

# Introduction to IBM Rational Solution for Systems and Software Engineering (SSE)

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*IBM Rational Brand Technical Specialists*

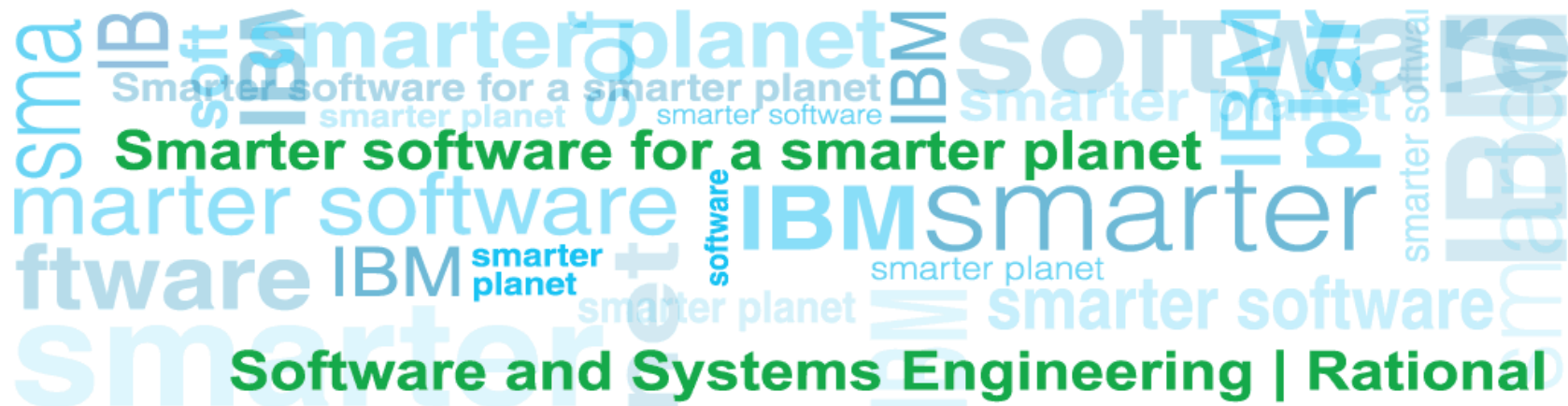
DOORS: Next Steps

July 11, 2013

IBM Client Center (Madrid)

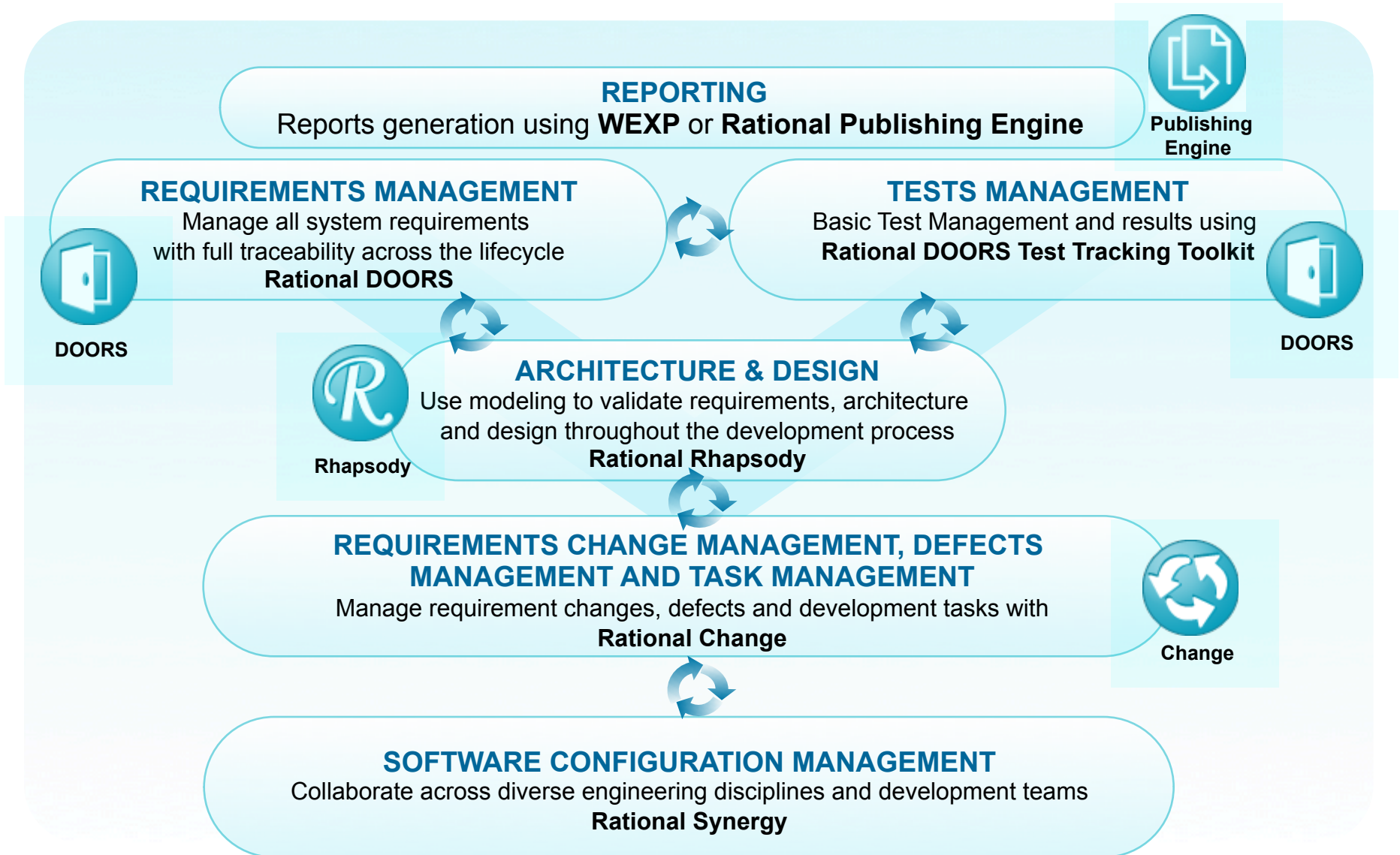
## Agenda

- **Current** IBM Rational Solution for Systems and Software Engineering
- **New** IBM Rational Solution for Systems and Software Engineering
- **Next** IBM Rational Solution for Systems and Software Engineering



# Current IBM Rational Solution for Systems and Software Engineering

# Current IBM Rational Solution for Systems and Software Engineering



## Current IBM Rational Solution for Systems

### ***Issues in current solution***

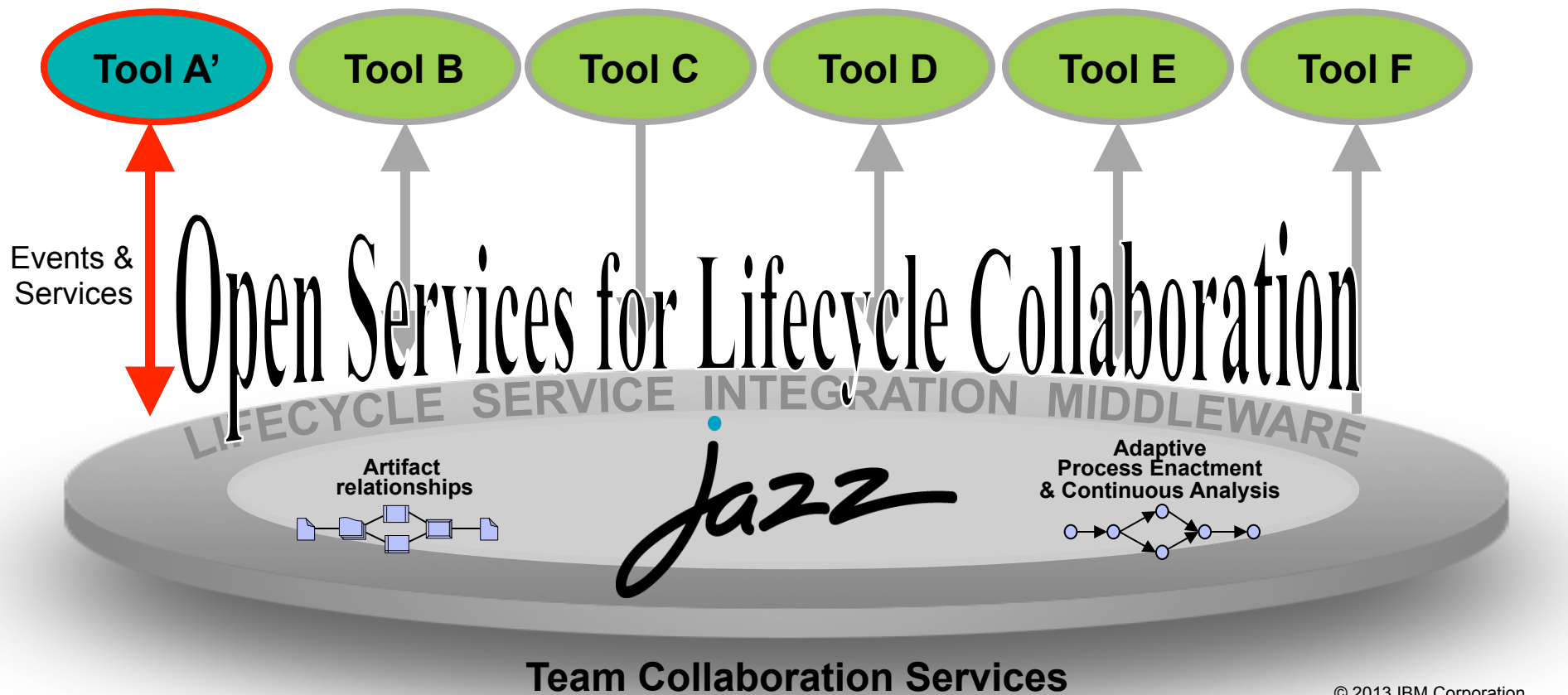
- Different UI – Web, desktop
- Different storage – commercial & proprietary databases, file system...
- Different users management and security policies
- Integrations point-to-point:
  - Specific product versions
  - Installation of integration components required
  - Synchronization usually required.
  - Data duplicity
  - Hard to administer and maintain
  - Different APIs
- No easy access to all engineering information from a single point
- Difficult collaboration for distributed teams



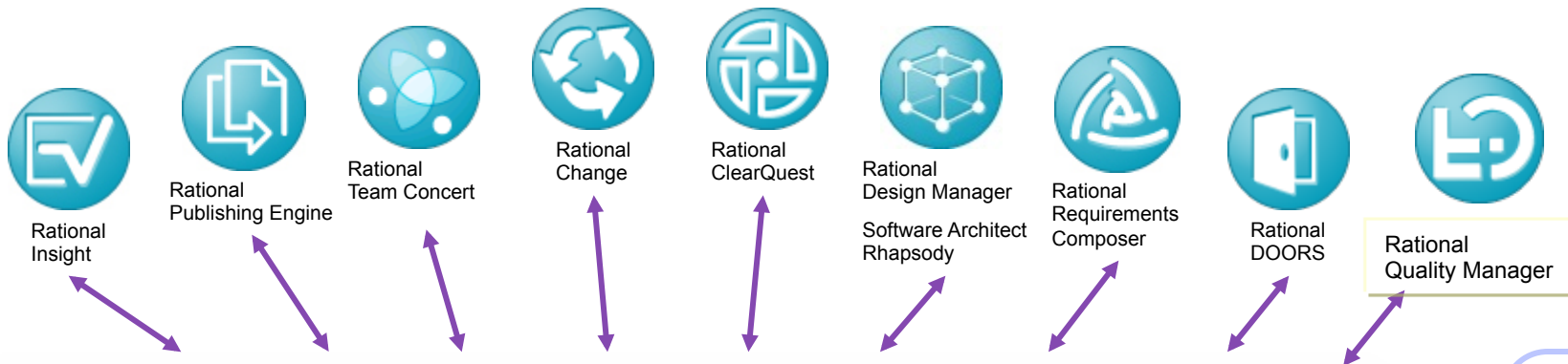
# New IBM Rational Solution for Systems and Software Engineering

## New IBM Rational Solution for Systems and Software Engineering based on the *Jazz Technology Platform*

- Tools collaborating using middleware services
- With the Jazz platform, the tools communicate only with the platform:
  - By listening to normalized/standardized events from the platform
  - By sending normalized/standardized events to the platform

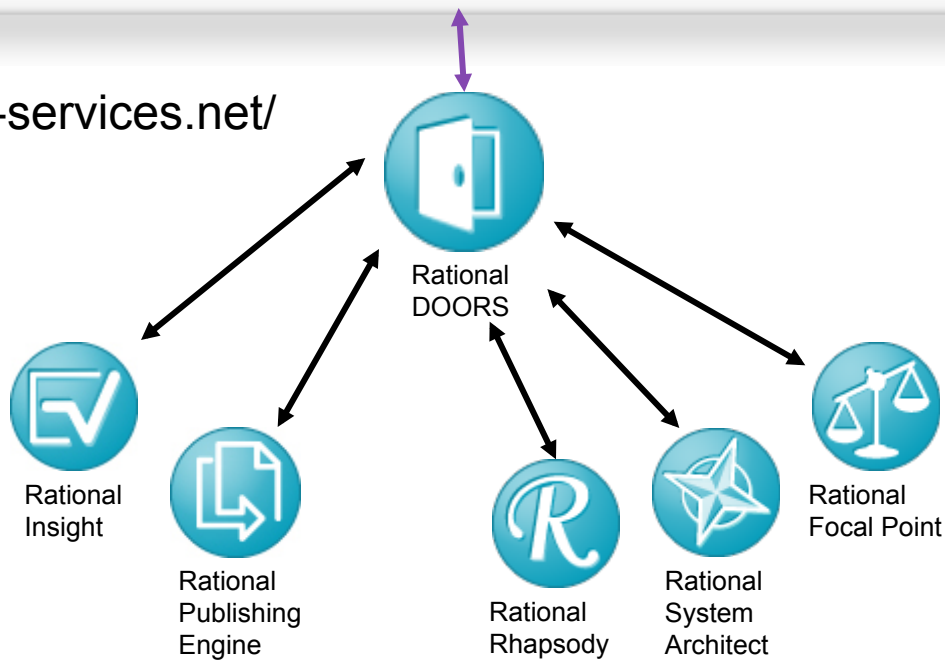


# New IBM Rational Solution for Systems and Software Engineering



**Open Services for Lifecycle Collaboration**

<http://open-services.net/>



3rd Party tools

HP Quality Center

Microsoft Team Foundation Server



## New IBM Rational Solution for Systems and Software Engineering

### ***Benefits of the new SSE solution based on Jazz and OSLC***

- **No point-to-point integration** needed, just connect your tool to the platform
- Common **user interface**, access to everything from the web
- Common **storage** for all engineering artifacts and their relationships
- Common **users management** and security policy
- **Collaboration** tools for distributed and not distributed teams.
- **Dashboards** to control project progress and obtain metrics in real time



