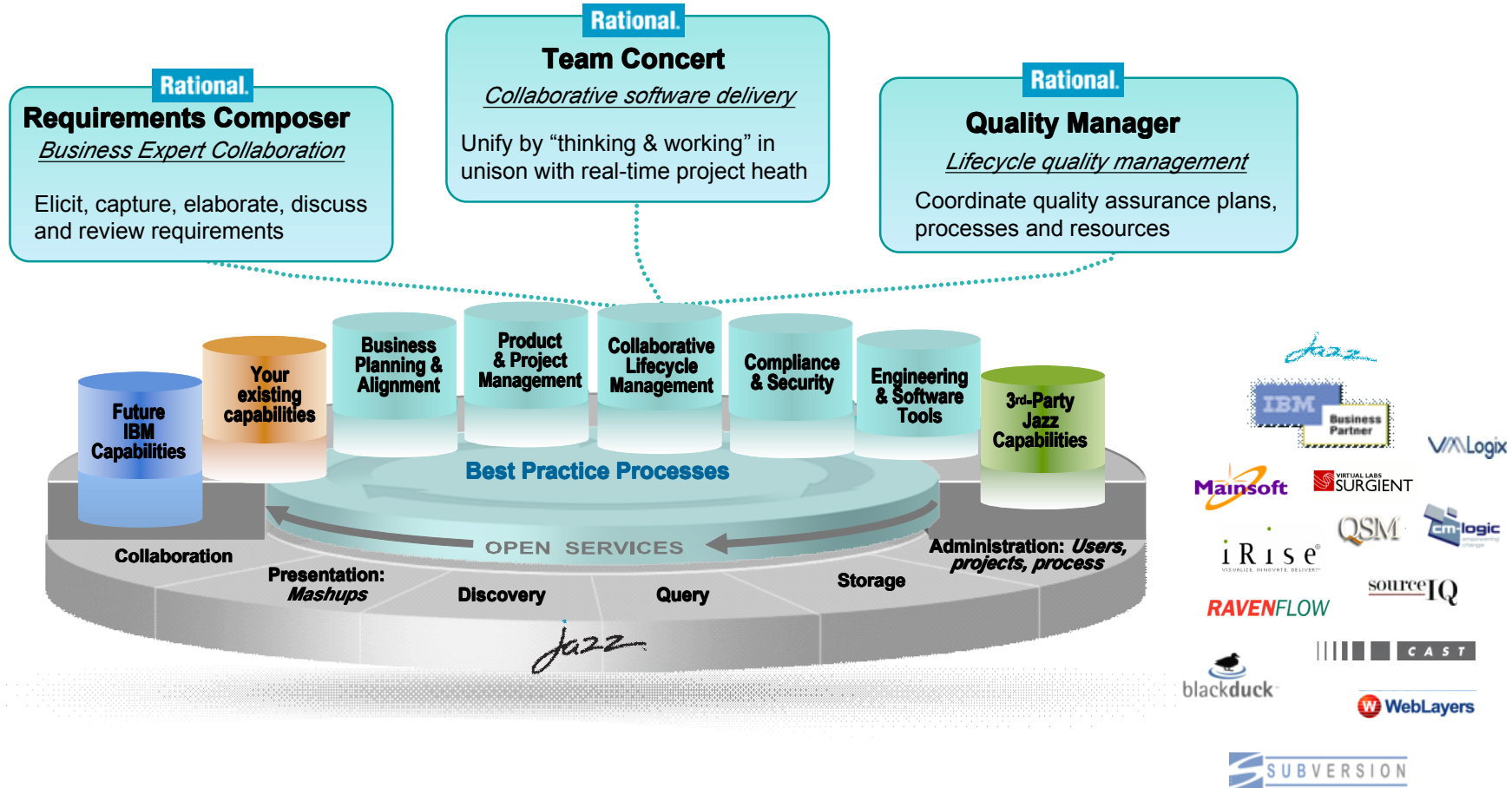




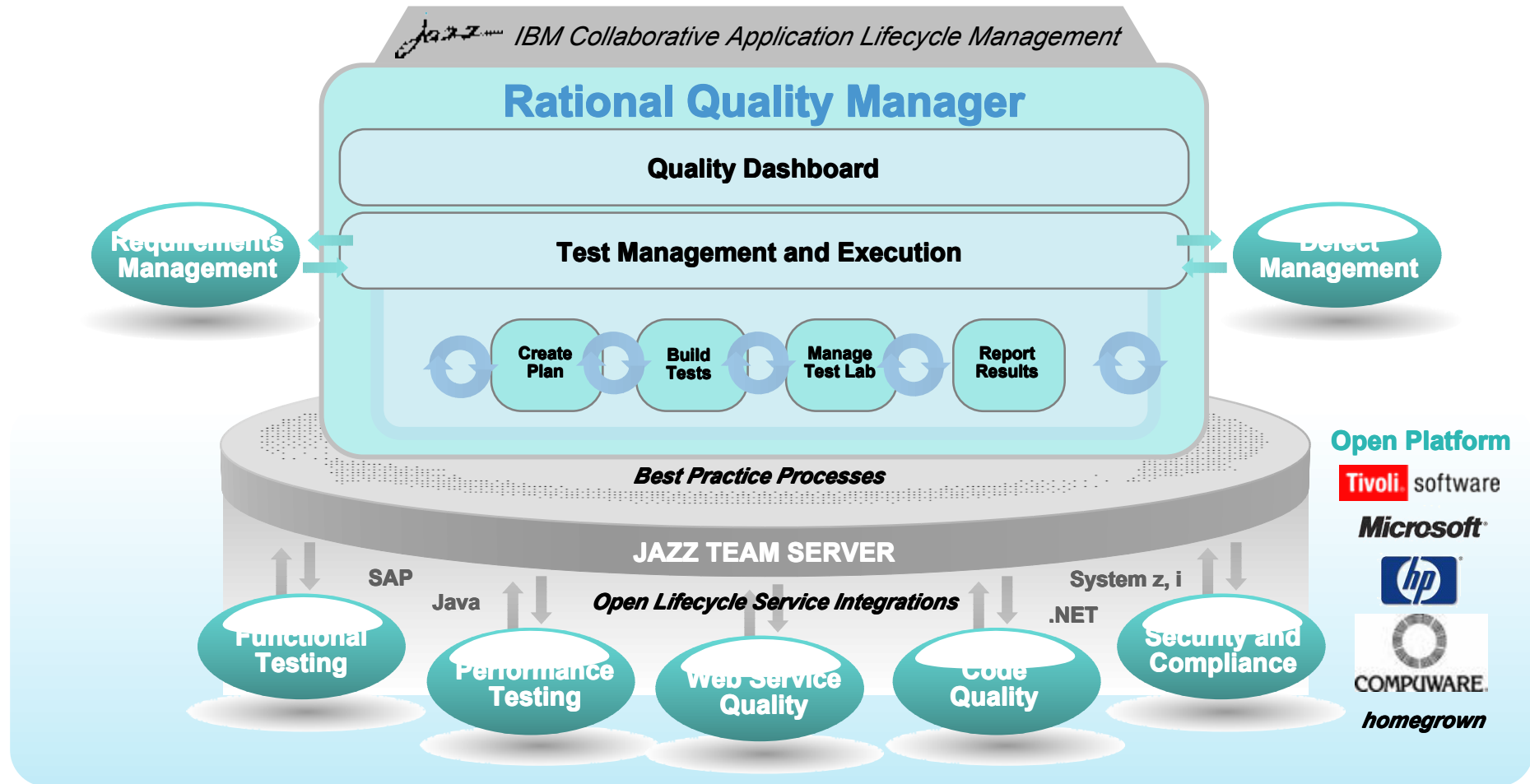
What's New in IBM Rational Quality Manager

