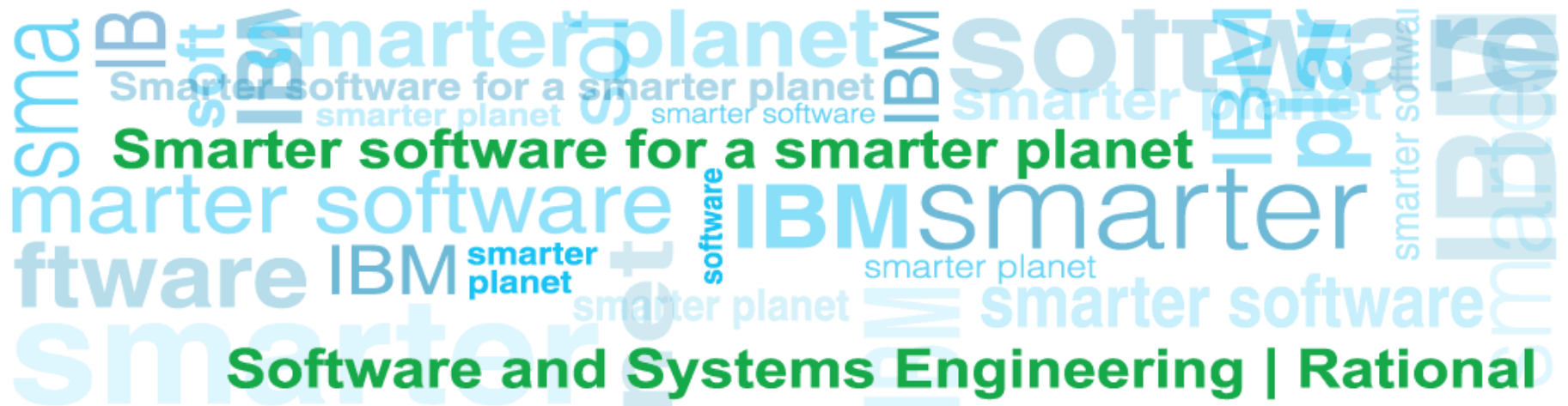# Visual Definition in the Requirements Lifecycle: Using Rational Requirements Composer

Bhawana Gupta
bhawana.gupta@in.ibm.com

Agenda

Introducing Rational Requirement Composer

Understand what customers really want

Work Smarter

Work Together

Coming SOON!

Next Steps

- Provides a rich requirements definition capability combined with the power of requirements management.

- Empower teams to define, manage, and report on requirements in a lifecycle development project.

smarter planet
Smarter software for a smarter planet
software
IBM smarter planet
IBM

Requirements Definition and Management for the Development Lifecycle
IBM Rational Requirements Composer v4.0

- **Empower teams of all sizes and complexity** to define, analyze, manage, report with project requirements

- Improve **visibility and understanding** of requirements across the development lifecycle

- **Realize project impact and downstream visibility** using traceability across requirements, test, and development

- **Drive development forward** with agile-at-scale and iterative processes in fast paced markets

- **Customer and stakeholder collaboration** for improved agility and informed decisions

3

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Smarter software for a smarter planet
IBM smarter planet
IBM software
IBM

IBM Rational Requirements Composer – Complete Picture

Requirements Engineering for the any development/delivery Lifecycle

Rational Requirements Composer

Definition

- Rich-text documents
- Diagrams: Process, Use Case
- Storyboards, UI sketching & flow
- Project glossaries
- Templates (formal/agile)

Visibility

- Customizable dashboards
- Project dashboards
- Analysis views
- Collections/Modules
- Milestone tracking & status

Collaboration

- Review & Approval
- Discussions
- Email Notification

Management

- Structure, Attributes/Types
- Traceability, Suspect Link
- Filtering, Change History
- Tags, Reuse, Baselines,
- Reporting Metrics & Doc.

Lifecycle

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

Planning

- Integrated planning
- Effort estimation
- Task management

Agile

Iterative

Waterfall

jazz

Introducing Rational Requirement Composer

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Next Steps

- 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

Understand what the Customer really wants

Enhance Requirement Quality with Text/Visual Scenarios

- Requirements management teams will capture detailed requirements and diagrams/pictures for critical for development understanding into a consolidated list of project information

- Collect and centralize your requirements in a single repository for management and team collaboration

- Business analysts can start high level requirements through example diagrams, storyboards, or UI mockup do depict how the concept product project will work

- Visually represent requirements through diagrams, use case, story boards to effectively communicate the business development needs

Review And Enhance The Quality Of Your Requirements

- Requirements teams will review, discuss and collaborate on requirements using email notification for updates