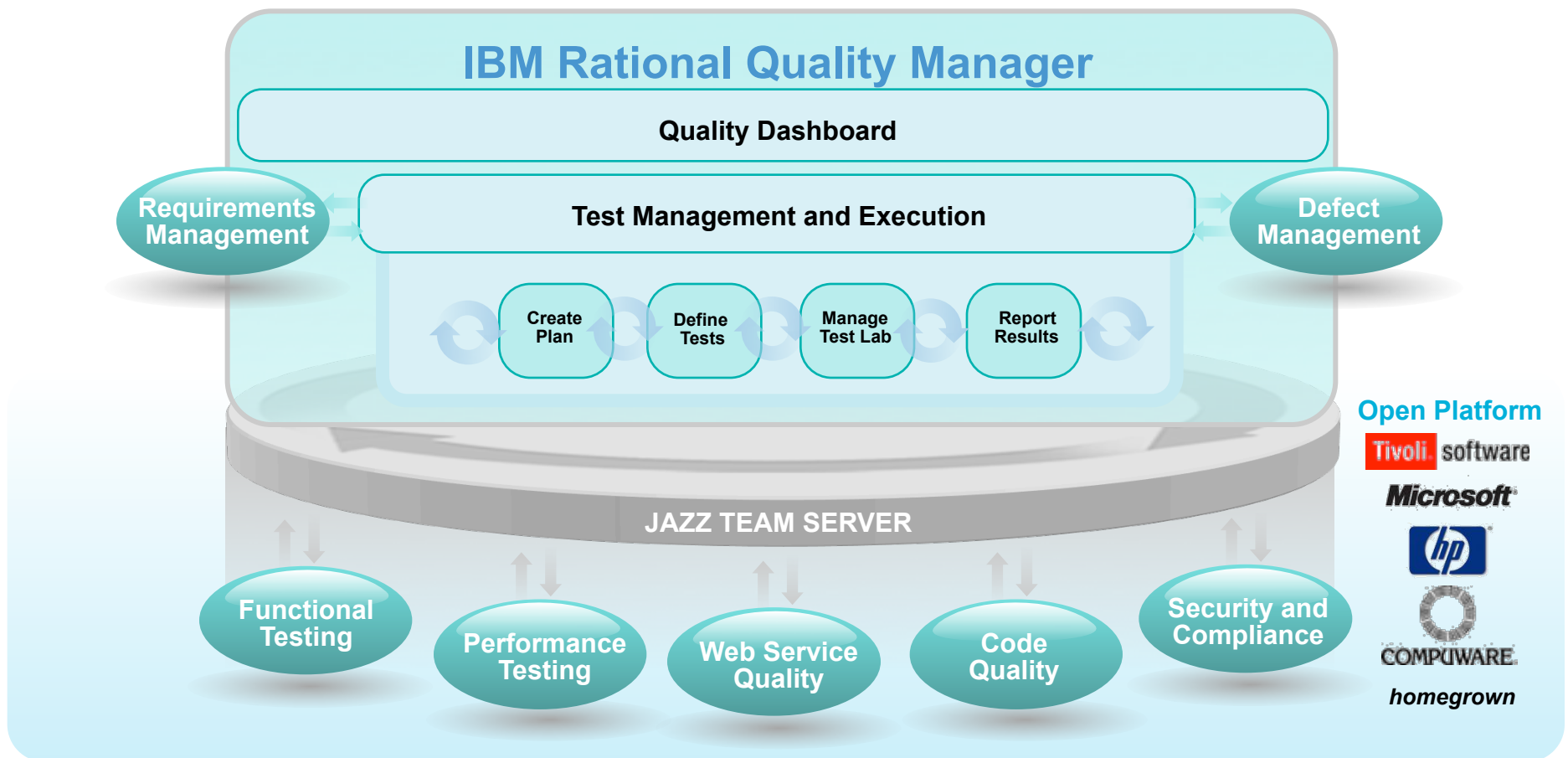
*Open Services for Lifecycle Collaboration*

# New IBM Rational Solution for Systems and Software Engineering



# New IBM Rational Solution for Systems and Software Engineering

***Rational Quality Manager 4.0.3 – Quality Mngmt integrated with automated testing***



## Integration between RQM and DOORS (DWA)

- Live links between test artifacts to requirement instead of a synchronization mechanism
  - Test plans to DOORS views
  - Test cases to DOORS requirements
- Links can be created using the reconcile wizard or one-by-one from DOORS or from RQM
- Direct visibility on DOORS requirements from RQM via rich hover
- Use OSLC RM specification v2

The screenshot shows the IBM Rational DOORS interface. The main window displays a table of requirements with columns for ID, Car user requirements, Test Cases, Test Status, and Verdict. A rich hover tooltip is displayed over requirement CSR105, showing an overview of its details.

ID	Car user requirements	Test Cases	Test Status	Verdict
CSR103	<b>3.2 Constraint Requirements.</b>		Mixed Status	Failed
CSR104	<b>3.2.1 Availability</b>		Mixed Status	Failed
CSR105	Users shall be able to travel 10000 kilometers with a 99.9 percent chance of experiencing no breakdowns.	(1) 10K Reliability: Failed		
CSR106	Users shall be able to travel 10000 kilometers with a 99.99 percent chance of experiencing no faults that do not result in breakdowns.	(1) 10K Reliability: Failed		
CSR107	Loss of use of car due to equipment failure shall not exceed 1 day in every 2 years.	(2) Stress Test: Error		
CSR108	<b>3.2.2 Lifetime</b>			
CSR109	Users shall be able to use the car to its designed standard for 200000 kilometers.	(2) Stress Test: Error (3) Security Check: Pass		
CSR110	<b>3.2.3 Security</b>			
CSR111	Only the authorized user shall be able to start and drive away the vehicle.			
CSR112	<b>3.2.4 Accessories</b>			
CSR113	A warning triangle shall be supplied with the vehicle	(4) Accessory Audit: Pass		
CSR114	A first aid kit shall be supplied with the vehicle	(4) Accessory Audit: Pass		
CSR115	<b>3.2.5 Fuel input</b>			

Overview			
State	Draft		
Description			
Details			
Type:	Test Case	Modified:	May 10, 2012 7:44 PM
Owner:	Maria	Trigger:	
Calculated Risk:	○○○○○	Activity:	
Community Risk:	○○○○○	Weight:	100
Project Area:	Meter Reader Testing	Team Area:	
<a href="#">Open..</a>			

## Requirement driven-testing

- Rich text test requirements can be defined in the RM application
- Test artifacts can be linked to requirements in IBM Rational DOORS
- Explore traceability from RQM

**Test Cases** ?

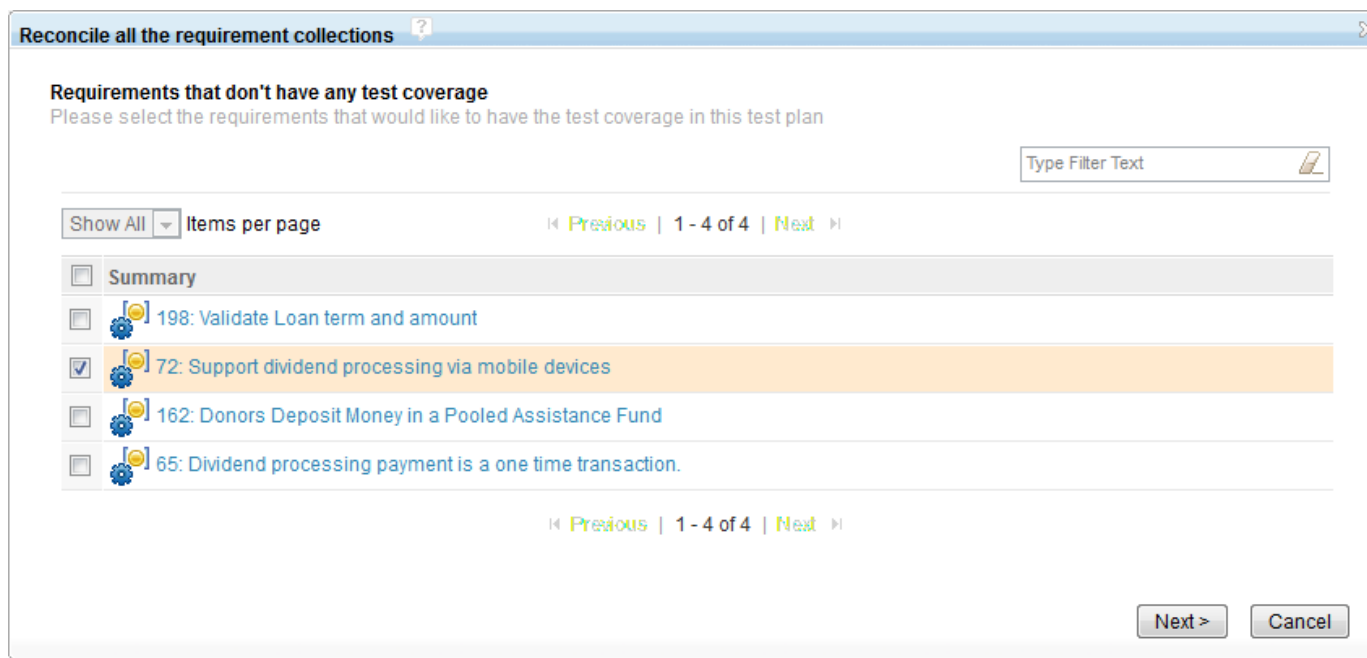
View As: **Traceability** Group By: **Ungrouped** Type Filter

10 Items per page Previous | 1, 2, 3 | Next

ID	Name	Validates Requirement	Tests Development Item	Priority
19	Allocate Dividends to a Single Cause	(1), (2), (3), (4), (5)	Allocate Dividends by Percentage	High
22	Dispute Credit Card Charge	--	--	High
3	Allocate Dividends by Percentage	Allocate dividends by Percentage	Allocate Dividends by Percentage	Medium
7	Allocate dividends by amount and frequency	Allocate dividends by amount and frequ	Allocate dividends by amount and ...	Medium
18	Dividend Allocation by Percentage	Dividend allocation by percentage	Dividend Allocation by Percentage	Medium
9	Donors Can Choose to Support an Organization	Donors can choose to support an orga	Donors Can Choose to Support a...	Medium
11	Donors Choose an Organization	Donor Chooses an Organization	Donors Chooses an Organization	Medium
17	JKE Charity Coordinator responds to online request	JKE Charity Coordinator will respond to	JKE Charity Coordinator will respo...	Medium
25	(QM Tutorial) Allocate Dividends to Multiple Causes	--	--	Low
16	Donor dividend allocation conforms to stated criteria	Donor Dividend Allocation Criteria	Donor Dividend Allocation Criteria	Low

## Requirement reconciliation wizard

- Show requirements not covered by test cases in the current test plan
- Can create automatically new test case for those requirements
- Can add existing test cases linked to those requirements to the current test plan
- Show modified and removed requirements
- Can update the links and mark test cases as suspect



## Requirements to test steps traceability

- Each test step of a manual test script can be linked to one or several requirements
- Can be restricted to requirements already associated with the related test cases
- Links are shown during test execution and in test case result details

Step	Description:	Expected Results	Validates
1	Select Money Market Savings Account 	Account Details screen appears	
2	Click Allocate Dividend Percentage button 	Money That Matters screen appears	Allocate dividends by Percentage
3	Select American Cancer Society and click Add 	American Cancer Society is added to the organizations list	
4	Enter 10 for the Percentage and click Next 	Verify Donation Organization is American Cancer Society and Donation Amount is \$50.00	

include built-in variables

Name	Value
No items found.	

Requirement View ?

Type Filter Text

Previous | 1 - 5 of 5 | Next

Requirement	Test
Donor Chooses a...	A...
Allocate dividends...	A...
Donors can choos...	A...
Dividend allocatio...	A...
Allocate dividends...	A...

Previous | 1 - 5 of 5 | Next

## New IBM Rational Solution for Systems and Software Engineering

### *Rational Team Concert 4.0.3 – Collaboration, Planning, Change & Configuration Mng*

- **Integrated capabilities**
  - ▶ Planning
  - ▶ Work items management
  - ▶ Source Control
  - ▶ Build management
  - ▶ Process guidance and instant messaging
- **Out-of-the-box agile and traditional processes**  
(Scrum, OpenUp and Formal Project Management).  
Fully customizable processes.
- **Automate governance**
  - ▶ Asses project status and trends in real-time with auto-refreshed graphical dashboards
- **Scale with your enterprise**
  - ▶ Supports teams ranging from a few to thousands of members
- **Unify teams working with different technologies**
  - ▶ Supports J2EE, .NET, Power Systems, System z, ClearCase, ClearQuest, Subversion, Synergy, Change





# Rational DOORS and Rational Team Concert OSLC integration

## Link RTC work item (CR, IR, Defect, ...) to DOORS Requirement

The screenshot displays the IBM Rational DOORS application interface. The main window shows a project titled '3. System requirements' current 0.2 (a) in /Training Car Project (Formal module) - DOORS. The left pane shows a tree view of system requirements, including '1.2 Control car' and '1.2.2 Control speed'. The right pane displays a table of requirements with columns for ID and description. A context menu is open over the table, with the 'Implementation Request' option selected, and a sub-menu showing 'Submit...' highlighted with a red box.