Rational. software

The first wave of Jazz products

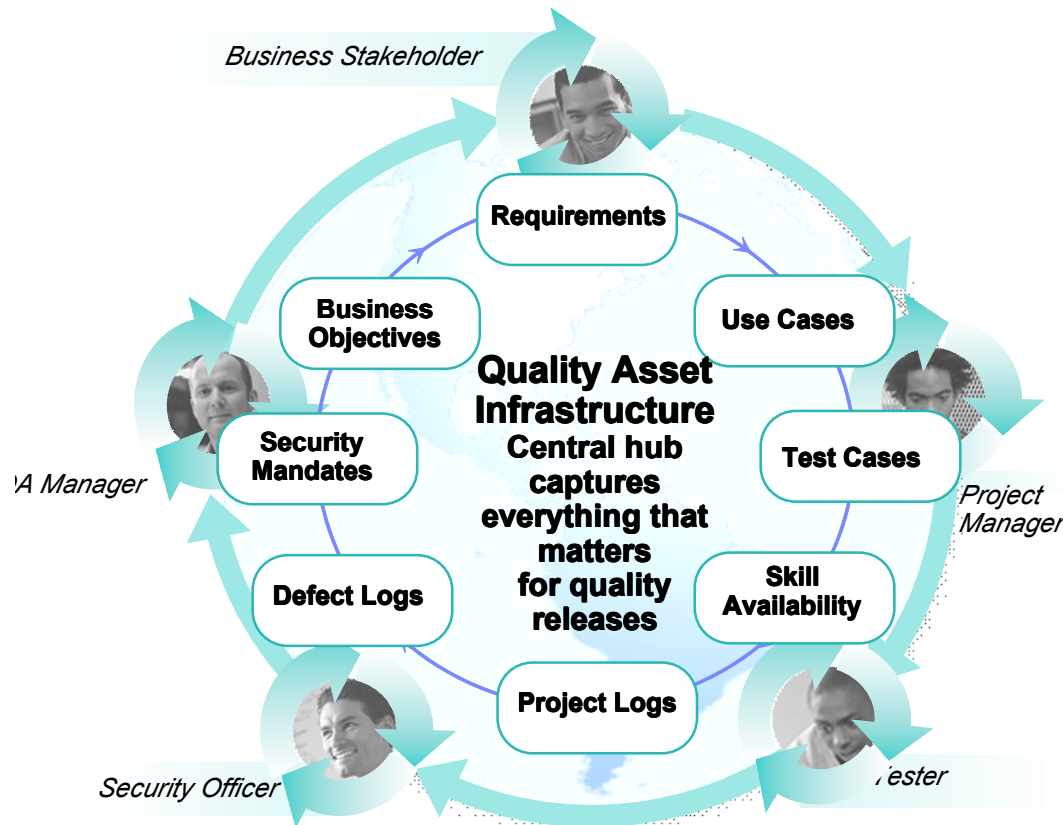


Centralized test management hub allowing full lifecycle support across all types of testing and platforms



Comprehensive rich test plan

A quality contract for the entire software delivery team



- **Collect and track all test data**
 - ▶ Central location for business objectives requirements, resources, platform and exit criteria to name a few
- **Defined Responsibilities**
 - ▶ Individual sections are assigned to team members to clearly establish ownership
- **Goal Oriented**
 - ▶ Formalized and documented exit criteria
- **Extensible**
 - ▶ Add sections, import custom data
- **Keep track of changes**
 - ▶ Snapshot version control to track plan history throughout the life of the project

Comprehensive dynamic planning and updates

Process flow, not artifacts drives team activities

Other Test Plans

Table of Contents

DOCUMENT HISTORY

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Overview

1.2 Test Objectives

1.3 Test Scope

1.4 Assumptions

1.5 Glossary

1.6 References

2 TEST STRATEGY

2.1 Business Function

2.2 Structural Function

2.3 Risk Assessment

2.3.1 Unavailability of test data

2.3.2 Test data for Unit tests

2.3.3 Assessing correctness of calculation

2.4 Test Focus areas

2.5 Levels of Testing

2.5.1 Development testing

2.5.2 System testing

2.6 Functional and Structural Test Types

2.6.1 Test Focus Types matrix

2.6.2 Test Levels Type matrix

3 TEST PLAN

3.1 Roles and responsibilities

3.2 Test Schedule

3.3 Major testing milestones

3.4 Resource requirements

3.5 Testing for Non-Functional Requirements

4 TEST PLAN TREE

4.1 Summary

4.2 Business Objectives

4.3 Test Objectives

4.4 Review and Approvals

4.5 Requirements

4.6 Application Security

4.7 Test Iterations

4.8 Sizing

4.9 Environments

4.10 Test Team

4.11 Quality Goals

4.12 Entry Criteria

4.13 Exit Criteria

4.14 Test Cases

4.15 Attachments

APPENDIX

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G

APPENDIX H

APPENDIX I

APPENDIX J

APPENDIX K

APPENDIX L

APPENDIX M

APPENDIX N

APPENDIX O

APPENDIX P

APPENDIX Q

APPENDIX R

APPENDIX S

APPENDIX T

APPENDIX U

APPENDIX V

APPENDIX W

APPENDIX X

APPENDIX Y

APPENDIX Z

Word based Test Plan

Test Plan Tree

Rational Quality Manager Plan

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

Add New Section

- ✓ Live dynamic documentation
- ✓ Defines test process and strategy
- ✓ Defines responsibilities
- ✓ Activity based versus hierarchy
- ✓ Business level reporting against quality objectives

RQM 1.0.1 Released in March

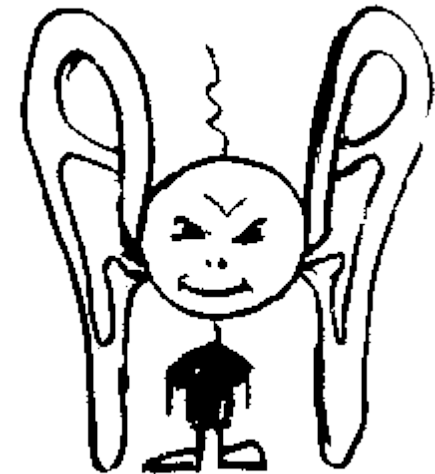
- Multiple Project Support
 - ▶ Multiple RQM Instances on Single Server
 - ▶ Complete isolation of assets

