



IBM Software Group | Rational Software

Rational ALM Strategy and Directions

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Rational. software



ON DEMAND BUSINESS™

Rational Cross-Product Green Threads

Definition

- Workflow across a set of products to solve a complex customer problem

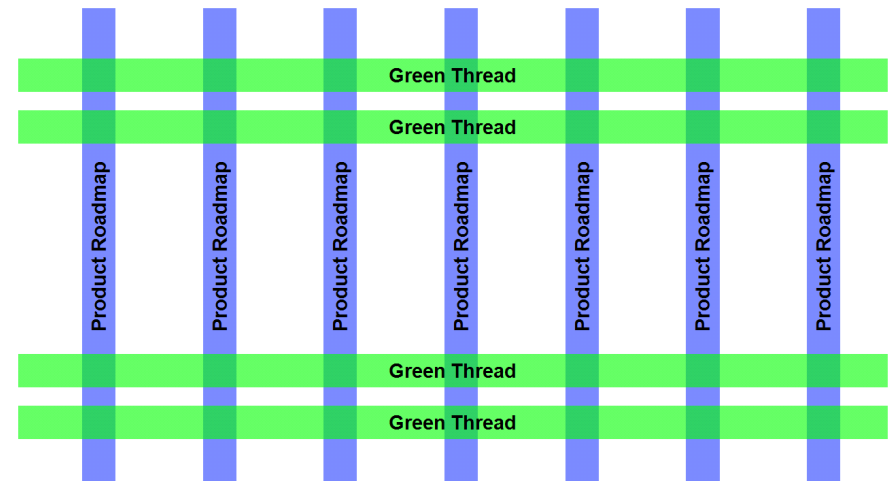
Goals

- Move beyond point product thinking
- Deliver solutions that solve real-world customer problems
- Identify and prioritize key issues and roadblocks to product development
- Provide guidance and recommendations for customers to use

Organization

- Reporting to VP Development
- Collaborative effort with product and offering management, marketing, engineering, and field teams
- Focus on Application Lifecycle Management, Enterprise Architecture and Software Development Governance

From Product-Centric to Solution-Centric

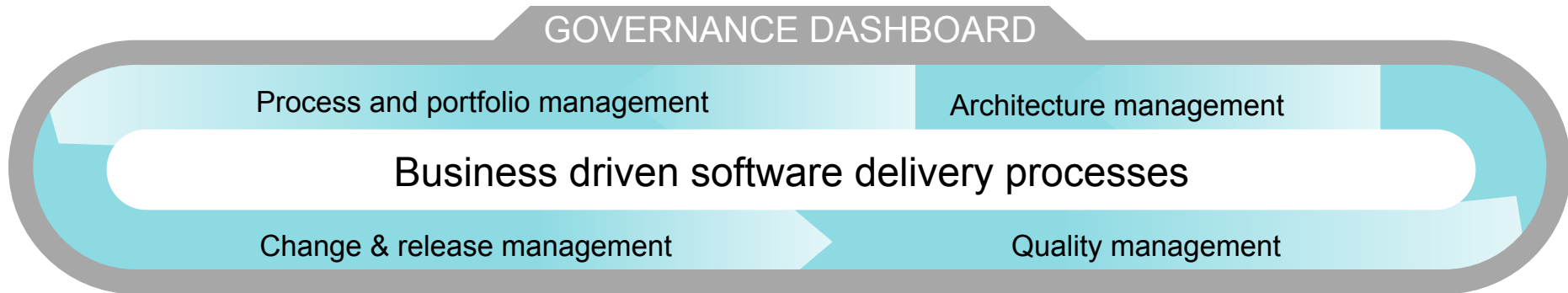


IBM Rational software

A strategic partner in business innovation & transformation



Collaborative, Process-Driven Lifecycle Management



Manage value

- Real-time analytics linking financial and software information
- Real-time resource management
- Comprehensive, flexible dashboards monitoring health of projects

Development flexibility

- Proven best practices
- Integrated requirements & architectural mgmt
- SOA design and construction capabilities
- Open, collaborative role-based team environment

Control risk and change

- Lifecycle change and asset management
- Built-in audit and status information on projects and assets
- Functional & compliance quality management
- Service-level monitoring



Pillars of ALM

■ Governance

- ▶ ... govern projects on live metrics in context of established plans traceable to original business goals and strategies

■ Collaboration

- ▶ ... establish role based, contextual collaboration among organizationally distributed networks of stakeholders and contributors

■ Traceability

- ▶ ... reduce impact and risk of change – by understanding the relationships across versions, variants and releases of assets, where change to one impacts others

■ Process Automation

- ▶ ... improve performance, compliance and quality by automating development process workflows and leaving an audit trail of what occurred

■ Distribution and Integration

- ▶ ... support flexible and agile business sourcing decisions by integrating distributed roles, teams, workflows, and asset repositories into a responsive software delivery chain



ALM Philosophical Principles

- Development is not an island unto itself; rather, we provide a service to the business
- Solutions never die, they are refined & maintained for years
- Software Solutions are the product of many Conversations
- There are cycles within ALM; some of these cycles are ripe for automation
- Simplicity First



The development focus has shifted

from the Individual...

- Remember late 90' s
 - ▶ Focus on “point tools”
 - ▶ Who can build the best Java IDE, the best C IDE, the best Web tool, ...
- When Eclipse was built
 - ▶ Focus a developer's productivity
 - ▶ Seamless integration across a set of tools to improve the productivity of one developer

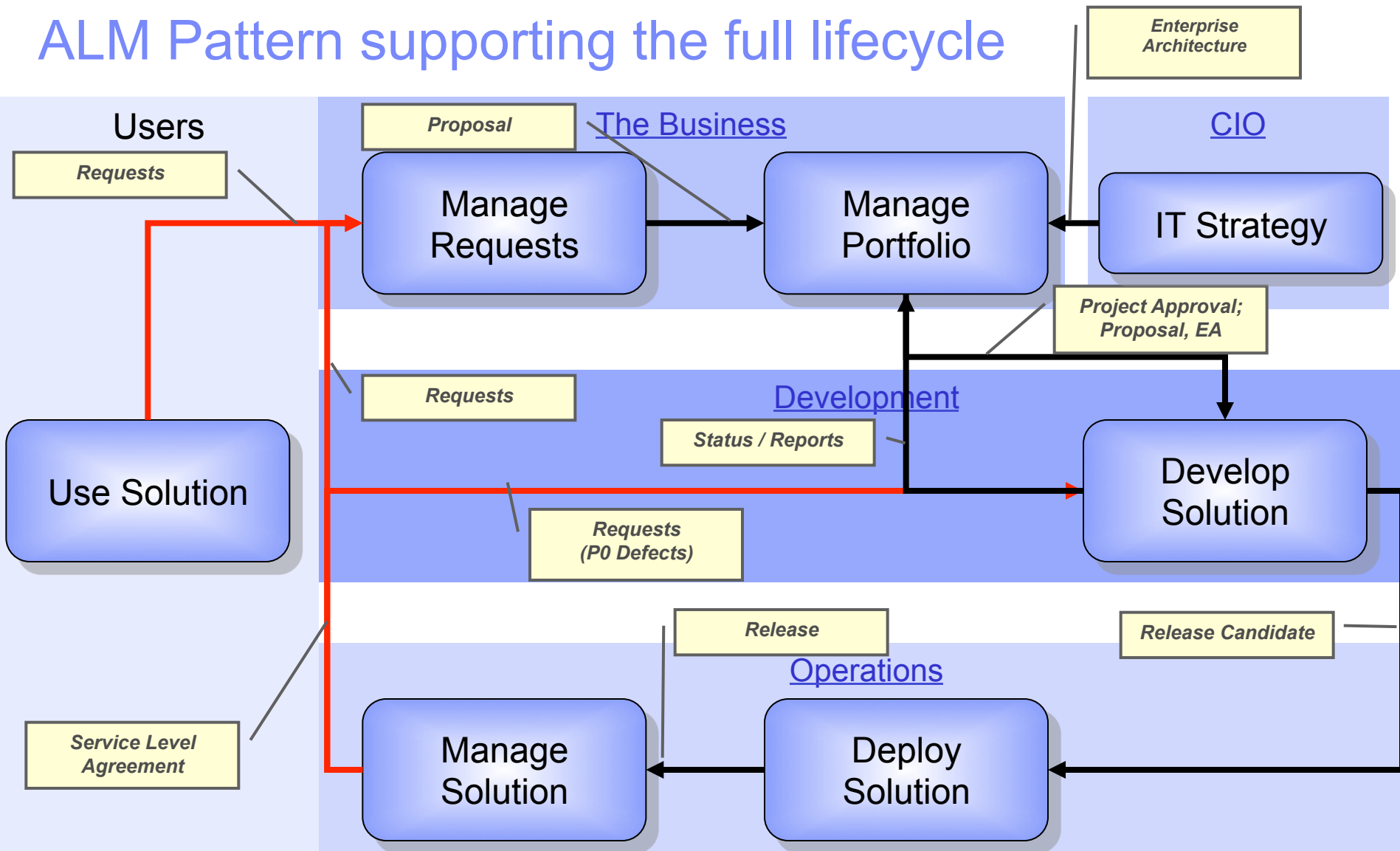
...to the Team

- Today, we must focus on the team's productivity
 - ▶ Collaboration
 - ▶ Geographically distributed
 - ▶ Accelerated delivery demands
 - ▶ Agility with predictability
 - ▶ Innovation and repeatability
 - ▶ Increased need for transparency
- Plus, we want to improve total cost of ownership (TCO) of our solutions