In the foreground, a 'Submit Request - DOORS' dialog box is open. It contains the following fields:

- Type: Requirement Change Request
- Summary: Implement speed automatic system
- Filed Against: PoT\_DOORS\_RTC\_1
- Owned By: Rational SW
- Due Date: Mar 15, 2012
- Description: The speed of the car shall be controllable by automatic means.

At the bottom of the dialog box are 'OK' and 'Cancel' buttons.

In the background, a bar chart is visible with the title 'Stopping time (secs) from indicated road speed to 0 kph'. The chart shows four bars of varying heights, with the tallest bar reaching approximately 10 on the y-axis.

# Rational DOORS and Rational Team Concert OSLC integration

## Navigate and explore traceability links

The screenshot displays the IBM Rational DOORS interface with several overlapping windows. On the left, a table lists requirements for a car system, including SR1012 (1.2 Control car), SR1013 (1.2.1 Switch on car), SR1014 (The car shall be able to discriminate which auto operate the car), SR1015 (1.2.2 Control speed), SR1016 (The car shall have a foot mechanism to control), SR1017 (The speed control shall be infinitely variable from), SR1018 (The speed of), SR1019 (1.2.3 Br), SR1020 (The car shall), SR1021 (The car shall), SR1022 (The car shall), and SR1023 (The car shall). A chart below the table shows 'Time (secs)' on the y-axis (0 to 50) and 'Stops' on the x-axis.

The main window shows a 'Requirement Change Request 83: Implement speed automatic system - Change and Configuration Management - Mozilla Firefox'. The browser address bar shows the URL: [https://win-2se07q37r2g:9443/ccm/web/projects/PoT\\_DOORS\\_RTC\\_1#action=com.ibm.team.workitem](https://win-2se07q37r2g:9443/ccm/web/projects/PoT_DOORS_RTC_1#action=com.ibm.team.workitem). The page title is 'PoT\_DOORS\_RTC\_1'.

A modal window for 'SR1018' is open, displaying the following details:

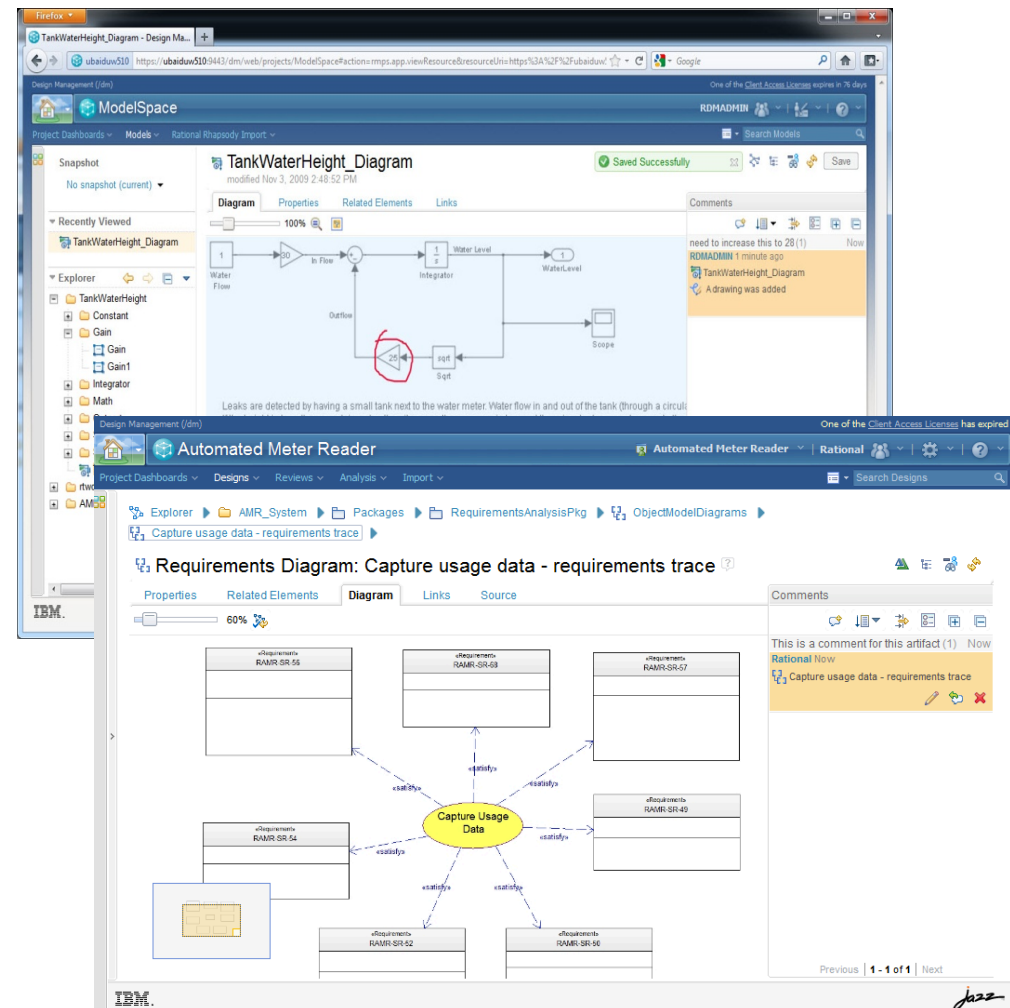
- Summary**
  - Object Identifier: SR1018
  - Created On: 1993-09-08
  - Created By: Rob Anstee
  - Last Modified On: 2012-03-14
  - Last Modified By: rational
  - Module Name: 3. System requirements
  - Module: Car system requirements
  - Description:
- Attributes**
- Links**
  - There is 1 DOORS In-link
  - There are 0 DOORS Out-links
- External Links**
- Implemented by (1)**
  - [Implement speed automatic system](#)

The bottom of the image features the IBM logo on the left and the word 'Jazz' in a handwritten style on the right.

## New IBM Rational Solution for Systems and Software Engineering

### *Rational Rhapsody 8.0.3 and Design Manager 4.0.3 – Architecture and Design*

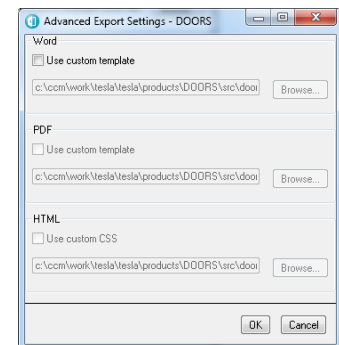
- **IBM Rational Rhapsody** is a visual development environment for systems engineers and software developers to create real-time or embedded systems and software.
- **IBM Rational Rhapsody Design Manager**, is a Rhapsody extension that:
  - Allow teams to review, search, and browse designs, published from Rhapsody
  - Allow link design artifacts with other lifecycle artifacts to integrate software and systems design into the lifecycle. OSLC Linking to DOORS requirements, RTC workitems, etc.



## New IBM Rational Solution for Systems and Software Engineering

### **IBM Rational DOORS 9.5.1 – Reqs Management – What's New?**

- Released in June 2013
- RPE Export improvements
  - Objective to replace RPE client install for DOORS (Started in DOORS 9.4, continues with DOORS 9.5.1)
  - Support for parameterized RPE templates
  - Create multiple outputs of different formats in a single operation
  - Advanced configuration and styling options
  - Still work to do in a future release
    - Additional template parameters – e.g. Word macro execution
    - Document Specifications from the database explorer to produce compound documents
- Richer Integrations
  - OSLC improvements: Database-Wide OSLC Link Query for 3rd party integrations, DM integration
  - Support for HP ALM 11.5
  - Support for TFS 2012
- Reporting over system engineering metrics

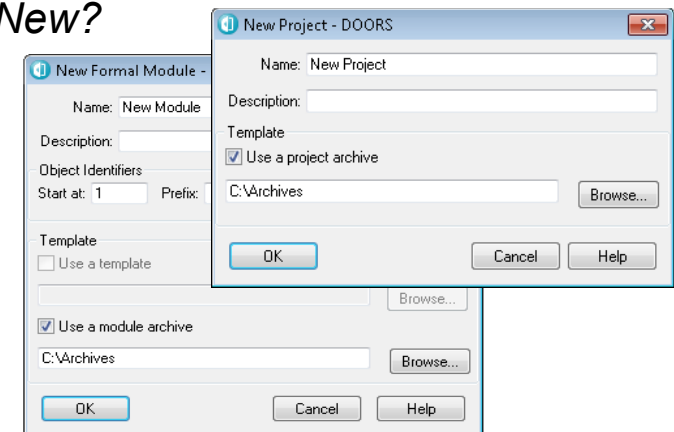


## New IBM Rational Solution for Systems and Software Engineering

### *IBM Rational DOORS 9.5.1 – Reqs Management – What's New?*

- **Project/Module** creation based on archives

- Ability to use DPA or DMA files during Project / Module creation.
- Database Managers can configure a default location



- **New Project templates** supplied from SSE

1. Systems Engineering Template

- A simple, pre-configured information schema for using DOORS to support systems engineering

2. Aerospace & Defense

- Developing requirements against the DO-178B safety standard

3. Automotive

- Supporting the ISO26262 functional safety standard

4. Medical Devices

- FDA Design Control practices defined in 21 CFR Part 820



Microsoft Word  
37 - 2003 Document1



Microsoft Word  
37 - 2003 Document1

## New IBM Rational Solution for Systems and Software Engineering

### ***IBM Rational DOORS 9.5.1 – Reqs Management – What’s New?***

- Usability improvements
  - Reporting history across baselines. Object properties to have a “more” button to navigate into baselines
  - Add/remove modules in a baseline set using a single dialog
  - Improved support for DOORS table formatting
- Memory management
  - DOORS is now Large Address Aware (LAA). Build setting allows 32 bit apps to handle addresses > 2gb.

	<b>32 bit OS</b>	<b>64 bit OS</b>
<b>Standard 32 bit application</b>	2gb	2gb
<b>LAA 32 bit application</b>	3gb	4gb
<b>64 bit application</b>	Will not run	Limited by physical RAM

- Making progress for 2014
  - 64 bit native client
  - Investigating SSO & coordinated baselines across lifecycle products

# Key Systems Announcements

## Solution updates

- Automotive ([Rational Solution for Automotive Engineering](#))
  - Updated support for ISO26262, with enhanced practices and new templates for DOORS and RTC
  - New DOORS and Rhapsody kits with TUV certificate to support ISO-26262 compliance
- Aerospace and Defense ([Rational Solution for Aerospace and Defense](#))
  - New practice mapping to DO-178C and related supplements
  - New DO-178 Templates for DOORS and RTC
  - New Rhapsody kit to support DO-178 compliance
  - New practice guidance to support Defense Architecture Frameworks (DoDAF)
- Medical Devices ([Rational Solution for Medical Devices](#))
  - Cross product visualization and compliance reporting
- Semiconductors and microelectronics ([Rational Solution for Electronic Design](#))
  - Hardware and software co-development

# Next IBM Rational Solution for Systems

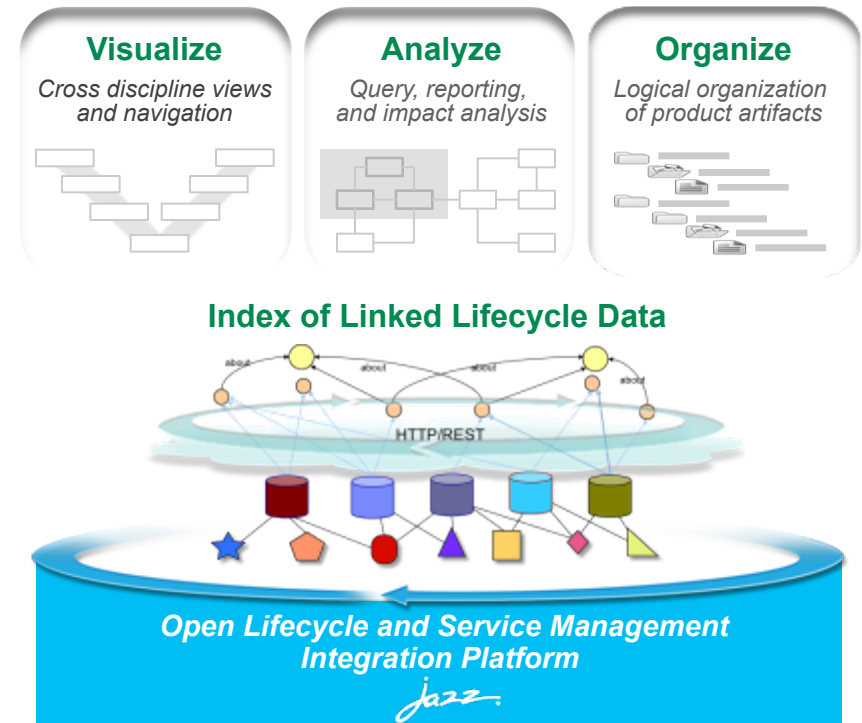


# **IBM Rational Engineering Lifecycle Manager (RELM)**

## IBM Rational Engineering Lifecycle Manager v4.0.3

### *Search, reporting, analysis and logical organization of engineering artifacts*

- IBM Rational Engineering Lifecycle Manager is an intelligent environment for **showing relationships** among Rational Team Concert, Rational DOORS, Rational Rhapsody Design Manager, and Rational Quality Manager.
- These tools **contribute artifacts** (work items, requirements, design models, and quality test cases) to a common index.
- Rational Engineering Lifecycle Manager provides a **portal into that index**, so that users can **view and navigate** easily through the different types of data.
- Extended to additional IBM and third-party data sources:
  - Beta HP Quality Center – test management artifacts
  - New National Instruments – hardware & software test execution results
  - New Mathworks Simulink – dynamic systems models
  - New Client-specific integrations to PLM and ERP tools



*“RELM demonstrates the power of linked data and provides an enterprise a new way to integrate tools and project tasks in one interface.”*

Systems Engineer


# RELM Screenshots

The screenshots illustrate the following features:



- Task Flow:** A sequence of tasks in a V-model process, from system design to specification.
- Traceability:** A view showing the relationship between a specific task (Task 616) and its associated test cases.
- Search:** A search interface for artifacts, filtering results by type (e.g., Test Cases, Test Scripts, Requirements).
- Impact Analysis:** A tool for analyzing the impact of changes, showing a target artifact and its dependencies in a hierarchical diagram.