- Adopting RTC/Jazz 1.01 Framework
 - ▶ Work Item Integration with RTC
 - ▶ Floating Licenses
 - ▶ SQL Server Support (2008 and 2005 SP2)



Rational Quality Manager 2.0 Preview

- We heard you -- feedback concerning 1.0/1.0.1 of RQM
 - ▶ Usability
 - ▶ Better searching capabilities
 - ▶ Needing to have a faster ROI
 - ▶ Integrations
 - ▶ Custom Reporting
 - ▶ Performance
- Problems to solve
 - ▶ Two weeks chopped off my test cycle, need help prioritizing
 - ▶ Tracking test progress
 - ▶ Understanding retesting



Usability

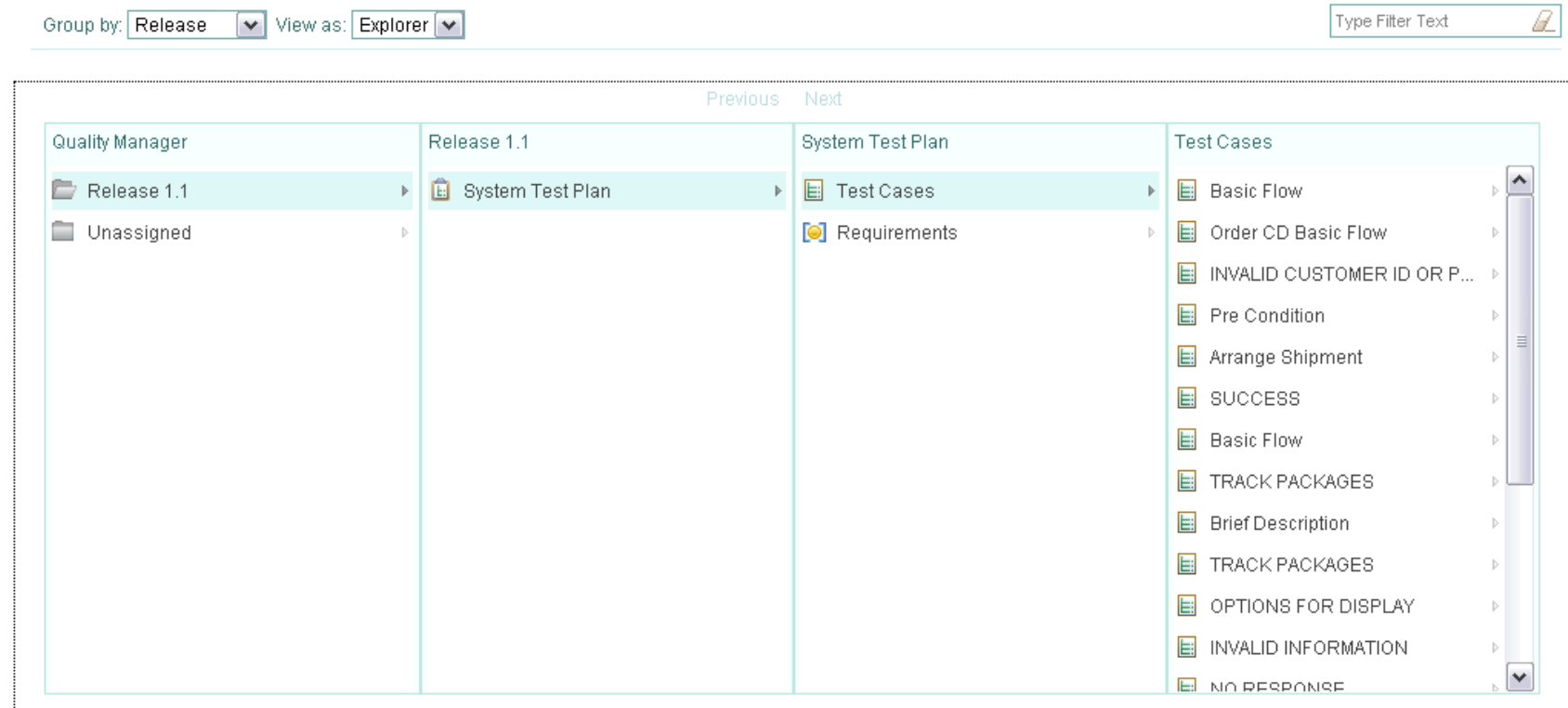
- Organizing Artifacts
 - User defined Hierarchical Tree Visualization based on artifact relationships
 - More Ability to leverage Categories to limit view of artifacts
- Finding Artifacts
 - Additional Searching/filtering capabilities.
 - Tag cloud for all assets
- Manual Test Improvements
- Catalogue Customizations

View Test Plans ?

Group by: View by:

- Project: Paint Shop
 - Test plans
 - Red
 - + Requirements
 - Test Cases
 - Viscosity
 - + Viscosity requirement
 - + Viscosity script
 - Viscosity execution
 - Viscosity result
 - Viscosity defect
 - + Weight
 - + Purity
 - + Brightness
 - + Tone
 - + Saturation
 - + Hue
 - + Color balance
 - + Luminosity
 - + Execution Results
 - + Environments
 - + Pink
 - + White
 - + Black
 - + Orange
 - + Yellow
 - + Chartreuse
 - + Green
 - + Blue
 - + Purple
 - + Test suites
 - + Unassigned
 - + Test lab resources

But wait, there is more



- View are dynamically rendered
- Can utilize many ways to view relationships
- Can change the perspective of views (starting point).
 - E.g. View by Release

Integrated manual test authoring and execution

Maximizing efficiency of manual testing

The screenshot displays the 'Script Execution' window for a manual script named 'New Customer Order'. The environment details are as follows:

Environment	Value
Test Script Name	New Customer Order
Application Server	Tomcat 6.0
Browsers	Firefox 2.0
CPU	AMD 32bit
DataBase	DB2 7.x
OperatingSystem	Windows NT

The test progress bar shows 67% completion. The 'Script Steps' table is as follows:











#	Type	Result	Description
1	Step	✓	Select a cd and click Order button
2	Step	Passed	Verify the login window displays
3	Step	Step	Select new customer radio button and select OK button

The interface also includes an 'Add Defect' button and a table for defect capture with columns for 'Id' and 'Summary'. A blue box with the text 'Manual Test Execution' is overlaid on the bottom left of the screenshot.

