

IBM Software Group

IBM Rational Requirements Composer CLM 2012

Better, faster business outcomes through better requirements practices

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Agenda

- Part 1: Why good requirements practices matter
- Part 2: Achieving better business outcomes with Rational Requirements Composer

Challenges to the effective delivery of software A history of cost overruns, schedule slips and quality issues



Only **22%** of executives felt that their IT and business strategy were tightly integrated



30% of project costs associated with rework



49% of budgets suffer overruns and **62%** fail to meet their schedules

Focus on business impact

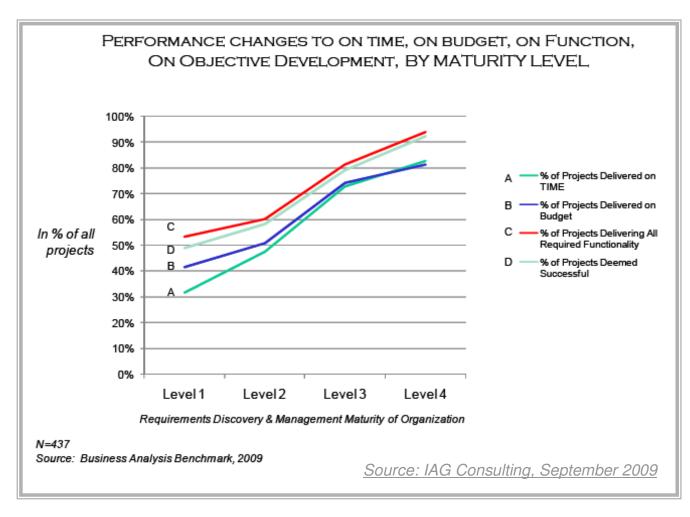
CIOs are trying to find the balance between the need to reduce costs, improve services and deliver innovation

- IBM CIO Survey, 2009





Good requirements are key to project success Reclaim up to a third of project budget and schedule



- Average on time performance increased 161%
- Time overruns were reduced 87%
- Average on budget performance improved over 95%
- Budget overruns reduced about 75%
- Percentage of projects that deliver the functionality needed by the business rose by about 75%



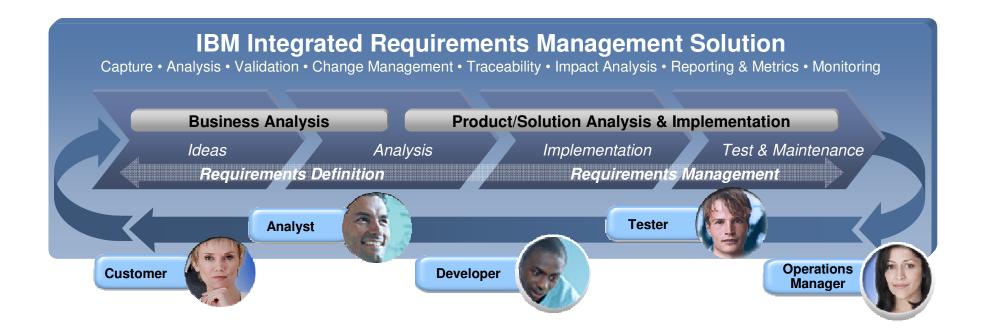
Symptoms of requirements issues Suggesting a need to invest in requirements practices

- Too many project surprises, overruns and failures
- Customers are not satisfied with the process or the results
- Analysts, developers and testers find it difficult to work in tandem
- Team is bombarded by change but struggling to keep up
- You aspire to greater agility but are unsure how to achieve it





A "requirements view" across the lifecycle For Programs, Projects, Products, Systems and Systems-of-Systems





Good requirements *practices* are key to project success *Address the big challenges*

Process Challenges

Poor requirements process or no process at all

Hard to balance risk vs. process overhead

Need a right-sized process supported in the tools

Collaboration Challenges

Geographically distributed teams
Outsourcing partners

People work in silos Hard to engage customers effectively

Need to align teams and converge on good requirements faster

Tools Challenges

Many tools and data formats
Tools don't work together

Information islands Heroic manual efforts to pull it all together

Need to avoid rework/errors and improve quality



Organization



Team



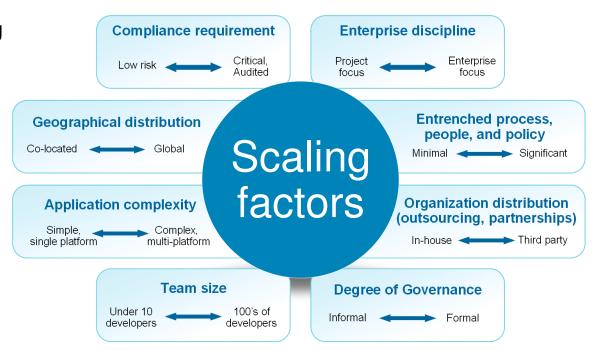
Individual



Become more agile at scale Scaling factors require more discipline, automation and communication

What doesn't change when scaling

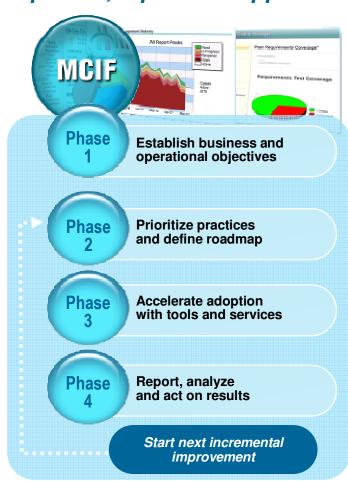
- Stakeholders actively participating in describing, prioritizing and evolving requirements
- High level requirements envisioning during project inception
- Just-in-time requirements elicitation during each iteration
- Organizing and prioritizing requirements in ways that are transparent to the team