# **IBM Rational DOORS Next Generation**

## Common Questions

- Is DOORS Next a replacement for DOORS 9.x?
  - No, DOORS Next Generation is a separate stream based on Jazz
- Is DOORS Next really DOORS 10?
  - No, DOORS Next Generation is a separate stream based on Jazz
- What's the migration path?
  - There is NO migration in this first version, DOORS Next can be used with interoperation with DOORS 9.x
- Can DOORS Next Generation be used without DOORS 9.x?
  - Yes of course, it is a stand alone product
- How does my customer get DOORS Next Generation? 
  - You can download from [Jazz.net](http://Jazz.net)
  - You can purchase DOORS
    - In which case you will receive both DOORS and DOORS Next Generation
- What additional features does DOORS Next Generation give over RRC?
  - DOORS Next Generation provides a rich client which is not available to RRC customers

## Common Questions (2)

- If my client has DOORS 9.x do they need to pay for DOORS Next? 
  - No, DOORS Next Generation available at no additional license cost for existing customers with active subscription and support
  
- Which types of license keys can I use with DOORS Next Generation?
  - Jazz based license – YES
  - Tokens - YES, same value as current DOORS 9
  - FlexLM – YES, but only for Tokens
  
- How do I decide which tool is best for my client? 
  - A white paper has been written to help clients decide

## Common Questions (3)

- **Is DOORS at its end of life?**
  - No, DOORS has a long and productive life ahead of it providing value for customers. It will be some years before DOORS Next is sufficiently capable to replace DOORS 9.x in large deployments. We haven't taken a decision when to stop producing new DOORS 9.x upgrades, and even after we do, it will be supported for another 5 years under IBM's standard support policies. We expect DOORS Next will propel the DOORS business far into the future. In any case, we predict there will be customers using DOORS 9.x through much of this decade – and maybe longer
- **Will DOORS Next be a Jazz product?**
  - Yes it will share a server with RRC. In Jazz terminology, they will share the same RM application running in the Jazz Team Server. But keep in mind that a Jazz product need not be built to use the Jazz Team Server; products like DOORS 9.x that employ the Jazz integration services are also Jazz products.
- **How do I migrate my DOORS database to DOORS Next?**
  - The initial focus for DOORS Next will be on interoperation with DOORS 9.x rather than migration. We expect you will be able to move data to DOORS Next, but you shouldn't expect DOORS Next to work exactly like DOORS 9.x or implement exactly the same data model.

## Common Questions (4)

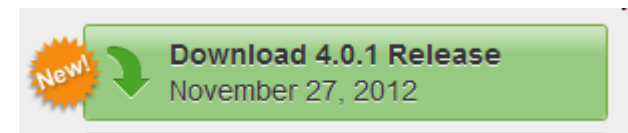
- My customer loves DXL. What do I tell them?
  - People do amazing things with DXL; it's one of DOORS special capabilities. In DOORS Next we intend to support DXL in the rich client, though in the initial release it will be used under the covers only (not exposed for customer use); in the first release we intend to focus on delivering fundamental and expanded DOORS capabilities that do not require scripting.
- Will DOORS Next support tokens?
  - Yes. Tokens are strategic for Rational. RRC supports them today, and we expect DOORS Next will support tokens in its first release.



## Adopt DOORS Next Generation at your own speed

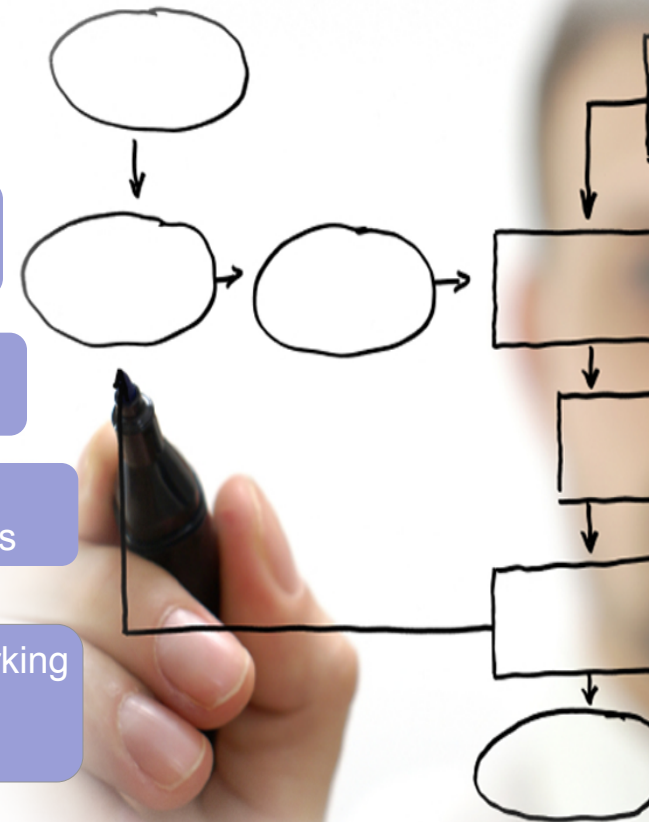
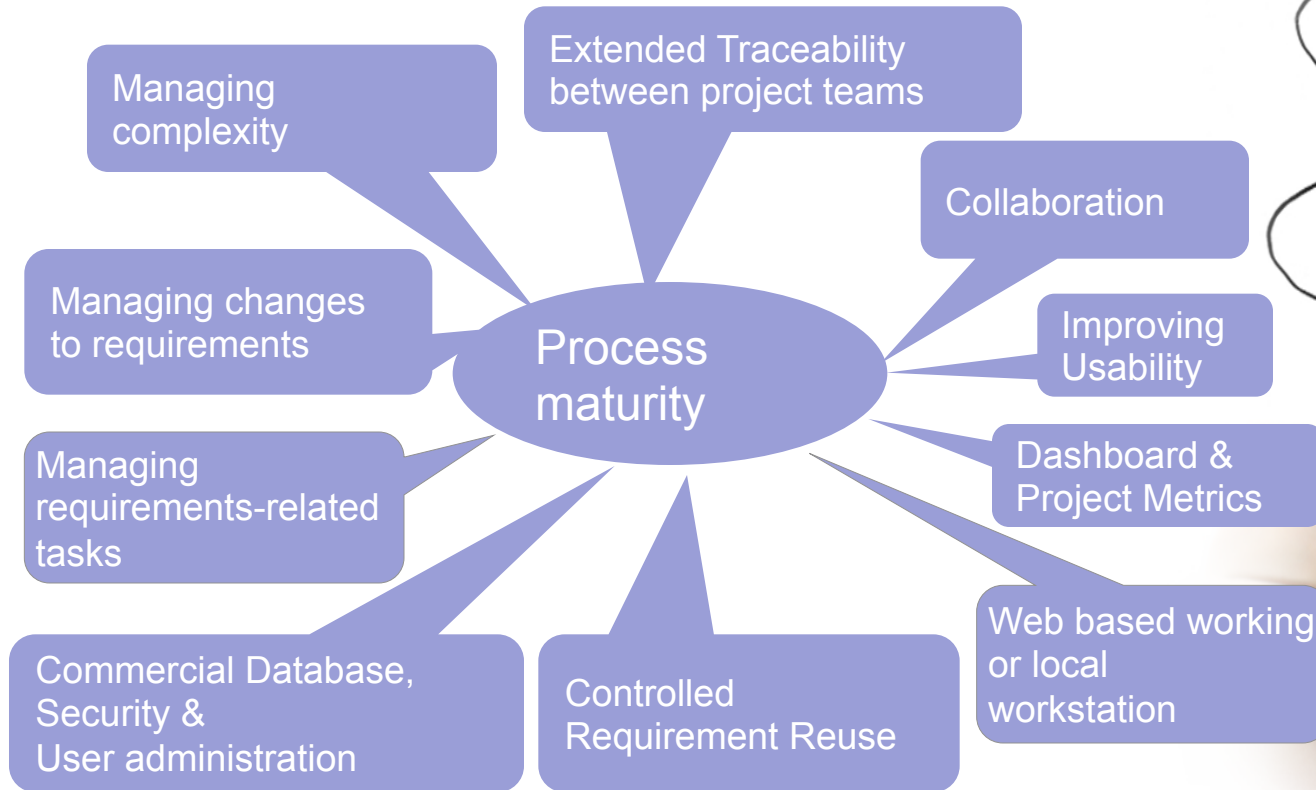
*Both products can be used in parallel to ensure pragmatic low-risk stepwise migration*

- Continue to work with DOORS and DWA
  - Gain the benefits of DOORS 9.x and future 9.x releases
  
- Participate in beta programs
  - Follow DOORS Next Generation on jazz.net
  - Participate in the beta, managed or unmanaged
  - Download milestone releases
  - Participate in development discussions
  - Submit defects/enhancements
  
- Use DOORS Next Generation with DOORS 9.x
  - “Recognizably DOORS” to aid adoption
  - Use DOORS Next Generation for new projects as it meets your needs
  - Data Import / Export between DOORS Next Generation and DOORS 9.x projects
  - Bi-directional linking between DOORS Next Generation and DOORS 9.x



# Why DOORS Next Generation?

*the demands for RM systems are expanding*



# IBM Rational DOORS Next Generation

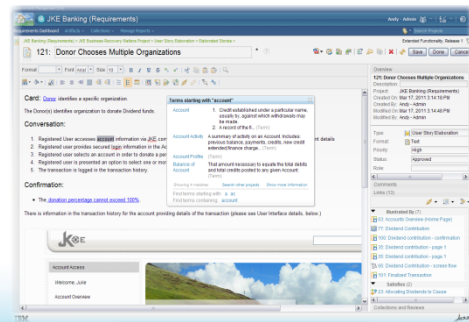
*DOORS concepts improved and much more....*

Improved!

## Definition

NEW!

- Rich-text documents
- Diagrams: Process, Use Case
- Storyboards, UI sketching & flow
- Project glossaries
- Templates



## Visibility

NEW!

- Customizable dashboards
- Analysis views
- Collections
- Milestone tracking & status

NEW!

## Collaboration

- Review & Approval
- Discussions
- Email Notification



## Management

- Structure, Attributes/Types
- Traceability, Filtering, Tags
- Baselines, Change History
- Reuse (reqs & types)
- Reporting Metrics & Doc.

NEW!

## Lifecycle

- Central requirements, test, & development repository
- Common administration and role-based user licensing
- Warehouse reporting

NEW!

## Planning

- Integrated planning
- Effort estimation
- Task Management

# Choosing the Right RM solution for your teams

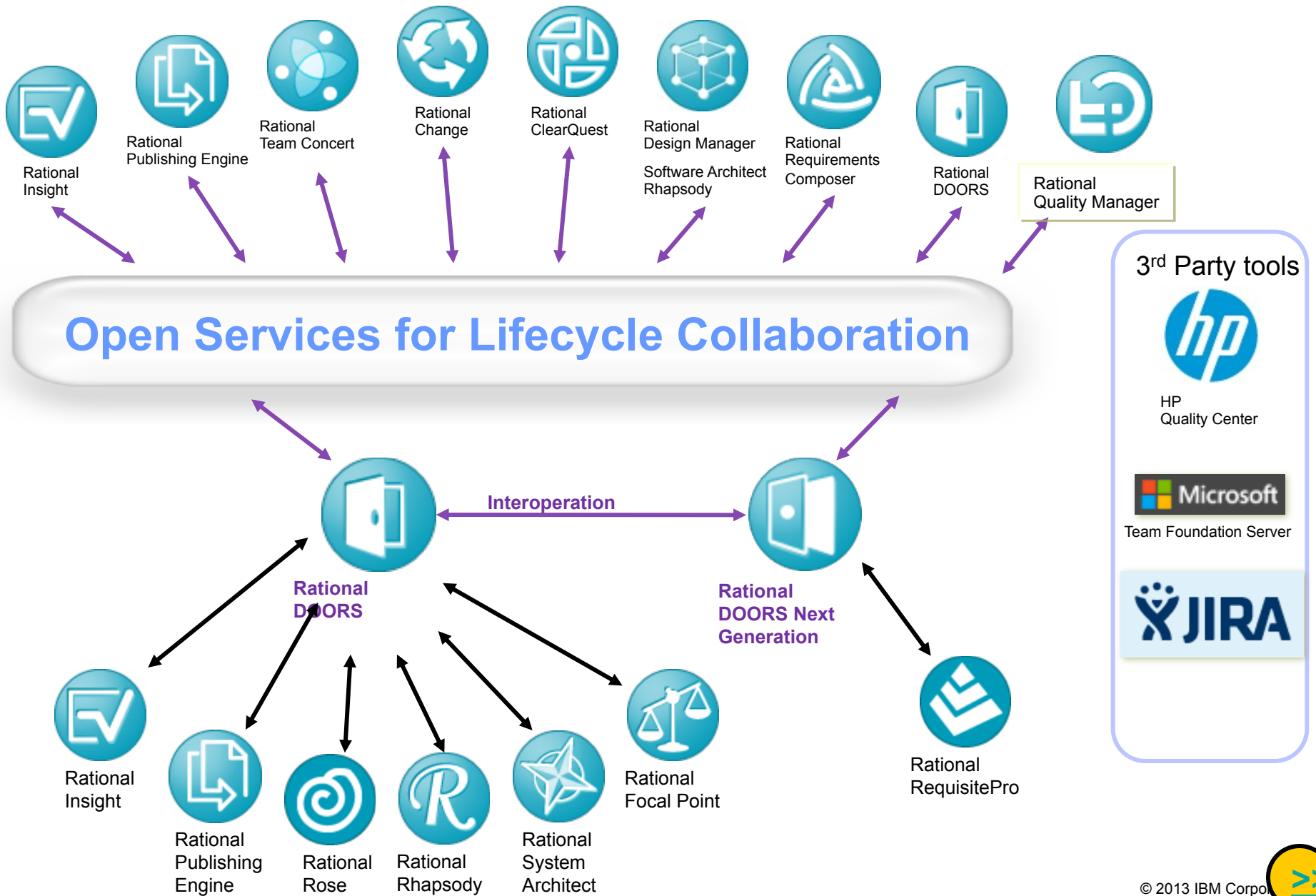
*Buy DOORS; deploy one or both flavors*

DOORS 9 indicators	DOORS NG indicators
<p>You are part of a development program using existing DOORS infrastructure, which is likely to stay in place as-is for a long time.</p>	<p>A single-server solution native to the Jazz Team Server making it easier to deploy a multi-product solution.</p>
<p>You need the more mature capabilities of DOORS 9, for example:</p> <ul style="list-style-type: none"> <li>• Electronic signatures</li> <li>• Baseline comparisons</li> <li>• Round trip data import/export</li> <li>• Requirements change management driven by a change management tool</li> </ul>	<p>Simplest on-ramp from MS Word and Excel</p> <ul style="list-style-type: none"> <li>• Built-in visual notations for collaborating around requirements</li> <li>• Built-in capabilities for task management and planning</li> <li>• A solution using a commercial off-the shelf (COTS) database</li> </ul>
<p>You need significant product customizations, integrations, or automation based on DXL</p>	<p>A web-based RM solution offering the most up-to-date web UI experience (with optional local rich client and interop with DOORS 9.5)</p>

