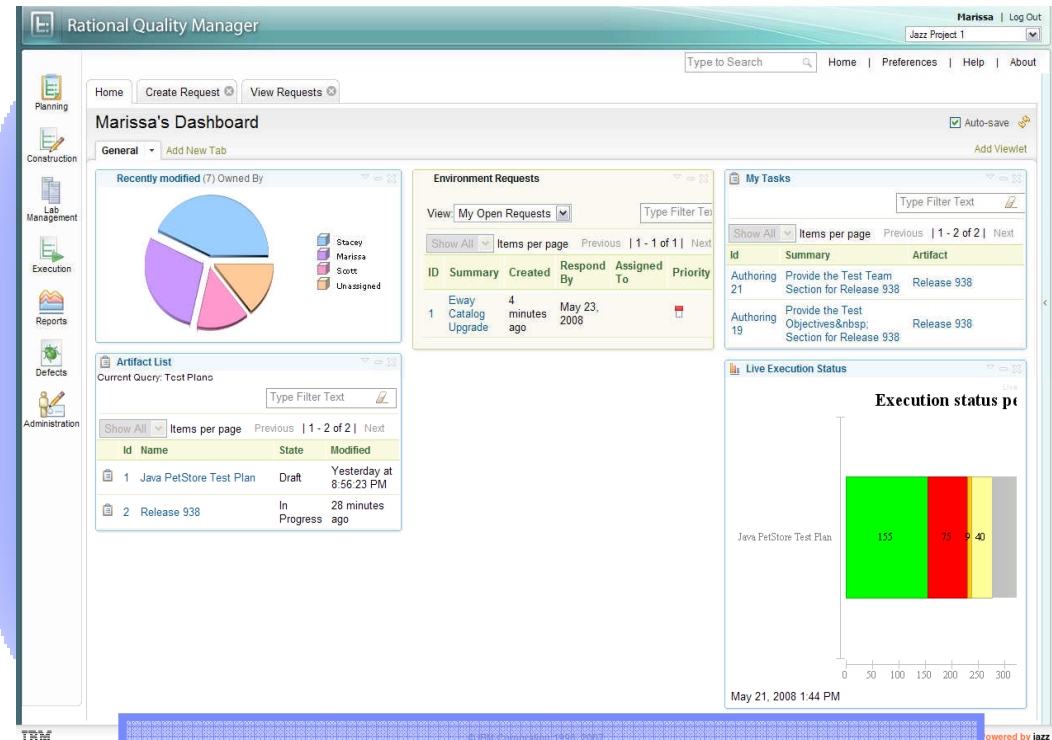
Type Filter Text

Type	Revision	Name	Date	Originator	Details	Copy
	1	Draft version	1 minute ago	ADMIN		