And we are introducing Collaborative Development Environments with jazz



ALM Pattern supporting the full lifecycle



CQALM

■ Objective

- ▶ Improving ClearQuest ability to support the management of artifacts through the application lifecycle
- ▶ Consolidate Analysis, Design, Test, Build, Deployment and Project Tracking schemas. Establish End-to-End traceability of software development artifacts
- ▶ Leverage CQ as ALM information Hub
- ▶ Out-of-the-box CQ ALM schema for SMB projects or add-ons to existing schemas
- ▶ Provide Out-of-the-box Queries/Reports necessary for release decision making
- ▶ Designed for Geographically Distributed Development

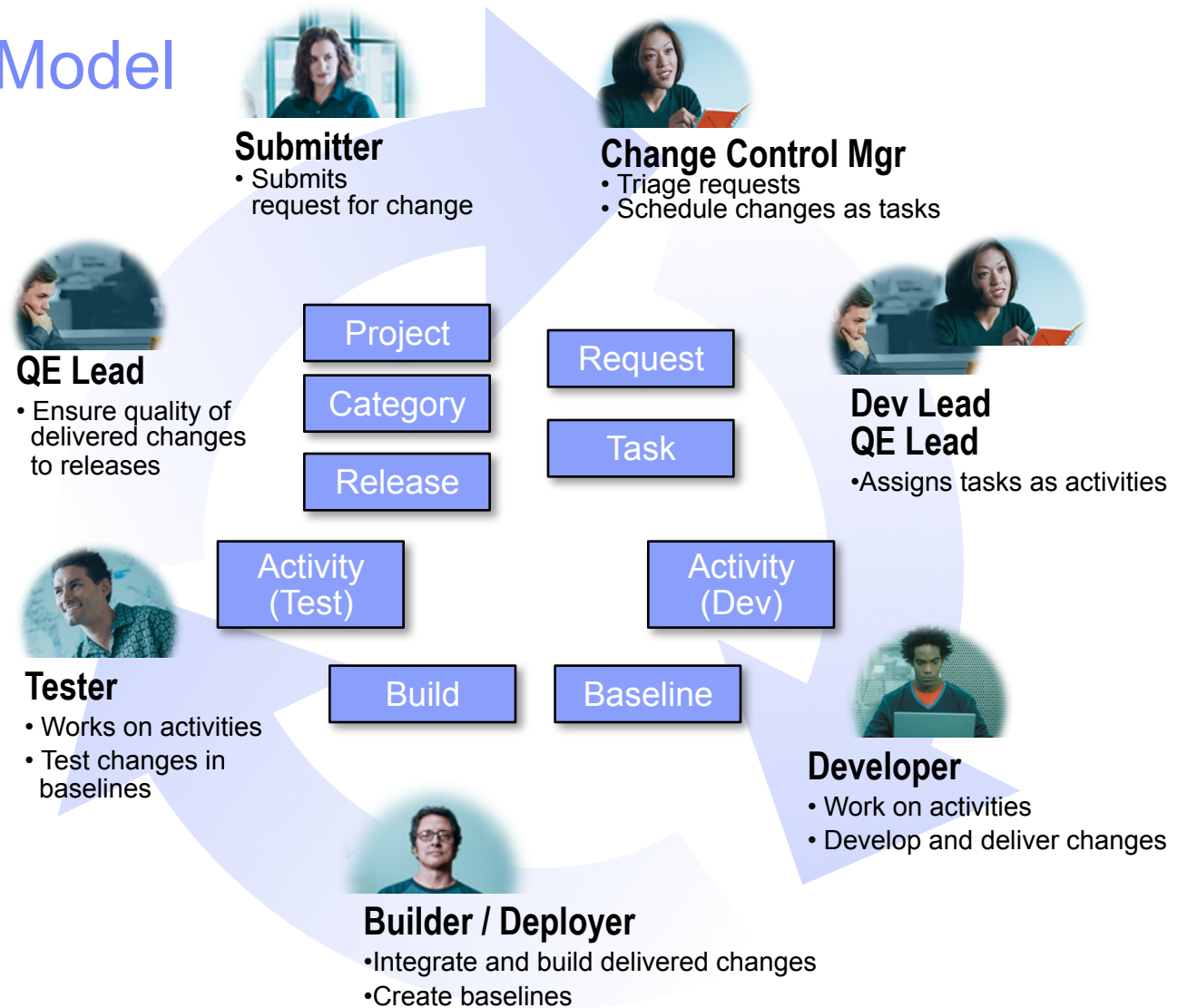
■ Status

- ▶ Progress demonstrated at RSDC 2007
- ▶ Key use-cases and requirements identified
- ▶ Targeting availability in 7.1 release 2H 2008



Enterprise ALM Model

- Enterprise process model focused on Request object submitted for a Release of a Project
- Workload can be balanced across Phases and Iterations of a Project
- Activity objects governing the work performed by the Roles in the teams

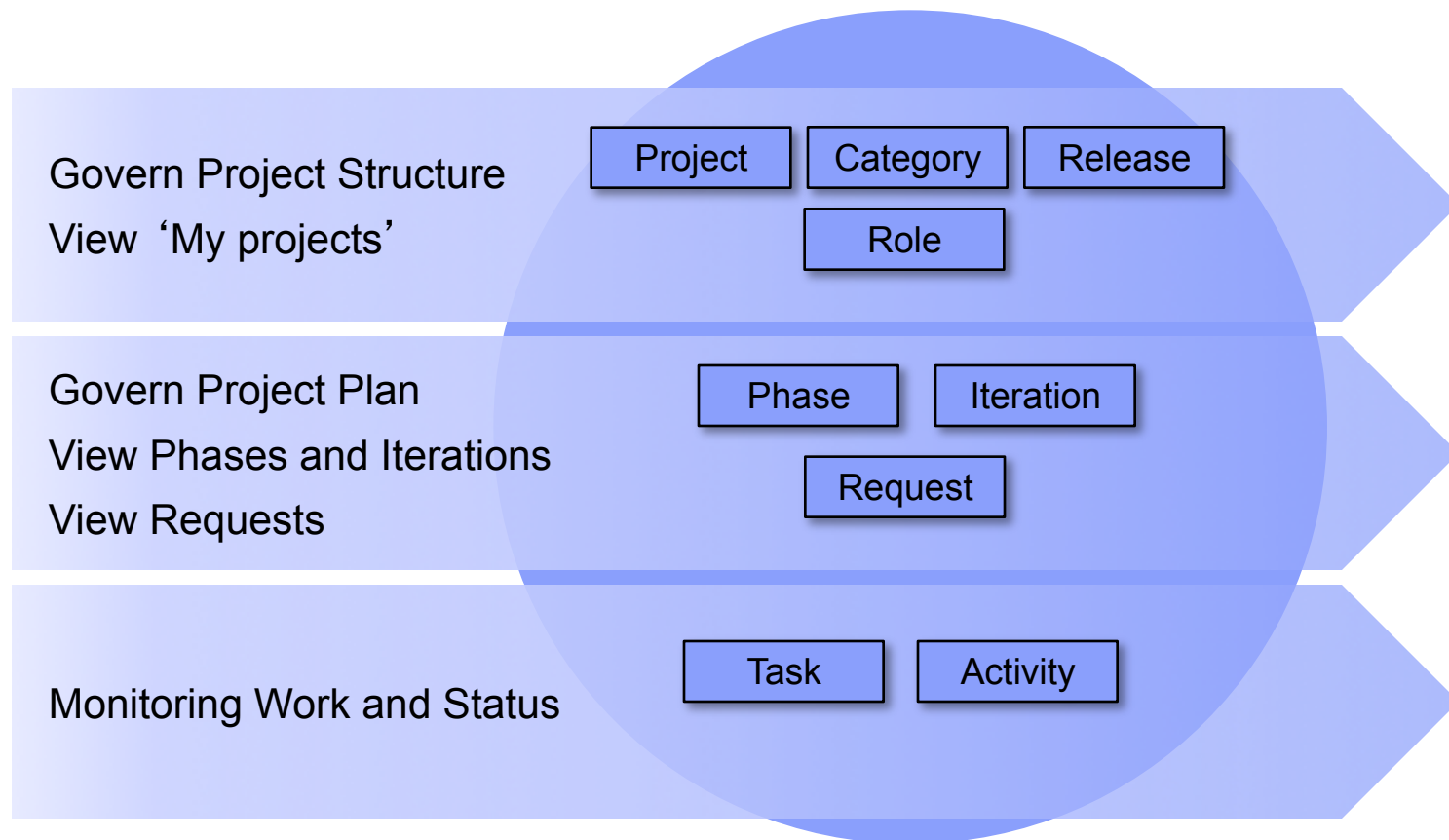


Project Health - Project Manager View

- Patricia the Project Manager must assess the team's progress / status before finalizing current project milestone
 - ▶ Did they complete all work they planned to complete?
 - ▶ What's the Quality?
 - ▶ How can Patricia make this decision?