- Achieve better quality requirements and product from collaboration

Review   Comment

Approve   Discuss
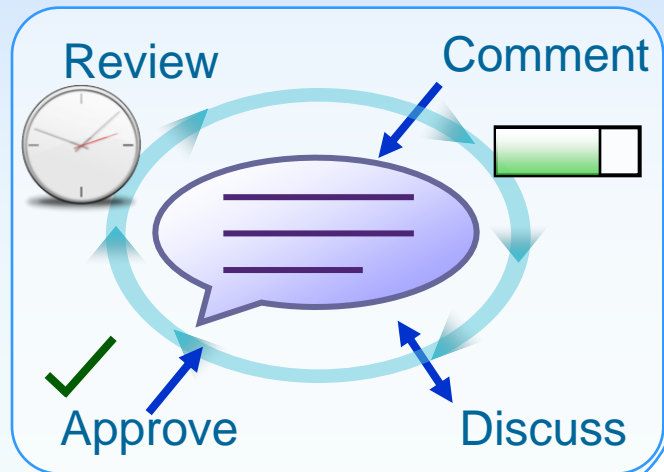
Use Visual Scenarios to Uncover Customer Needs
Using Rational Requirements Composer
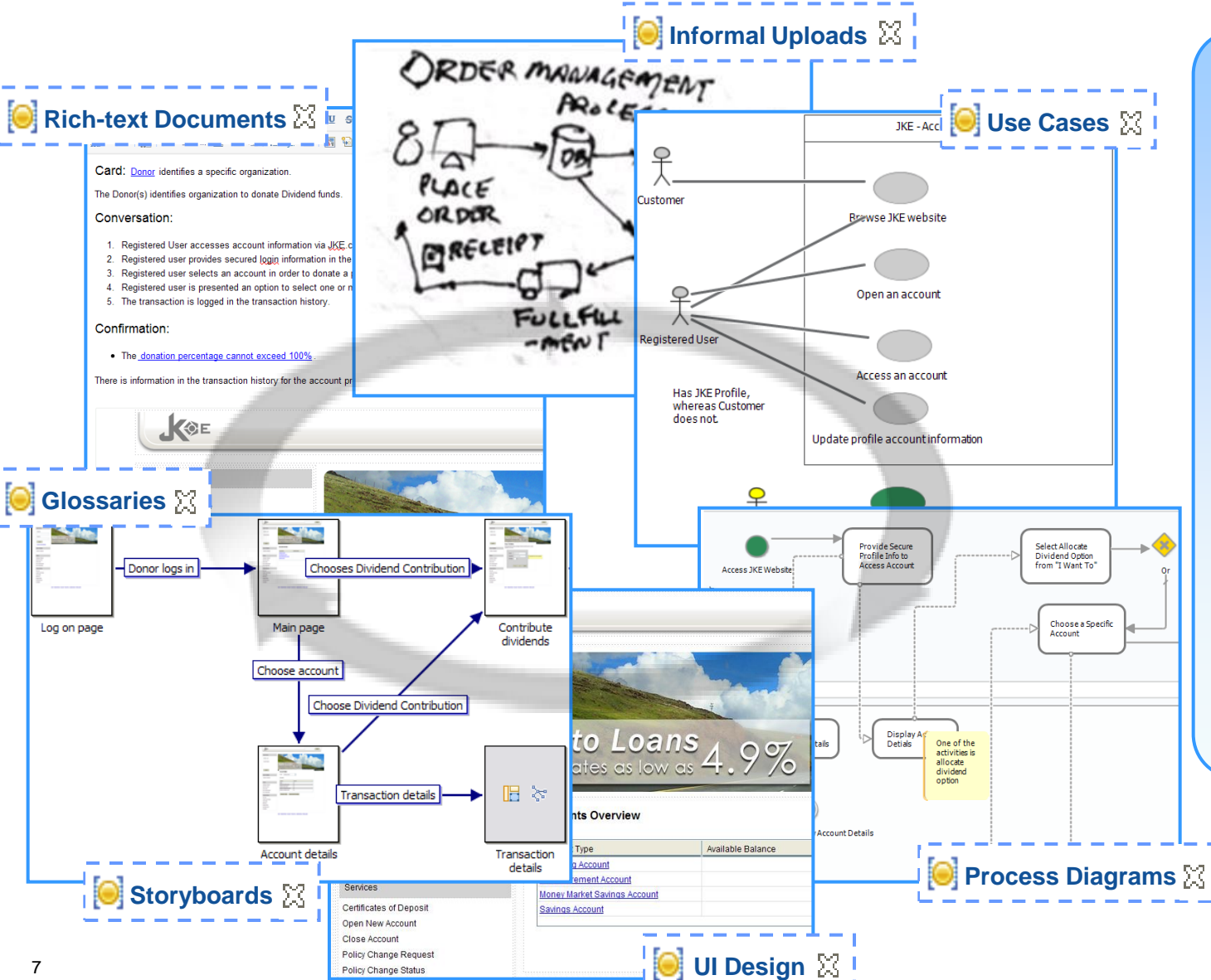
- Defining requirement flows using scenarios to uncover missing critical details

- Text requirements link to diagrams to complete the development picture

- Visualise your development results through a variety of requirements forms

- Traceable elements helps ensure complete coverage thinking

Rich Requirement Editor (Documents)

Used by All Project Team Members

RRC Rich Requirement Editor

Capability

☞ Collaborative Rich Document Editor Environment (Text/Tables/Graphics)
☞ Specific Attributes and Links
☞ Glossary Terms

Benefits

☞ Rich document controls and table support for requirements capture, sharing, and management
☞ Unify teams around a common Vocabulary

Overview

121: Donor Chooses Multiple Organizations

Description:
Project: JKE Banking (Requirements)
Created On: Mar 17, 2011 3:14:18 PM
Created By: Andy - Admin
Modified On: Mar 17, 2011 3:14:48 PM
Modified By: Andy - Admin

Type:	User Story Elaboration
Format:	Text
Priority:	High
Status:	Approved
Role:	

Comments

Links (13)

Illustrated By (7)

- 63: Accounts Overview (Home Page)
- 77: Dividend Contribution
- 100: Dividend contribution - confirmation
- 35: Dividend contribution - page 1
- 35: Dividend contribution - page 1
- 35: Dividend contribution - page 1
- 66: Dividend Contribution - screen flow
- 101: Finalized Transaction

Satisfies (2)
- 23: Allocating Dividends to Cause

Collections and Reviews

Editor panel

Format ▾ Font Arial ▾ Size 10 ▾ **B**

Card: Donor identifies a specific organization.

The Donor(s) identifies organization to donate Dividend funds.