Quality Governance

Customized dashboards for each user

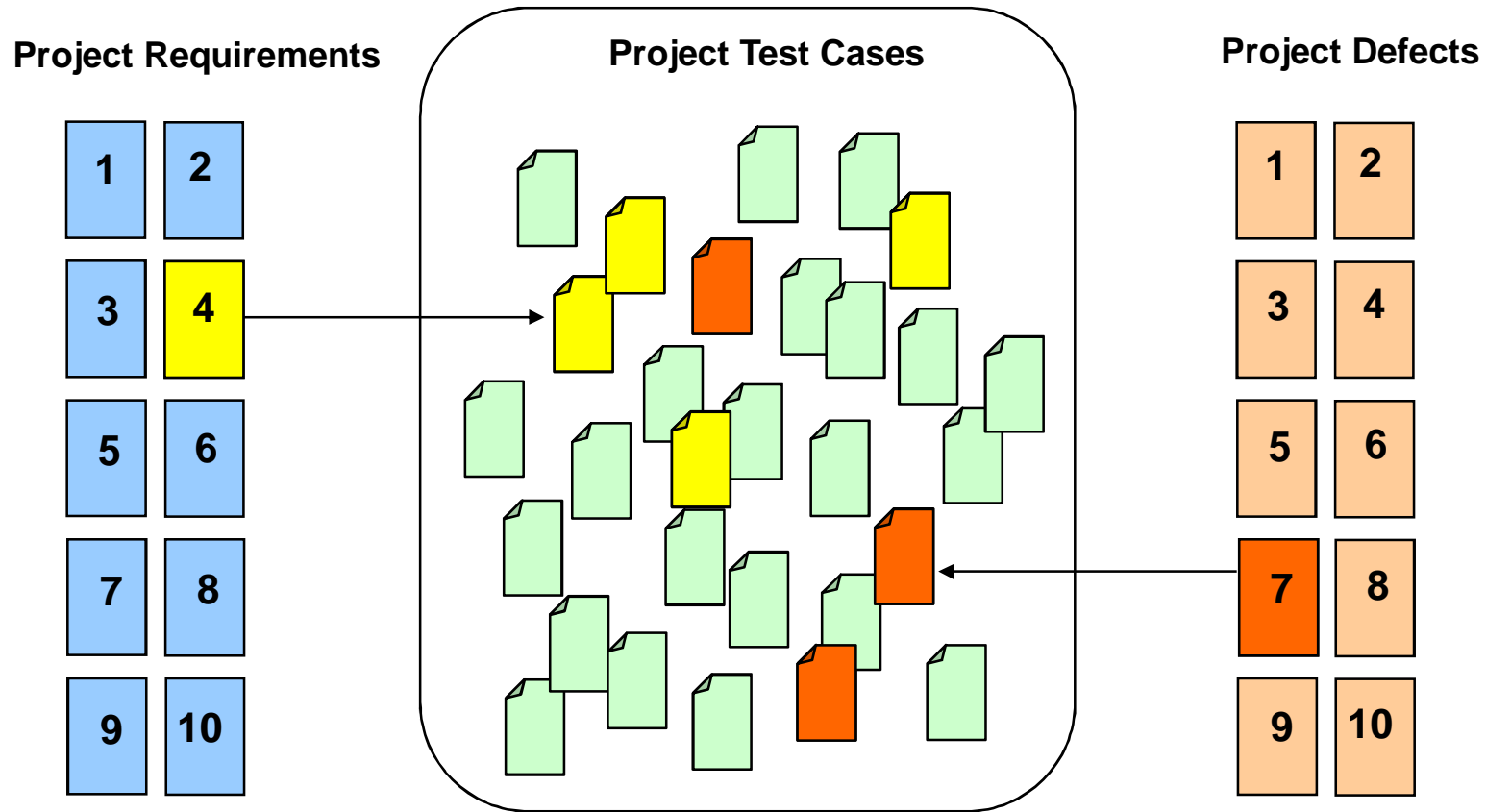
- Automate team workflow **improving productivity**
- Real time reporting and alerts **reduces project risk**
- Automate data collection **eliminating administrative overhead**



User customized layout and content

Test Case Management

Determining the impact to test cases



Integrated Manual Test

Execution and Results all from the new web console

The screenshot displays the 'Script Execution' web console. At the top, it shows 'Executing New Customer Order' with a 'Manual Script' icon and a 'Cancel' button. Below this, an 'Environment' section lists details such as 'Test Script Name: New Customer Order', 'Application Server: Tomcat 6.0', 'Browsers: Firefox 2.0', 'CPU: AMD 32bit', 'DataBase: DB2 7.x', and 'OperatingSystem: Windows NT'. A 'Test Progress' bar indicates 67% completion. The 'Script Steps' table shows three steps: Step 1 (Select a cd and click Order button), Step 2 (Verify the login window displays - Passed), and Step 3 (Select new customer radio button and select OK button). On the right, there is a 'Defect' capture section with an 'Add Defect' button and a table with columns 'Id' and 'Summary'. Other sections include 'Attachment', 'Result Attachment', and 'Comment'.