Patricia –
Project Manager



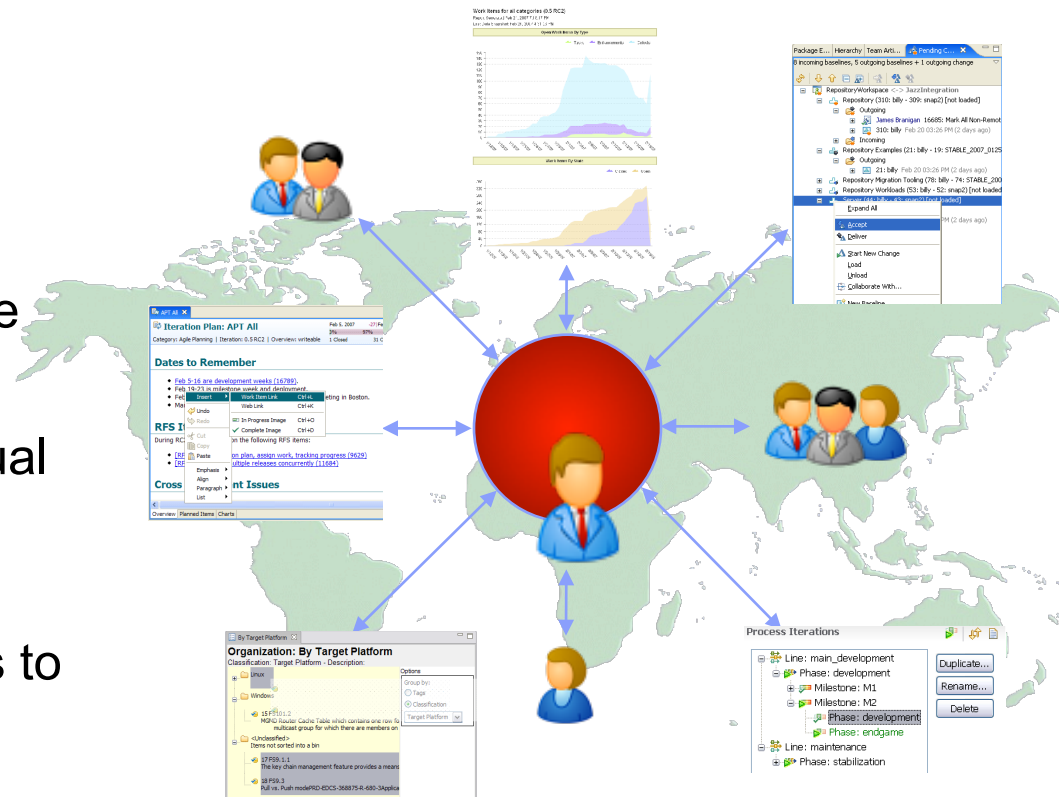
What is *jazz*?

- Jazz leads the way to Collaborative Development Environments
- Jazz is open, scalable and extensible team collaboration technology for seamlessly integrating work across the development lifecycle
 - ▶ Open and extensible in both worlds (Client and Server)
 - Based on the IT standards (J2EE, Web Services, Ajax,...)
 - Uses the Eclipse principles (OSGi bundles, extension points, ...)
 - Extensible by IBM, partners, customers, etc...
 - ▶ Scalable according to
 - Process complexity
 - Number of users: from small teams to large organizations

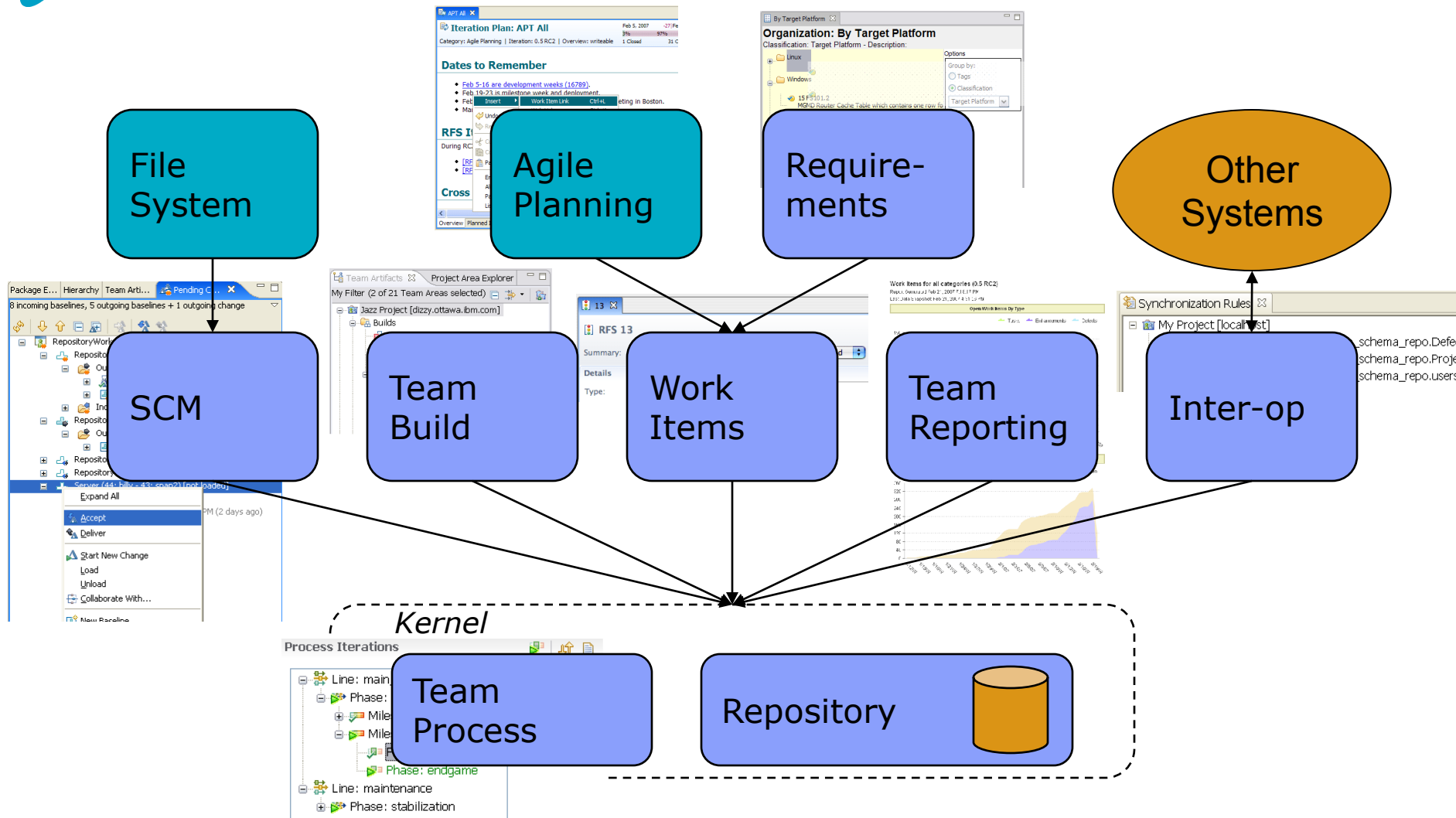


What can *jazz* do for your enterprise?

