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Integrating Design and Collaborative Lifecycle Management using Rational Software Architect and Design Manager

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What's Announced and What's Beta?



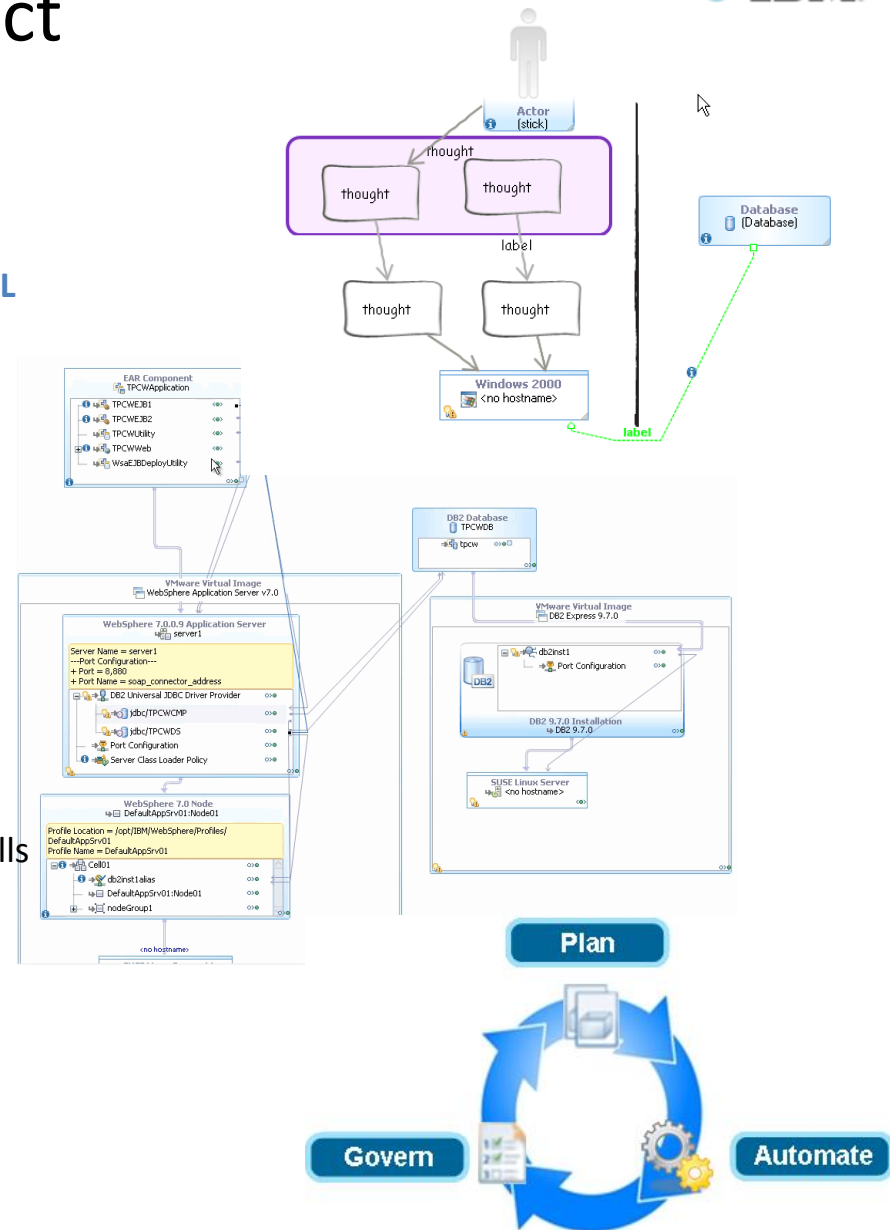
- This presentation covers capabilities from:
 - Rational Requirements Composer V4.0 (announced June 4th)
 - Rational Team Concert V4.0 (announced June 4th)
 - Rational Quality Manager V4.0 (announced June 4th)
 - Rational Software Architect Design Manager V4.0 Beta (posted on jazz.net)
 - Slides that cover the capabilities related to the RSA DM V4.0 Beta are marked with the beta icon

Agenda

- Introduction
- Shared Administration between CLM and Design Management
- In-context Collaboration
- Real-time Planning & Lifecycle Traceability
- Demo