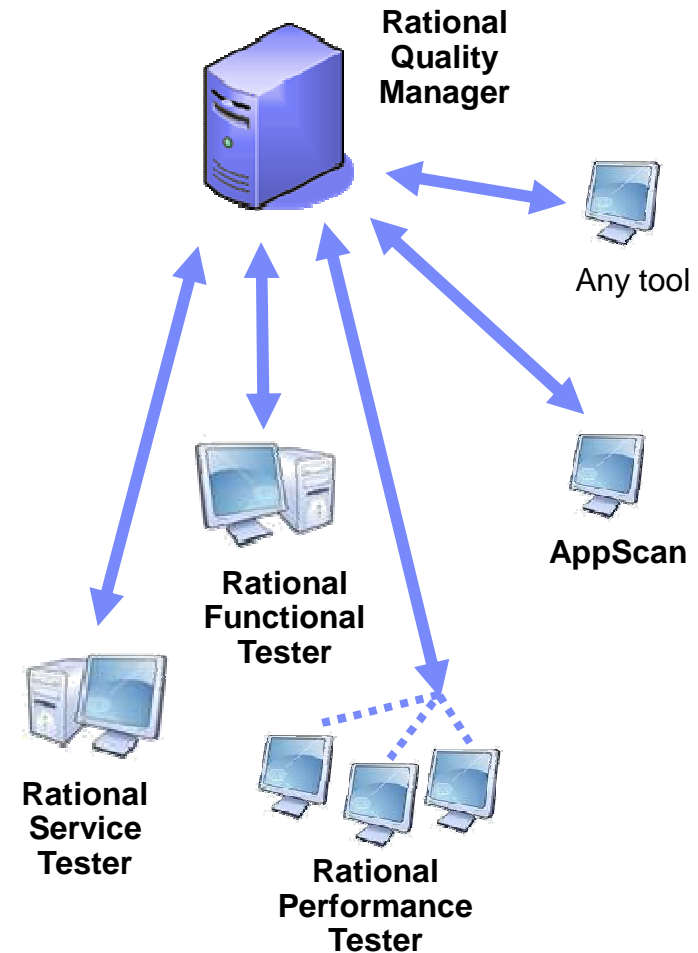
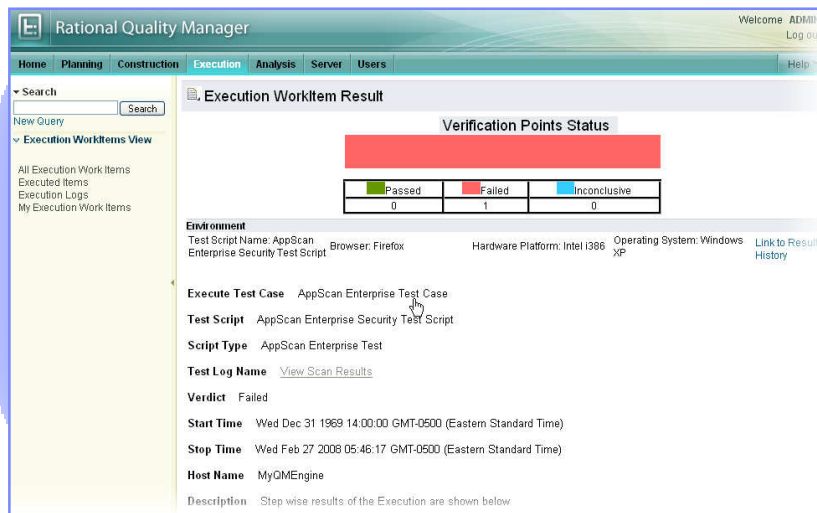
Manual Test Execution

- **Step by step capture** and execution of manual tests
- **Data Assist** during Test Execution
- **Rich defect capture** during execution, including screenshot and attachments
- Leverage Keywords for test **reuse and modularity**

Manage and Execute Automated Tests

Distributed automated test execution

- Launch and control test automation tools
- Remote execution through web console
- Automated test log execution collection
- Open platform allows testing with all testing tools – not proprietary



Automatic Test Coverage

Computing configurations for your test

Environment ?