Applying the right requirements practices Manage, measure and improve your practices with a proven, repeatable approach

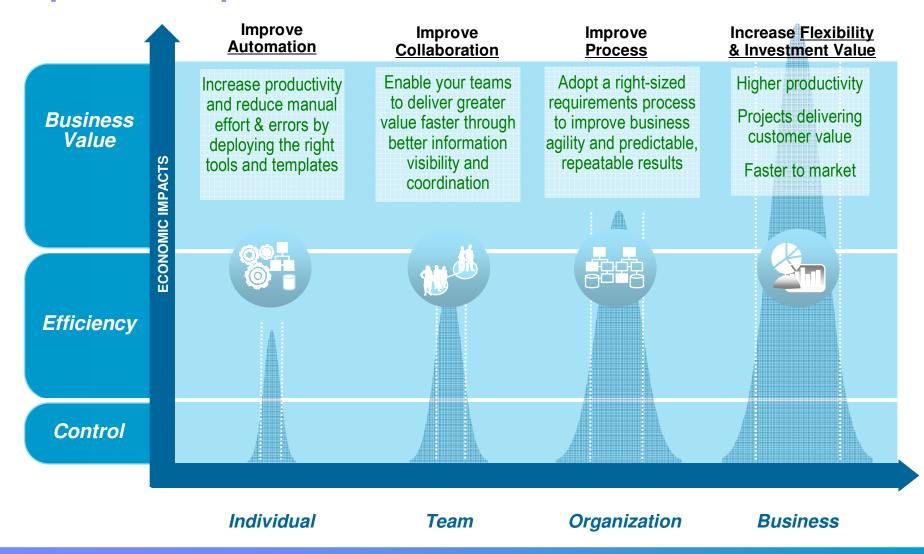
- Understand where you are at today, and establish a roadmap forward
- Define the simplest, leanest requirements process that will meet your needs; choose the appropriate tools to support it, and implement the requirements practices of highest value to you
- Accelerate and monitor the adoption of the process and tools
- Continuously assess the business and operational benefits and replicate best practices across your teams



Measured Capability Improvement Framework



Improve your ROI with better requirements and requirements practices





Agenda

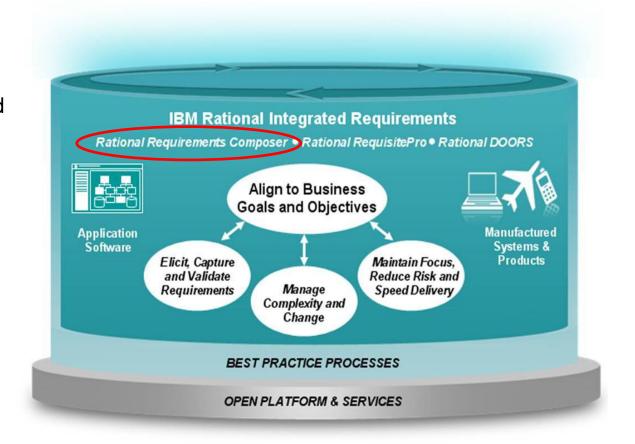
- Part 1: Why good requirements practices matter
- Part 2: Achieving better business outcomes with Rational Requirements Composer



Rational Requirements Composer

Better business outcomes through light-weight requirements practices

- Engage stakeholders early and often to converge on the "right" requirements faster
- Improve agility and align project activities with customer value in light-weight practices
- Reduce rework and get to market faster



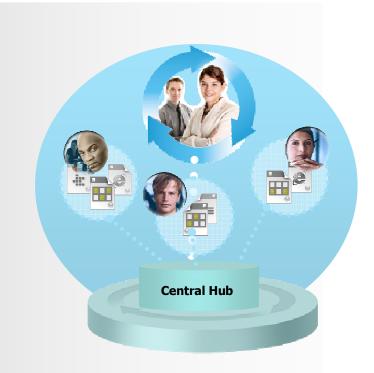
Better requirements. Less rework. Better results



Good requirements are key to project success

Understand what your customers really need

- Engage a wide range of stakeholders to capture real business needs and project constraints
- Uncover missing, incorrect, and ambiguous requirements that drive project overruns and cancellations
- Work across boundaries: organizational, geographical, time zones



"Rational Requirements Composer has been engineered with the business analyst in mind. The web access to these artifacts brings the requirements domain into the current technology space. I can simply send a URL out for review." - Randy Haven, IBM Global Business Services

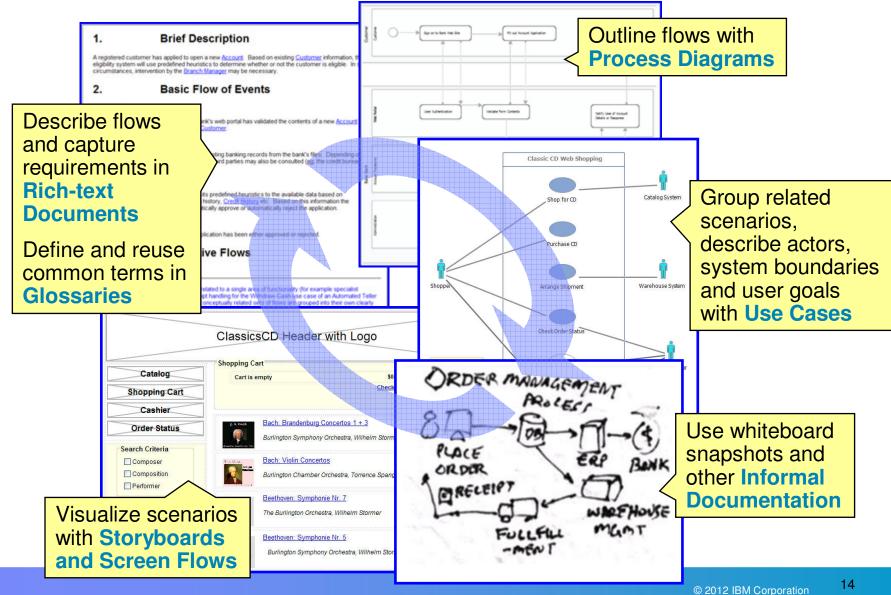
"In general, [RRC] is very simple and easy to use with a nice and customizable UI.