- Jazz enables projects to be run more effectively by providing accurate real-time project health information drawn directly from actual project work
- Jazz manages artifacts across the development lifecycle
- Jazz shifts thinking from “Individual First” beyond “Team First” to “Collaboration First”
- Jazz enables development teams to collaborate in real time in the context of the work that they are doing



jazz components overview



Questions

Thank You



Backup



Backup

- Rational Cross-Product Green Threads
- IBM Rational Strategy
- Rational ALM Vision and Manifesto
- Ongoing ALM/2 Investments
 - ▶ CQALM
 - ▶ Jazz and Rational Team Concert



Cross-Product Green Threads

Business-Driven Development	The identification, analysis, design, implementation, test, deployment and monitoring of a process change.
System In Trouble	The detection, diagnose, fix, test and redeployment of an encountered problem in a system in production.
Deployment	The deployment of a system into test or deployment.
Software Development Governance	The creation and establishment of a governance framework, including definition and management of policies and audits, in a software development organization throughout the development lifecycle.
Geographically-Distributed Development	The collaboration on a single application release, which must also integrate fixes from an outsourcer who handles the application maintenance.
Systems Development	Challenges of software development in the context of systems development
Application Lifecycle Management	Explores traceability across the development lifecycle, following a single requirement from initial creation to deployed release.
SOA for Financial Services Sector	Challenges of use, reuse, and management of IFW/IAA models, SWG tools and methodologies



JK Enterprises – GDALM Development & Delivery Scenario

JKE-EU



- Agile development team w/ open-source preferences
- Key skills and assets in vertical market
- Roles contributing in multiple projects

EU Regional Partners

- Consumer of deliveries for localization and local market testing

JKE-US



- HQ functions
 - Business leaders
 - Product and Project leaders
 - IT Operations
- Multiple sites spanning multiple projects
- Central dev functions

GSI-India



- Strategic System Integrator partner
- Mature internal processes on CMMI level 5
- Roles contributing in multiple innovation projects
- Ownership of maintenance

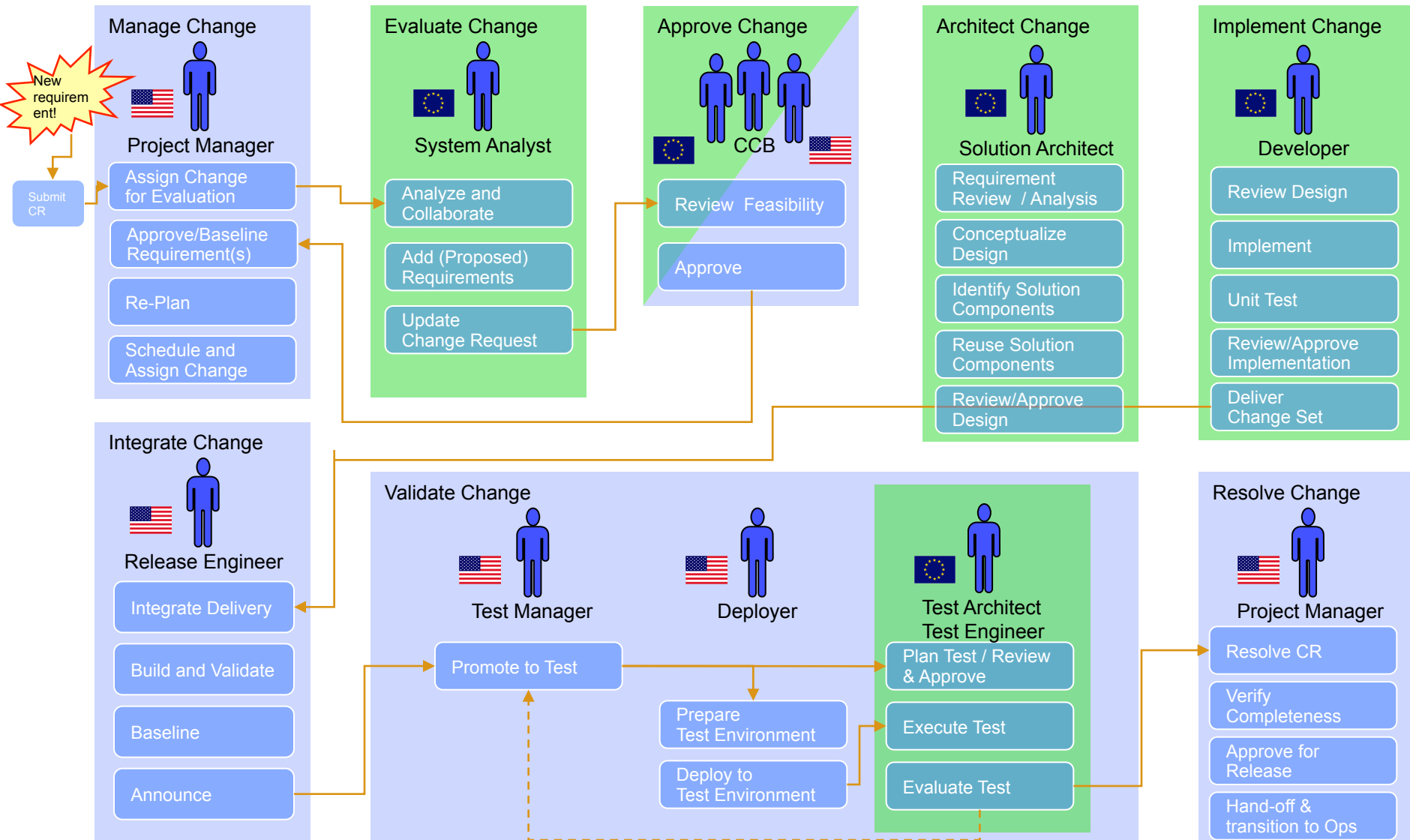
JKE Scenario

- ▶ JK Enterprise is a financial sector company
- ▶ JKE IT is tasked to deliver business optimization project(s)
- ▶ JKE R&D Conducting Organizational Distributed Development
 - New innovation projects run in US, EU, and India
 - Maintenance in India
 - Partner network for application localization
- ▶ Increasing dependency on off-shore capacity

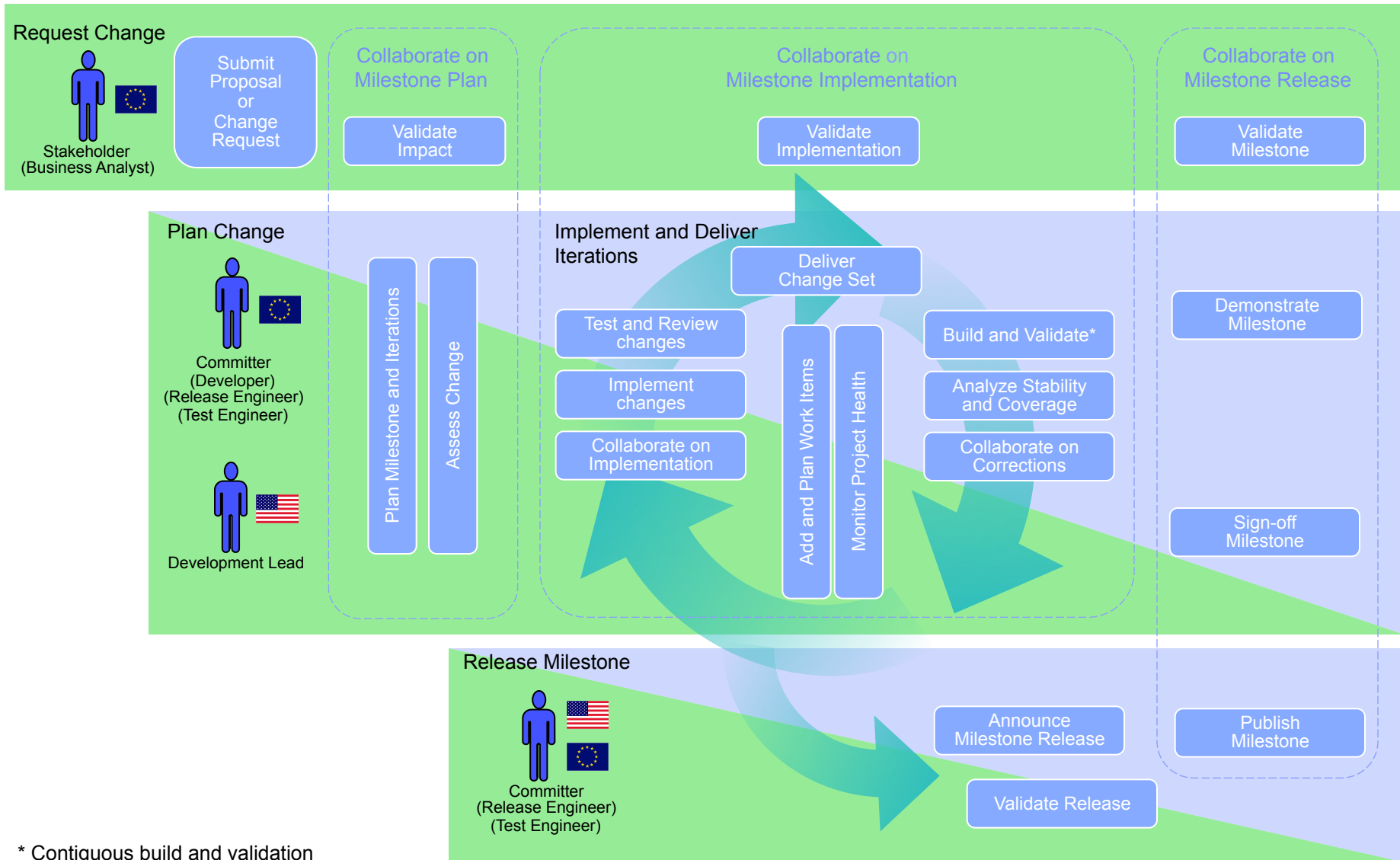
JKE ALM Challenges

- ▶ Extending tools to a Global Governance and Delivery Platform
- ▶ Enable team collaboration
- ▶ Improve IT delivery efficiency and capacity
- ▶ Manage repository and asset integration and security