Select one or several attributes from the columns below. The number of work items created depends on : the number of attributes selected, the level of coverage that you choose, and the Advanced Properties (attribute Inclusions, Exclusions, and Weightings).

Application Server	Browsers	CPU
Tomcat 6.0	<input checked="" type="checkbox"/> Firefox 2.0	<input checked="" type="checkbox"/> AMD 32bit
WAS 6.1	<input type="checkbox"/> Internet Explorer 6	<input checked="" type="checkbox"/> System i
WAS 7.0	<input type="checkbox"/> Internet Explorer 7	<input type="checkbox"/> System z

DataBase	OperatingSystem
DB2	<input checked="" type="checkbox"/> Vista
DB2 7.x	<input type="checkbox"/> Windows NT
DB2 8.x	<input type="checkbox"/> Windows Server 2003

[Advanced Properties](#)

Generation Properties ?

Coverage:

Medium - Pair-wise interaction

Minimal - One-way interaction

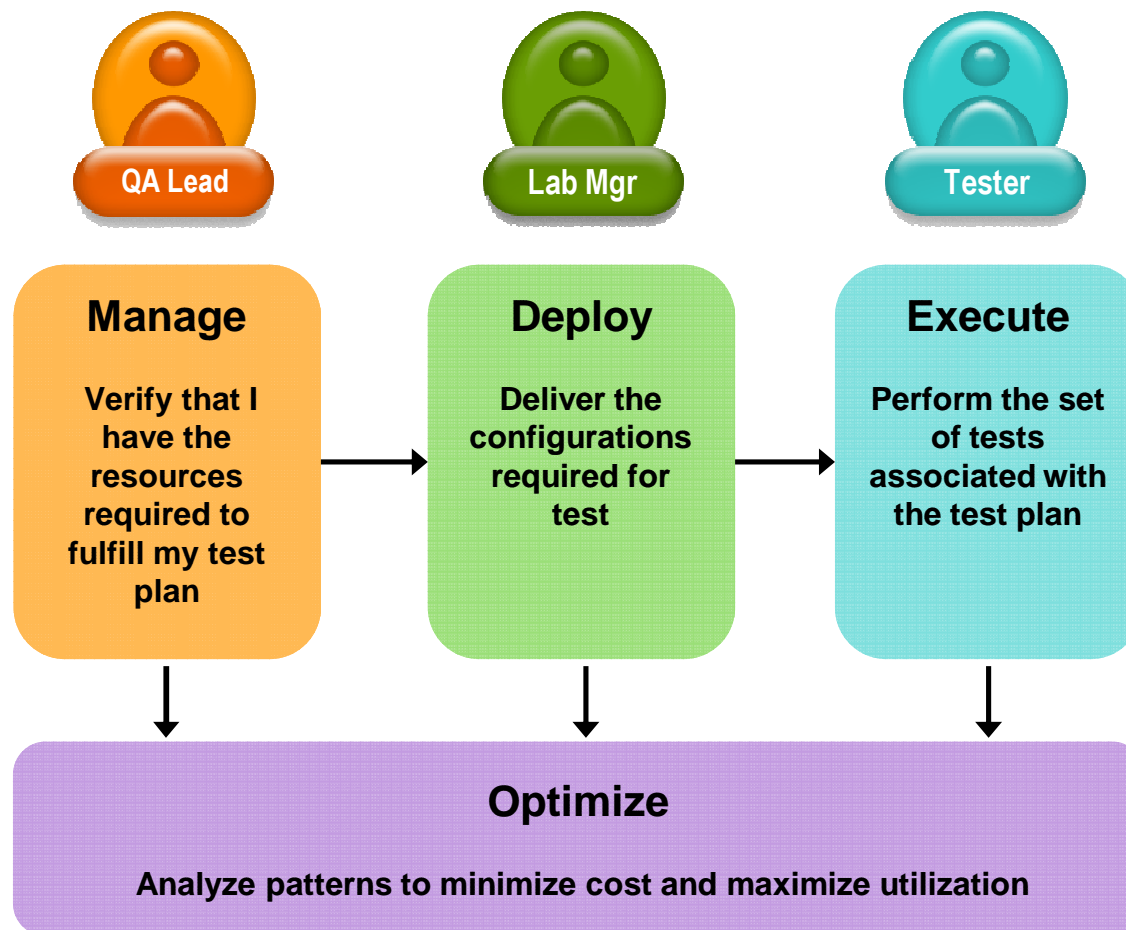
Medium - Pair-wise interaction

Large - Three-wise interaction

All - All permutations

- Configuration Awareness
 - Plan for test execution across all of your target environments
 - Rational Quality Manager will determine most efficient execution path for optimal coverage