The Web UI is a great addition ... so that we can review, comment and verify artifacts with clients and other team members." - Anthony Gock, Deloitte



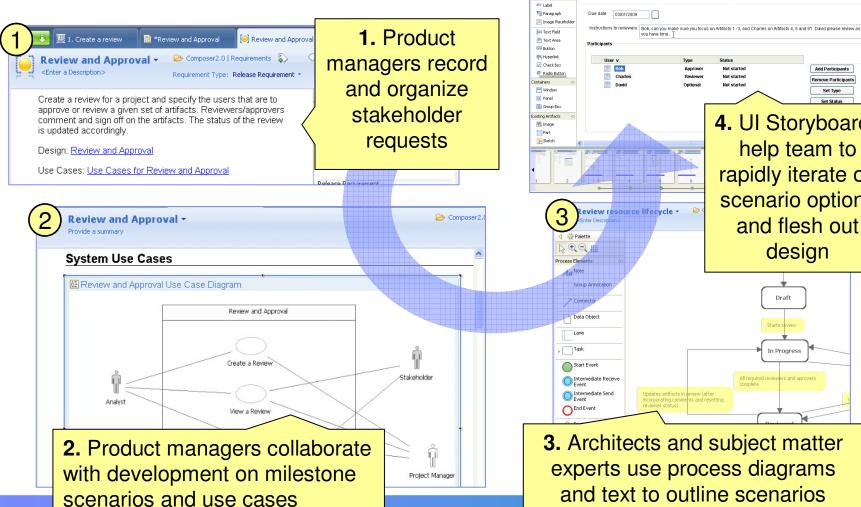
Use scenarios to uncover customer needs





Many notations, extensive team involvement, rapid iterative refinement

Example: Using RRC V1.0 to create V2.0



4. UI Storyboards help team to rapidly iterate on scenario options and flesh out design

Draft

3. Architects and subject matter experts use process diagrams and text to outline scenarios

Initial review of baseline use case

Save as Draft Start Review

Note

(Cursor asic Controls



Distributed teams collaborate around the world Capture, analyze, review and approve requirements

Stakeholder

Share needs and validate proposed solutions over the web

Business analyst



Define, validate, organize, and analyze requirements. Use custom dashboards; share common views with the extended team

Iterate

Project Manager

Understand the status of work to implement and validate requirements.



Product Owner

Contribute requirements and the market view. Do reviews and approvals.



Developer / Tester

Ask for clarifications, help elaborate scenarios, and and give feedback.

Capture & Organize Information

Create & Link Requirements

Elaborate with Scenarios

Validate & Implement

Iterate

Iterate



Good requirements *practices* are key to project success *More agility through light-weight requirement practices that scale*

Respond quickly to changing priorities

- Learn and adapt as you go
- Every project is a "voyage of discovery"

Work smarter

- Bridge your information islands
- Become more agile at scale
- Automate what you can to reduce errors and increase productivity
- Reuse existing knowledge and good practices

Work together more effectively

- Align development and test activities with customer value
- Improve information visibility and management of change



"We are using RRC 1.0 to capture requirements for a major web development project and are definitely sold on the



product. Version 2.0 will take it to a whole new level."

- Robert Huet, Ascendant Technologies



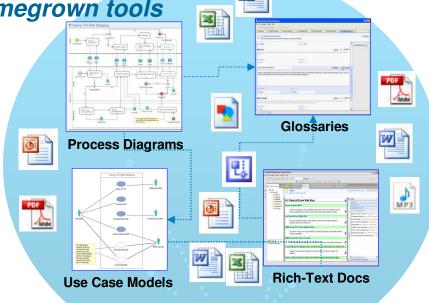
Bridge your information islands

Embrace but move beyond Office and homegrown tools



There are many kinds of requirements artifacts

- Many tools, data formats and repositories create information islands
- A large extended team participates in the requirements "conversation"



Central Hub

"The vast array of options linking artifacts sensibly with one another [in RRC] give it a definite benefit over using older, document-based approach to defining requirements ... This product is clearly a step up from our current methodology."

- Randy Haven, IBM Global Business Services

Use of general tools for requirements poses challenges

Difficult to address:

- Artifacts are not interrelated (are on islands)
- No team collaboration & workflow
- Ad-hoc procedures for relating and versioning artifacts
- Difficult to reuse requirements "downstream"

Office documents

Requirements can be captured in ...

- Documents
- Drawings
- Spreadsheets
- Pictures

- ➤ Working with artifacts in well-defined groups
- Coordinated updates across related artifacts
- ➤ Generating requirements reports and documents

Collaborative tools

Requirements can be communicated via:

- Email
- Instant messaging
- Newsgroups
- Wikis and blogs
- Groupware
- Shared file system

Domain-specific tools help the team go to the "next level"

- ✓ Secure repository provides central location
- ✓ Team collab. & workflow
- ✓ Progressively structure unstructured information
- ✓ Artifacts are interrelated and versioned
- ✓ Requirements are reused "downstream"

Office documents

Requirements can be captured in ...