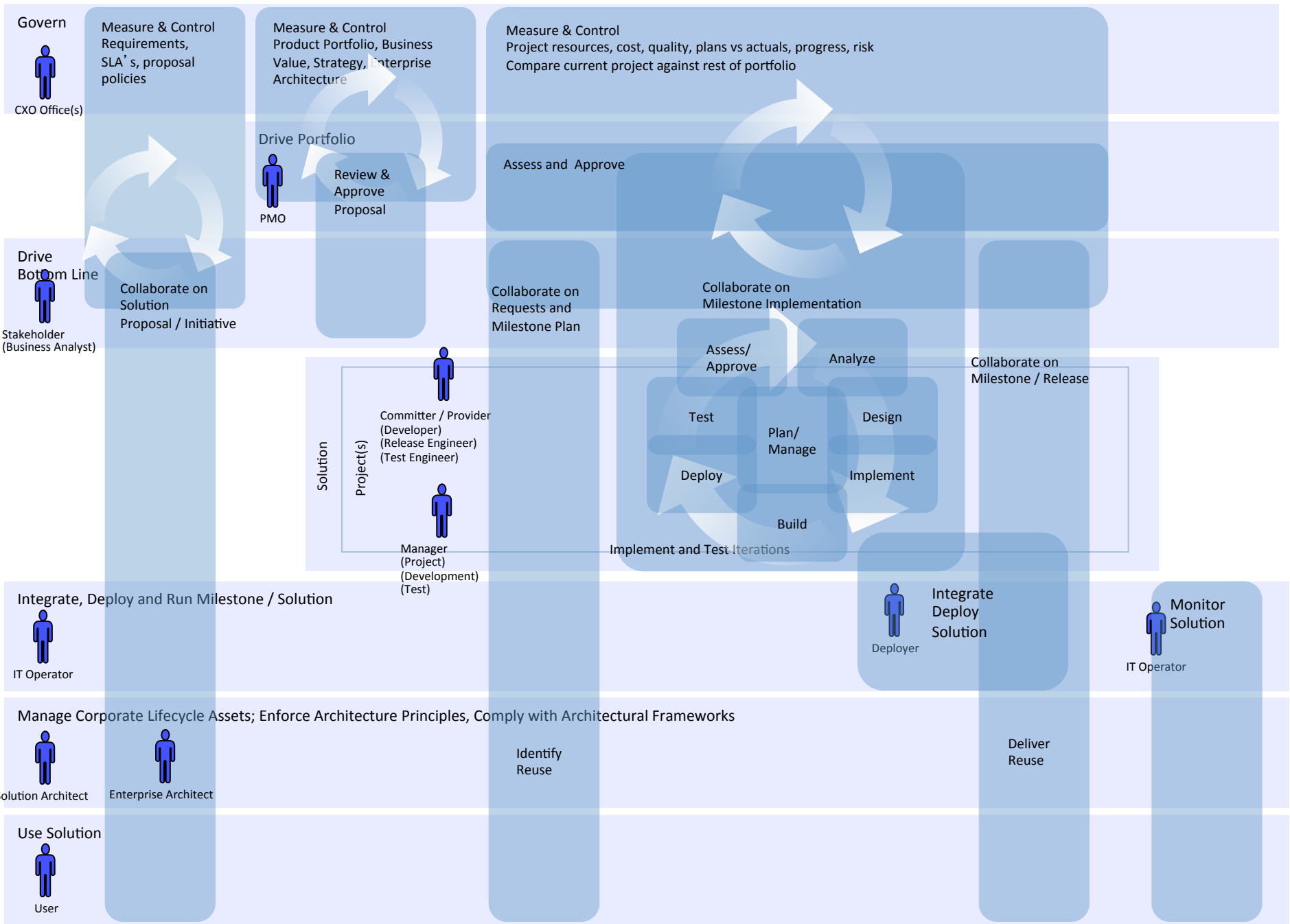
GDALM - New Development Thread



RTC Develop and Deliver Scenario



* Contiguous build and validation



- Business driven software development and delivery supported by
 - ▶ Governance
 - ▶ Collaboration
 - ▶ Traceability
 - ▶ Process automation
 - ▶ Integration and Distribution

Philosophical Principles

- Development is not an island unto itself; rather, we provide a service to the business.
 - ▶ The development team innovates within the context of business goals, enterprise architectures and operational constraints.
 - ▶ Teams around the world interact to produce software solutions (Business, Operations, Development, Partners)
- Software Solutions are the product of many Conversations
 - ▶ ALM involves many conversations which result in artifacts which ultimately result in deployable software.
 - ▶ Support people whoever they are, where ever they are, and whatever tools they use to create artifacts
 - ▶ Relationships Matter. There are People clouds, Artifact clouds, Tag clouds. Public/Shared Bookmarks.
 - People collaborate to produce artifacts
 - Artifacts are linked and traceable regardless of where they are located
 - A change to one artifact impacts other artifacts and the people who own them
- Solutions never die, they are refined & maintained for years.
 - ▶ All artifacts are Investments and should be treated as such.
 - ▶ Most project artifacts move forward and are re-used for the next "release."
 - ▶ Solutions can be assembled from parts of other solutions (asset & artifact re-use)
- There are cycles within ALM; some of these cycles are ripe for automation
 - ▶ Business priorities drive software project selection while Operations priorities drive maintenance cycles & hotfixes.
 - ▶ Project schedules drive development software projects
 - ▶ Quality drives development cycles within iterations; there are repeated patterns of activity
- Simplicity First
 - ▶ It's easy to grow from something simple. It's difficult to simplify something that is complex.
 - ▶ Customers look to Rational for a reference implementation to start with, but expect to customize it to suit their needs