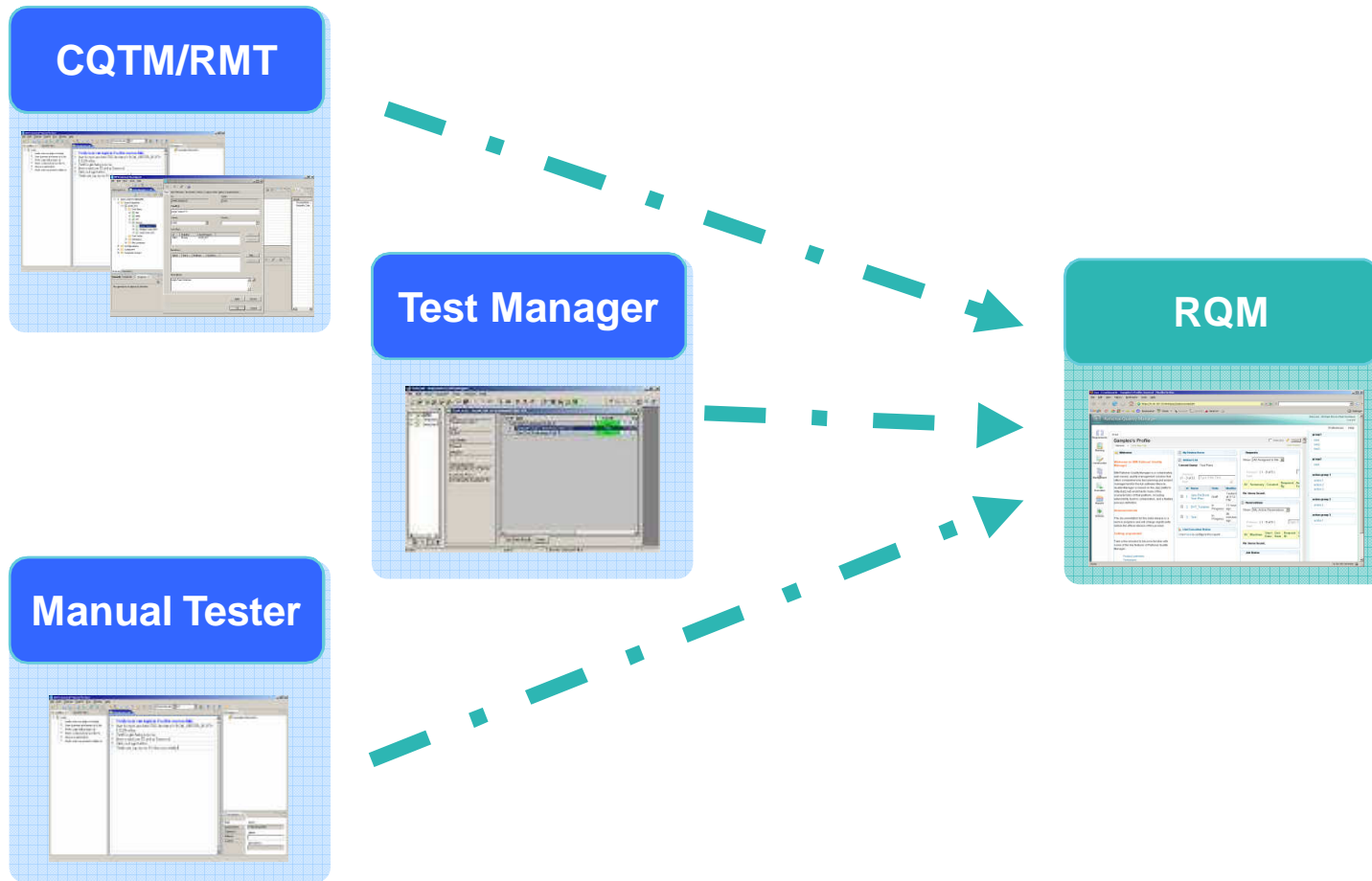
IBM Rational Test Lab Manager



- A **centralized asset inventory** tracks machine status and configuration
- Automation tasks **accelerate the delivery of test configurations**
- An **asset reservation system** allows testers to coordinate activities
- Utilization metrics help **optimize lab resources** and identify candidates for virtualization
- Integration of physical and virtual systems maximizes flexibility

Preserve investments

Automated assets migration



IBM Rational Quality Manager

Central hub for business-driven software quality

Collaborate throughout the lifecycle

- ✓ Defined, customized roles and processes guide activities
- ✓ Dynamic, living test plan evolves with the project
- ✓ Web 2.0 style interface designed for globally distributed teams
- ✓ Early, ongoing team interaction on progress

Automate test creation & execution tasks

- ✓ Automated test case generation and prioritization
- ✓ Manage and provision virtual and physical test lab assets

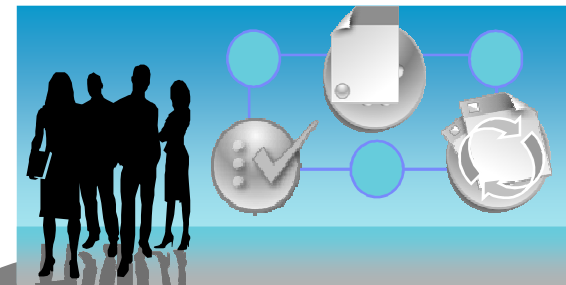
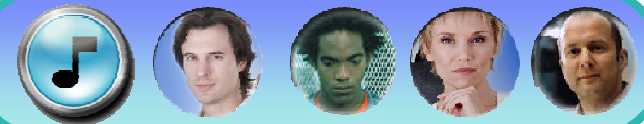
Govern with immediate access to quality metrics

- ✓ Data and pattern analysis informs and optimizes future activities