Conversation:

1. Registered User accesses account information via JKE.com
2. Registered user provides secured login information in the Ac
3. Registered user selects an account in order to donate a per
4. Registered user is presented an option to select one or mor
5. The transaction is logged in the transaction history.

Confirmation:

- The donation percentage cannot exceed 100%.

Terms starting with "account"

Account	1. Credit established under a particular name, usually by, against which withdrawals may be made.
	2. A record of the fi... (Term)
Account Activity	A summary of activity on an Account. Includes: previous balance, payments, credits, new credit extended, finance charge... (Term)
Account Profile	(Term)
Balance of Account	That amount necessary to equate the total debits and total credits posted to any given Account. (Term)

Showing 4 matches.   Search other projects   Show more information

Find terms starting with: a ac
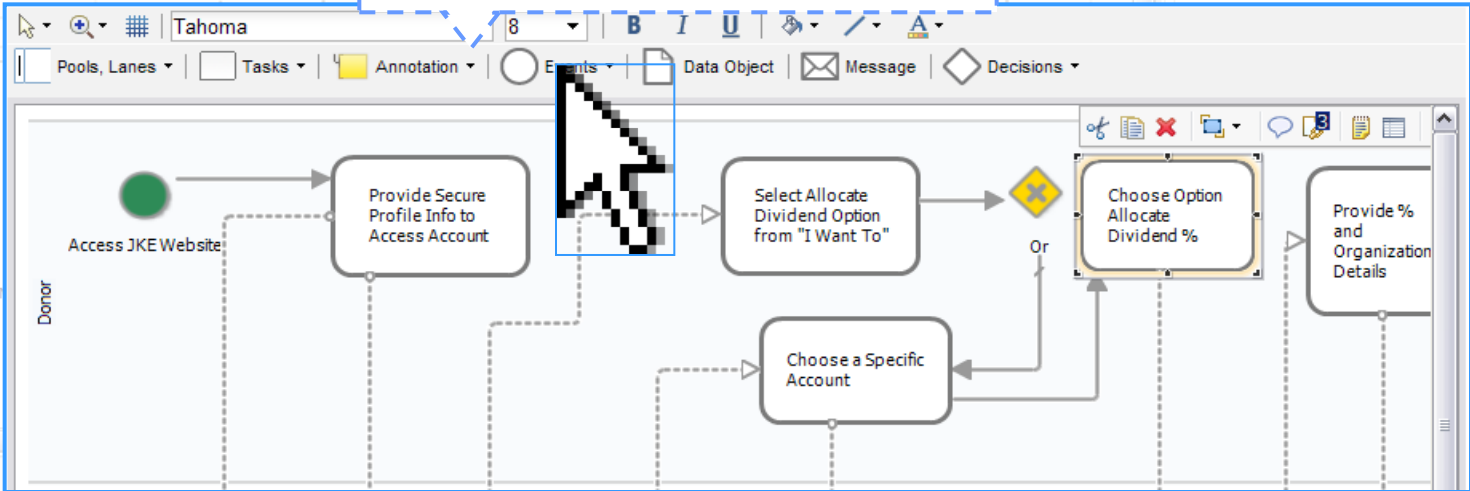Find terms containing: account

Process Sketching

RRC Process Sketching

Capability
- Process Sketching Editor
- Standard Element Controls
- Traceability To Element

Benefits
- Visual Representation For Your Process Or Business Diagram For Common Team Understanding
- Capture The Current And Propose A Future State With Business Process Diagrams

Business Analysts

Links (11)

Illustrated By (5)
- 77: Dividend Contribution
- 100: Dividend contribution - confirmation (A
- 35: Dividend contribution - page 1 (Choose
- 101: Finalized Transaction (Display of Fina
- 83: Log In Page (Provide Secure Profile Inf

Satisfied by (4)
- 99: Allocate dividends by Percentage (Cho
- 25: Dividend allocation by percentage (Cho
- 54: Donor Chooses an Organization
- 121: Donor Chooses Multiple Organization

Use Case Diagrams

RRC Use Cases

Capability

- Use Case Diagrams
- Element Traceability to Use Case Description

Benefits

- Visually Represent How Your Product is Used
- Consistent Visual Notation Across Requirements for Consistent Team Understanding

User Interface Sketching

Development and UI Designers

RRC UI Sketching

Capability

- Design User Interfaces
- GUI Controls
- Rapid Changes Via Reusable Parts
- Interface Traceability

Benefits

- Visually Represent Software and Gain Conceptual Understanding/Agreement From Non-technical Stakeholders
- Collaborate Across Projects on Interface Proposals

User Interface Storyboard
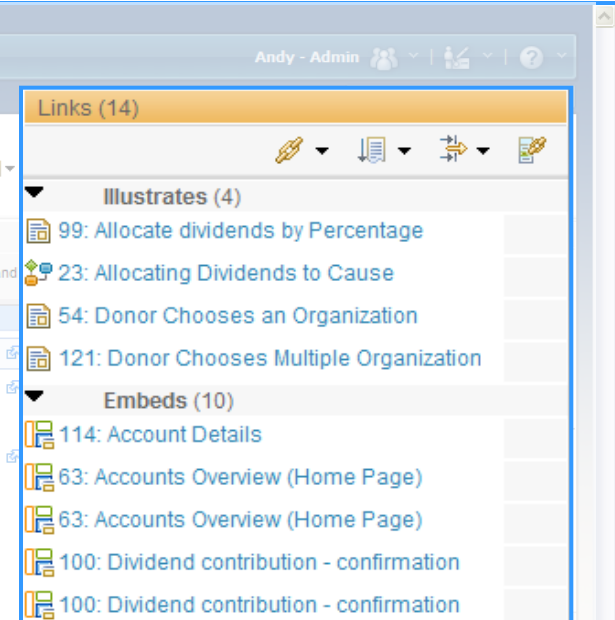
RRC Interface Storyboard