- Documents
- Drawings
- Spreadsheets
- Pictures

- ✓ Collections group related artifacts
- ✓ Baselines for scoping and comparison
- ✓ Views for coordinating updates across artifacts
- ✓ Purposeful documents and dashboards

Collaborative tools

Requirements can be communicated via:

- Email
- Instant messaging
- Newsgroups
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Requirements Domain-specific

Tools enabling highproductivity practices

- Native support for various RD techniques
- Embrace office documents
- Collaboration in the requirements practices

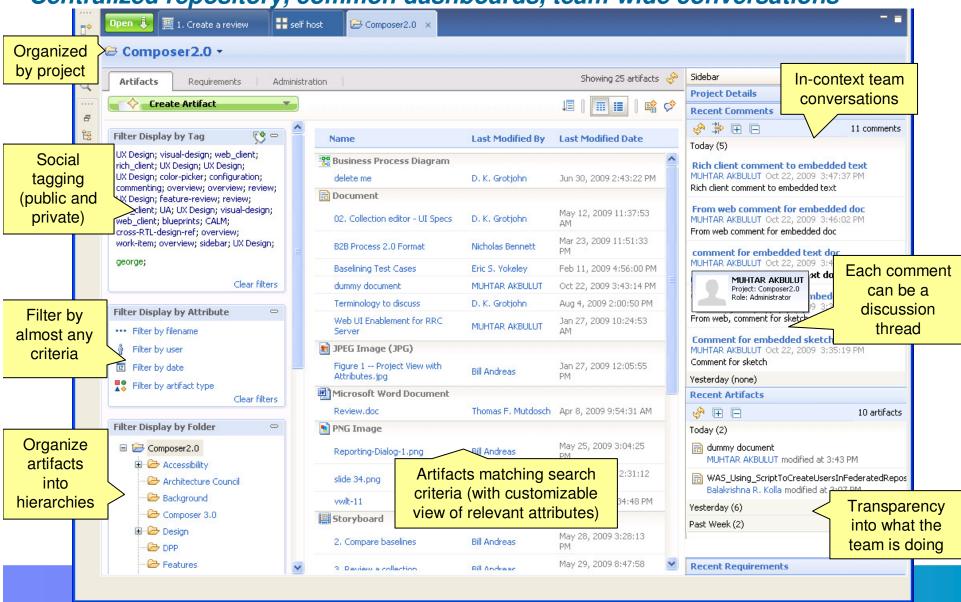
Requirements across the lifecycle

- Relate requirements to project milestones and work items
- Testing verifies solution meets requirements
- Coverage and impact analysis, change mgmt



Foster collaboration and team transparency

Centralized repository, common dashboards, team-wide conversations

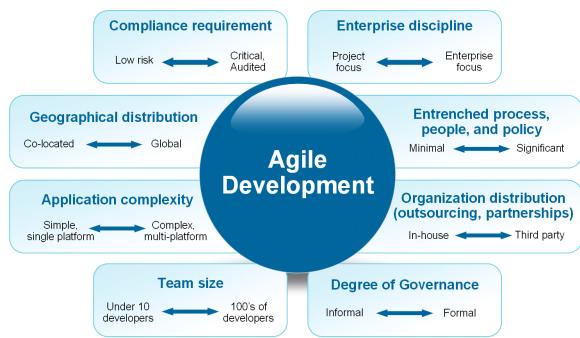




Become more agile at scale Scaling factors require more discipline, automation, and communication

What doesn't change when scaling

- Stakeholders actively participating in describing, prioritizing and evolving requirements
- High level requirements envisioning during inception
- Just-in-time requirements elicitation during each iteration
- Organizing and prioritizing requirements in ways that are transparent to the team





Automate what you can Improve productivity and reduce errors



Rational Requirements Composer



"RRC dramatically reduced the time to do internal assembly, discussion, and finalization of deliverable documents internally."

- Brian Beveridge, Greenridge Business Systems

Deliver work products in standard forms



 Generate and publish reports based on IBM® Rational® Publishing Engine



 Organize and retrieve information quickly using tags, filters, collections, searches and queries



 Analyze requirements from various perspectives using dashboards and traceability reports





Reuse existing knowledge and good practices



Program: Sales support

Project: V1

Project: V1.1

Project: V2

Program: B2B web

Program: Inventory management

Program: Customer support

Program: Financial systems



Rational Requirements
Composer

 Align projects with enterprise, program and product-level requirements



 Reuse requirements artifacts



 Use templates to promote repeatable best practices



 Remove ambiguity and unify teams around common glossaries

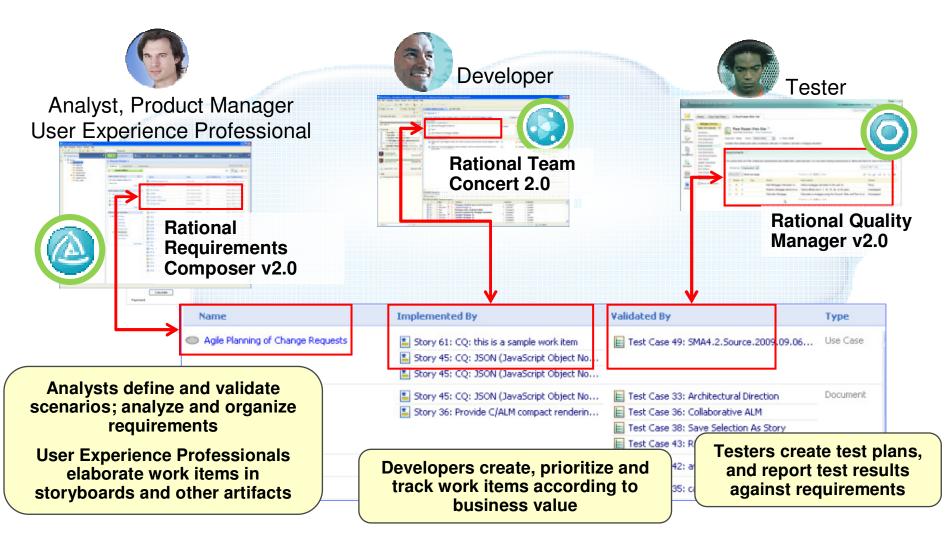


Provide lightweight process guidance in practitioners' tools where and when they need it