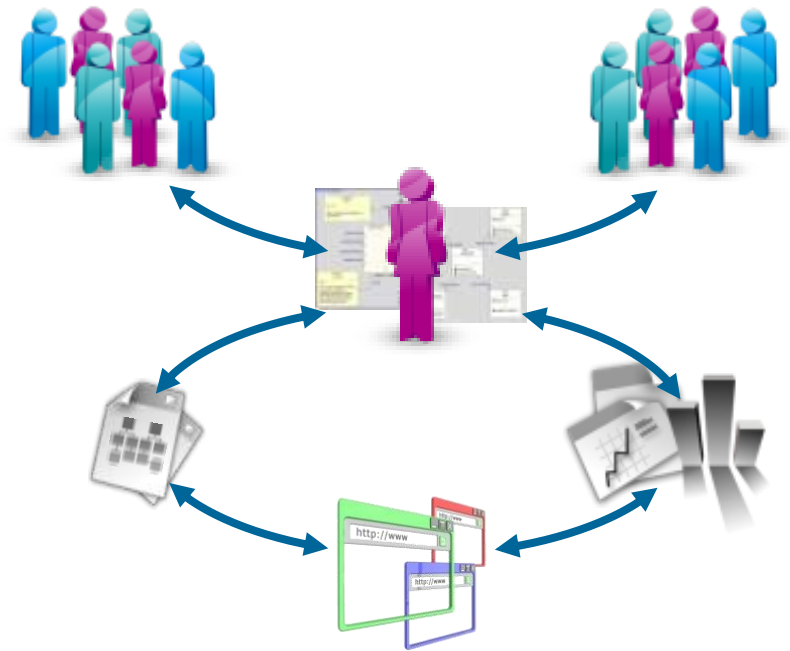
IBM Rational Software Architect

- **Agile Sketching** provides free form modeling capability enabling Agile development. Teams can quickly sketch out thoughts and convert to UML as more formality is needed.
- Software modeling and **Model Driven Development with UML** allowing teams to communicate designs and generate code. Support for a variety of domains including UML2, BPMN2, Java/JEE, WSDL, XSD, SCA, SoaML, DoDAF 2, and more)
- Analyze and walk through scenarios before implementation with **model simulation** that animates and simulates functionality and behavior.
- **BPMN2** tooling allows business plans and goals to be directly incorporated into application architecture and design and the interchange of BPMN2 with other tools like WebSphere Lombardi and Rational System Architect
- **Service modeling and SOA Support** allows architects to visualize SOA functionality plus guidance on process and pitfalls of candidate service identification and service and solution specification.
- Model software deployments and generate automation workflows from deployment plans for Rational BuildForge or Rational Automation Framework for WebSphere (RAFW) with **Deployment Planning and Automation**