*Teams need high rigor and high levels of automation*

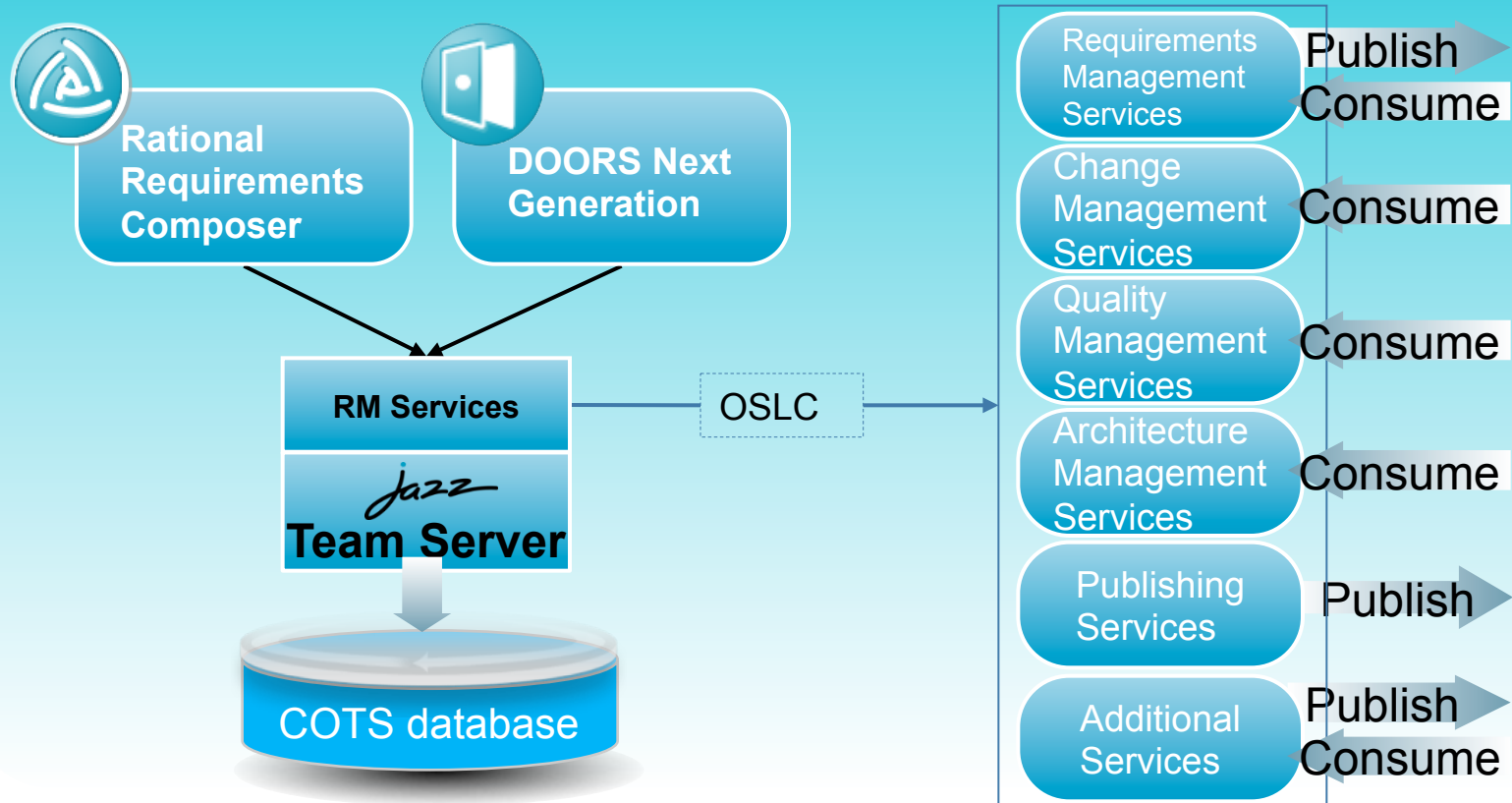
*Teams seek lightweight RM ... an alternative to DOORS 9*





## Two products from one technology base

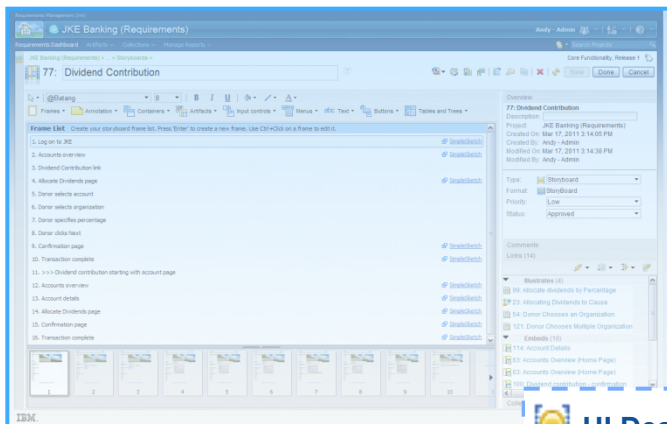
- Requirements visibility and traceability across the lifecycle
- Open integration architecture built on the Jazz Team Server
- Integrations using Open Services for Lifecycle Collaboration (OSLC)



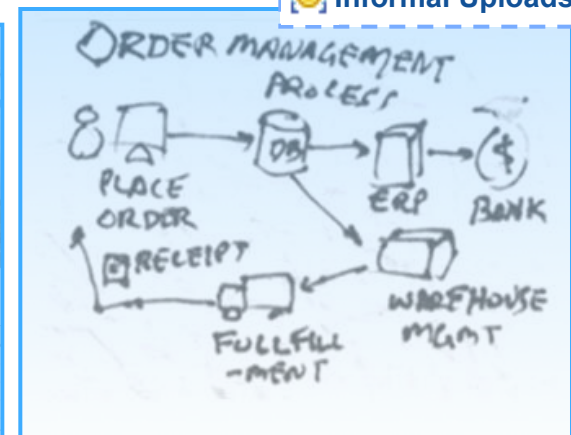
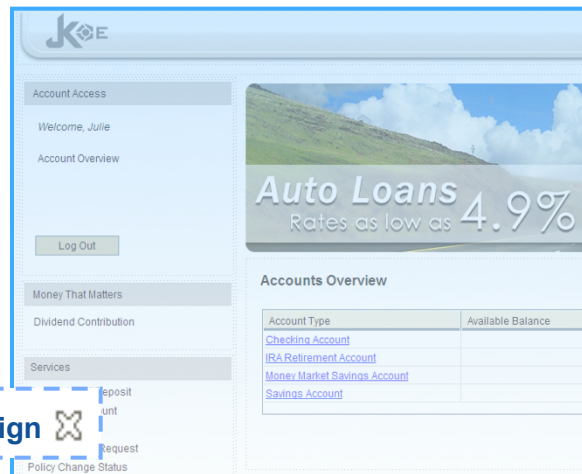
# New Concept: Artifact

**Artifact** - general term within the repository of something that is part of a project.

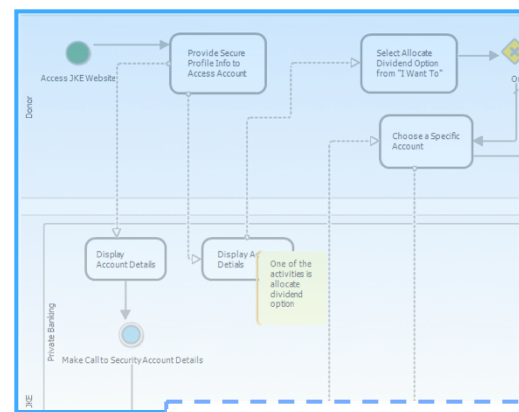
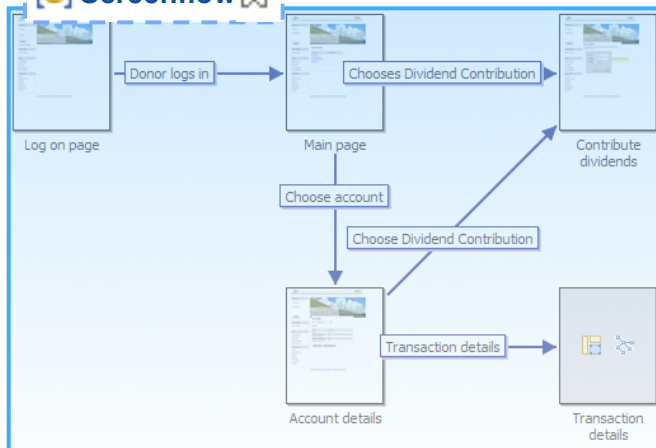
Informal Uploads



UI Design

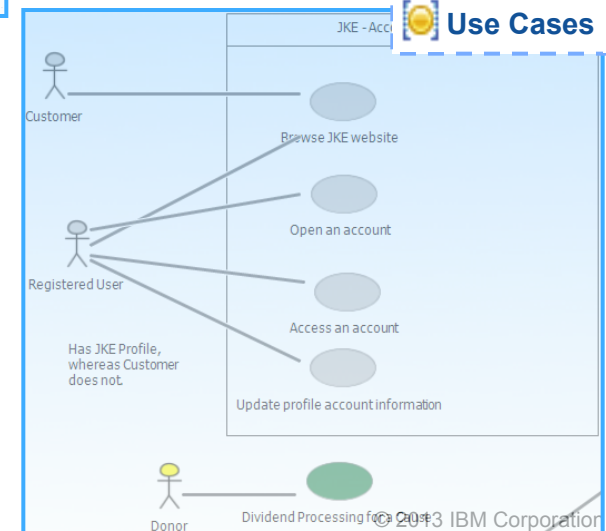


Screenflow



Process Diagrams

Use Cases



# Fully functional web client

## DOORS NG module view (web client)

Modern web look and feel minimizes adoption cost for new and casual users

The screenshot displays the IBM Rational DOORS NG web client interface. The main content area shows a table of artifacts for the module '15: AMR Stakeholder Requirements Specification'. The table has columns for ID, Contents, Artifact Type, and Priority. A 'Filter Pane' is visible on the left side. A 'Properties' panel is on the right. A 'Glossary Terms' popup is shown for artifact ID 57.

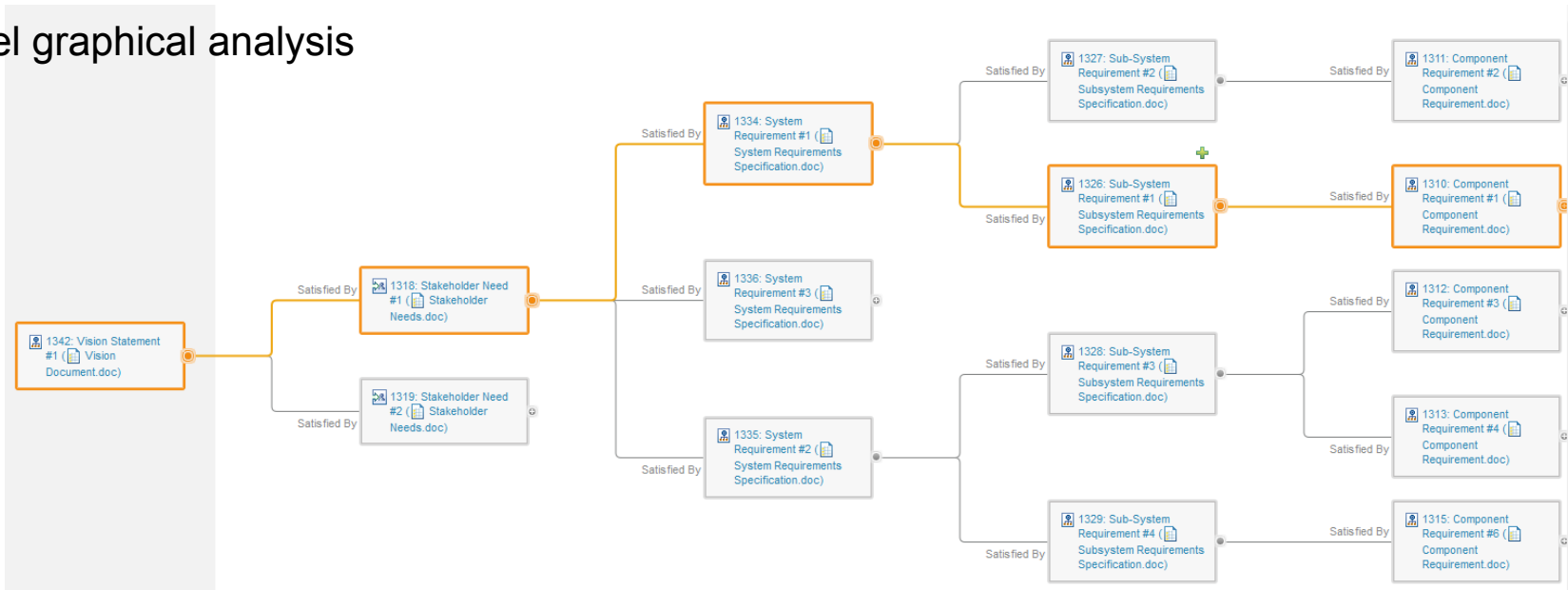
ID	Contents	Artifact Type	Priority				
195	- 1 Introduction	Heading					
53	- 1.1 Purpose of the Document	Heading					
251	The Stakeholder requirements describe the user needs for a water meter reading system (AMR) including the meter, the method of collecting data from the device, and the means by which the customers will be billed for usage.	Stakeholder Requirement	High				
31	The AMR product is intended to allow water providers to lower their cost of operation by more accurately measuring consumption and more quickly gather data.	Stakeholder Requirement	Low				
317	(c) IBM 2012	Stakeholder Requirement	Low				
35	- 1.2 Intended Use	Heading					
191	The AMR is intended for gathering and reporting of water consumption data to facilitate measurement of residential and business customers.	Stakeholder Requirement	Medium				
86	- 1.3 Definitions Acronyms, and Abbreviations						
296	<table border="1"> <thead> <tr> <th>Term</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>AMR</td> <td>Automatic Meter Reader</td> </tr> </tbody> </table>	Term	Definition	AMR	Automatic Meter Reader		
Term	Definition						
AMR	Automatic Meter Reader						