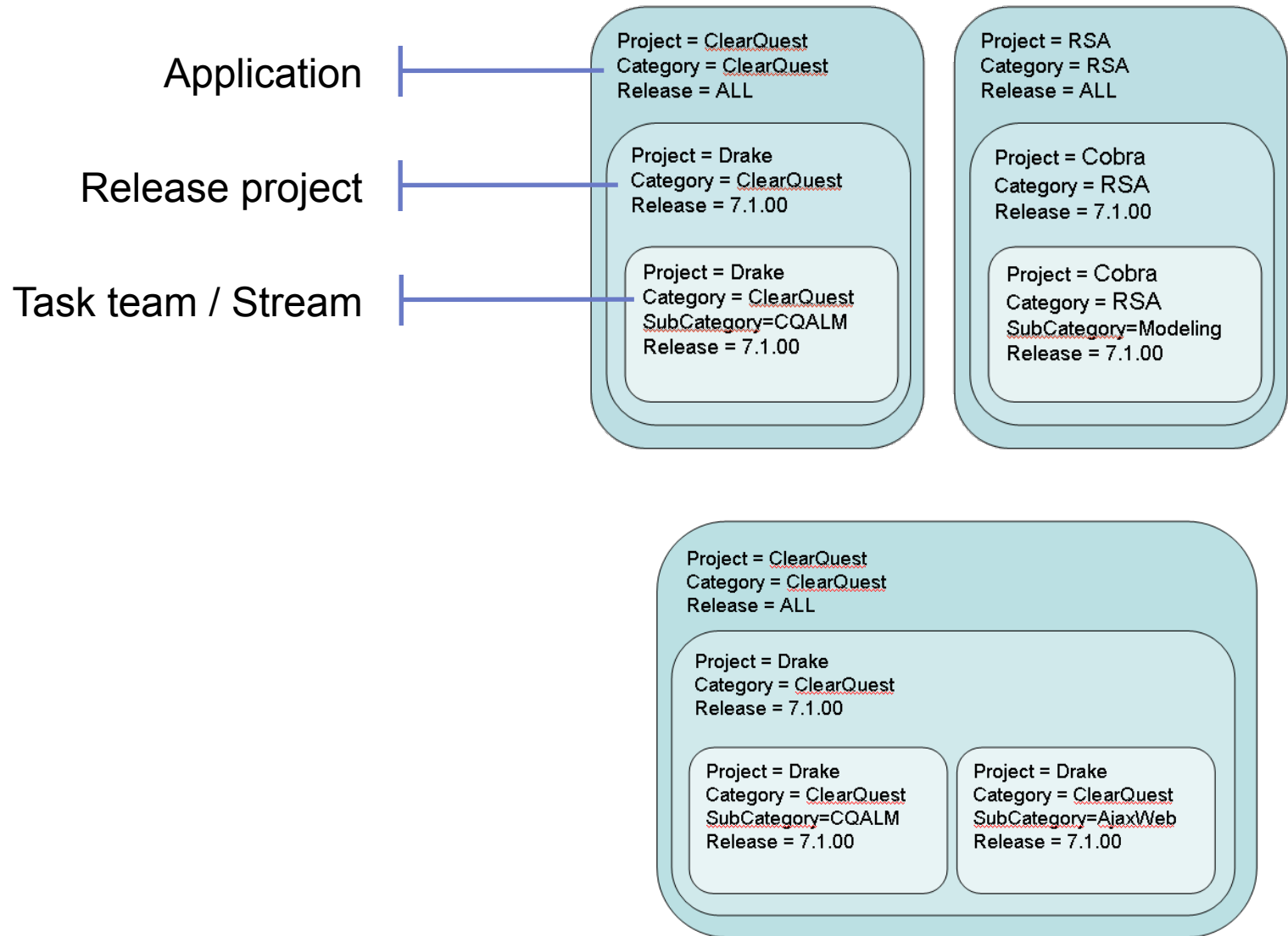


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CQALM Use-Cases

■ Project Manager

- ▶ Organize project
 - Create Project
 - Establish Roles, Team Members, Categories, Phases and Iterations
 - Establish access security
- ▶ Track Project
 - Identify any outstanding requests
 - Identify un-assigned work (Request/Task)
 - Project load balancing - Who is working on what
 - Task completeness - How much is left to go
 - Project status against plan - Are we done

■ Any Role

- Submit Request, Task, Activity
- Deliver Activity
- Report on assigned Task, Activity - What do I have to do?
- Report on assignment Status - What is the state of work I've submitted?
- Report on health - What's our status?

■ Release Engineer

- Identify Build status and contents

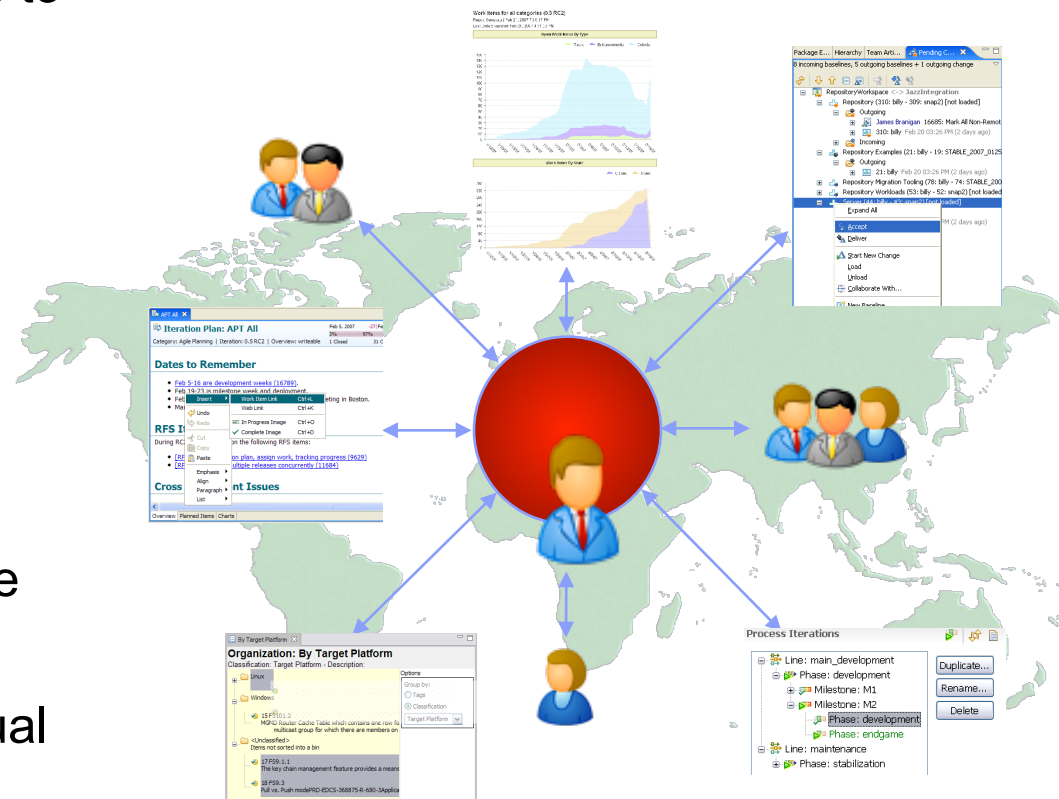
■ Tester

- Determine what to test

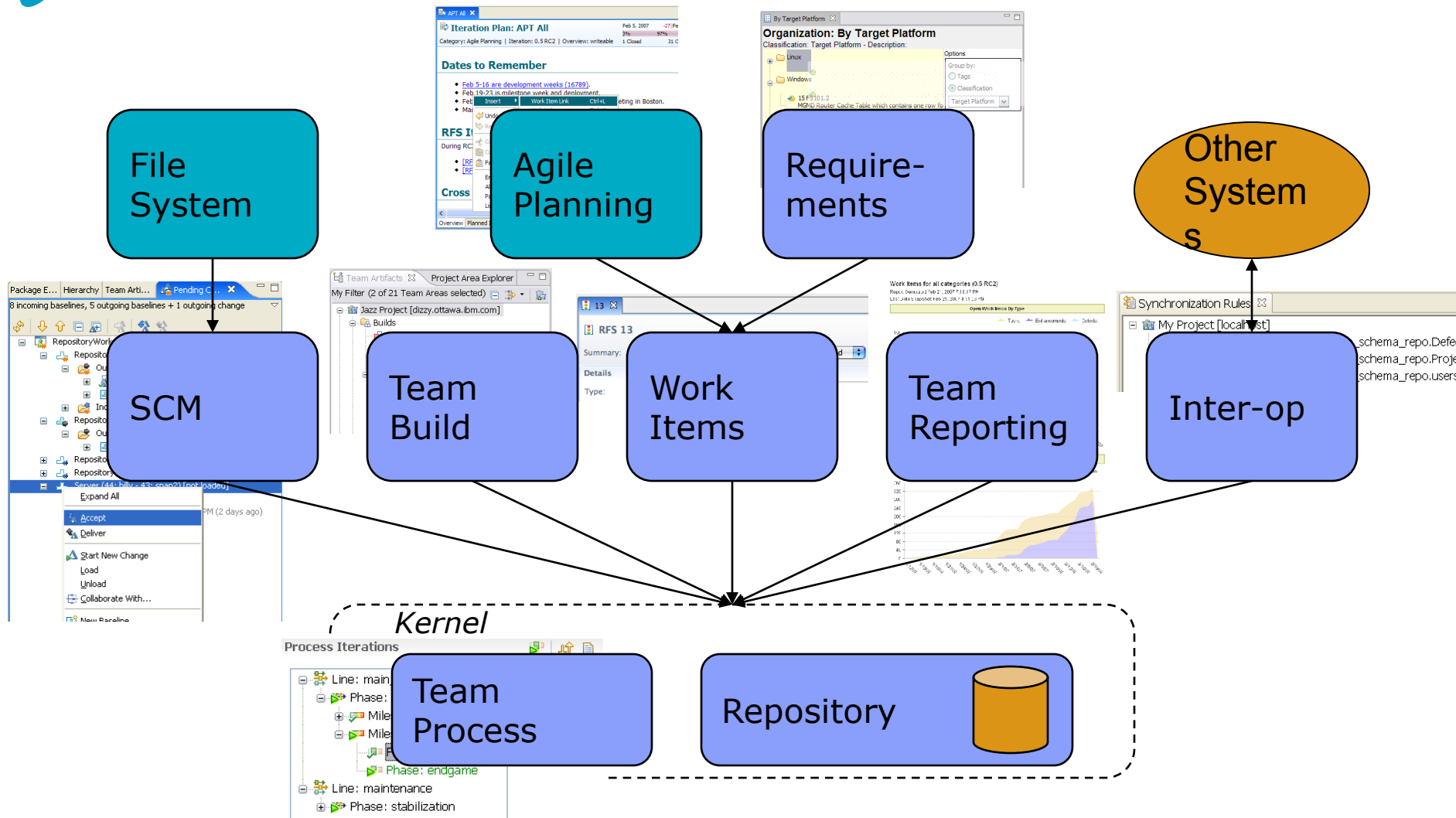


What can *jazz* do for your enterprise?

