



Achieving Agility at Scale

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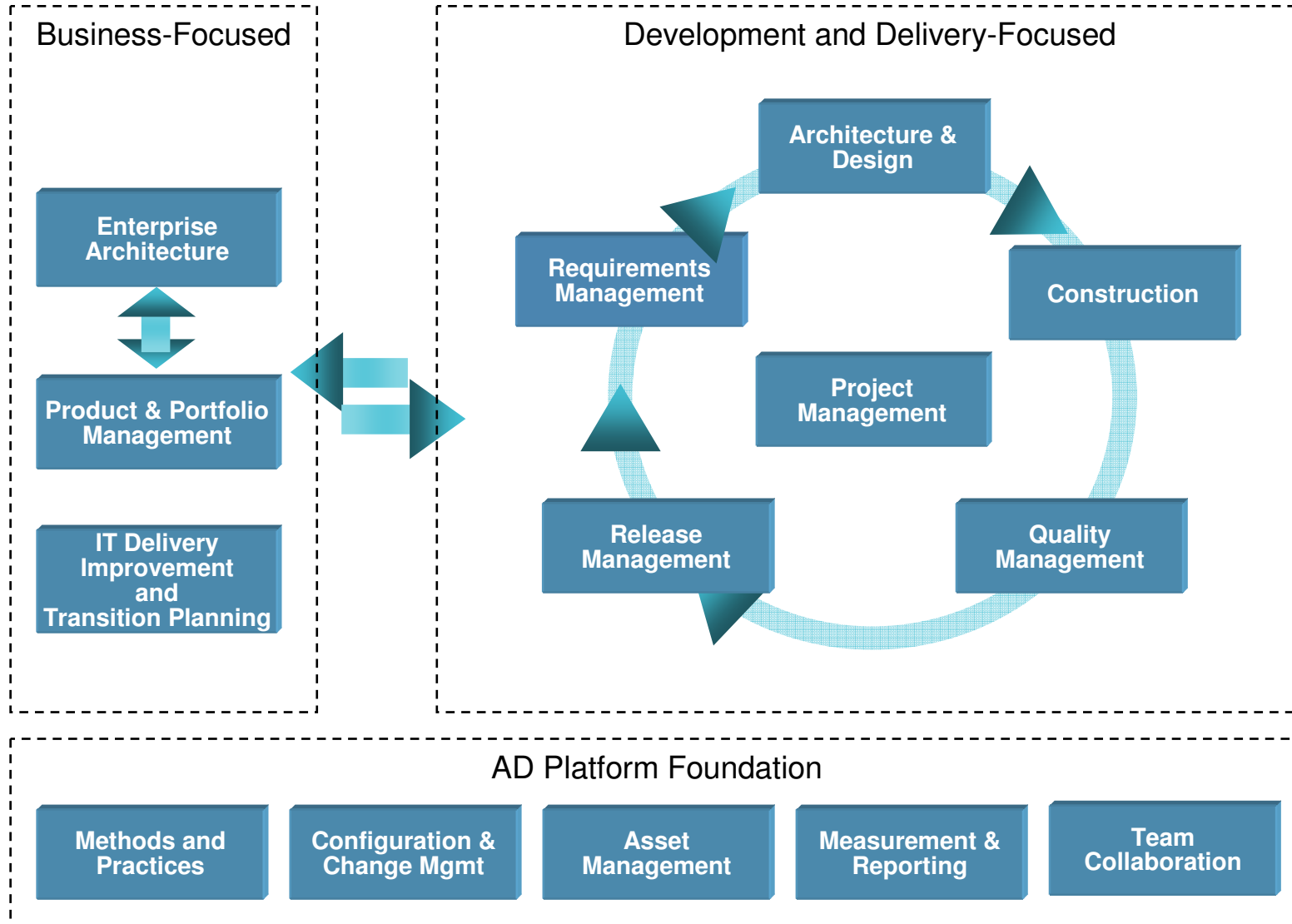
IBM Softwaredag 2010

12. oktober 2010, Øksnehallen, København

On a smarter planet,
software is changing the way people live.