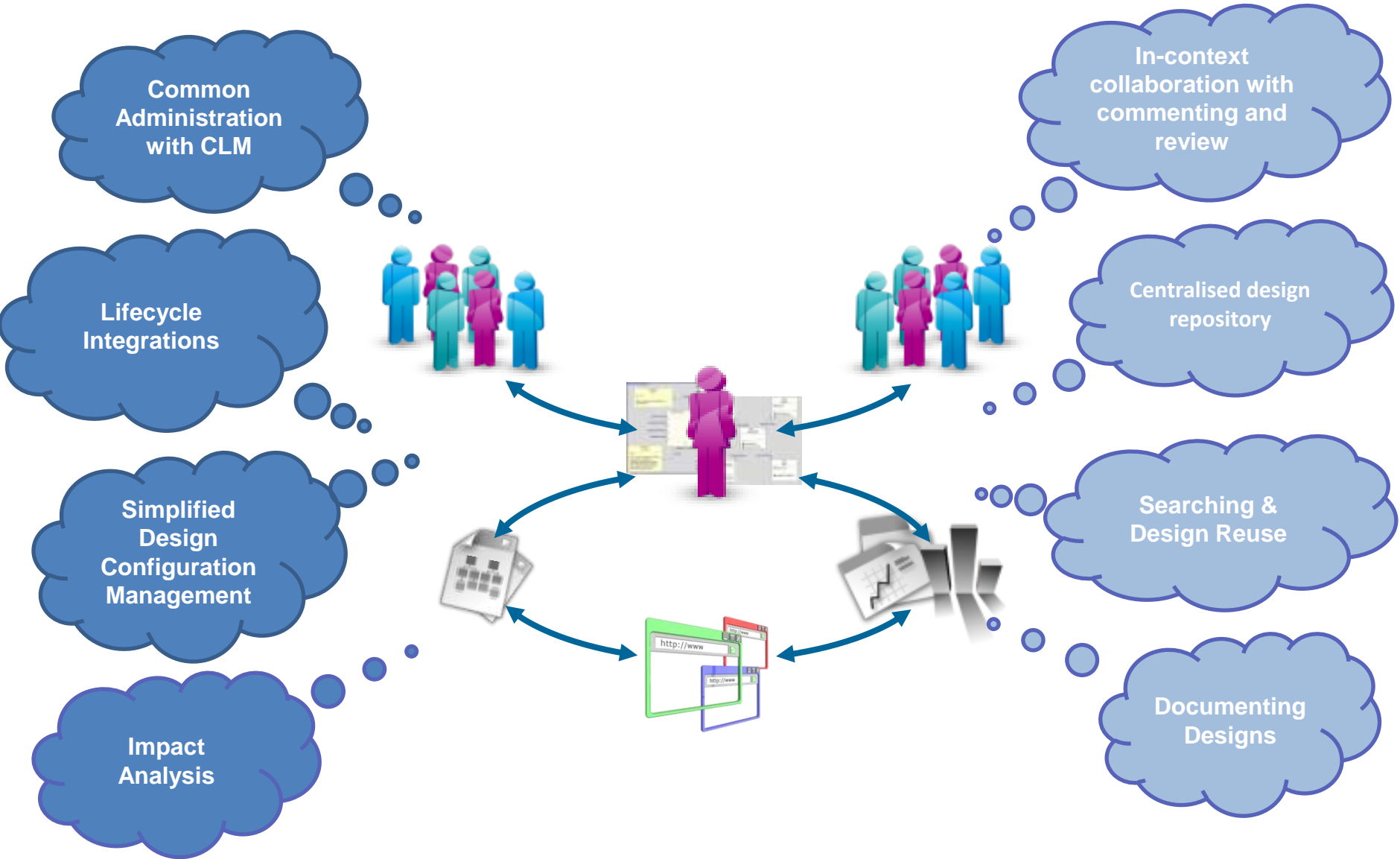


Design Management

- ✓ **Design Management** is an ALM discipline that integrates software and systems design into the lifecycle
- ✓ Just like requirements management, change & configuration management, and quality management
- ✓ **Rational Software Architect and Rational Rhapsody** are IBM Rational's industry leading software and systems design solutions
- ✓ Design Management capabilities have been added to Rational's Rhapsody and RSA product families to enhance their design capabilities with **new team collaboration and lifecycle capabilities**



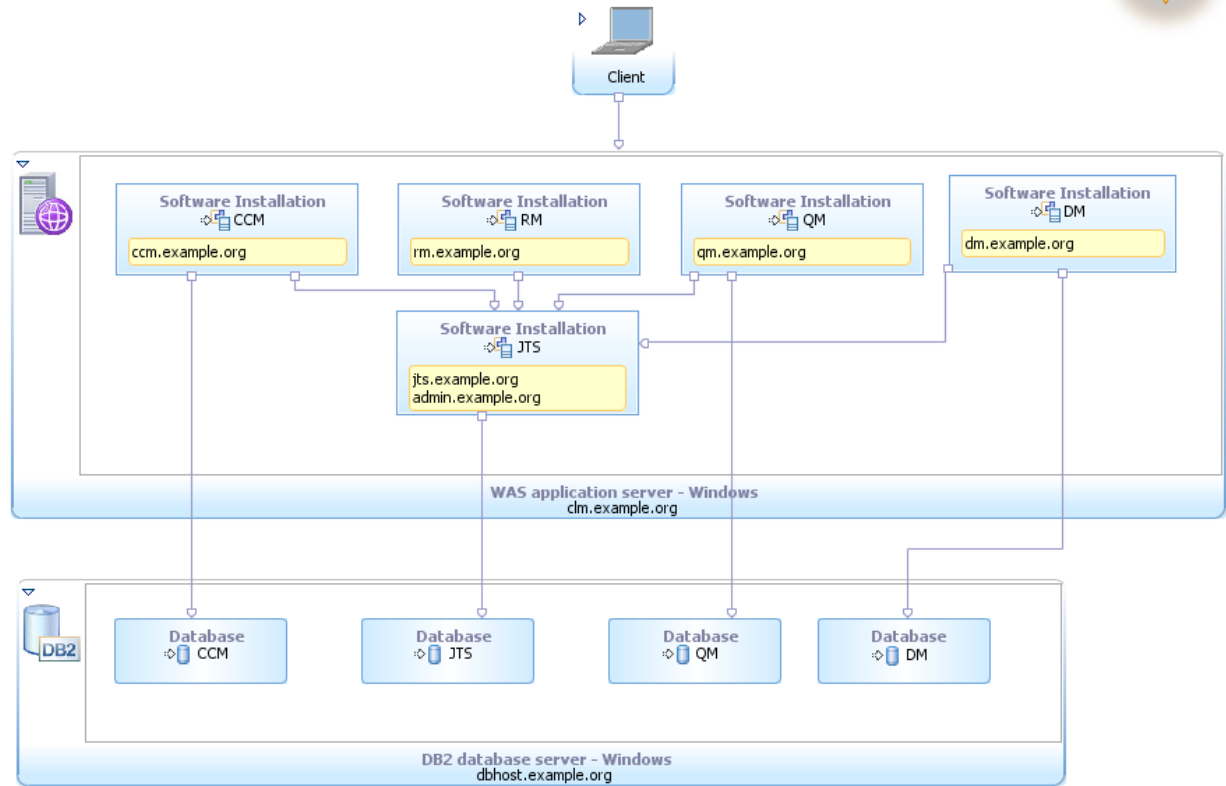
RSA Design Manager 4.0 Beta



What Does “Shared Administration” Really Mean?