- Jazz enables development teams to **collaborate in real time in the context** of the work that they are doing
- Jazz enables projects to be run more effectively by providing **accurate real-time project health information** drawn directly from actual project work
- Jazz **manages artifacts** across the development lifecycle
- Jazz shifts thinking from “Individual First” beyond “Team First” to “**Collaboration First**”



jazz components overview



Build and Deployment Tracking with ClearQuest

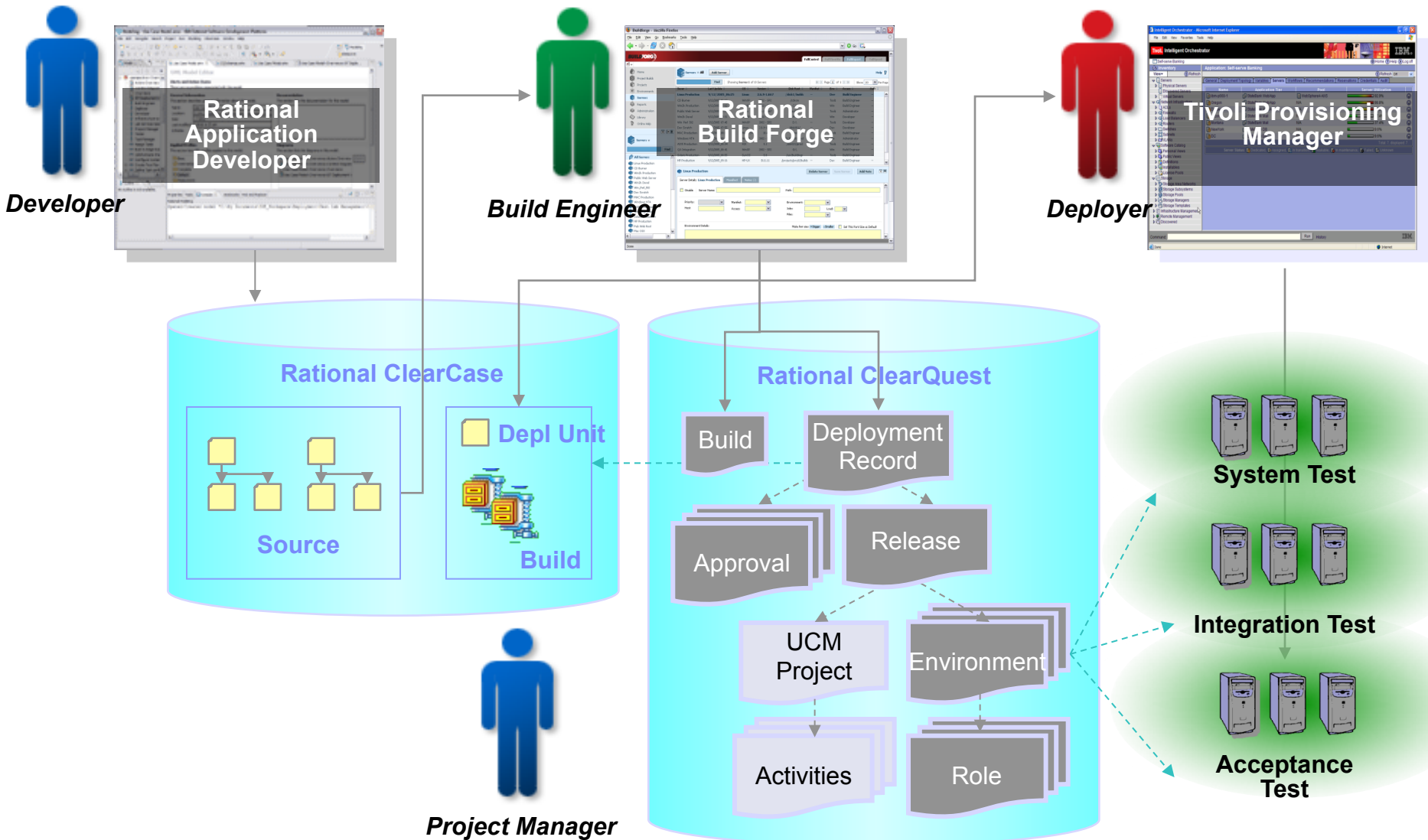
- **Track Builds and Deployments into test environments**
 - Track which build is to be used for testing
 - Define and sequence test environments specific to your organization
 - Establish approval gates before deploying to an environment
- **Pass regulatory audits**
 - Associate builds with deployments
 - Capture electronic signatures when needed
 - Maintain build artifacts under version control in UCM
- **Add Build Automation**
 - Integrate 3rd party build automation packages
 - Automatically create and update build records
- **Add Deployment Automation**
 - Optionally link to Tivoli Provisioning Manager to automate the provisioning of servers with latest build
 - Deploy “approved” build files directly from source control

The screenshot displays the IBM ClearQuest web interface for managing build and deployment records. The interface includes a top navigation bar with tabs: Main, Approvals, Relationship, History, Notes, Audit Trail, and TPM. The main form contains the following fields:

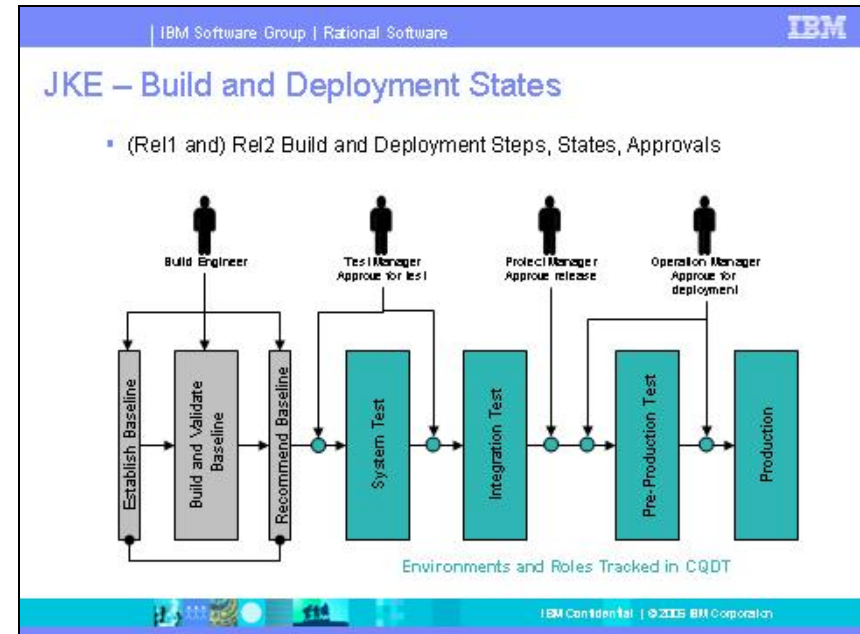
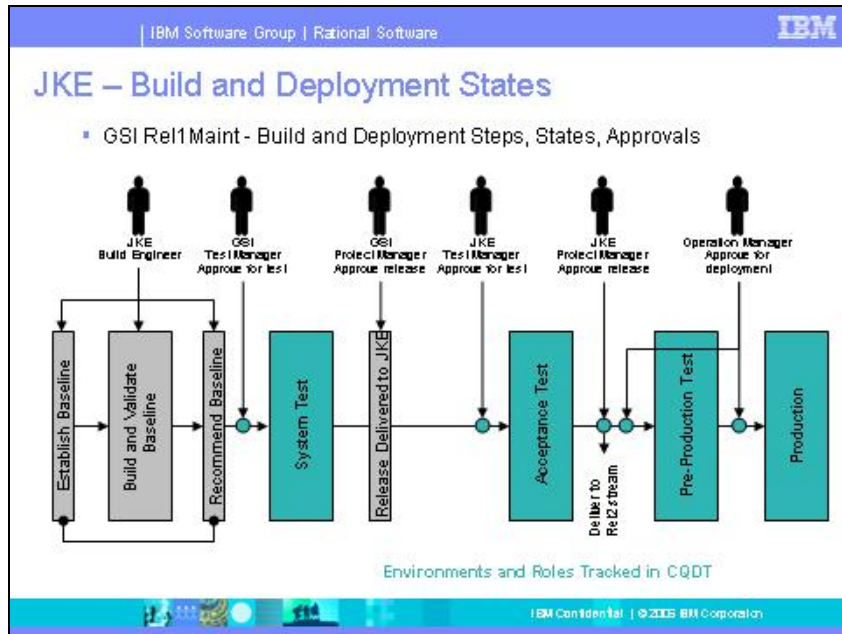
- id:** dl200000008
- State:** Ready
- Headline:** Version 0.1 App
- Submitter:** admin (dropdown)
- Submit Date:** 8/24/2005 11:53:39 AM
- Owner:** user (dropdown)
- Environment:** Unit Test
- Application:** RD_Bank_App
- Approval Status:** No Approval Required
- Deployment_Unit_Reference:** ccase:/vobs/test_vob/duxml?OREF=oid:3A1a232d3a.101211da.8ell
- Baseline:** (empty field)
- Description:** (large text area)

On the right side of the form, there are buttons for **Apply**, **Revert**, **Print Record**, and an **Actions** dropdown menu. At the bottom of the form, there is a status bar showing the record ID **dl200000008** and navigation icons.