Manual test author and execute

- ▶ Step by step capture and execution of manual tests
- ▶ Assisted data entry
- ▶ Keyword support for integrated manual and automated testing
- ▶ Rich defect capture during execution, including screenshot and attachments
- ▶ Simple intuitive interface for quick test execution


Manual Test Improvements

Step	Description	Expected Results
1	Start Classics Application	 This window should appear.
2	Select a CD. User browses to Schubert and selects String Quarter	
3	Order the selected CD. Press the Place Order Button. The Place Order Window appears with Schubert as a selected item.	
4	Insert CC Number by using assisted data entry.	
5	Validate Trent Cuplito is on Name: field using assisted data verification	
6	 Press the  button. Validate the login screen appears	
7	Press the OK Button. Validate the order confirmation window appears.	
8	OK Button	

- **Manual Test Creation**

- Expected results for every step
- Graphic management (thumbnails vs full size)
- Full off-lining of manual test

Manual Test Improvements

Step	Result	Description	Expected Results	Actual Results
1	Fail	Start Classics Application	 This window should appear.	Login Screen Appeared instead.
2		Select a CD. User browses to Schubert and selects String Quarter		

- **Assistance in manual test execution**
 - Inline actual results. Thus, from a log people will see step, expected result, actual result and comments all on screen (and report needs to provide)
 - Pause Resume of Manual Test execution
 - Manual execution updates the Execution Points based on each step
 - Execution Console should show manual tests too
 - Ability to easily provide execution comments

Risk Based Testing

Risk Management strategy can make or break companies.

- *Effective Risk Based Testing requires process support.*



- Calculated Risk
 - ▶ Screen hold 10 lbs
 - ▶ Cat weighs 9
 - ▶ High Risk
- ▶ My Risk
 - ▶ Really want that bird
 - ▶ Low Risk
- ▶ Community Risk
 - ▶ What do other cats say?

Risk Based Testing

Risk Management strategy can make or break companies.

- Effective Risk Based Testing requires process support.

Classics Java Test Plan
Test Plan Overview | View Snapshots

Originator: ADMIN Action: Select Action State: com.ibm.rqm.planning.common.new

Test coverage for the Classics Java application.

Test Cases

Lists the test cases associated with a given plan. You can add and remove associations to test documents and create and associate a new test case. Removing a test case will remove the association to this test plan but not delete the test case.

Group by: Ungrouped

ID	Risk Assessment	Suspect	Name	State	Category	Function	Theme	Weight	Modified
12	○○○○○	◆	View Report Test Case	com.i...	Reporting	Execution	Functiona...	20	1 minu...
15	○○○○○	◆	Add New Customer	Draft	Web UI	Execution	Functiona...	100	1 minu...
16	○○○○○	◆	Order Multiple CDs	Draft	Web UI	Execution	Functiona...	100	1 minu...
17	○○○○○	◆	Add New Products	Draft	Web UI	Execution	Functiona...	100	1 minu...
18	○○○○○	◆	Administer Orders	Draft	Web UI	Execution	Functiona...	100	1 minu...
19	○○○○○	◆	Order single CD	Draft	Web UI	Execution	Functiona...	100	1 minu...

Requirements
Test Plans
Test Cases
Risk Profiles

Calculated Risk Assessment

Collaborative Risk Assessment

Risk Assessment:

○○○○○ very high

My Risk:

Rate this: ○○○○○ very low

Comment here

Community Risk:

Very high: 0 (0%)

High: 0 (0%)

Neutral: 0 (0%)

Low: 0 (0%)

Very low: 1 (100%)

average ○○○○○ very low

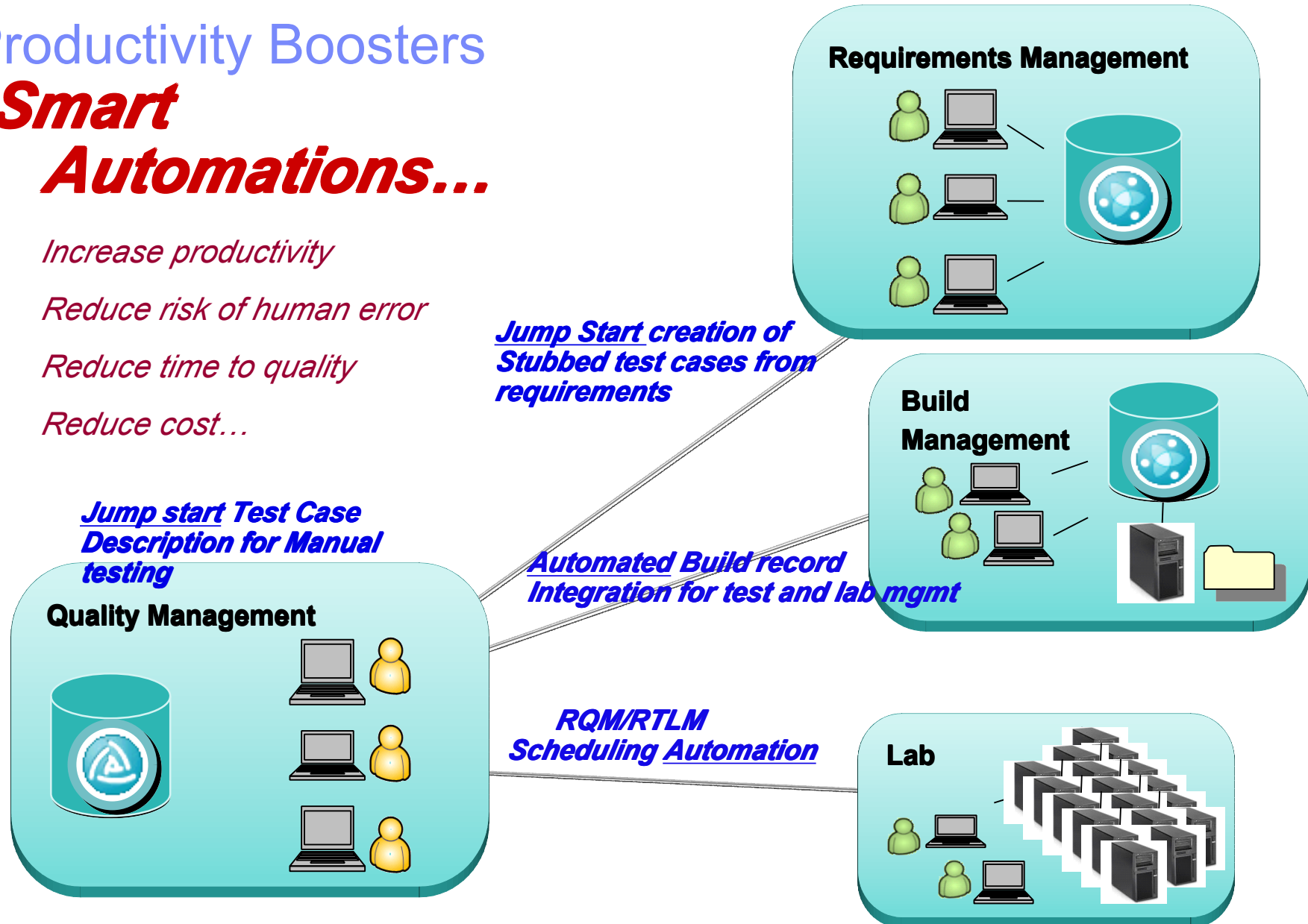
- Prioritize efforts where resources are limited
- Drive risk based decisions to meet quality objectives
- Allows for collaboration on risk mitigation strategy
- Documentation of risk related decisions

Prioritized Tests to meet business needs

Productivity Boosters

Smart Automations...