- Sharing a Jazz Team Server
 - Less server infrastructure to manage
- Common user Administration
 - Only one place to define and administer users
- Lifecycle Projects
 - Easily create and manage your “projects” that use requirements, design, change management, and quality management





Design and Lifecycle Projects

- **Creating project areas within a lifecycle project**
 - The Lifecycle Project Administration application uses the notion of a lifecycle project to manage your project areas.
 - A lifecycle project groups multiple project areas that collaborate with each other. Rather than managing each project area separately, you can manage all of the project areas from this central lifecycle project.
 - After associations are established between project areas, you can link their artifacts to establish traceability across the requirements, design, development, and testing phases of the application development lifecycle.

Project Name

Template:
 This template sets up associated project areas for architecture management and requirements management. The architects (in architecture management) work integrated with analysts (in requirements management). A...
[Show More...](#)

Locale:

Description:

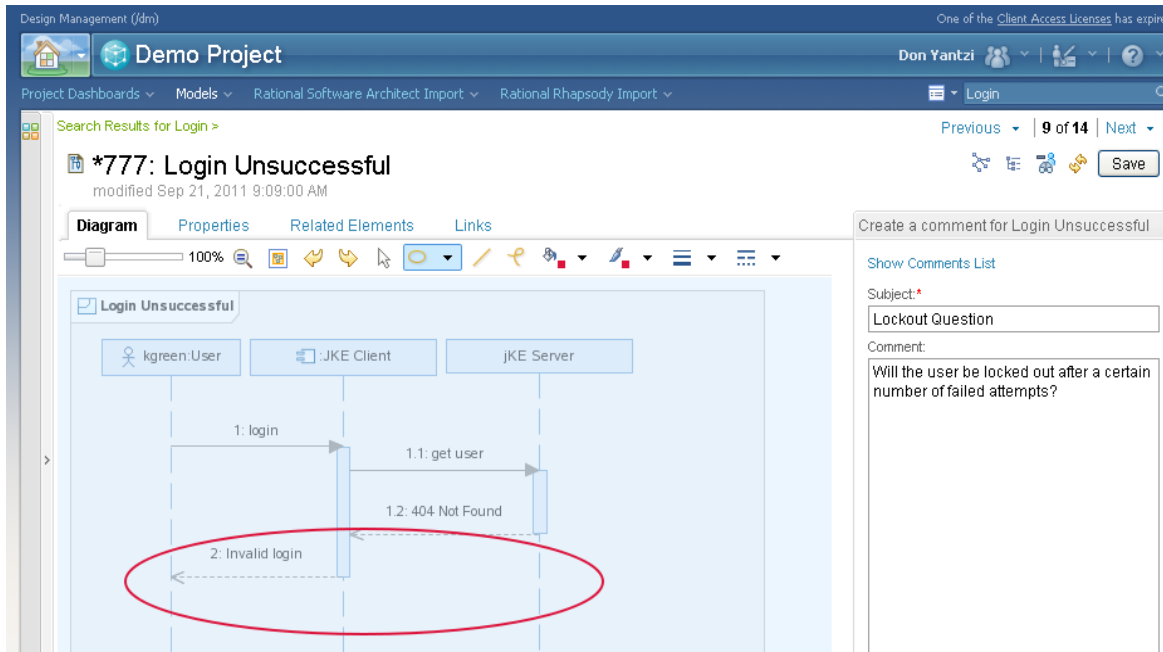
Artifact Containers

Artifact Containers for Template (2)

Method	Artifact Containers	Process / Project Template
Create:	<input type="text" value="Project Name (Architecture Management)"/> project area in '/dm' for 'Architecture Management'	<input type="text" value="Basic"/>
Create:	<input type="text" value="Project Name (Requirements)"/> project area in '/rm' for 'Requirements Management'	<input type="text" value="Base"/>

Design Collaboration

- Engaging team members in the design process with Web client access to designs
- Improve quality with in-context design collaboration through commenting and visual markup
- Automate manual and time consuming design reviews with a more guided process
- Comments can be posted and accessed from Web client and RSA desktop client



Automate Design Reviews

- Automate manual and time consuming design reviews
- Users notified via email of the review and access their reviews from the dashboard
- Design Manager tracks progress of design review
- Link review to Team Concert work items for more formalized approvals

When & Why

Who

What

Reviews > ***MyReview** Save

Overview | Participants | Resources | Links

Draft
Start Review
In progress
Reviewed
Finalized

Name: Snapshot:

Due:

Instructions:

Participants Add...

Name	Role	Review results	Completed	Actions
Julian Jones	Reviewer	0 ✓ 0 ✗ 2 ⌚	0%	
jim conallen	Reviewer	0 ✓ 0 ✗ 2 ⌚	0%	

Resources Add...