Capability

- Storyboard Layout
- Frame List
- GUI Controls
- Sketch Reuse
- Interface Traceability

Benefits

- Layout Timeline for Flow Understanding and Collaboration
- Gain conceptual understanding and agreement from non-technical stakeholders

Development and UI Designers

User Interface Screen Flow

For Development and Architects

RRC Interface Screen Flow

Capability

- Interface Screen Flow
- UI Process
- GUI Controls
- Interface Traceability

Benefits

- Interface Screen Flow Understanding and Collaboration
- Team Conceptual Understanding for UI Flow
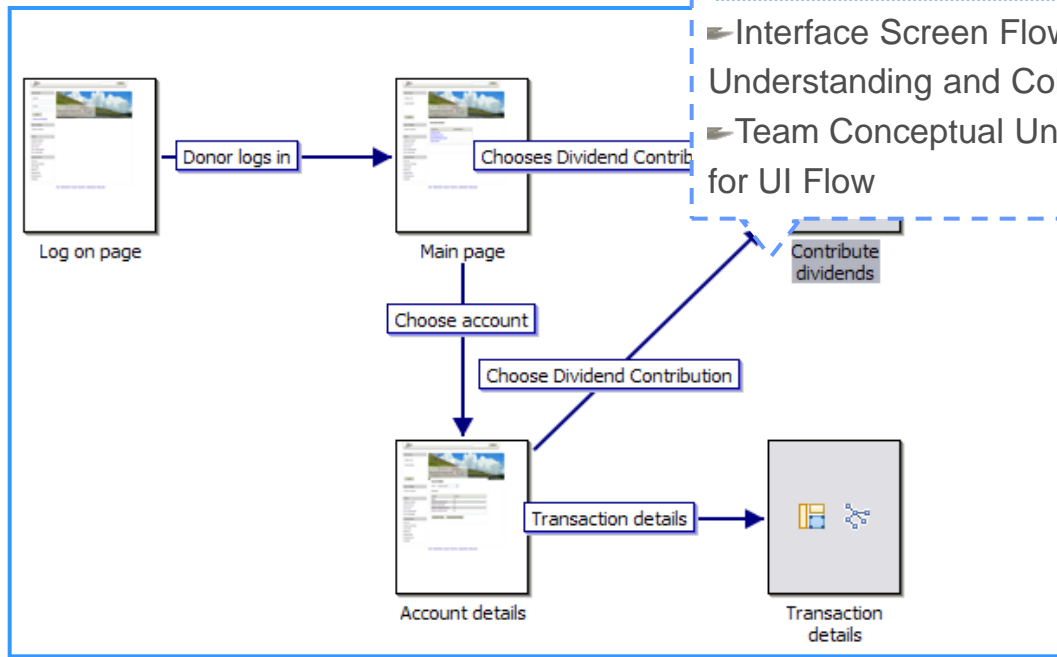
Links (8)

Illustrates (3)
- 99: Allocate dividends by Percentage
- 54: Donor Chooses an Organization
- 121: Donor Chooses Multiple Organization

Embeds (5)
- 114: Account Details
- 63: Accounts Overview (Home Page)
- 100: Dividend contribution - confirmation
- 35: Dividend contribution - page 1
- 83: Log In Page

Review (Collaboration)

RRC Review (Collaboration)

Capability

- Discussion Collaboration Support
- Review/Approval Workflow
- Email Notification

Benefits

- Improve Requirement Quality Through Team Discussion
- Controlled Formal Review Provides Signoff Process
- Email Broadcast Discussion Statements To One Or Many Team Members
- Receive Email Alerts

Agenda

Introducing Rational Requirement Composer

Understand what customers really want

Work Smarter

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

Work Together

Coming SOON!

Next Steps

Work Smarter

Manage and Analyze the Projects Position and Status

Creating Traceability (Relationships)
- Project members will be able to create links/relationships between common requirements artifacts to enable development, show dependence, and prove compliance

- Expose gaps and realize change impact in your development process by applying effective traceability between related project information

Management Analysis (Filtering, Sorts, Tagging)
- Business analysts using filters, sorting, Tags, and other data analysis features to manage requirements content and spot change

- Manage business requirements and find gaps, adapt to change, and manage expectations

Baselines & Collections
- Project members will collect requirements together or documents and put them into collections or baselines as part of project milestones

- Establish proper review milestones for development for review and comparison

Understand Project Gaps and Changes Using Traceability

Traceability Analysis
- Traceability analysis features will allow team members to see dependency on other requirements, spot gaps in the project, and help manage compliancy

- Raise product quality, lower cost from redundancy and error using traceability

Traceability (Analysis Tools) – Grid View

Traceability (Analysis Tools) – Tree View

RRC Traceability (Tree View)

Capability

➤ Traceability Using Link Types

➤ Dynamic Lifecycle Traceability

➤ Muiti-level (end to end) Traceability Analysis Views

Benefits

➤ Understand Relationships

➤ Discover Downstream Status and Change Through Attributes

➤ Coverage, Gap, Impact and Requirements Change Analysis

Business Analysts, Team Leads

Requirements Analysis Tools (Filtering)

Audit Trail History (Analysis Tools)

All Project Team Members

RRC Change History

Capability

- Change History of All Revisions
- Previous Revision Access
- Automated Audit History Tracking
- Difference Change Mark-up
- History/Reversion Query

Benefits

- Access all Prior Revisions of Each Artifact for Change Assessment
- Explore / Analyze Changes
- Restore Previous Versions if Mistakes are Made