- *Increase productivity*
- *Reduce risk of human error*
- *Reduce time to quality*
- *Reduce cost...*



Organizational Policies

- Assessing status
 - ▶ Standard Objectives
 - ▶ Reuse across Test Plans
 - ▶ All working toward same objectives
 - ▶ Measures against objectives

System Test Plan ?
 Test Plan Overview | [View Snapshots](#) Discard Changes

Originator: ADMIN Action: Select Action ⇒ State: Draft

Quality Objectives ? Work Item:

Defines the overall metrics for what constitutes a quality product.

Objective	Expected	Actual Value	Status	Comment
Number of Open Sev1 Defects	= 0	0	Successful	

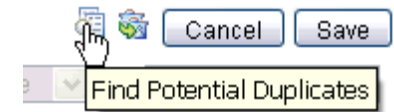
Select Quality Objectives ?

Name	Description	Condition	Target
Number of Blocked Execution Records	Objective stating that no Execution Records can be Blocked.	=	0
Percentage of Blocked Execution Records	Objective stating that only a small percentage of Execution Records can be Blocked.	<	10
Number of Failed Execution Records	Objective stating that no Execution Records can be Failed.	=	0
Percentage of Failed Execution Records	Objective stating that only a small percentage of Execution Records can be Failed.	<	10
Execution Record Pass Rate.	Objective stating that the Pass rate must meet a certain percentage.	>	80

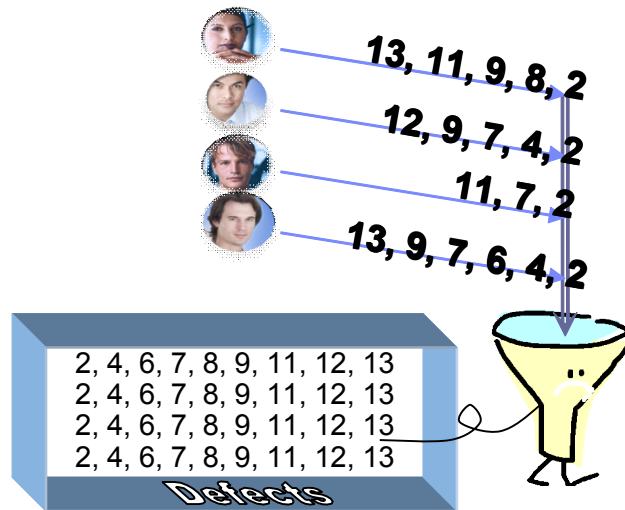
OK Cancel

Just create defect to ensure in the system. Worry about duplicates later..

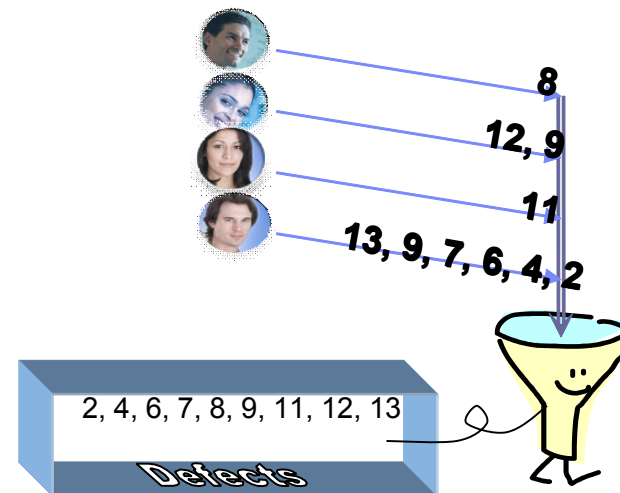
- How long does it take to find and resolve a single duplicate defect?
 - ▶ Are development teams working on same issue unknowingly
 - ▶ Are multiple fixes for the same problem put in different builds
 - ▶ Are testing members validating
- Time is money.....



Common scenario



Utopia



Process-led Automation yields real savings

Examples of automation capabilities

Asset	Developing repeatable industry test solutions			Advanced Defect Analysis	Developing repeatable test procedures applicable to future projects		Integrating end to end processes		Total
	Test cases copied	Manual scripts copied	Manual scripts Reuse	Prevent & block duplicate Defects	Baseline & migrate documentation	Baseline artifacts	Leveraging component Reuse	Dynamic updates of test assets	
Quantity	343	350	1,393	905	1,365	2023	1029	2,227	9,635
Hours saved	167	175	696	1,755*	683	1,011	515	557	5,558
Value	\$16,690	\$17,514	\$69,633	\$175,452	\$68,254	\$101,125	\$51,459	\$55,673	
Total						\$169,379		\$107,132	\$555,799