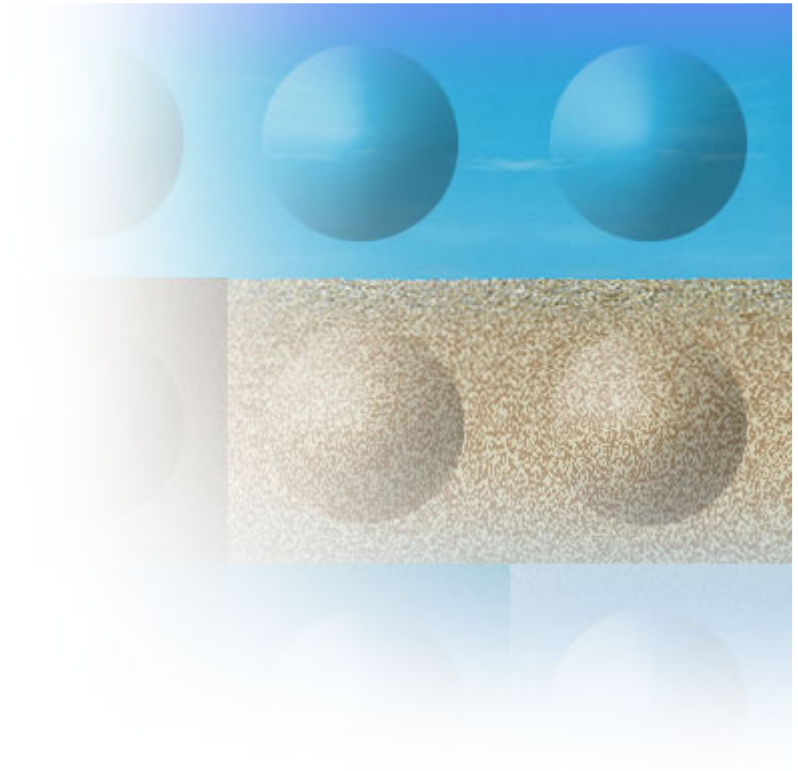
Smarter software for a smarter planet

IBM Rational Capabilities and Value



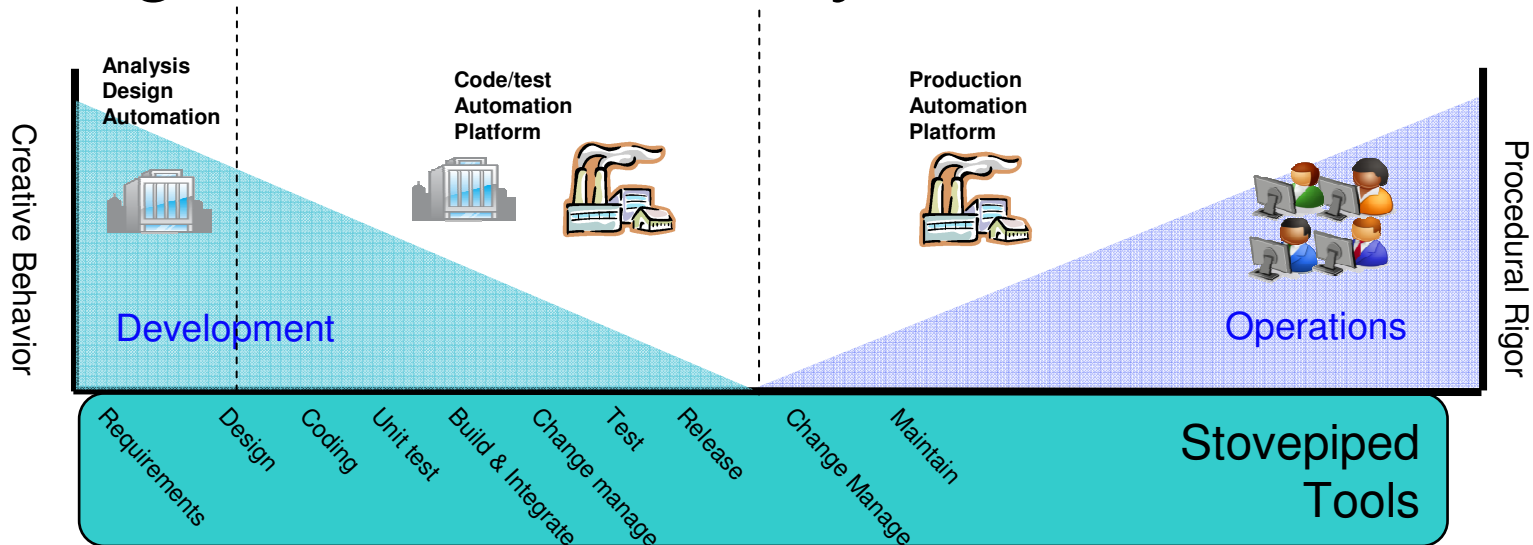
Topics

- Thinking agile
- Acting agile
- Staying agile

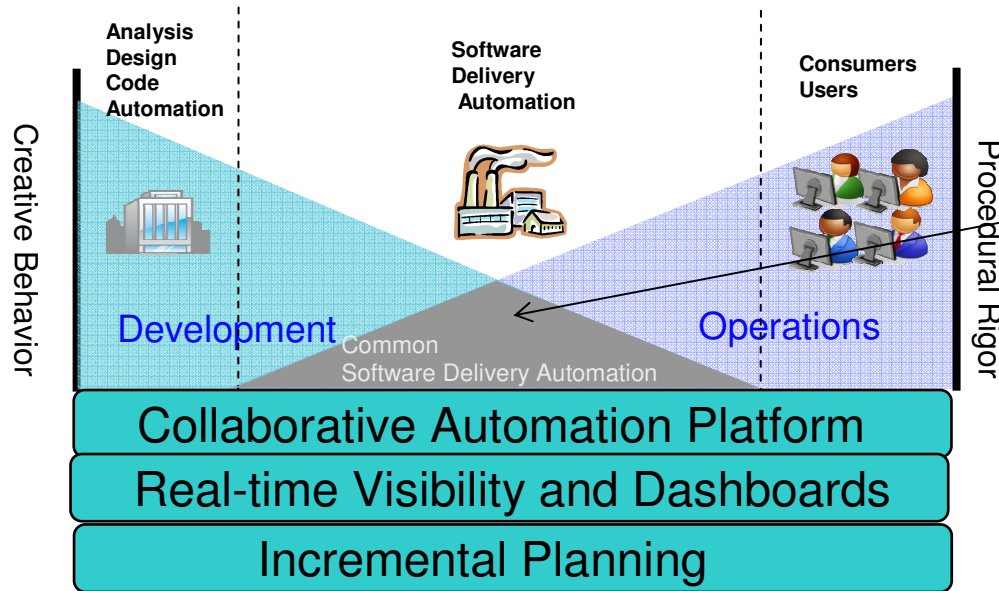