Work Smarter

Reuse Requirements and Critical Project Information

Parallel Requirements Reuse
- Product Managers and Team Leaders can identify key requirements that apply to multiple projects for reuse
- Reusing project information in parallel saves time, keeps common requirements consistent, and reduces the risk of errors between projects
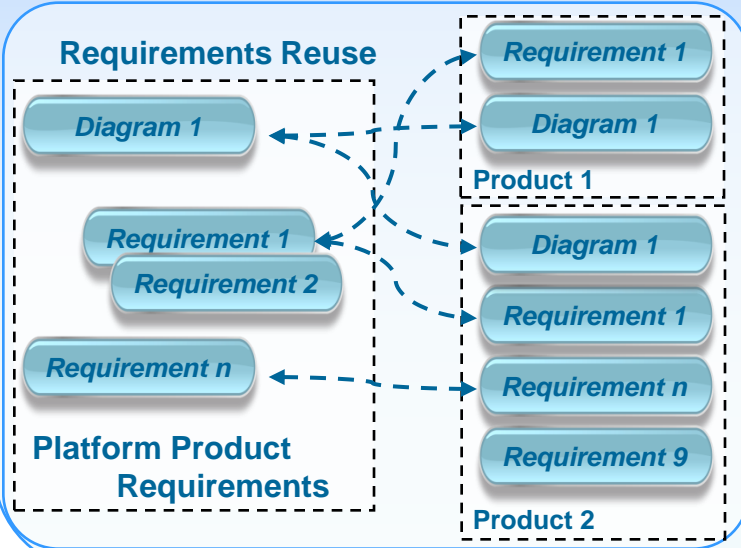
Report and Discover Your Projects Status

Import, Export, and migration
- Project members will take existing requirements documents, spreadsheets, and ReqPro data and import them into the RM database
- Migrate requirements information into a centralized RDM tool

Reporting and Document Generation
- Team leaders will want to deliver reports to senior managers or suppliers/collaborators using document generation facilities
- Provide high quality reports/documents for your requirements driven projects

Requirements Reuse

Diagram 1

Requirement 1
Requirement 2

Requirement n

Platform Product Requirements

Requirement 1

Diagram 1

Product 1

Diagram 1

Requirement 1

Requirement n

Requirement 9

Product 2

Embedded Artefacts (Requirements Reuse)

Insert Artifact

Select an artifact to insert

Select project area: JKE Banking (Requirements)

Select Link Type: No Traceability Link

Search for artifacts by id or for words contained in the name:

Search...

Select artifact from the following recently visited artifacts: Displaying 1-3 of 3 matches

- 104: Promote JKE Corporate Image
- 73: Healthy Customer Ecosystem
- 77: Give Back

Analysts, Development

Artefact Embed (Reuse)

Capability
- Artefact Embed
- Embedded Artefact Views

Benefits
- Change Common Requirements in Single Location
- Parallel Development
- Reuse Requirements from Other Products that Apply to New Project

What is the goal of a user? Use 2-3 sentences to capture the intent of the user story. For example, as a (user role), I want to (achieve a goal) so that I can (provide a reason).

Card

Donor(s) can choose to allocate a specific percentage of their dividends to support organizations.

Conversation

1. Initial capability:

Write Access Support Permissions

Project Managers & Team Leaders

Write Access Support

Capability
➤ Set Write access permissions on a project role for the members of a project/team area

Benefits
➤ Control editing and modification to your project requirements, scenarios, and use cases

Requirements Parsing (from Word Documents)

Requirements Parsing

Capability

- Automatically identify imported requirements using keywords and document hierarchy

Benefits

- Quickly identify requirement with syntax standards using structure and key words

Analysts, Doc Controller

Import Microsoft Word or CSV

Import Document

Import a Microsoft Word, OpenDocument, Open Office, or rich-te...

▾ Limitations:

Does not convert: table of contents, VBA macros, mail me...s,
frames, drawings, .emf, .wmf, and .pict format embedde...s,
columns (are not preserved), table styles, Word Art, OLE e...s
(like Visio), embedded XML, document properties, or ...d
documents.

File: *   [   ] Browse...

Artifact Name: [   ]

Folder: [JKE Business Recovery Matters Project] ...er...

Artifact Type: [Actor (Default Actor Type)   ▾]

Import Options: ○ Import for viewing use ● Import for editing an...ewing
                 ☐ Create RRC comments for Word comments

                                      Finish   Cancel

Import Requirements

File to Upload: * [   ] Browse...

Location

Folder: ...siness Recovery Matters Project Pick Folder...

                                      Finish   Cancel
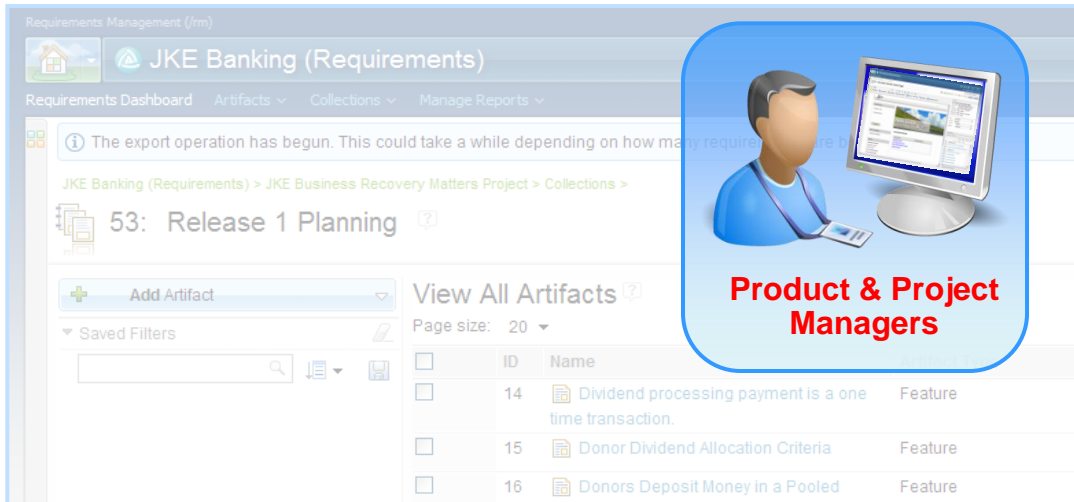
🔵 RRC Data Import

Capability

☛Import/Export for CSV

☛Import (RTF Convert) for Word

☛Generic Data Migrate (CSV)