### Glossary Terms



# Traceability

- Multi-level graphical analysis



- Traceability views similar to DOORS

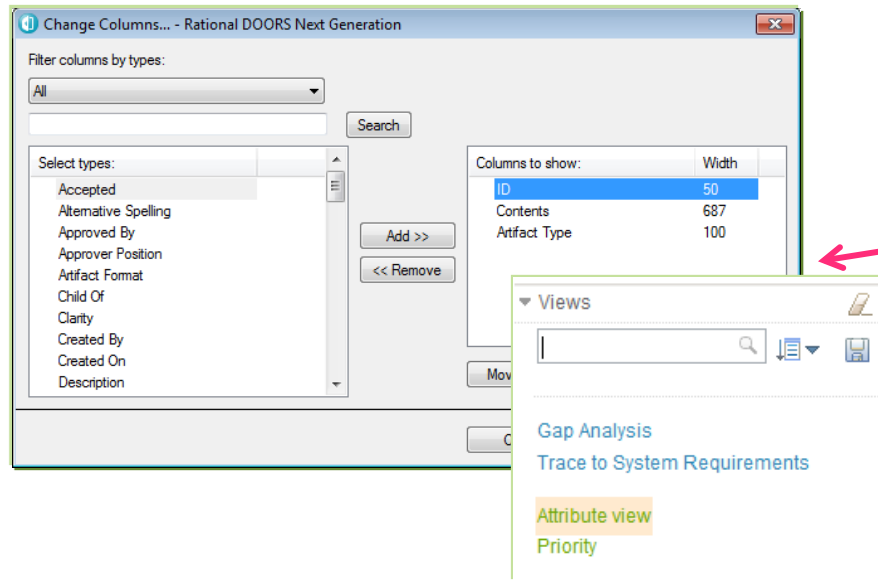
Linked Stakeholder Requirements

System Requirements

Linked Subsystem Requirements

Requirements	ID	Contents	Satisfied By
929: The meter interface unit shall be able to collect meter data at regular interval (AMR Stakeholder Requirements Specification) Created On: Oct 2, 2012 7:31 PM	929	demand from any meter interface via the network or a handheld. When connected to a fixed network, the meter interface unit shall 'wake up' and communicate for 4 seconds every 30 minutes, synchronizing all clocks and configuration information. Between these transmissions, the unit remains in a low power state, conserving battery life.	
844: The meter interface shall detect water leaks and record leak status with the account data (AMR Stakeholder Requirements Specification) Created On: Oct 2, 2012 7:31 PM Priority: Medium Schedule: Version 2	871	The meter interface shall detect water leaks and record leak status with the account data.	805: monitorPressure (Meter Interface Subsystem Requirements Specification) Created On: Oct 2, 2012 7:30 PM Creator: Morgan 806: detectLeak (Meter Interface Subsystem Requirements Specification) Created On: Oct 2, 2012 7:30 PM Creator: Morgan

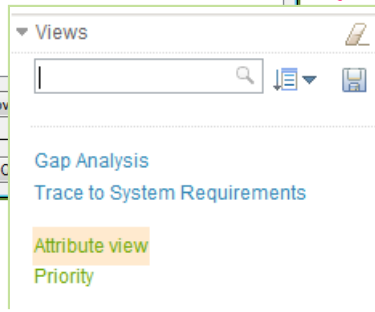
## Analysis (views & filters applied to requirements)



### View definitions

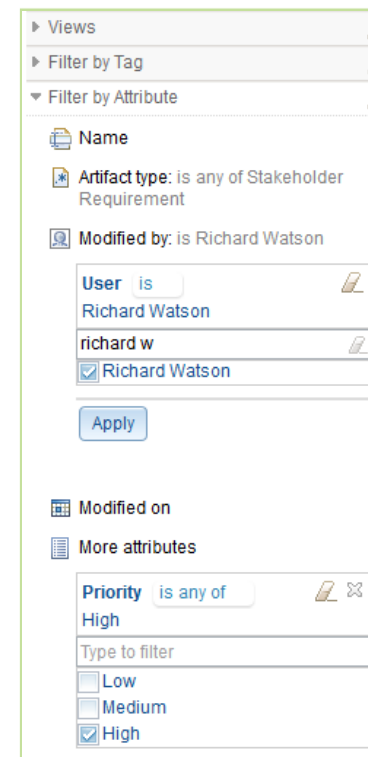
– Display configurations saved as Views

- Similar to DOORS
- User specific or shared across project or even modules!



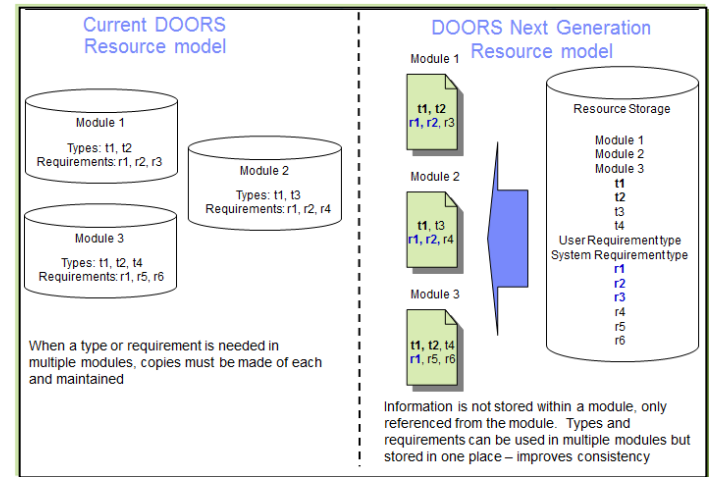
### Filter definition

- Filter information in a module to make finding information easier
- Compound filters easy to define and change later
- Can be saved as part of the view definition



# Requirements reuse

- Central store of requirements information
- Referenced by specifications
- Reuse on an individual basis
  - Or as part of a module template



13: AMR System Requirements Specification

ID	Contents
149	1 Introduction
16	1.1 Purpose of the Document
176	This document describes the specific functionality of the Automata system is currently available with a handheld collection device. The methods of data collection are outside the scope of this system.
317	(c) IBM 2012

15: AMR Stakeholder Requirements Specification

ID	Contents	Artifact Type	Priority
195	1 Introduction	Heading	
53	1.1 Purpose of the Document	Heading	
251	The Stakeholder requirements describe the user needs for a water meter reading system (AMR) including the meter, the method of collecting data from the device, and the means by which the customers will be billed for usage.	Stakeholder Requirement	High
31	The AMR product is intended to allow water providers to lower their cost of operation by more accurately measuring consumption and more quickly gather data.	Stakeholder Requirement	Low
317	(c) IBM 2012	Stakeholder Requirement	Low

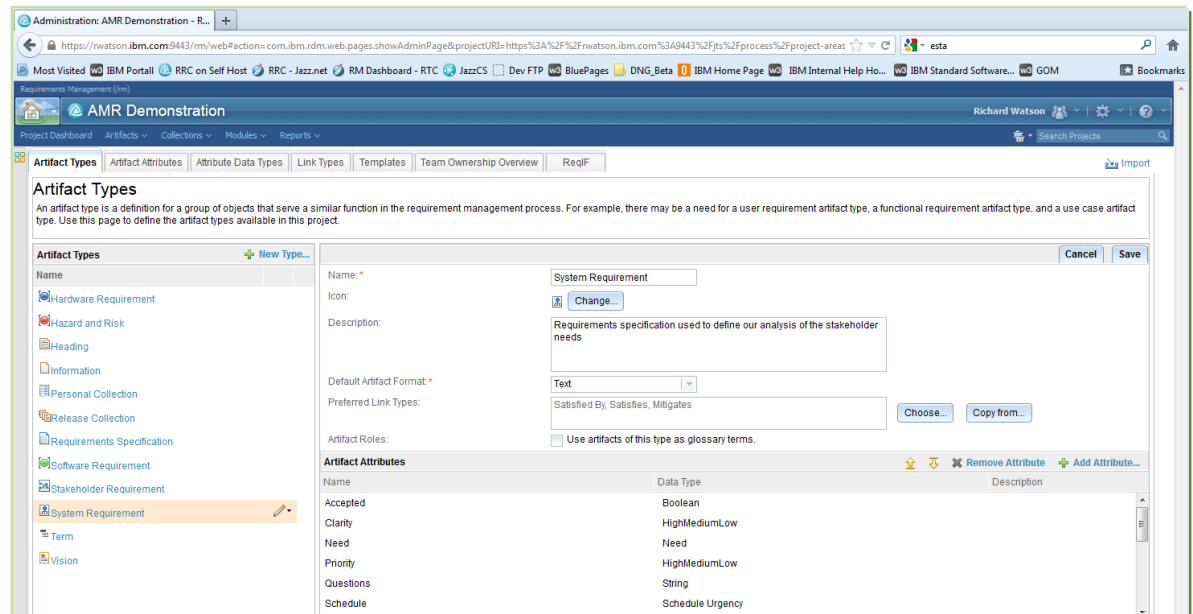
↔

Reusing the same requirements in multiple places

# Centrally defined type system

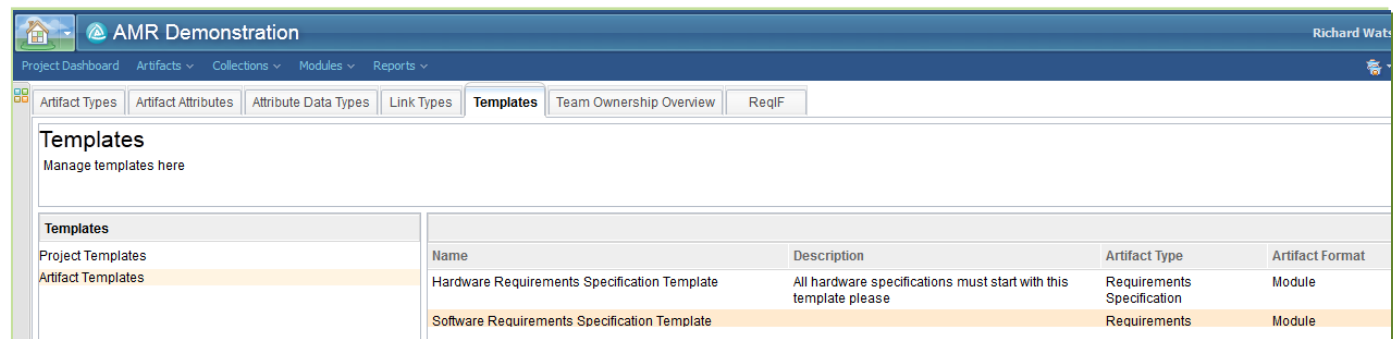
- Harmonized process across your projects

- Single definition for information structure
- Artifact types
- Attribute types
- Link types



- Coordinated deployment of

- Project templates
- Module templates
- Artifact template



# Collaboration

- Collaboration through information discussions or by formal review
- Email notification available for updates
- Dashboard widgets to show review participation

**Automated Water Meter Reader**  
Project Dashboard | Artifacts | Collections | Modules | Reports

**Milestone 1 Review**

Participant's Review: In progress | 0% completed | Your role: Approver

Overall Review: Draft → In progress | 33% completed | Pause Review → Reviewed → Finalized

Due: Oct 22, 2012

Instructions to reviewers:  
Please review the System Requirements Specification module ahead of our Milestone 1 review meeting next Monday.

Participant	Type of Participant	Review results
Kirk	Reviewer	
Morgan	Approver	
Richard	Reviewer	100% - 1 Reviewed

ID	Artifact	Version	Status
686	AMR System Requirements Specification	Oct 15, 2012 1:56 PM	1 Reviewed

**Reviews in Automated Water Meter Reader (1 of 1)**

Milestone 1 Review | Oct 22, 2012

Morgan modified on 10/15/2012 1:48 PM

**Module Comments (3)**

- Richard to Morgan 15 minutes ago  
**Ready for milestone 1**  
I think we have completed all the appropriate work within this specification to go ahead with the Milestone 1 review meeting.
- Morgan to Kirk, Richard 2 minutes ago  
**Agreed**  
I am waiting for Kirk's comments before I approve the review.
- Richard to Kirk, Morgan 1 minute ago  
**Kirk's on vacation this week**  
We shouldn't let that hold up the review.