Rethinking Software Delivery

Waterfall Process Platform



Agile Delivery Process Platform



Implications

- Automation
- Measurement
- Close Customer Relationship
- Project visibility



Achieving Agility at Scale

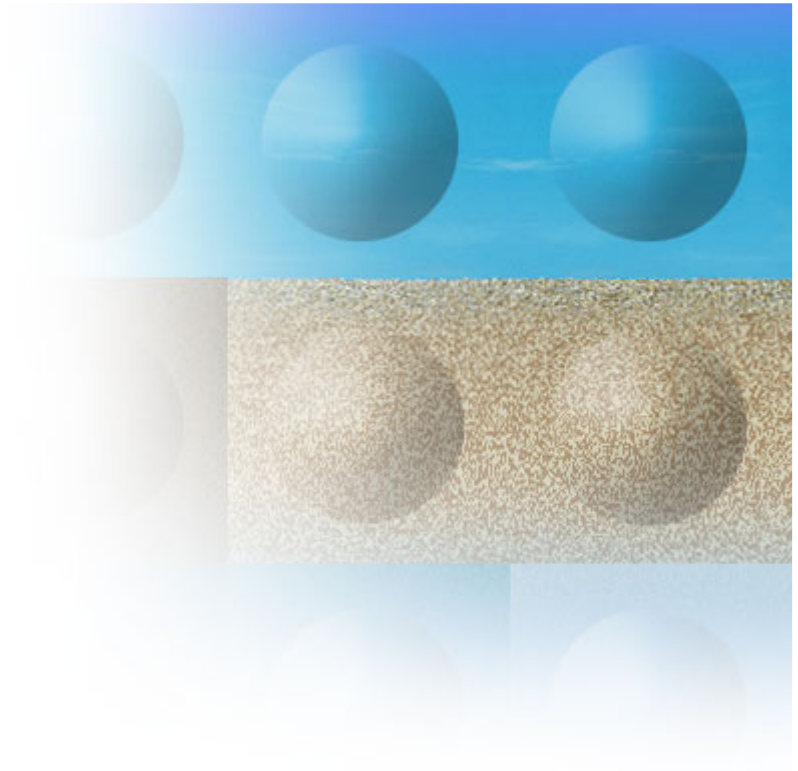
Disciplined agile teams:

1. Produce working software on a **regular basis**.
2. Do **continuous** regression testing, and better yet take a Test-Driven Development (TDD) approach.
3. Work **closely** with their stakeholders, ideally on a daily basis.
4. Are self-organizing, and disciplined teams work within an **appropriate** governance framework.
5. **Regularly** reflect, and **measure**, on how they work together and then act to improve on their findings in a **timely** manner.



Topics

- Thinking agile
- **Acting agile**
- Staying agile



From Software Development to Software Delivery

Software Development

Distinct development phase

Distinct handoff to maintenance

Requirements-design-code-test sequence

Phase and role specific tools

Collocated teams

Standard engineering governance

Engineering practitioner led

Software Delivery

Continuously evolving systems

No distinct boundary between development and maintenance

Sequence of released capabilities with ever increasing value

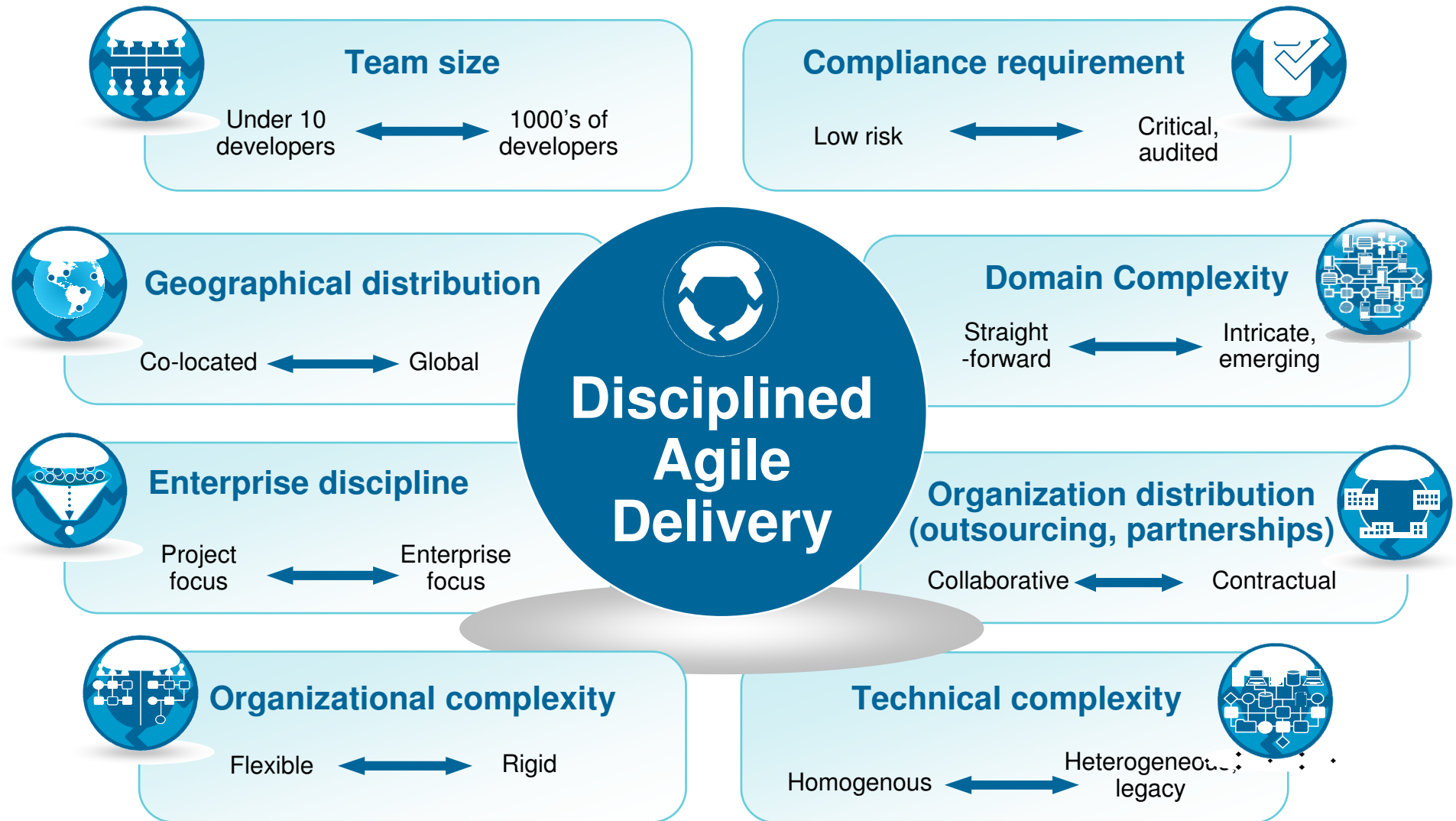
Common platform of integrated process / tooling