Benefits

☛Import Information Received From External Sources or Created Off-line

☛Migrate Existing Project Requirements

☛Reuse Data from Other Tools

☛Export Information for Off-line Use

All Project Members

Export CSV (Spreadsheet)
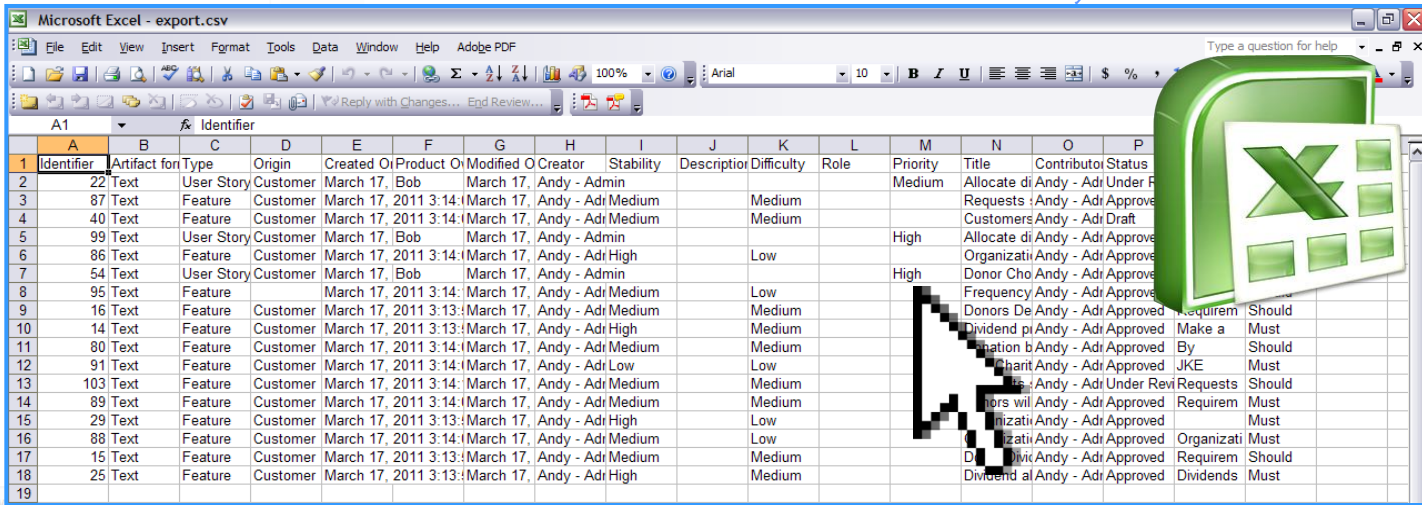

RRC CSV Export

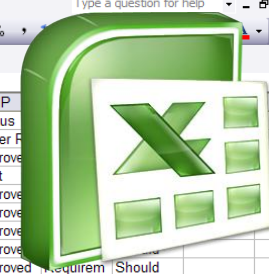**Capability**
- Export for CSV
- View/Filter Export

Benefits
- Export existing requirements for use in other tools (for further Analysis)
- Create ad hoc Spreadsheet Reports
- Share Requirements with Partners

Publish Document (PDF)

Document Controllers, Team Leaders

Create PDF Document : Open an account

☐ Include Comments
☑ Include Attributes

OK   Cancel

🔵 RRC Document Publish

Capability
☛ PDF or Microsoft Word Output
☛ Use OOTB Templates
☛ Take Data Offline

Benefits
☛ Useful for meetings and external stakeholders
☛ Partner/Collaborator Document Delivery

Requirements Interchange Format (ReqIF)

ReqIF Manager

Create and manage ReqIF definitions, which are used to create and export ReqIF files.
No ReqIF definitions defined yet. Click on the "New Definition..." link below to create one.

ReqIF Definitions	➕ New Definition...
Name	
Mobile Banking	🖉 ▾

Name: *   Mobile Banking
Description: Project Milestone for transfer

ReqIF Export ✕

95%

Show Report   Download   Close

Include Folders ☑

Cancel   Save

Project Managers & Team Leaders

Artifacts   ➕ Add Artifact   ✖ Remove Artifact

Show Report   Download   Close

🔘 ReqIF ✕

Capability

☛ Export requirements from projetc using XML standard format ReqIF

☛ Take project data to new database

Benefits

☛ Establish new projects based on existing requirements

☛ Easily collaborate with partners and collaborator using export formats

1 2 3 Specify Import Options 4

Specify Import Options

Select Import Option

Specify the folder location to place newly created artifacts without a defined folder hierarchy.

Selected Folder   TestFolder   Select Folder

☑ Place newly created artifacts with no module hierarchy in a user defined module.

Selected Module   Test Module   Select Module

Agenda

Introducing Rational Requirement Composer

Understand what customers really want

Work Smarter

Work Together

- Align development and test activities with customer value

- Improve information visibility and management of change

Coming SOON!