Name	Description	Actions
Main	<input type="text" value="Main Diagram"/>	
JKEClientApp	<input type="text" value="Application Interface"/>	

Dashboards

- Dashboards provide a quick way to stay on top of project activity
- DM dashboard viewlets for collaboration (recent links, comments, most active, design reviews)
- Create mashup dashboards with viewlets from CLM & DM applications

JKE Banking (Design Management) [?]

 Auto-save
 Save

General ▼ +
Add Widget

Money that Matters Sample

This sample provides an in-flight perspective of the collaborations that occur on a typical Agile team aligning requirements, development and quality. Walk through an iteration with the team as they deliver a new feature to support an important corporate initiative called Money that Matters. For getting started see the [Money that Matters sample scenario](#).

Recent Comments (0) Past Week ⌵

No results available.

Most Comments (0) Past Week ⌵

No results available.

Requirements Tracing Validated By (4) ⌵

- 137: Donors will receive confirmation and receipt
- 14: Donors will receive confirmation and receipt
- 119: Donor Chooses an Organization
- 11: Donors Choose an Organization
- 106: Dividend allocation by percentage
- 18: Dividend Allocation by Percentage
- 148: Allocate dividends by Percentage
- 3: Allocate Dividends by Percentage

PROJECT DETAILS

Members (12)

Showing 12 of 12 members.
See the [Project Area](#) to view all members.

Associated Domains (4)

- RSA BPMN Domain
- RSA Deployment Domain
- RSA Sketcher Domain
- RSA UML Domain

Actively managed with Design Manager.
See the [Domains page](#) to configure the associated domains.

Configuration Space

There is currently no Configuration

Reviews (0) My Reviews ⌵

No results available.

Recent Links (2) Past Week ⌵

- 13: JKEDesign 1 hour ago
- 150: Extended Functionality
- 13: JKEDesign 1 hour ago
- 95: Core Functionality

Current JKE Banking (Change Manag... (2) ⌵

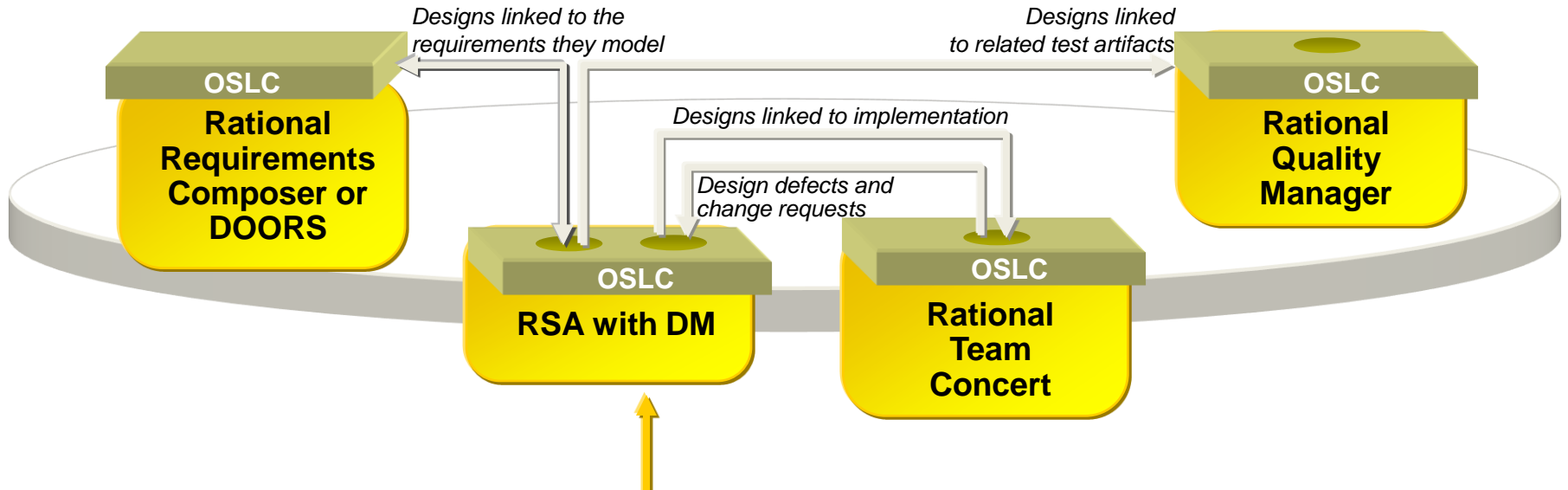
Current Iteration: **Sprint 2**

BRM Sprint 2 (1.0) Plan [Sprint 2]

Release 1.0 Backlog [Release 1.0]