Distributed, web based collaboration

Economic governance tailored to risk / reward profiles

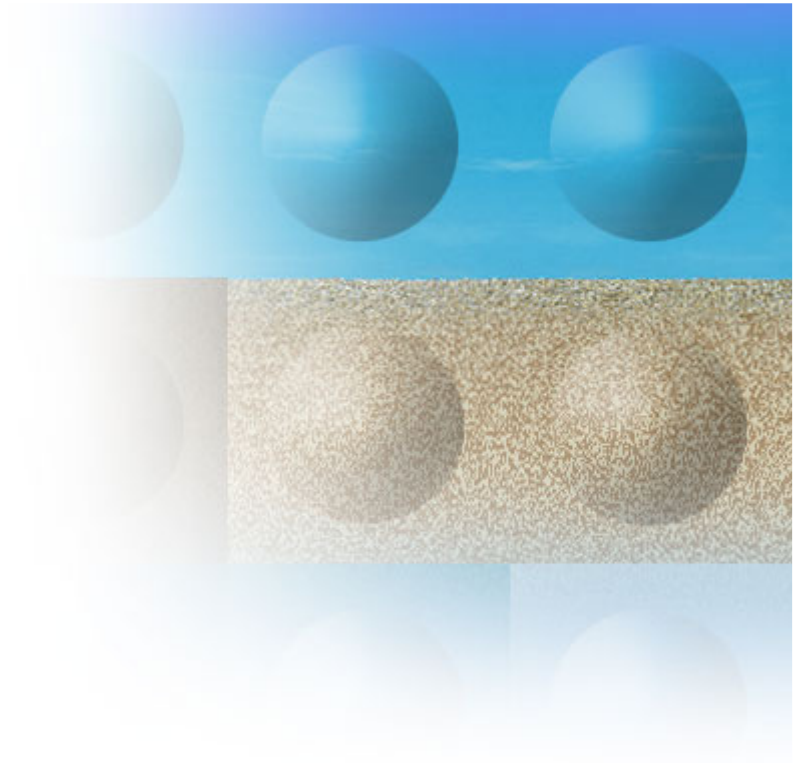
Business value and outcome led

Agile is Fragile: Agile scaling factors



Topics

- Thinking agile
- Acting agile
- **Staying agile**



How Do You Stay Agile?