Notification to personal dashboard

Comments can be used inside or outside of a review

## Audit trail

- Requirements updates are monitored and recorded in history
  - See *who* did *what* and *when*
- Record a milestone as a retrievable version

The screenshot shows the 'Audit History' tab for a requirement specification titled '15: AMR Stakeholder Requirements Specification' (dated 11 October 2012). The interface includes a filter bar with options for 'Today (0)', 'Yesterday (0)', 'Past Week (0)', 'Past Month (0)', and 'Earlier (0)'. Below the filter, there are several entries showing changes made by 'Richard Watson' on 11 Oct 2012. The entries include:

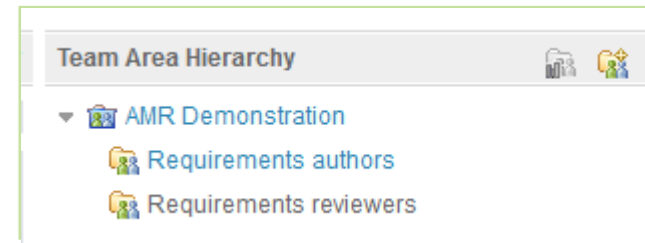
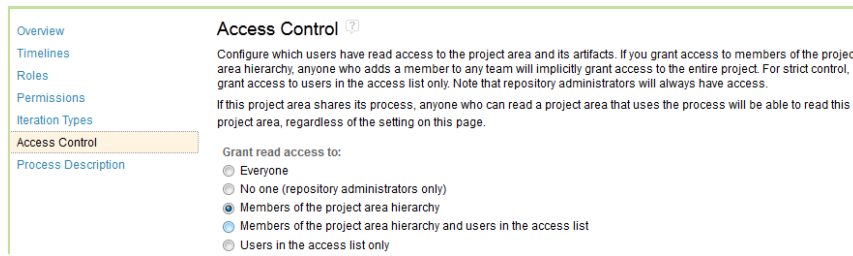
- Richard Watson changed on 11 Oct 2012 14:29:47
- Richard Watson changed on 11 Oct 2012 14:27:15
- Richard Watson changed on 11 Oct 2012 14:26:33
- Richard Watson changed on 11 Oct 2012 11:12:39

The details for the 11:12:39 change are expanded, showing:

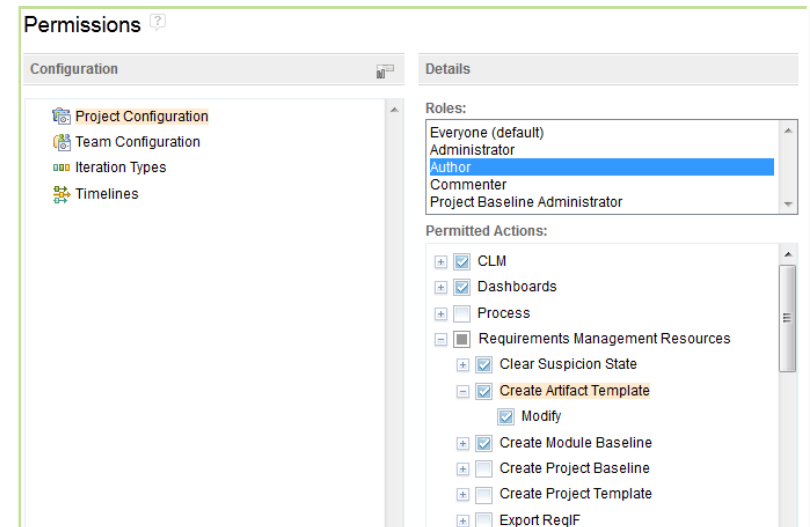
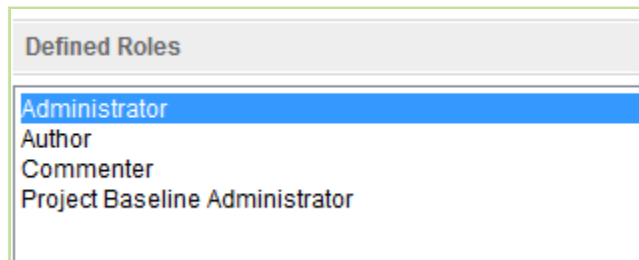
- Title: (c) IBM 2011
- Primary Text: Show changes
- Module Structure: added: 317: (c) IBM 2012
- Primary Text: Show changes
- Priority: added: Low

# Security, Roles and Permissions

- Controlling who can see and modify information can be critical
  - Control access to data through “Team Areas”

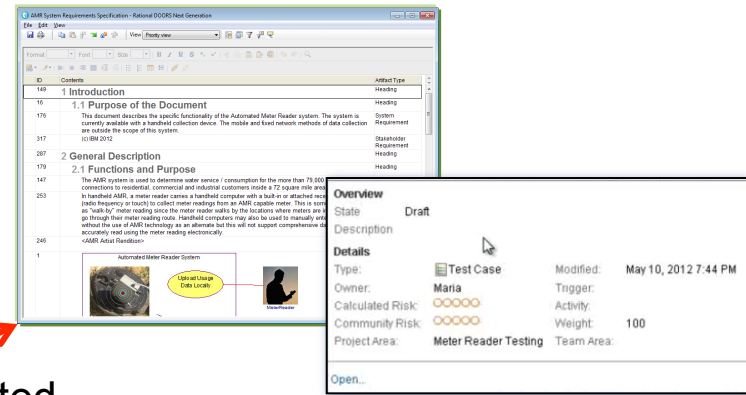


- Controlling which functions are visible can simplify product usage within teams
  - Limit who can run functions by defining user roles
  - Refine user roles to your specific project needs



# Centrally integrated repository

- Share Jazz based servers between multiple products
  - Simplify administration
  - Single point of configuration for users
  - Single place for backups and disaster recovery
- Support for COTS databases
  - Oracle, SQL Server, DB2 etc
- Integrated systems work closer together
  - Example scenarios for DOORS & RQM users



Specifies requirements needing to be tested

Monitors traceability to tests

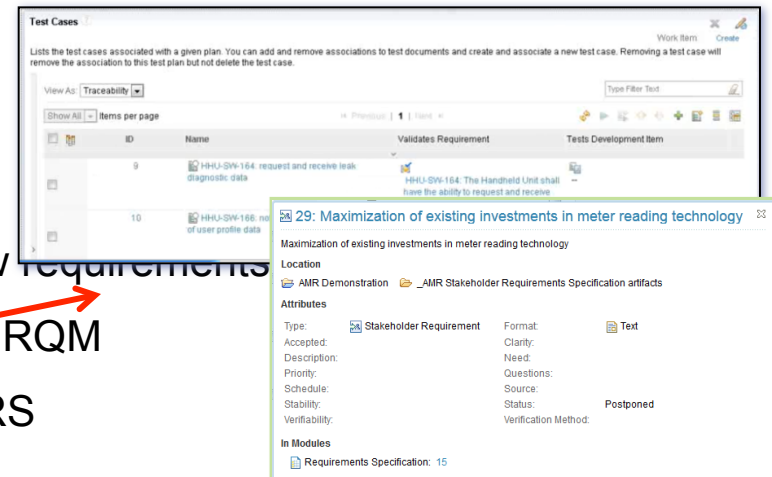
Follows test reviews down into RQM

- RQM User:

Automatically creates draft tests based on new requirements

Reviews requirements information from within RQM

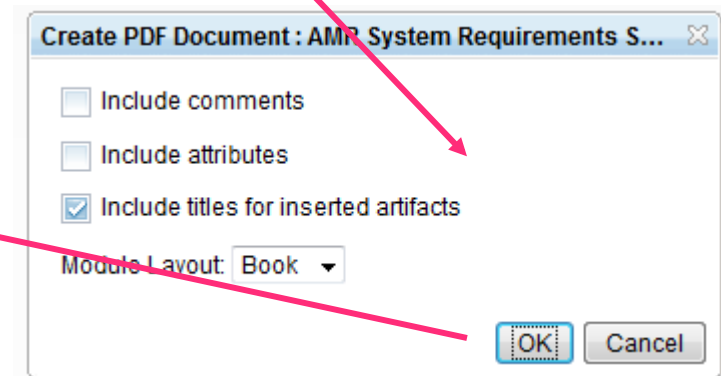
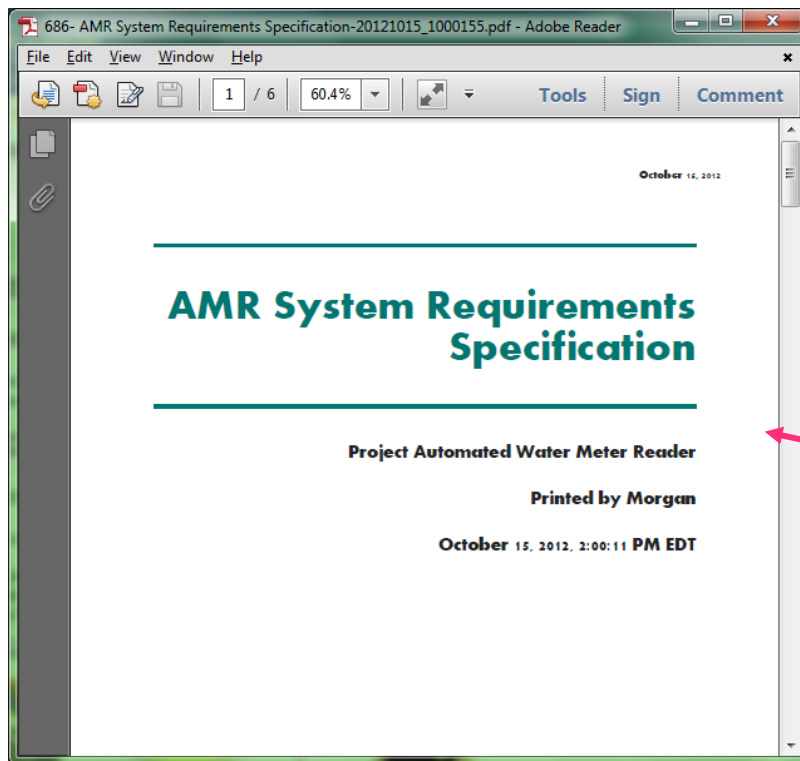
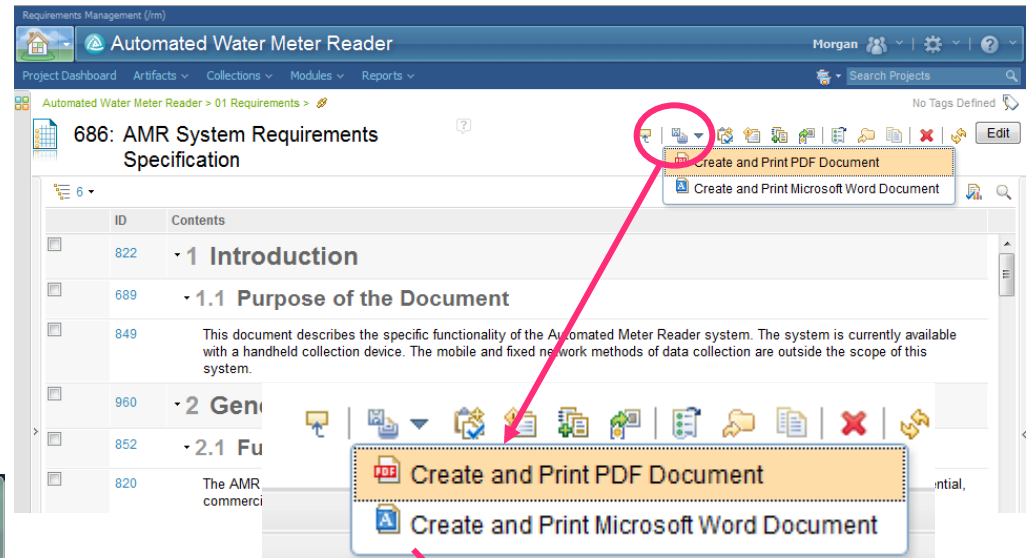
Follows requirements audit trail back to DOORS





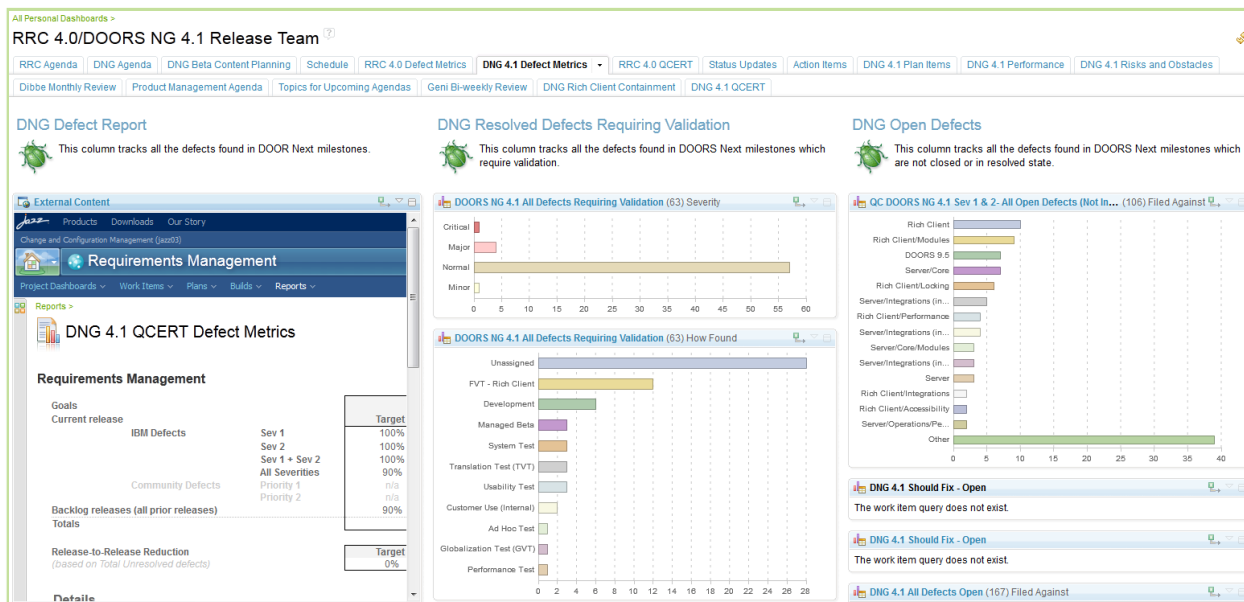
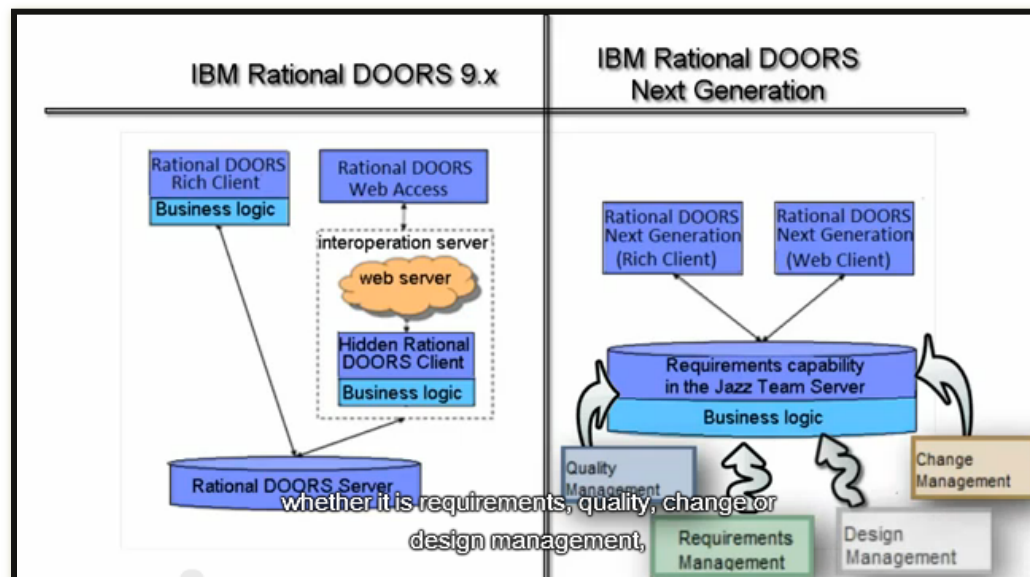
# Reporting