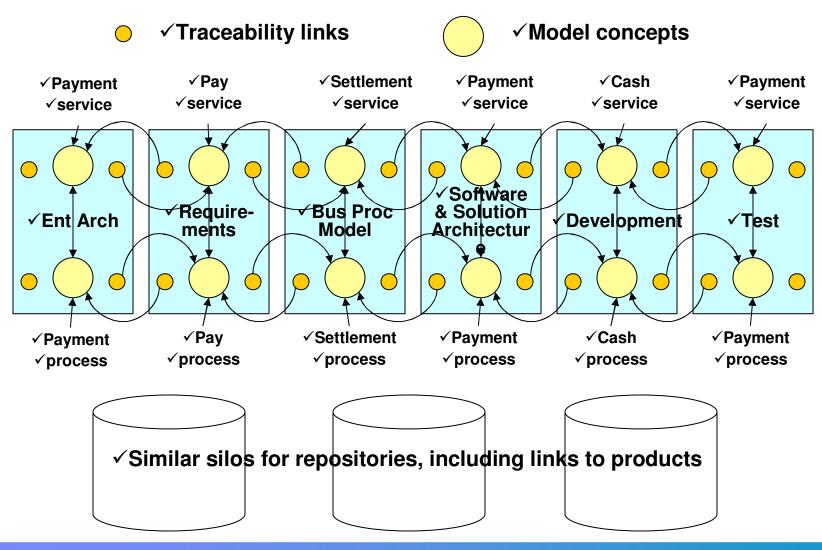


C/ALM - Align development and test activities with customer value Break down role-based information silos for better project execution



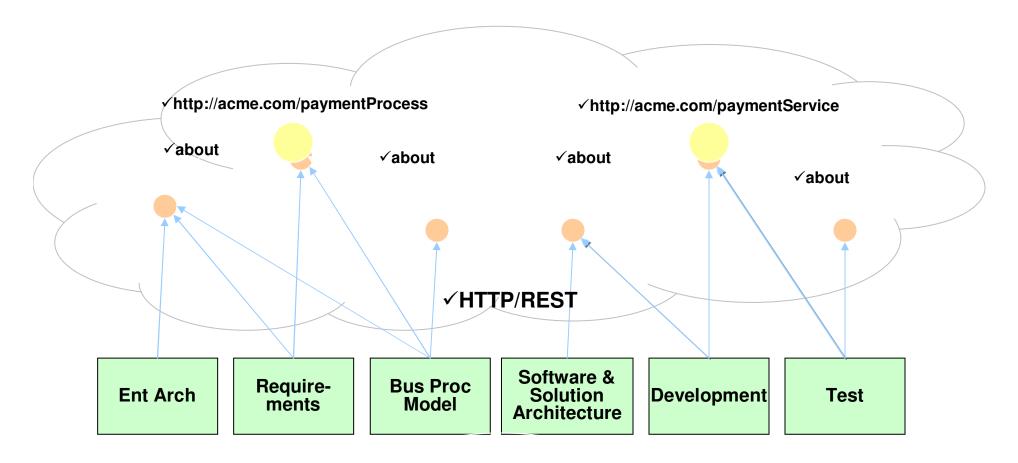


Tool integration - the old way





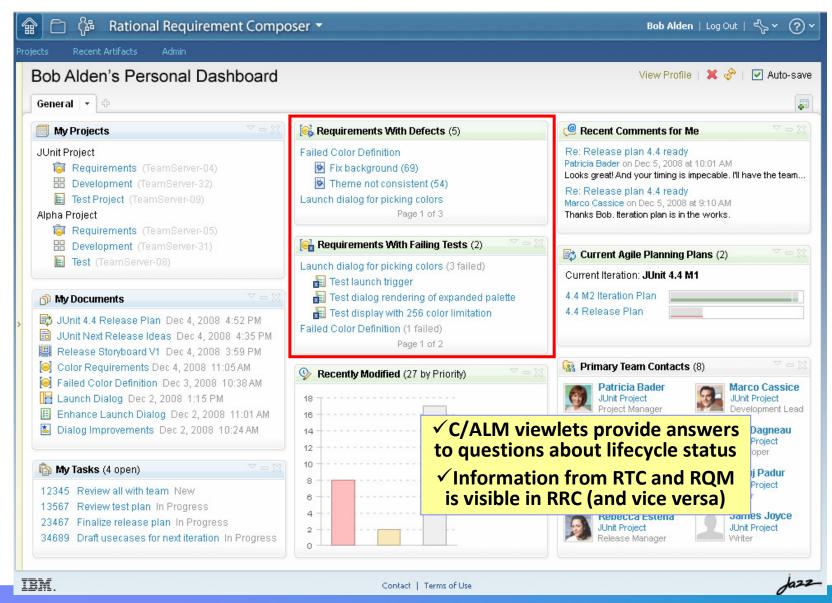
Tools – the new way: "www linked data" Taking integration to a new level