- ✓ Prioritize assignments to complete most vital quality issues first
- ✓ Versioning and traceability of test case assets maintained

Protect investments with an open, extensible platform

- ✓ Use test tools of your choice
- ✓ Tagging enables ready reuse of your test assets

IBM Rational Quality Manager



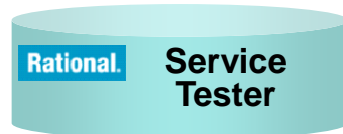
Enhanced Test Automation Products

Additional updates to the portfolio in 8.0



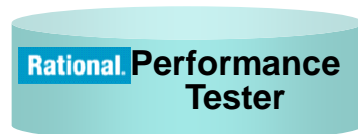
■ Rational Functional Tester 8.0

- Image Comparator
- Additional Environment Support
 - *GEF, .Net 3.0, SAP GUI 7.1, Dojo 1.0.2*
- Web Execution and results through RQM



■ Rational Service Tester 8.0

- Generic Service Client
- Additional Environment support
 - *JSON, text, NTLM, WS-**
- Web Execution and results through RQM



■ Rational Performance Tester 8.0

- Streamlined UI
- Additional Environment Support (SAP)
- Kerberos security support
- IPV6 support
- Web Execution and results through RQM



Get Started Today
with
Rational Quality Manager
Open Beta

www14.software.ibm.com/iwm/web/cc/earlyprograms/rational/QMOpen/

Come blog with us

www.qualitymanager.wordpress.com

IBM Rational Software Development Conference 2008

WHERE TEAMS ARE **R-HEROES**

LUNCH SPONSORED BY:



IVAR JACOBSON
INTERNATIONAL