\$175,452

The biggest hidden QM cost is associated with defect duplications

* Hours saved assumes an average of 100\$/hr

Source: GBS Test Practices

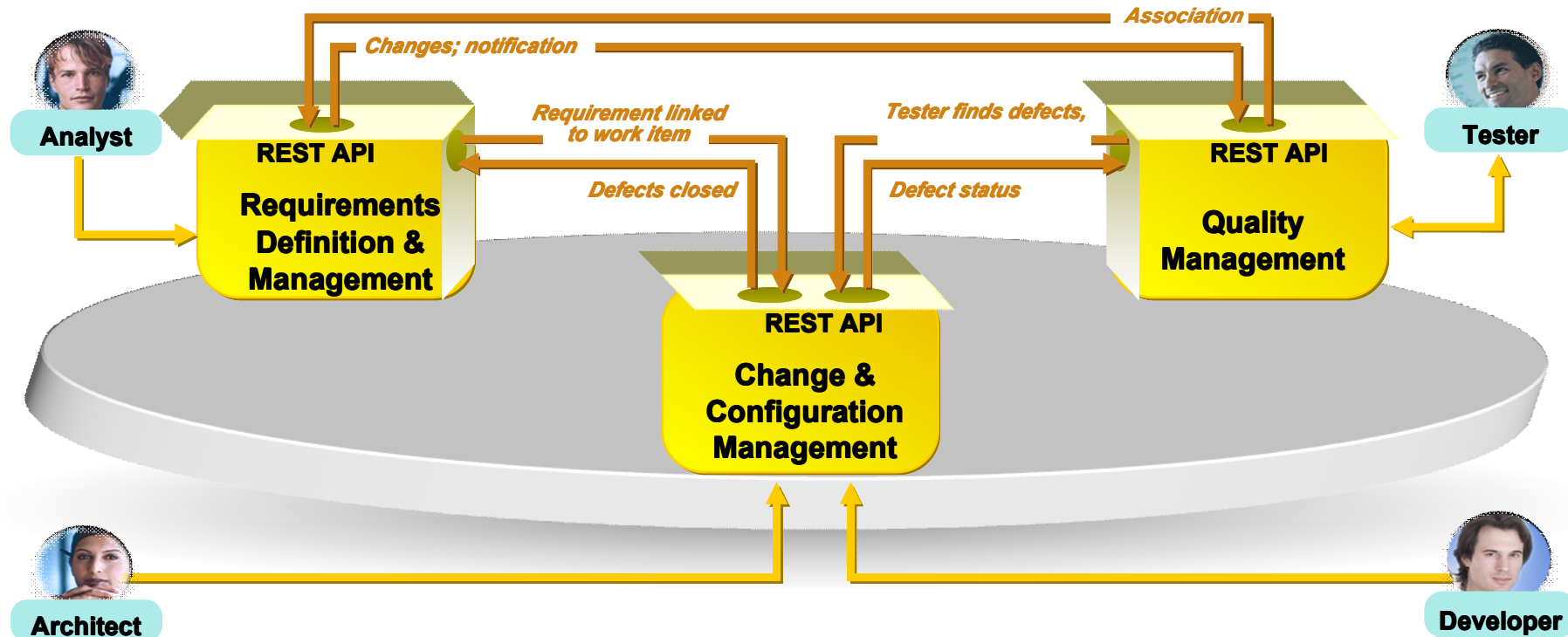
Average per project saving was calculated on a per asset task and process

reality, it often takes much longer.

s calculated on a per asset task and process

Average savings per project - over half a million dollars

Integrations -- Collaborative ALM connects Analysts, Developers and Testers



- **Coordinate analysts, developers and testers**
 - Collaborate in context and track status
- **Align teams on project plans**
 - Which requirements are in the development plan?
- **Track builds and the impact of defects**
 - What build is ready for test?
 - What defects are blocking test from proceeding?
- **Track status with C/ALM dashboard mashups**
 - Transparency across teams and artifacts

RQM Doors Integration

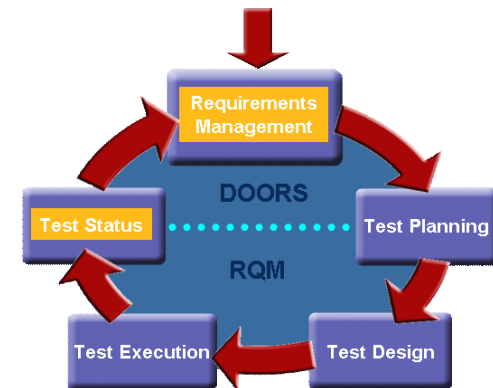
'Test Requirements' current 0.0 in /DOORS-RQM Demonstration (Formal module) - DOORS