√Similar fix for repositories

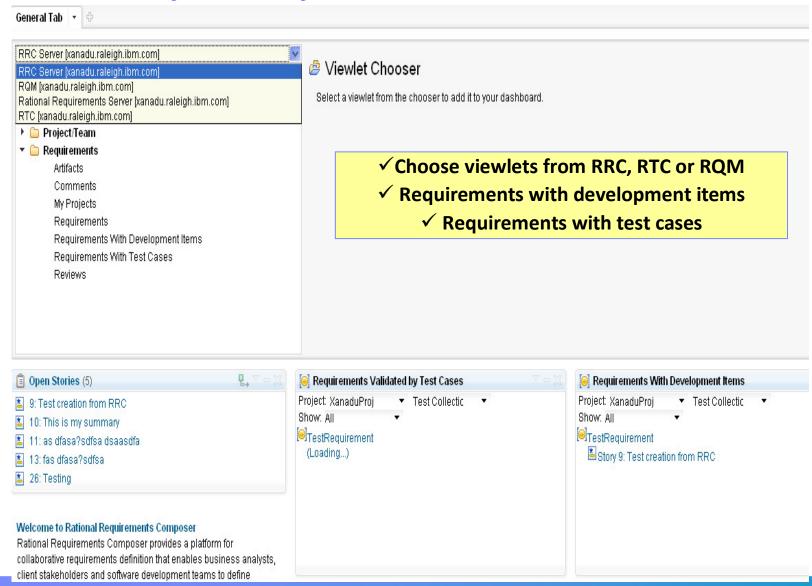


C/ALM Cross Product Viewlets



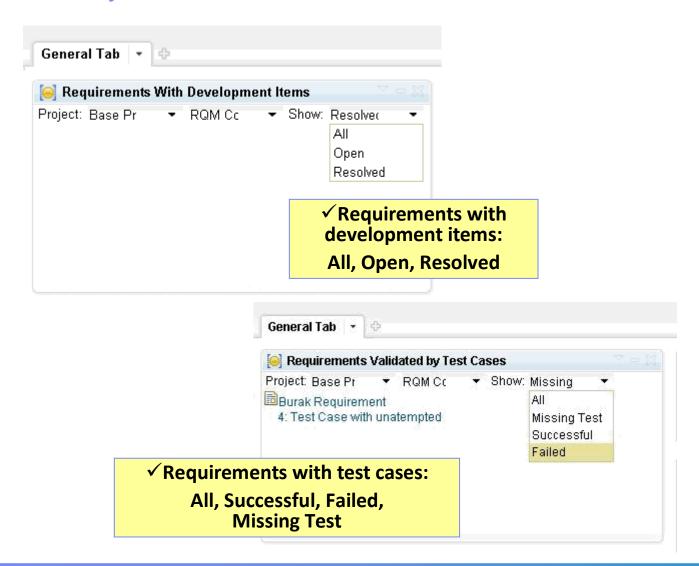


Traceability - Lifecycle Viewlets on Web Dashboard



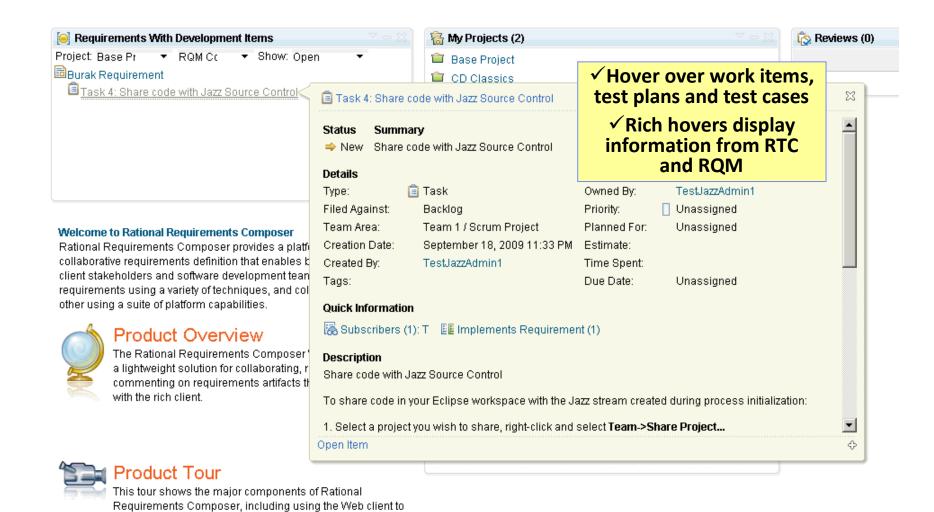


Traceability – Predefined Filters for C/ALM viewlets



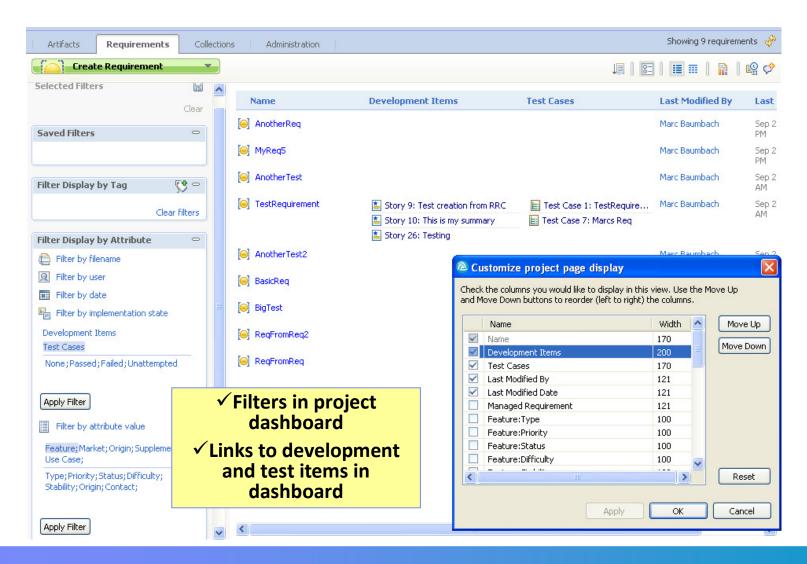


Traceability – Rich Hover





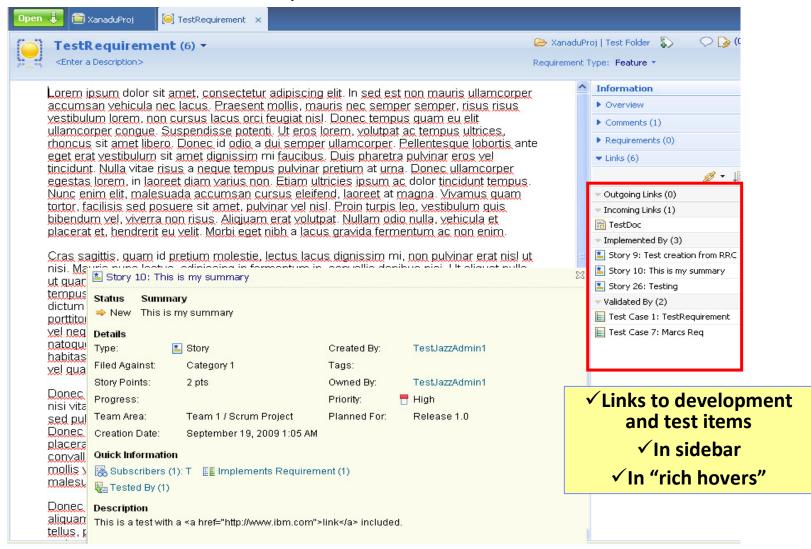
Traceability – Dashboard Views on rich client





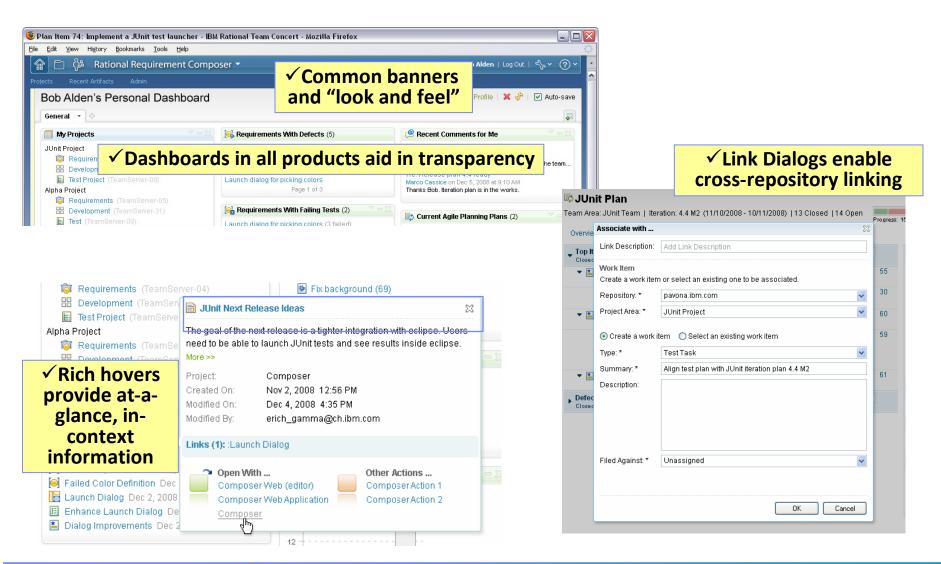