- Built in document generation is often crucial to communicate with customers



# Integrated planning

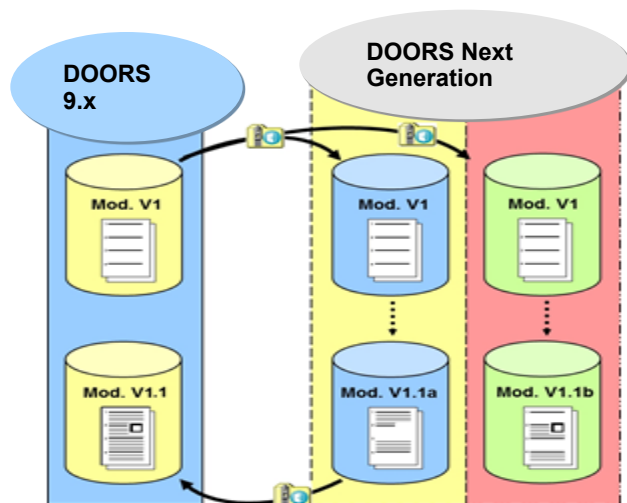
- Support for flexible dashboards
- Show information across the lifecycle
  - RM, CM, QM etc
- Supplied as part of DOORS NG
  - No additional license required



## DOORS 9 and DOORS Next inter-operation scenarios under consideration

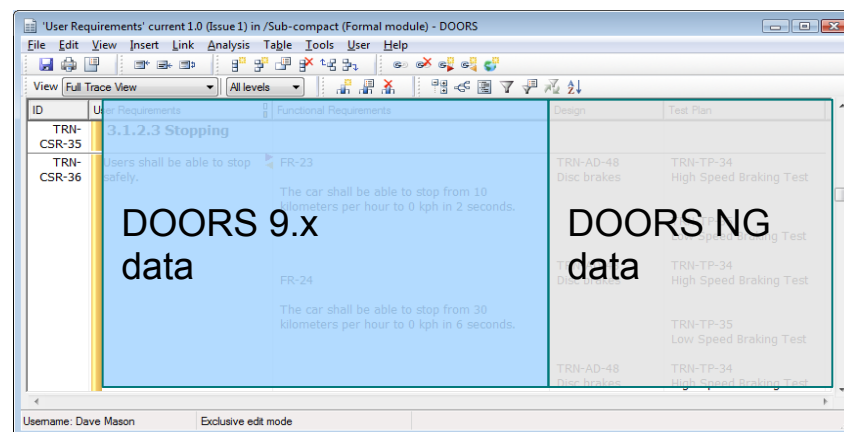
### 1. Offline data exchange

- Support import / export of ReqIF requirements data between DOORS 9.x and DOORS Next Generation.
- Support supply chain scenarios where downstream suppliers can use the DOORS Next Generation and exchange data with your DOORS 9.x projects.



### 2. Cross application linking and query

- Support linked data across DOORS 9.x and DOORS Next Generation projects.
- Rich hover and traceability columns supported in DOORS 9.x and DOORS Next generation



### 3. Cross application reporting and publishing

- Metrics reporting across DOORS 9.x and DOORS Next Generation via Rational Insight.
- Document generation across DOORS 9.x and DOORS Next. Generation via RPE

### 4. Dashboards

- View data from DOORS Next Generation and data in DOORS 9.x.

## Positives

- - Reuse of artifacts, i.e. they are stored at project level and can be selected in collections and modules
- - It is very simple to define a new meta-model: types, attribute types, artifacts types, preferred links
- - Easy-to-use UI
- - Easy to install and deploy
- - RTF support in artifacts including tables, images, links, etc.
- - Import of Word, ReqIF and Excel (CSV)
- - Multiple editing: you select several artifacts and you edit an attribute or add them to a collection in one operation.
- - Webclient: fresh and innovative “look & feel” [JAZZ]
- - Dashboard with nice widgets (changes, reviews, pictures of the team)
- - Clicking direct to Module view (most of customers are using still a document based approach)
- - The project should contain only few modules and only few artifacts (not more than 100 inside a module)
- - Quick-Report
- - Linking from the Module view
- - Linking explorer and link columns
- - Reusing of a requirement (showing the update of the reused artifact in both modules)

# New Videos for DOORS Next

[Developer Works Link](#)

[YouTube Link](#)

- ➔ [View the demo](#)
- ⬇️ [Get the downloads](#)

IBM® Rational® DOORS® software enables you to capture, trace, analyze and manage changes to requirements and helps you to demonstrate compliance to regulations and standards.

**Duration**  
8 minutes.

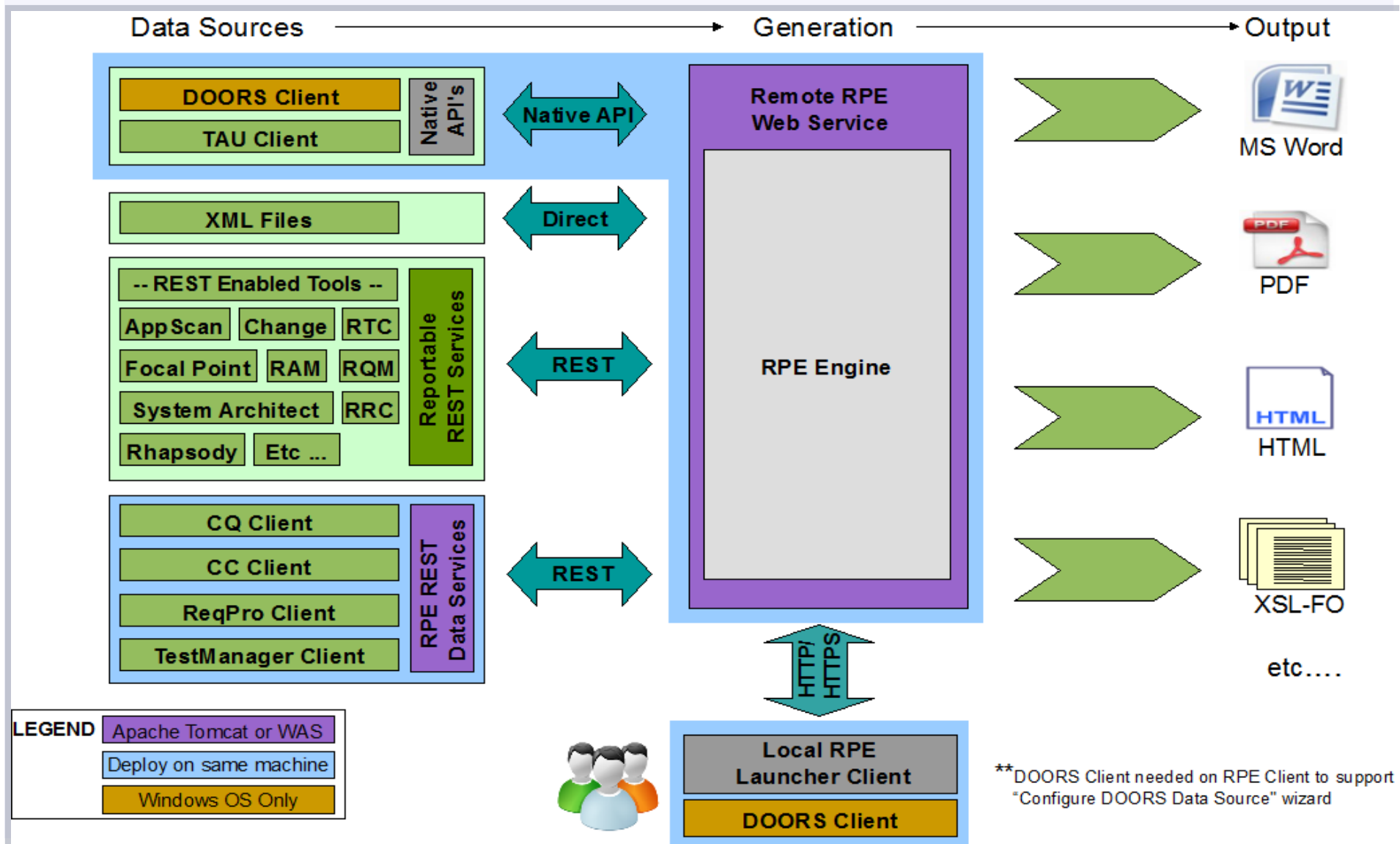
**My developerWorks community**  
Interact, share, and communicate with developers worldwide.

- My Home
- Profiles
- Groups
- Blogs
- Bookmarks



- **Rational Publishing Engine:  
Value Proposition**

# Rational Publishing Engine

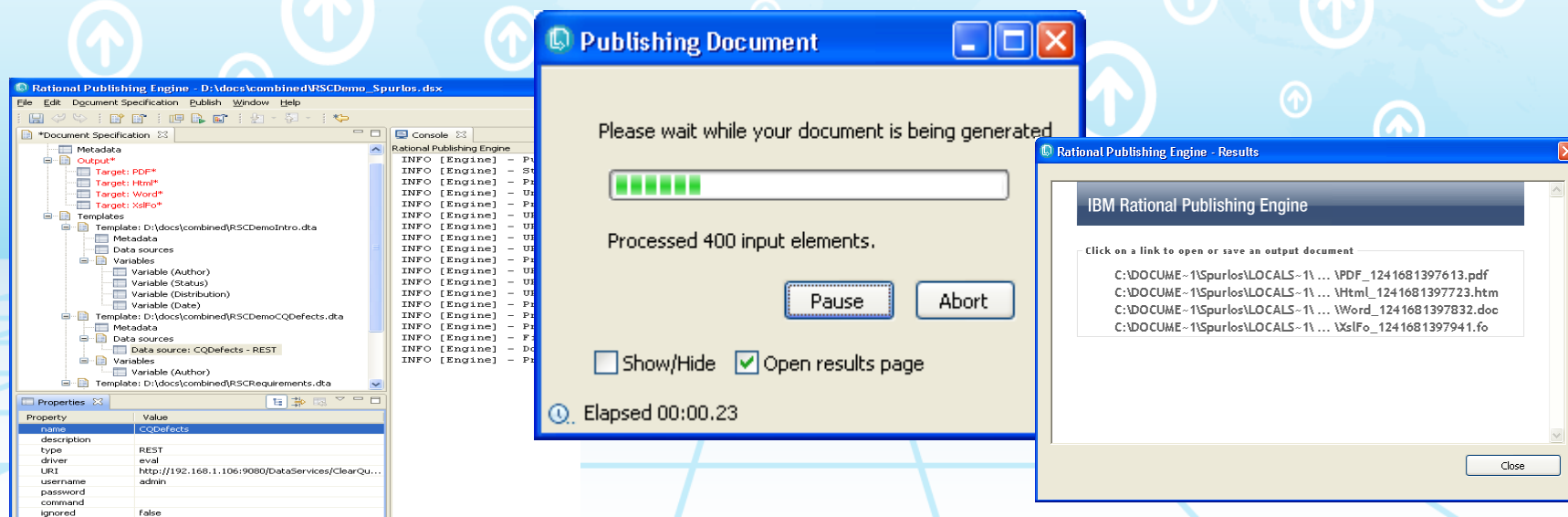


# Rational Publishing Engine: document creation made simple

## *Simple generation of complex documents*

**Usability**

- Launcher interface to quickly and easily control document generation
- Also available as a wizard embedded into some data sources
- The user generating the document requires no domain knowledge



- Use out-of-the-box templates for quick ROI



## Rational Publishing Engine: high quality, compliant documents

- Support for a huge range of document features
  - ▶ Richly formatted text
  - ▶ Images
  - ▶ Tables
  - ▶ OLEs
  - ▶ Tables of Contents
  - ▶ Figures & Captions
  - ▶ Headers & Footers
  - ▶ Page size & Orientation
  - ▶ Hyperlinks – Internal or external
  - ▶ Full multi-cultural support
  - ▶ Conditional formatting
  - ▶ Etc...

**Flexible  
output**

### PR9

*GUID* {C136435B-28AA-4D3B-A0F4-2B1343D15D6A}

*HREF* [link](#)

*Loc.*

<i>Unique ID</i>	7
<i>Bookmark</i>	REQJUIPGS
<i>Doc pos</i>	4194

#### Location table 9

*Desc*  
*Info* The QBS system shall provide the following reports:

<i>Priority</i>	<i>Difficulty</i>	<i>Stability</i>	<i>Status</i>
High	High	Medium	Proposed



# Thank You

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