File Edit View Insert Link Analysis Table Tools Discussions User Help

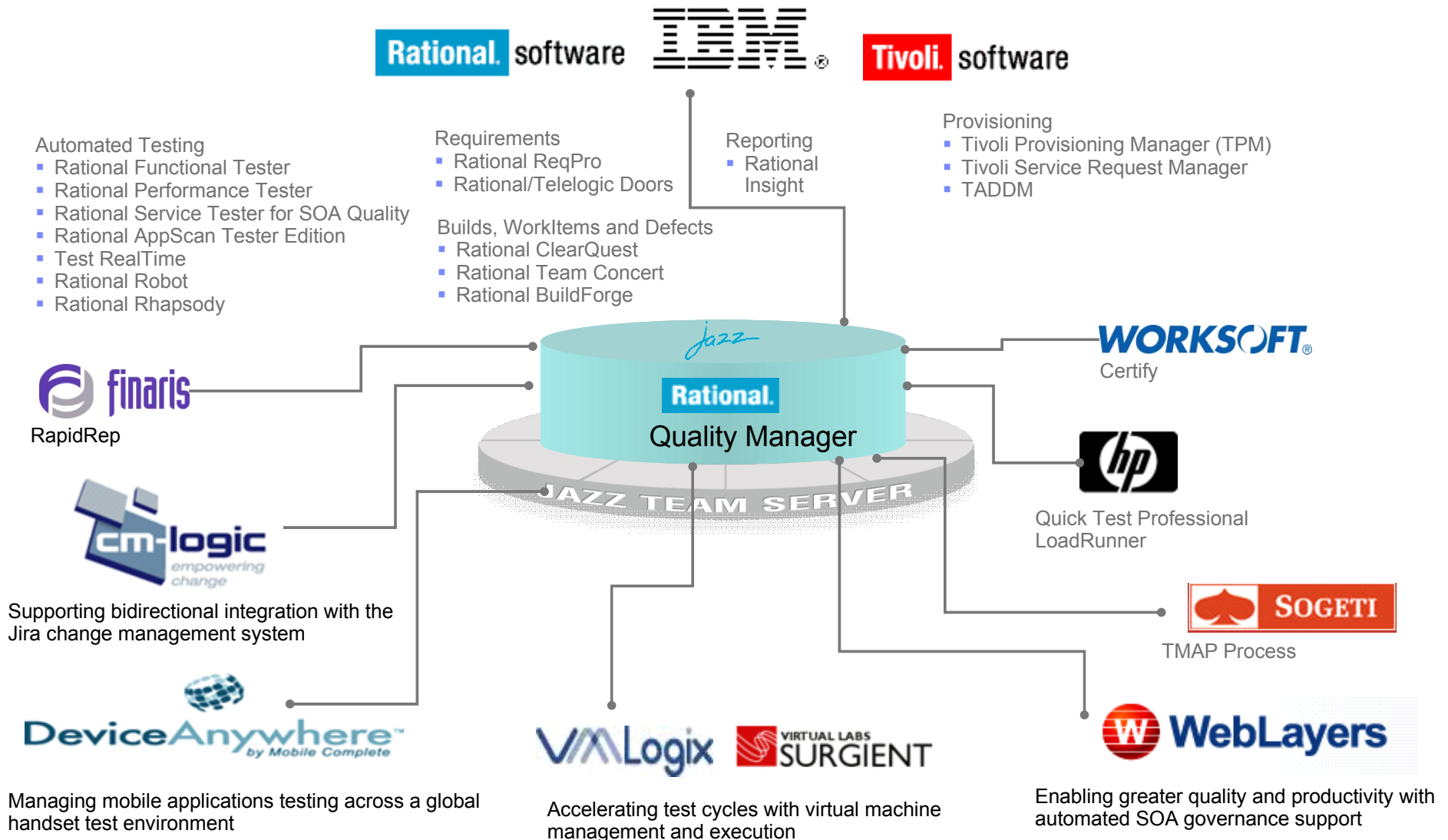
View Save (Ctrl+S) results All levels

Object	Verdict	Test Status	Verdict	Passed	Deferred	Error	Failed	Perm Failed
UR-6	1 User Requirements	Mixed Status	Perm Failed					
UR-8	2 Order processing	Approved	Perm Failed					
UR-4	Customers shall have the ability to update existing orders until orders are ready to ship	Test 16:Perm Failed Test 18:Error	Approved	Perm Failed	Test 18: 2 of 3	Test 16: 1 of 3	Test 18: 1 of 3	Test 16: 1 of 3
UR-3	All customer support representatives shall have the ability to update and cancel existing until orders are ready to ship	Test 17:Passed Test 19:Deferred	Approved	Deferred	Test 17: 3 of 3 Test 19: 2 of 3	Test 18: 1 of 3		
UR-1	All customer support representatives shall have the ability to add new customer records	Test 1:Passed Test 2:Passed	Approved	Passed	Test 1: 3 of 3 Test 2: 3 of 3			
UR-7	3 Security		Not Approved	Failed				
UR-2	Level 3 inventory administrators shall have the ability to add, update and archive products, product attributes	Test 3:Failed Test 27:Passed	Not Approved	Failed	Test 3: 2 of 3 Test 27: 3 of 3		Test 3: 1 of 3	

Save the changes that have been made to this module.



Rational Quality Manager Open Ecosystem Today

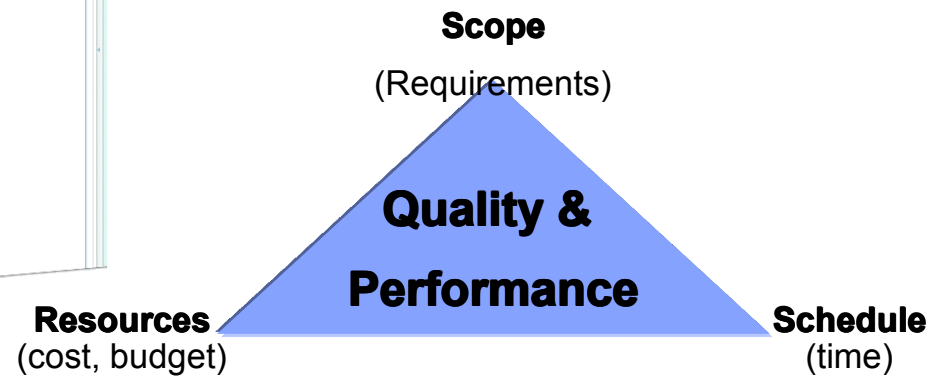


Closed Loop Analysis & Reporting

Reduce time to value, Reduce Risk

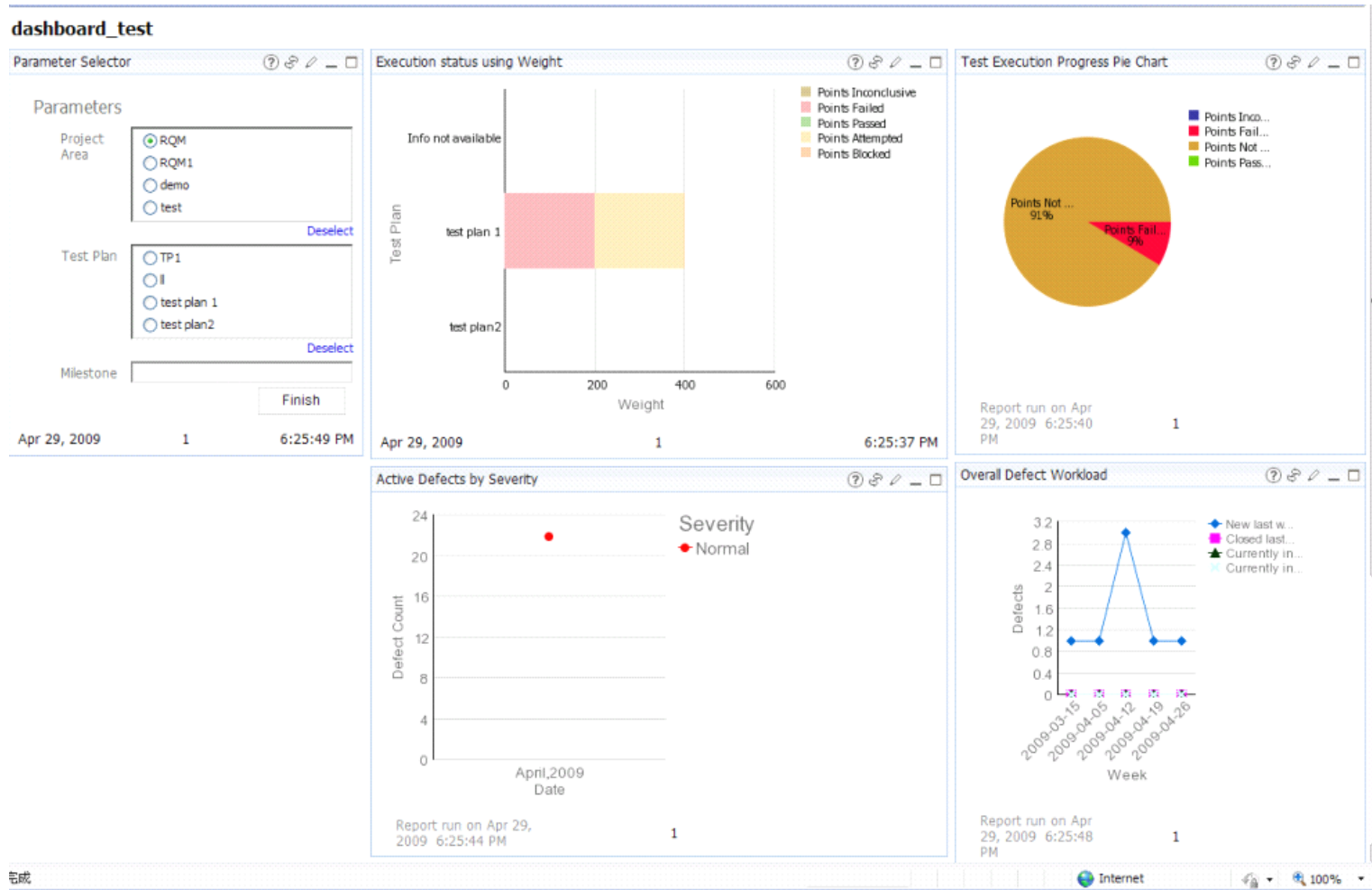
- *Addressing management needs*
 - *Early identification of problem areas*
 - *Standardize reports that communicate ROI (in compliance with MCIF)*
 - *Understanding Test Lab Utilization*