Traceability - Links on editor sidebar on rich client

Links to development and test items in sidebar and rich hovers



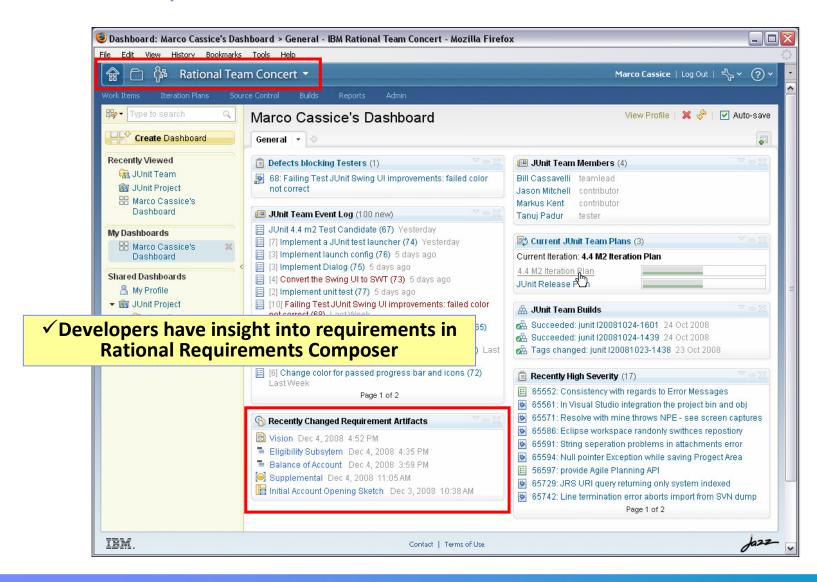


Common UI elements aid in ease-of-use





C/ALM Mash-up Dashboard – View from RTC





Improve management of change by improving visibility Change is inevitable, so invest in managing it well

Requirements

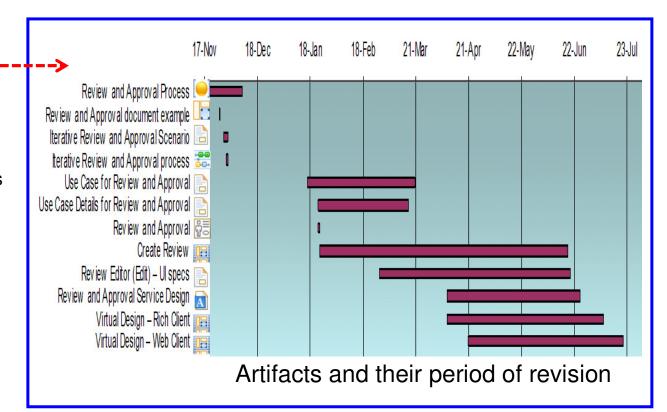
Define clear scope;
 everyone works on the
 same version of the
 requirements – and knows
 when they change