Build and Deployment Tracking



Build and Deployment Workflows

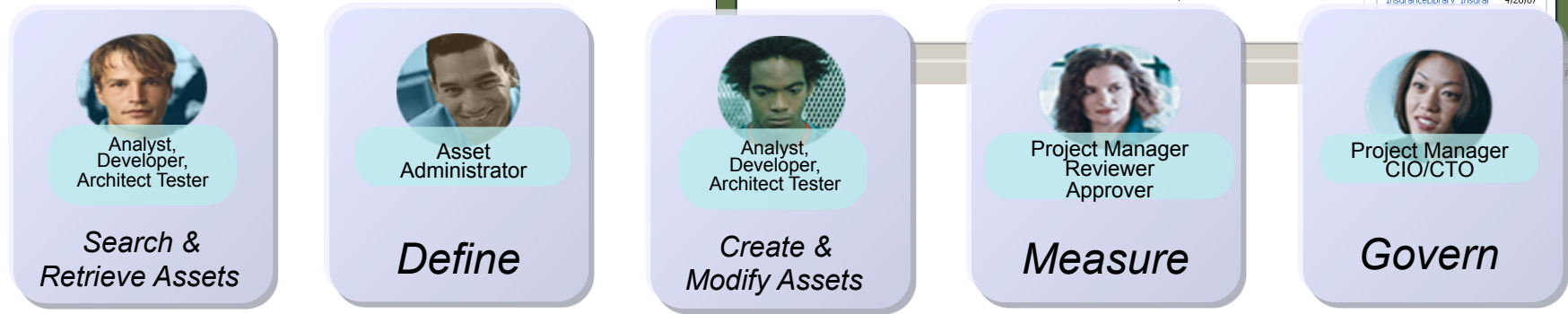
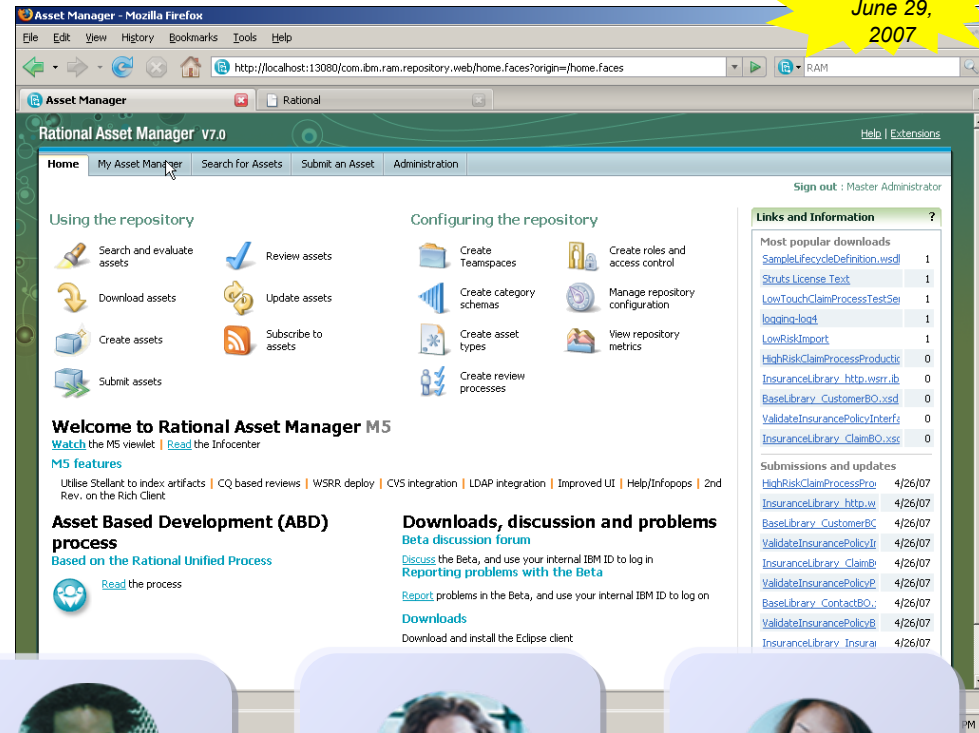


Introducing IBM Rational Asset Manager

New!

Available
June 29,
2007

- Collaborative asset management to identify and manage assets & ROI best practices
- Manages assets across their lifecycle from design/creation to consumption/change
- Manages service creation & reuse across service oriented architectures (SOA) projects
- Leverages an extensive library of process best practices for asset creation & reuse in Rational Method Composer (ABS, SOA, GDD, etc.)



Asset Management Lifecycle

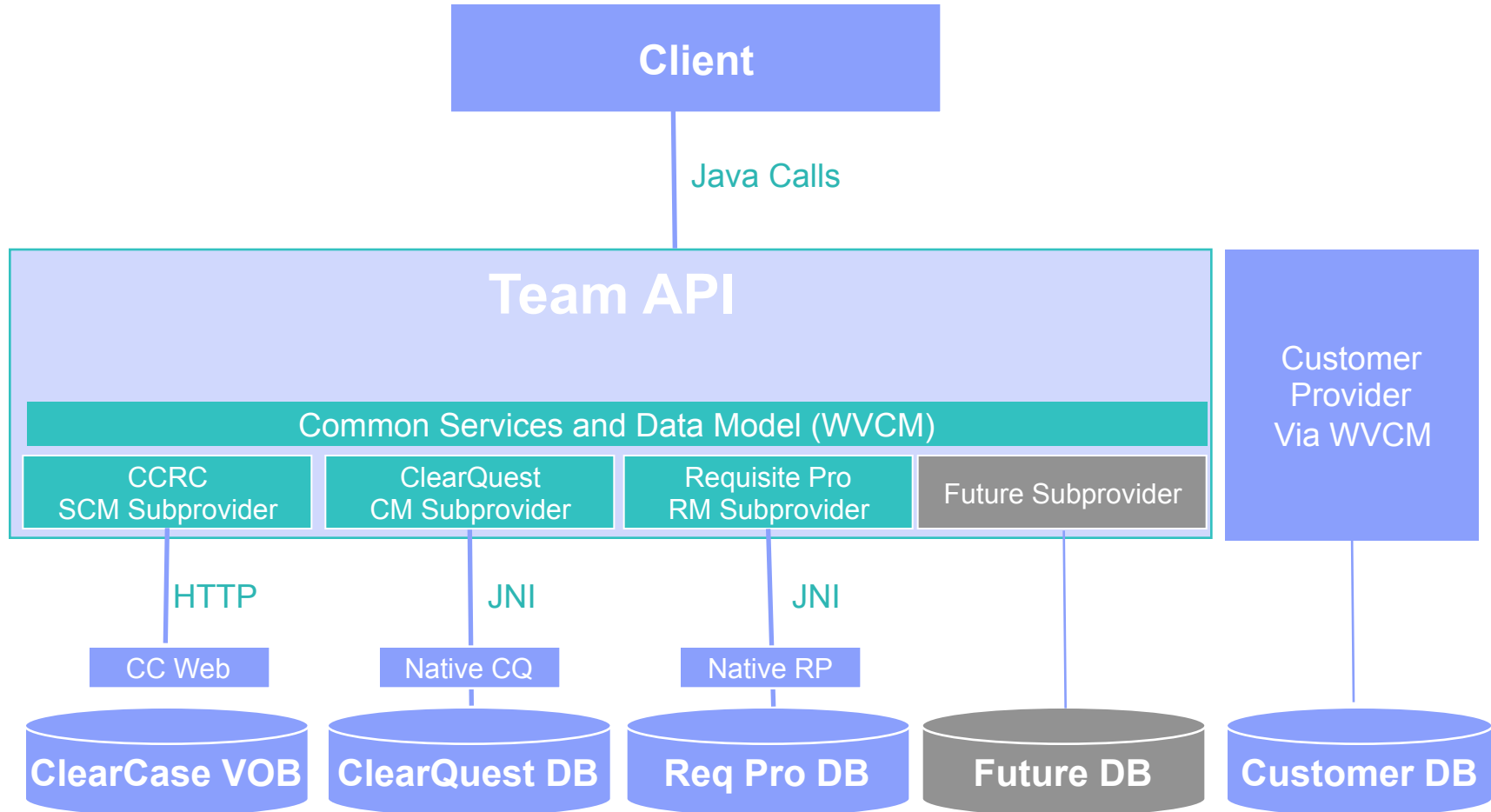


IBM Rational Team API - Platform Support

- Team API
 - A unified client-side Java API for access to RequisitePro, ClearCase and ClearQuest artifacts.
 - Based on the JSR 147 proposed standard: WVCM
 - OS and platform independent
 - Provides a common team data model and domain specific services
 - Supports the full lifecycle of software product development
 - Supports customer and partner developer ecosystem
- Platforms
 - ClearCase APIs
 - Windows, Linux, AIX, Solaris, HP-UX
 - ClearQuest APIs
 - Windows, Linux, AIX, Solaris, HP-UX
 - Requisite Pro APIs
 - Windows
- Documentation & sample code available on DeveloperWorks



IBM Rational Team API



Current ADC product portfolio