Increased visibility into the quality status & actionable reporting



Closed Loop Analysis & Reporting

Overall Status Measures



Closed Loop Analysis & Reporting

Helping assess your ROI

Keep this version ▾ ▶ 🔍

ROI

Parameters

Projects:

RQM
 RQM1
 demo
 test

Select all Deselect all

Job cost factor (\$):

Testcase cost factor(\$):

Lab Resource cost factor(\$):

Asset Type	Total creation	Total Used	Reused	Costs	Benefits	Cost saving	ROI percentage
Automation Job	0	0	0	\$0	\$0	\$0	
Test environments	2	0	0	\$20	\$0	\$0	
Test Case	5	5	0	\$50	\$50	\$0	100%
Summary				\$70	\$50	\$0	100%

About This Report

This report shows the return of investment of projects. Total creation means the total number of assets created. Total Used means the number of assets used in current project. For Test Case, it means the number of Test cases associated with test plans. For Test Script, it means the number of test script associated with test cases. For Automation Job, it means how many times of the automation jobs run. For Keywords, it means the number of keywords associated with test scripts. For Test environments, it means the reservations number of lab resources. For Entry/Exit criteria, it means the times of Entry/Exit criteria associated with test plans. Reused is the Total used number - Total creation number. Cost factor is the average cost money of creating the asset. Costs is the number of total creation multiples by a cost factor. Benefits is the number of total used number of assets multiples by a cost factor. Cost savings is Benefits - Costs. ROI Percentage is (Benefits/Costs) x 100%.

Report run on Apr 29, 2009 6:35:15 PM

1

完成

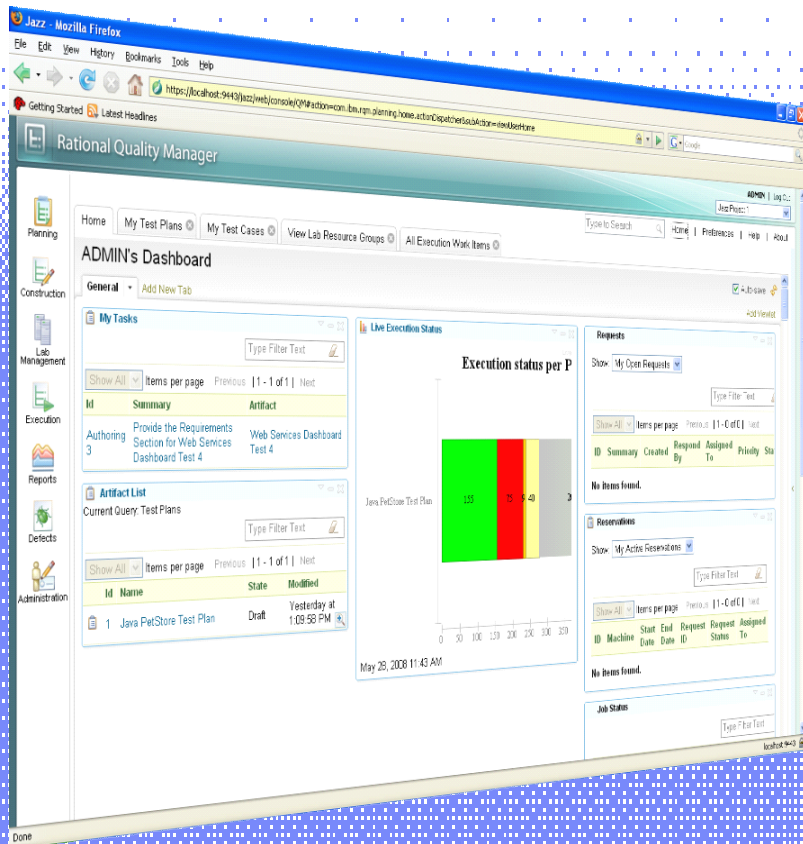


What else The Grab Bag



- Published API
- Copy Test Assets (Test Plans, Test Cases)
- Support of importing from word/excel
- Scheduled Execution
- Customization of “Cataologue” for test environments
- Bulk Update of Records
- Viewer license capability of WI create/update

IBM Rational Quality Manager



■ **Comprehensive test planning, execution and reporting featuring:**

- ▶ **Web 2.0 portal architecture**
- ▶ **Team Collaboration**
- ▶ **Customizable dashboards**
- ▶ **Integrated defect tracking**
- ▶ **Integrated requirements referencing**
- ▶ **Asset version control**
- ▶ **Distributed execution**

Risk Based Testing
Jazz Lifecycle Integrations

Dynamic Tree Views
ROI Analysis

Detailed Custom Reporting
Productivity Boosters

New in 2.0

Open and extensible on



- ✓ Collaborate in context
- ✓ Right-size governance
- ✓ Day one productivity



Myth – There is no center of the Universe



RQM on Jazz.net – Get Involved

1. Sign-up & sign-in

Learn more about the capabilities

Want to try it? Log in to download.

User ID:

Password:

Forgot your User ID or Password?

Not a member yet? [Register now!](#)

Take a look around and read about [Jazz](#) to learn more.

2. Click on Projects

Home About Jazz Projects Downloads Forums Library Community Brian Massey | Edit Profile | Log Out

jazz COMMUNITY SITE We're building a new generation of products to help n development more collaborative, productive and enjo

Learn about Jazz Explore projects Download products

3. RQM Project

jazz Projects

We host the following development projects right here on Jazz.net. Take a look. Download code. Follow along. Participate!

Products

Rational Quality Manager and Rational Test Lab Manager

Rational Quality Manager is a centralized test management environment that helps increase the efficiency and quality of software delivery through test planning, workflow control, tracking and traceability, and metrics reporting. Rational Test Lab Manager, an extended component of Rational Quality Manager, helps to improve the efficiency of the test lab environment and optimize its utilization, cutting workload and saving on test infrastructure.

Rational Requirements Composer

IBM Rational Requirements Composer provides a platform for collaborative requirements definition that enables business analysts, client stakeholders and software development teams to elicit, capture, elaborate, discuss, review, and validate requirements using a variety of requirements definition techniques and collaboration capabilities.

Rational Team Concert

IBM Rational Team Concert is a team-aware software development platform that integrates work item tracking, builds, source control, and agile planning. Rational Team Concert interoperates with other products by providing Visual Studio integration and connectors for ClearCase and ClearQuest.

Featured Business Partner

SEER
GALORATH

See all partners >

Rational Executive Dashboard

IBM executives use Rational software to run their own business. Check out the Executive Dashboard that allows IBM executives to manage product development and delivery.

Learn more >

Participate

We use our own tools to openly develop this project on jazz.net. Track our progress or get involved:

- Submit a bug or enhancement request
- See the project dashboard
- Explore detailed iteration plans
- View reports
- Review release plan

4. Create Defects, review plans, etc

Thank
You

© Copyright IBM Corporation 2009. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, Rational, the Rational logo, Telelogic, the Telelogic logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.