- Focus on the key Agile practices
 - Match them to your organization, people, maturity, projects, culture.....etc...
- Reinforce the delivery practices that support your teams
 - Find out what works....grow the skills and practices
- Change the delivery rhythm, and make it more transparent
 - Push teams to work in shorter cycles with greater feedback and input
- Support practices with automated tooling
 - Help overcome the collaboration and integration issues for larger, distributed teams
- Measure and report to get management buy-in and support
 - Clearly align technology improvements to business goals, and demonstrate the value to the business

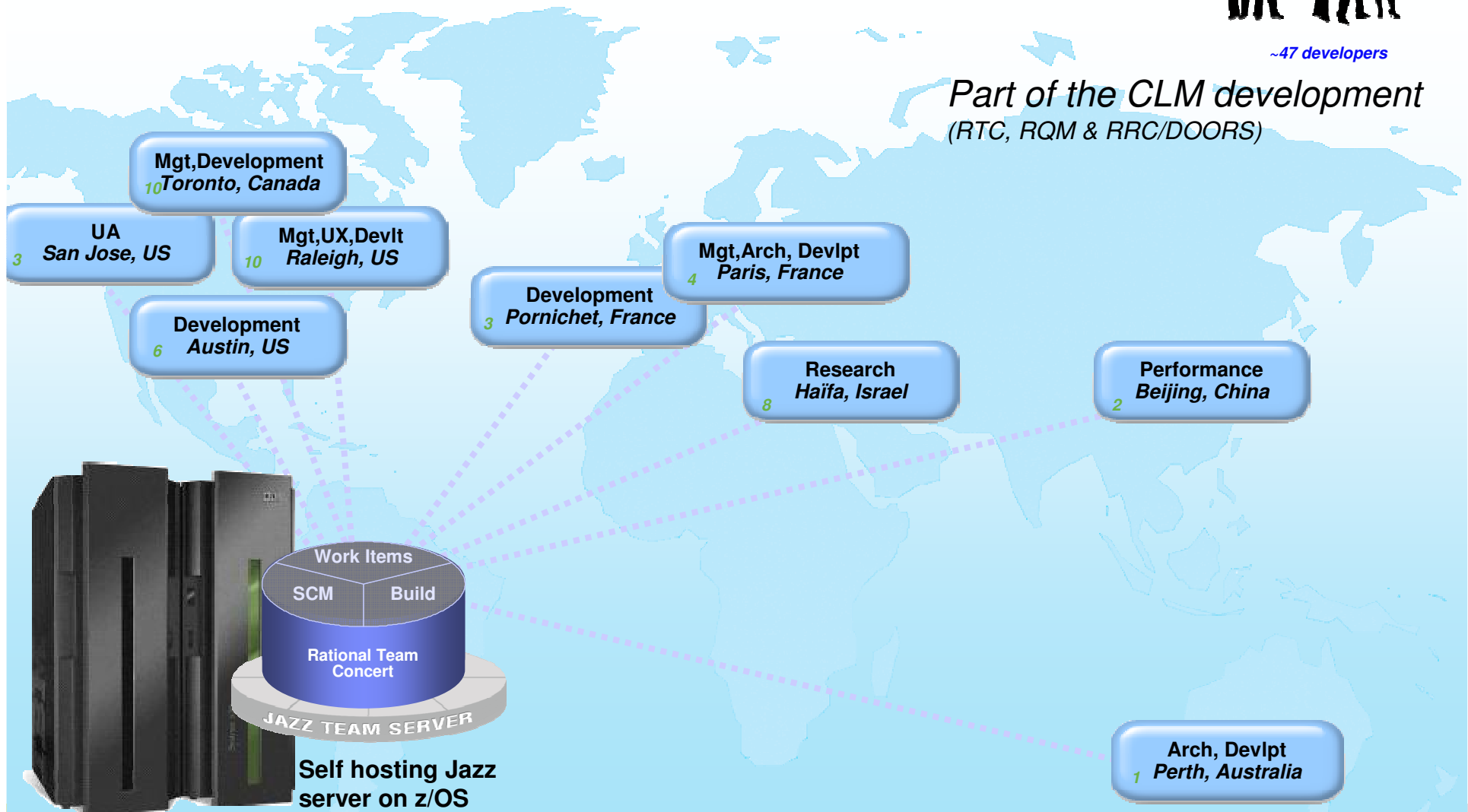


An Illustration: RTC Enterprise Extensions Team



~47 developers

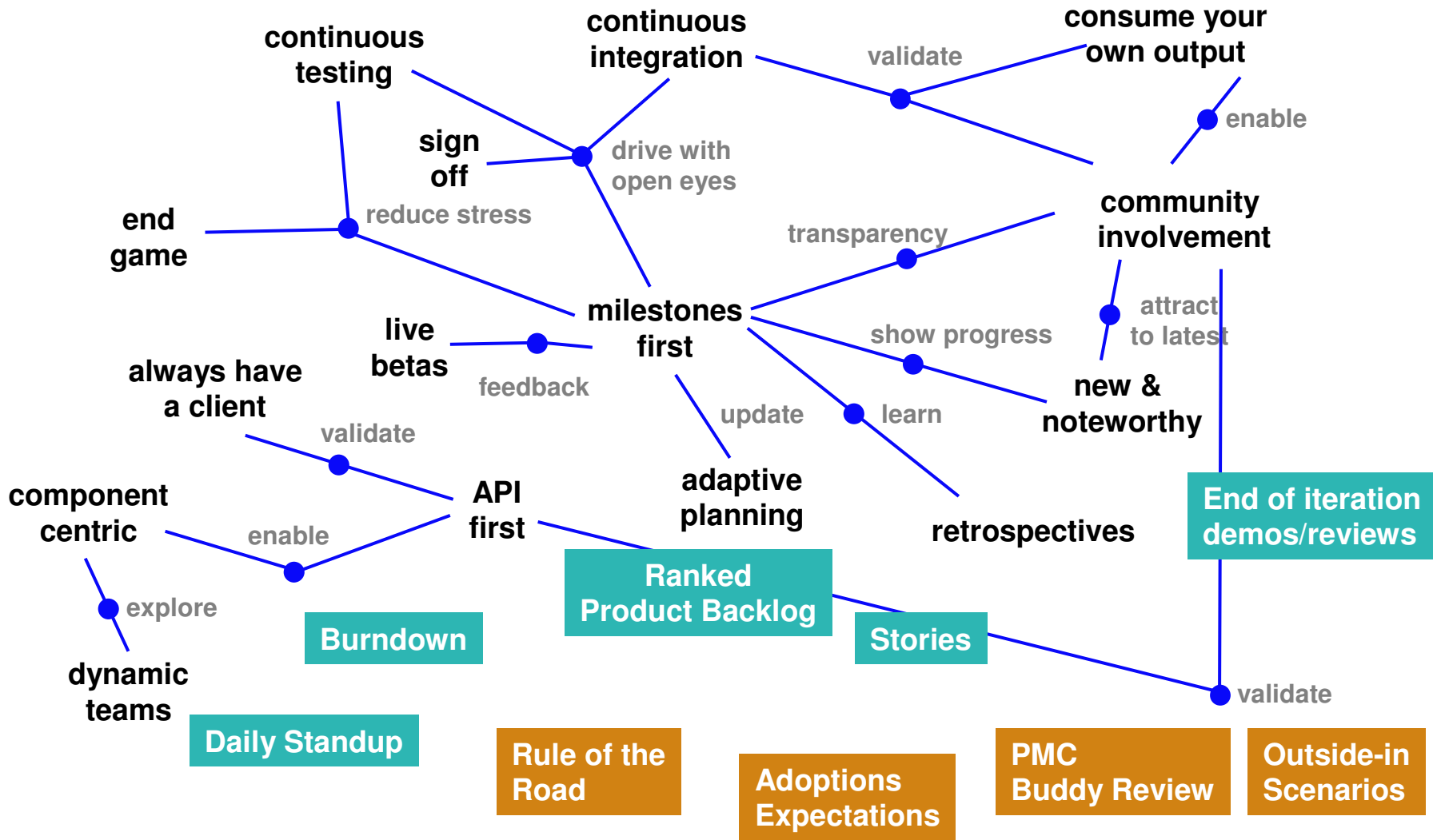
Part of the CLM development
(RTC, RQM & RRC/DOORS)