Next Steps

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Work Together
Role-based Development Disciplines For Better Project Execution

Connect to Extended Development (ALM)
- Team members in other project disciplines (testing, development, etc.) will consume, use, and author product information content

Business Analysts and Product Management
- Analysts define and validate scenarios; analyze and manage requirements for product releases
- Requirements can be traced to test and changes easily discovered to keep information valid
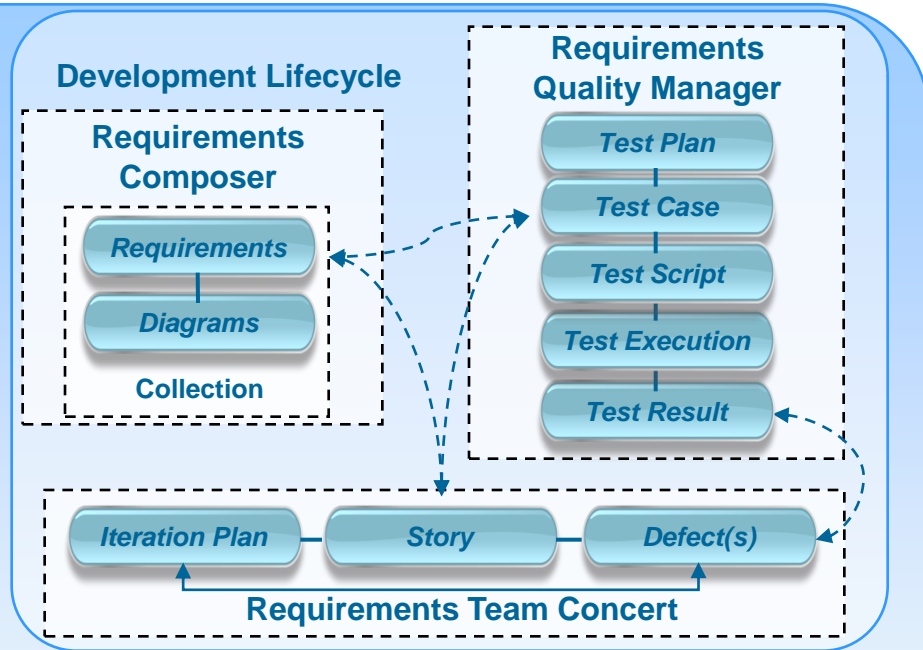
Developer, Dev Leads
- Developers see defect in their "To Do" list, and can link to detailed defect information.
- Developers create, prioritize and track work items according to business value

Quality Assurance, Testers
- Testers create test plans and report test results against requirements
- Testers captures test execution results and logs defect as a work-item.

Improve visibility & predictability using dashboards using development intelligence

Development Lifecycle

Requirements Quality Manager
- Test Plan
- Test Case
- Test Script
- Test Execution
- Test Result

Requirements Composer
- Requirements
- Diagrams

Collection

- Iteration Plan — Story — Defect(s)
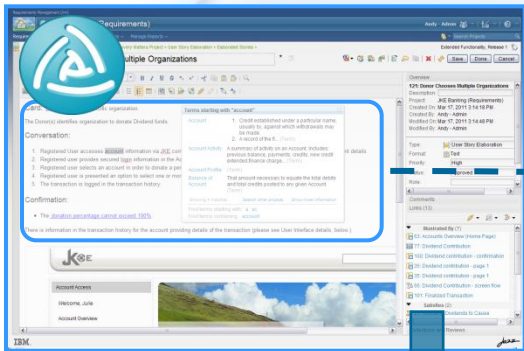
Requirements Team Concert

Working in a Development Lifecycle (ALM Today)
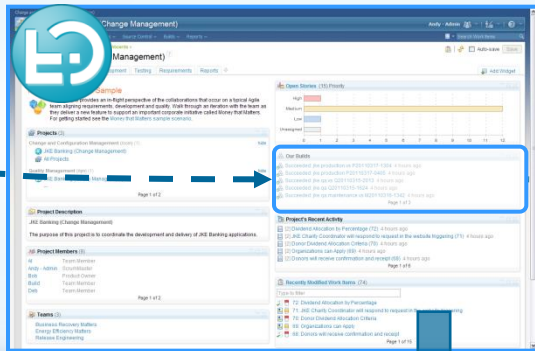
Requirements driven development across the lifecycle
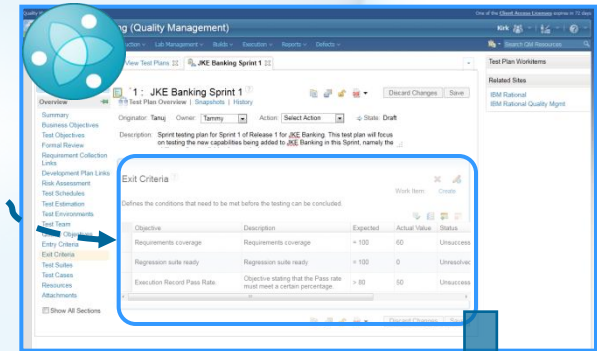
Analysts, Testers, Developers

Rational Requirements Composer 3.0

Rational Quality Manager 3.0

Rational Team Concert 3.0

Previous | 1 | Next

		Artifact Type	Implemented By	Validated By
☐	🏅 **Requirements** ✕			
☐	8 📄 Dividend allocation by percentage	Feature	✔ 75: Dividend Allocation by Percentage	📋 18: Dividend Allocation by Percentage
☐	11 📄 Customers can nominate an organization for the program	Feature	★ 67: Customers can Nominate an Organiz...	📋 21: Customers can nominate an organization for the program
			🏅 **Quality** ✕	📋 10: Customers can Nominate an Organiz...
				🏅 **Development** ✕
☐	⊟ 12 📄 Donor Dividend Allocation Criteria	Feature	★ 73: Donor Dividend Allocation Criteria	📋 16: Donor Dividend Allocation Criteria
	⊟ Satisfied by			
☐	⊟ 23 📄 Frequency of dividend transfer	Feature	★ 58: Frequency of dividend transfer	📋 1: Frequency of dividend transfer