Lifecycle Traceability

Integrating Software Designs with the Application Lifecycle



**Architect,
Developer,
Engineer**

- How can I leverage my designs in iteration planning?
- How can stakeholders gain a comprehensive view of the system across requirements and designs?
- How can developers find designs related to their implementations?
- How can I reduce risk and improve my agility in making changes?
- How can I ensure traceability across the lifecycle

Design and Lifecycle Traceability

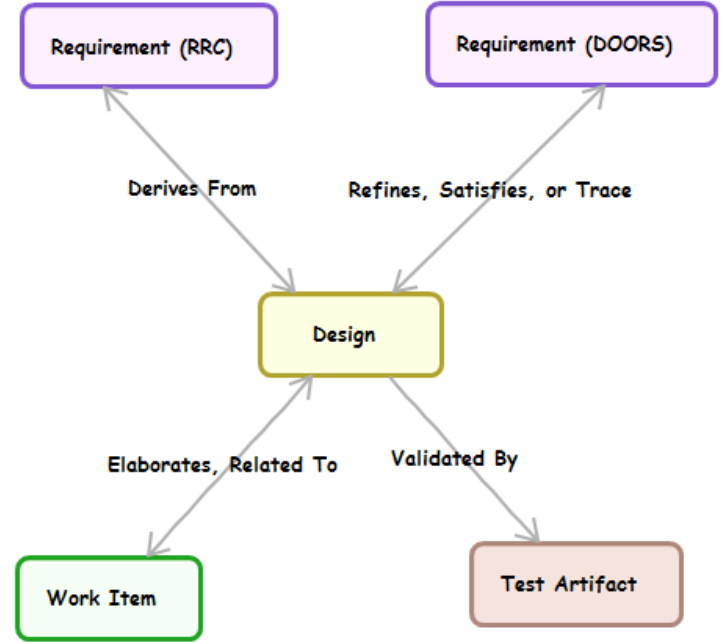
CLM 2012 and Design Manager 4.0 Beta Lifecycle Integration Scenarios



- Design and Requirements
 - **Analysis**: link designs that provide the next level of details for requirements
 - **Coverage**: link designs that implement requirements to ensure coverage

- Design and Change Management (Work Items)
 - **Planning**: link design tasks to related designs
 - **Design Changes**: link design change sets to related work items
 - **Implementation**: link implementation tasks to related designs making it easier for developers to find design
 - **Defects**: link design defects back to defective design

- Designs and Test Artifacts (one-way only)
 - **Test coverage of designs**: Link from designs to test artifacts that validate the design to ensure test coverage



Deploying Predefined Link Types



Link types are specific to each project area

Select Manage Project Properties

Design Management (/dm) One of the Client Access Licenses expires in 76 days

JKE Banking (Design Management) JKE Banking (Design Management) Default Workspace Don Yantzi

Project Dashboards Designs Reviews Analysis Import Search Designs

Link Management

- Project Linking
- Explorer
 - Explorer Filtering
- Modeling
 - Domains
- OSLC
 - Default OSLC Context
- Versioning
 - Configure Space

Project Linking

Defined Link Types

Use the following section to add new link types. A link type indicates the relationship between two resources and is directional. Possible link types include Architects, Elaborates, Related To, Specifies, and Validated By.

To make common collaborative lifecycle management (CLM) relationships available for use in the project, you can [deploy a set of predefined link types](#).

Link Type	Description	Actions
Derives From	This resource is derived from the referenced resource. This means the resource originated from, or is significantly influenced by, the referenced resource. For example a UML Use Case is derived from a Requirement. When linking to a Requirement in a Jazz RM provider, links of this type will appear in the UI as "Derives".	
Elaborates	This resource elaborates the referenced resource. For example a Business Process Diagram can elaborate a Work Item Task. When linking to a Tasks or Defect in a Jazz CM provider links of this type will appear in the UI as "Elaborated By Architecture Element" link.	
Refines	The target is a refinement of the source. (e.g. a use case scenario might be a refinement of a textual requirement that describes the interaction). Used in DOORS 9.x traceability.	
Related To	General purpose relationship between OSLC resources. When linking to an Task or Defect in a Jazz CM provider links of this type will appear in the UI as "Related Artifact".	
Satisfies	The model element satisfies the requirement (e.g. The use case satisfies a functional requirement). Used in DOORS 9.x traceability.	
Trace	The model element has a trace to the requirement (e.g. an attribute or its value are traced to a requirement) A model element that is traced to another model element that in turn is traced or satisfies a requirement (e.g. a design class is traced to an analysis class that is traced to a use case that satisfies a requirement). Used in DOORS 9.x traceability.	
Validated By	This resource is validated by the referenced resource. For example a UML Component can be validated by a Test Case.	

Delete link types you don't need by hovering in the Actions column. This avoids clutter in drop down when creating links!