Project activities and project artifacts

 Keep them aligned with changing requirements

Team members

Retain project knowledge.
 Enable new staff to become productive faster and work smarter





Better business outcomes

Through good requirements and good requirements practices

Reduce rework and get to market sooner

- Converge on good requirements faster
- Less rework later
- More automation
- Fewer errors
- Better project ROI



"This tool enables us to extend and improve our client's requirement practices, which significantly increases the probability of a successful software project."

- Kenny Lew, CEO, Noblestar International

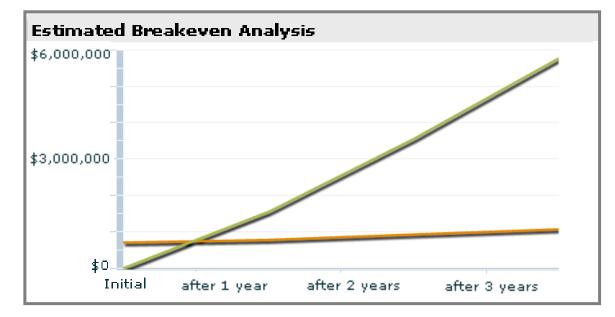


Requirements Composer Return on Investment (ROI) Sample calculations for an organization completing <u>five projects in one year</u>

Requirements Composer key cost-saving benefits include:

- Reduction in rework: Get requirements right sooner; avoid wasted effort
- * Faster time to market: Start enjoying the outcomes of your project sooner
- * Avoiding missing and lost requirements: Reduce project overages and the risk of failure

	Estimated Return On Investment			
	Initial	After 1 year	After 2 years	After 3 years
Cumulative Benefits		\$1,551,228	\$3,545,664	\$5,761,704
Cumulative Costs	\$707,300	\$782,211	\$925,141	\$1,068,072
Cumulative Cash Flow /	(\$707,300)	\$769,017	\$2,620,523	\$4,693,632
Benefit to cost ratio		1.98	3.83	5.39
Return on Investment		98%	283%	439%



tinyurl.com/RDQROI

IAG Consulting achieves significant savings with IBM Rational software

Situation: IAG consultants needed a better way to engage stakeholders in defining requirements as well as implement an end-to-end requirements lifecycle.

Solution: IBM's Requirements Composer, IBM RequisitePro and (for certain engagements) Rational Software Architect.

Benefits: IAG saw significant overall savings for customers across the entire requirements lifecycle when taking into account requirements efficiencies, automated generation of tests, enhanced modeling and analysis capabilities, and greater ability to share and collaborate on larger scale projects.



"Rational Software has the flexibility to address a wide range of IAG engagements, the preconfiguration functionality to support our demanding standards of consistency, and the right vision for end-to-end requirements life cycle management."

A. Ross Little EVP IAG Consulting



Executive summary

Better, faster business outcomes with Rational Requirements Composer

Understand what your customers really need

- Engage stakeholders to capture real business needs
- Work across boundaries to uncover missing, incorrect and ambiguous requirements



Be more agile with light-weight requirements practices

- Align development work with business objectives, policies and requirements
- Improve management of change by improving visibility

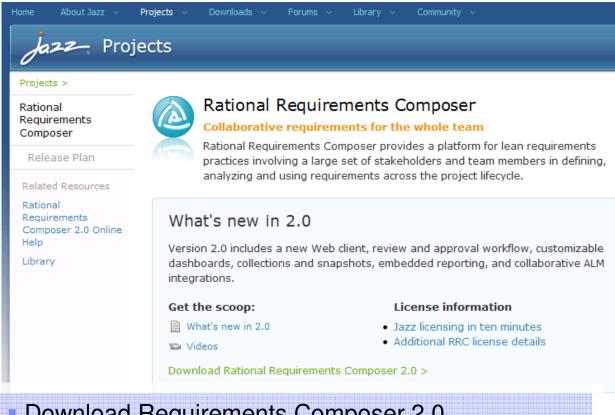
Reduce rework and improve time to market

- Converge on good requirements faster to reduce rework later
- Get everyone on the same page and adapt quickly to change

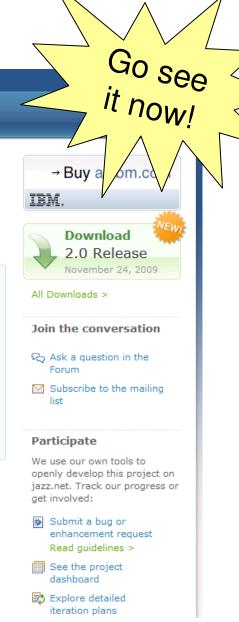


Delivering greater, faster business value with "lean" requirements practices

See for yourself at jazz.net



- Download Requirements Composer 2.0
- Learn more from the blog and library
- Have discussion with developers and community
- Report defects or request enhancements
- Stay informed!





Resources

- Webcast: <u>Delivering more value: What's new in RRC 2.0</u>
- Business Analyst eKit
- ROI Calculator for requirements-driven quality
- Integrated Requirements Management Web page
- RRC on jazz.net
- Follow us on Twitter @RationalRDM and on Facebook
- Rational RDM Blog





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- Process and portfolio management
- Change and release management
- Quality management
- Architecture management

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- Leading Innovation Web site
- developerWorks Rational
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- IBM Rational Case Studies

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