Single View for End to End Development Needs

Dashboards

Used by all Team Members

Recent Changes in All Projects (100)

- Donor Chooses Multiple Organizations (121) 1 hour ago
- Audit History - Elaborated User Stories (11) 1 hour ago
- Traceability Report - Release 1 Features (10) 1 hour ago
- Traceability Report - Elaborated User Stories (9) 1 hour ago
- Requirement Specification - Elaborated User Stories (8) 1 hour ago
- Vision Template (120) 1 hour ago
- Improve customer experience (119) 1 hour ago
- Account Lockout (118) 1 hour ago
- Target socially cognizant initiatives to grow JKE visibility (117) 1 hour ago
- Process Acount Profile Information (116) 1 hour ago

Page 1 of 10

Comments in All Projects (11)

Tanuj 1 minute ago
- Donor

Marco 1 minute ago
- Business Recovery Matters

Ursula 5 minutes ago

Approved in 'Review project terms'
Agree with the definition. Just wondering if is there a third investment option?
- Business Recovery Matters

1: JKE Banking Release 1

Name	State
1: JKE Banking Release 1	Draft

Description
Defines testing for the Release 1 of JKE Banking. Significant capabilities being added in Release 1 include the Money that Matters initiative whereby account holders can elect to redirect dividends from their investments to causes needing assistance.

Details

Originator:	tammy	Updated:	3/17/11 5:10:25 PM PDT
Calculated Risk:	⬤⬤⬤⬤◯	Project Area:	JKE Banking (Quality Management)
Community Risk:	⬤⬤⬤◯◯	Team Area:	
Product:	Personal Banking		
Release:	R 1.0		
Test Phase:	User Acceptance Test		

Test Cases
- 1: Verify dividend transfer frequency
- 10: Customers can Nominate an Organization
- 11: Donors Choose an Organization
- 12: Organization must provide justification for why funds are needed
- 13: Donation amount limits
- 14: Donors will receive confirmation and receipt
- 15: Organizations can Apply

Show Less

RRC Dashboard

Capability
- Configurable Dashboard Widgets
- View projects, recent changes, traceability, comments, reviews

Benefits
- Easy Navigation to find project data
- Quickly recognise recent change
- Discover traceable requirements
- Take part in ongoing discussions
- Participate in development without the need to request information

Data Warehouse and Web-based Metric Reports
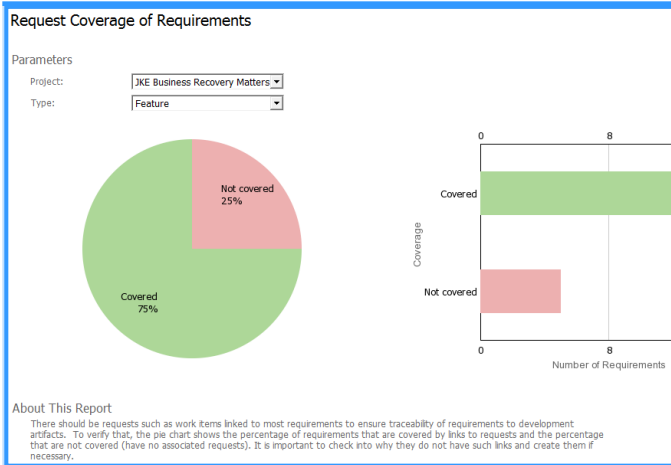
RRC Reporting

Capability

☞ Data warehouse and web-based reports

☞ Rational Insight

☞ Use OOTB Reports (Coverage, Open Defect, Distribution, Execution Results, Traceability, Test Coverage/Trends)

Benefits

☞ Reporting for Development Intelligence

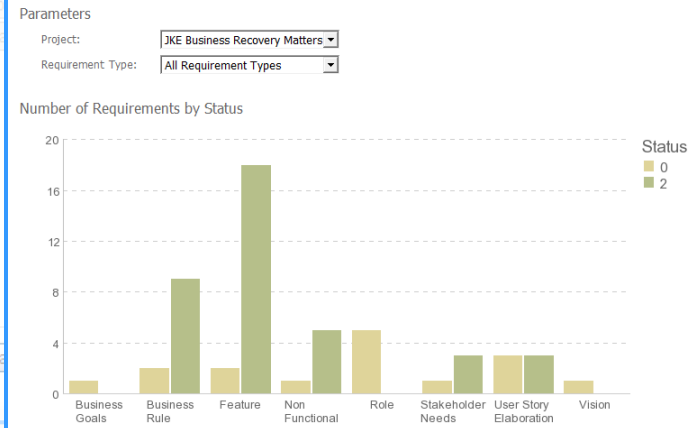☞ Discover Requirements Impact and Change

All Project Team Members

Agenda

Introducing Rational Requirement Composer

Understand what customers really want

Work Smarter

Work Together

Coming SOON!

Next Steps

- For more product information and tool demonstrations

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Next Steps
Where to go now…

The following links will take you to the next step…

- Requirements Composer on jazz.net

  - https://jazz.net/projects/rational-requirements-composer/

- Requirements Composer Release Plan

  - http://jazz.net/projects/rational-requirements-composer/release-plan/

- Rational Requirements Composer Beta Download

  - https://jazz.net/downloads/rational-requirements-composer/

- Next Generation of Requirements Definition and Management

  - https://jazz.net/blog/index.php/2011/06/05/countdown-to-clm-2q11-part-4-next-generation-of-requirements-definition-and-management/

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