Click hyperlink to deploy predefined link types

Showing Designs in Plans and Requirements Views



<input type="checkbox"/>	206	JKE Charity Coordinator will respond to request in the website triggering..	Feature
<input type="checkbox"/>	216	Donors can choose to support an organization	Feature
<input type="checkbox"/>	217	Service for Allocating Dividends	Feature

Derives

- 584: Service Interfaces - Overview
- 537: Logical Topology

RRC View showing elements linked to requirements

BRM Sprint 2 (1.0) Plan

34 items: 34 open, 0 closed | Ends in: 1 day

Plan Details Edit

Planned Items Links Snapshots Dashboard Notes

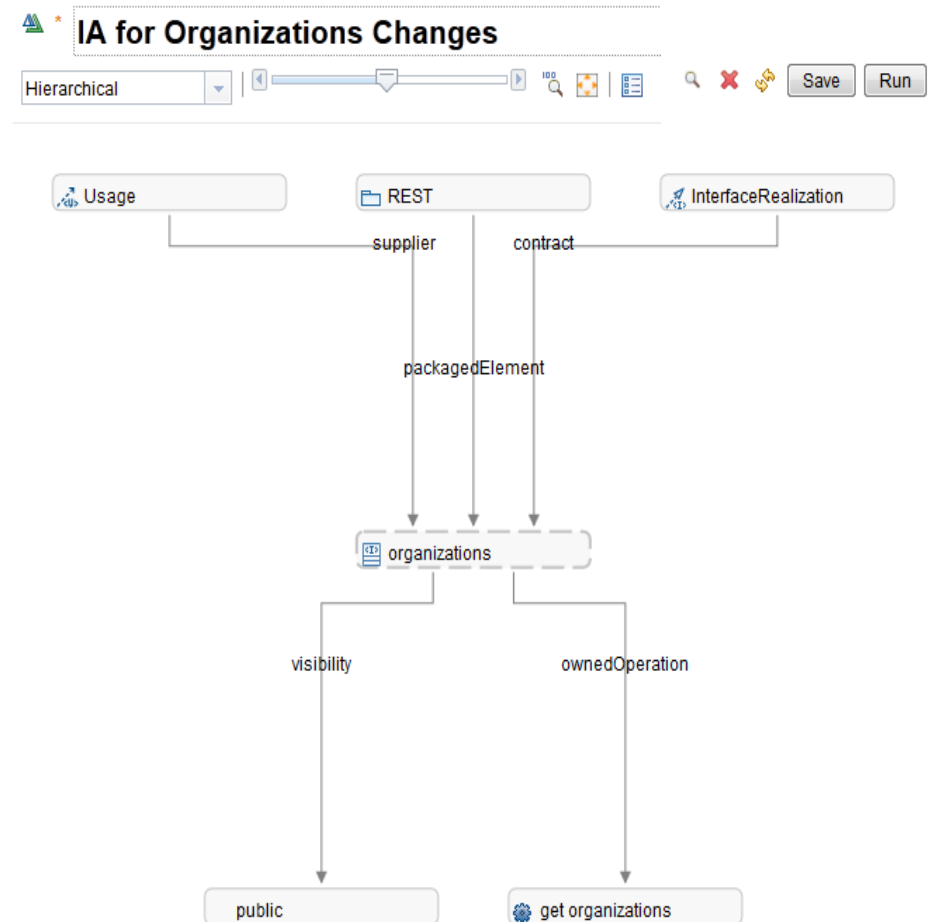
View As: Traceability Type to Filter (23 items filtered) Add Work Item

Summary	Implements Requirement	Tested By Test Case	Elaborated by Architecture Element
Donor Dividend Allocation Criteria	Donor Dividend Allocation Criteria	Donor dividend allocation conforms to stated criteria	Allocate Dividends to Cause
Validate Loan Term and Amount	Validate Loan term and amount	Test Validate Loan Term and Amount	--
Frequency of dividend transfer	Frequency of dividend transfer	Verify dividend transfer frequency	--
Requests sent in form of email	Requests sent in form of email	Process email requests	--
Organization must identify how much money is...	Organization must identify how much money is desir	Organization must identify how much money is desir	--
Organizations may apply with an initial request	Organizations may apply with an initial request	Organizations may apply with an initial request	--
Customers can Nominate an Organization	Customers can nominate an organization for the pro	Customers can Nominate an Organization	--
Organization must provide justification for why ...	Organization must provide justification for why funds	Organization must provide justification for why funds	--
Organizations can Apply	Organizations can apply	Organizations can Apply	defined organizations
JKE Charity Coordinator will respond to reque...	JKE Charity Coordinator will respond to request in th	JKE Charity Coordinator responds to online request	--
Allocate Dividends with Web Service	217: Service for Allocating Dividends	--	Service Interfaces - Overview

RTC Plan in Traceability view showing linked design elements

Impact Analysis – Design Centric View

- Design Management 4.0 Beta includes a new graphical impact analysis diagram
 - Includes both **design and OSLC linked** artifacts
- An **Analysis Configuration** defines the parameters for the analysis
 - **Upstream** level, **downstream** level, which links types to include
 - Can be used be shared by multiple analysis
- An **Analysis** applies the configuration to a selected element to perform the impact analysis
 - Add and remove elements from impact analysis diagram
 - Save and re-run at a later time

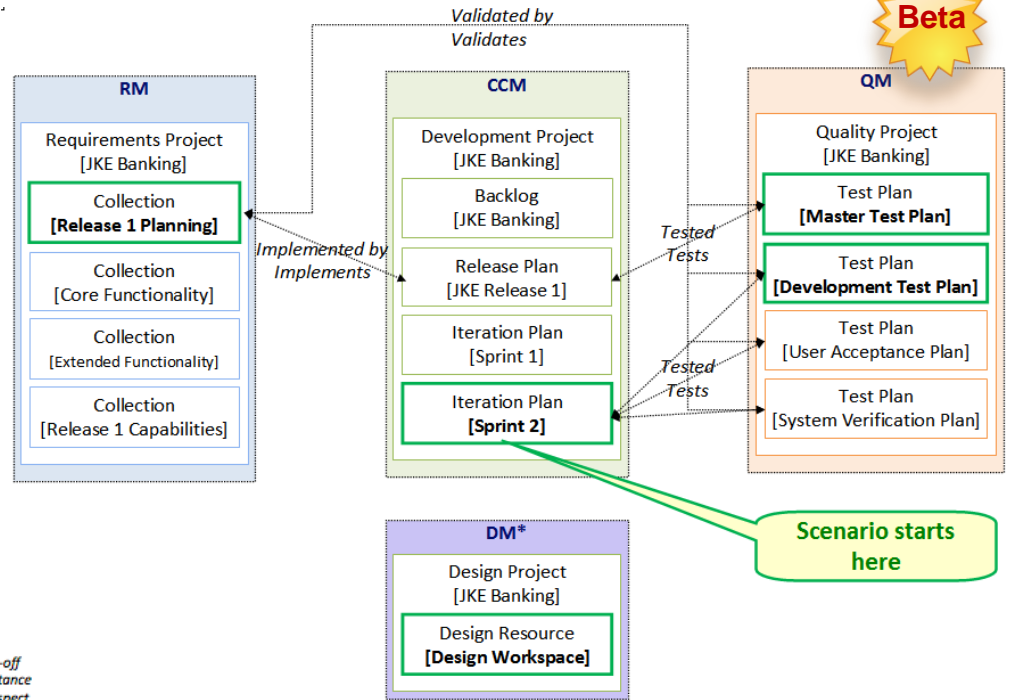


Sample Application - Money That Matters 2012

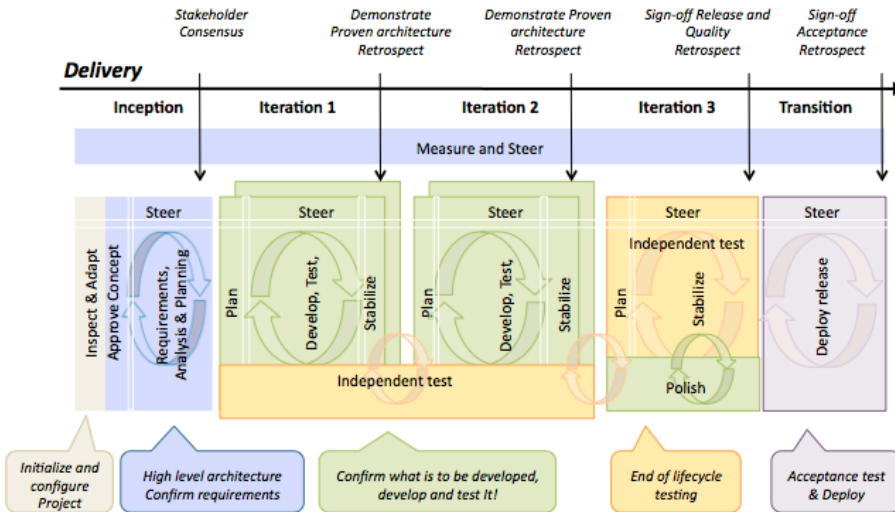


What is it?

- Sample application shipped with CLM and RSA DM Beta
- Makes it easy to try out CLM
- Deployed as a lifecycle project
- Contains RM, CCM, QM, and DM artifacts



Release Lifecycle Overview Hybrid agile practices applied at scale



Release Lifecycle Process

- Hybrid approach that includes the Disciplined Agile Delivery process framework
- Scaling factors which necessitate the need for upfront requirements management and release planning
- Multiple teams running iterations at the same time (where Scrum is applied)



www.ibm.com/software/rational