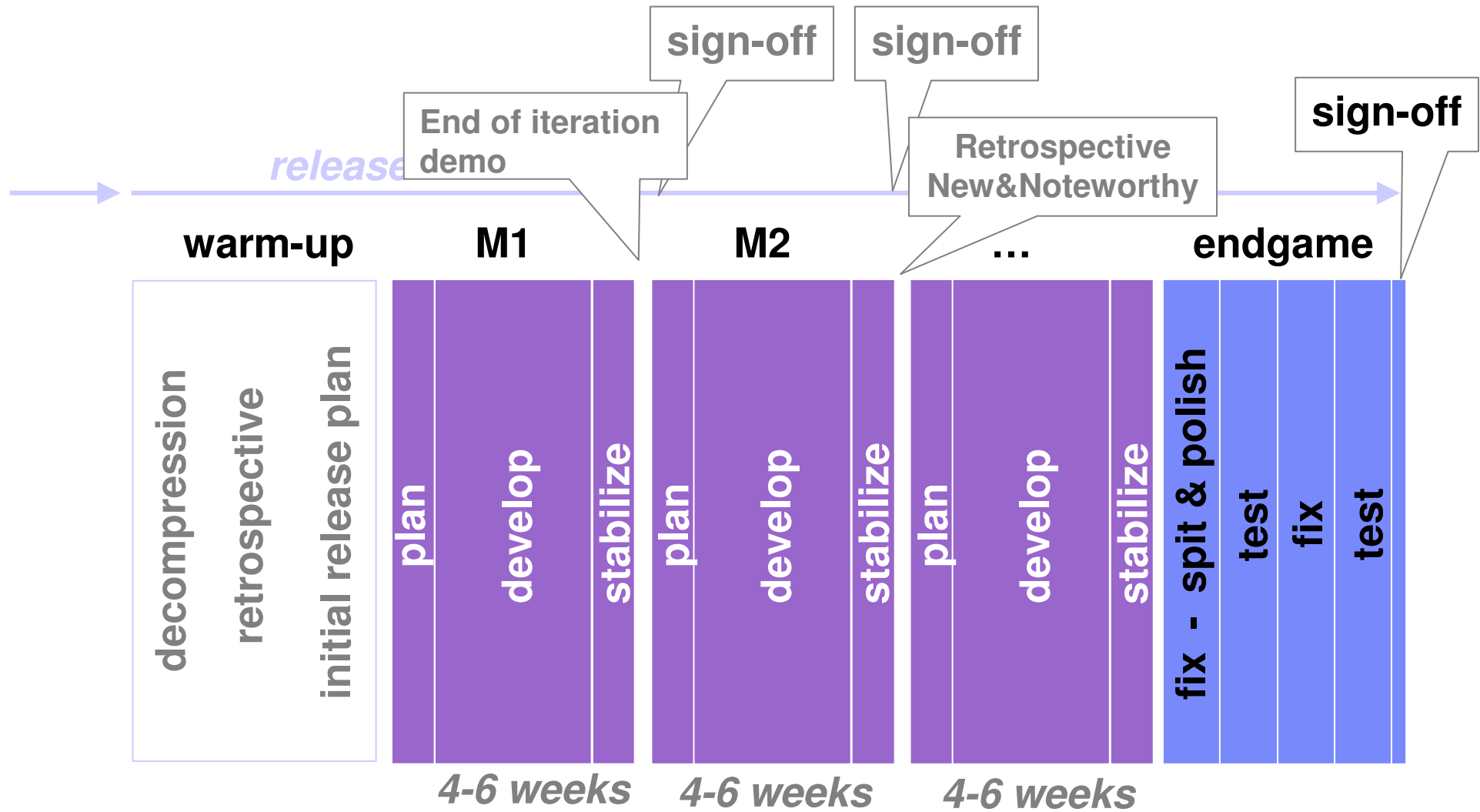
Focus is on the Agile Practices



Our Practices

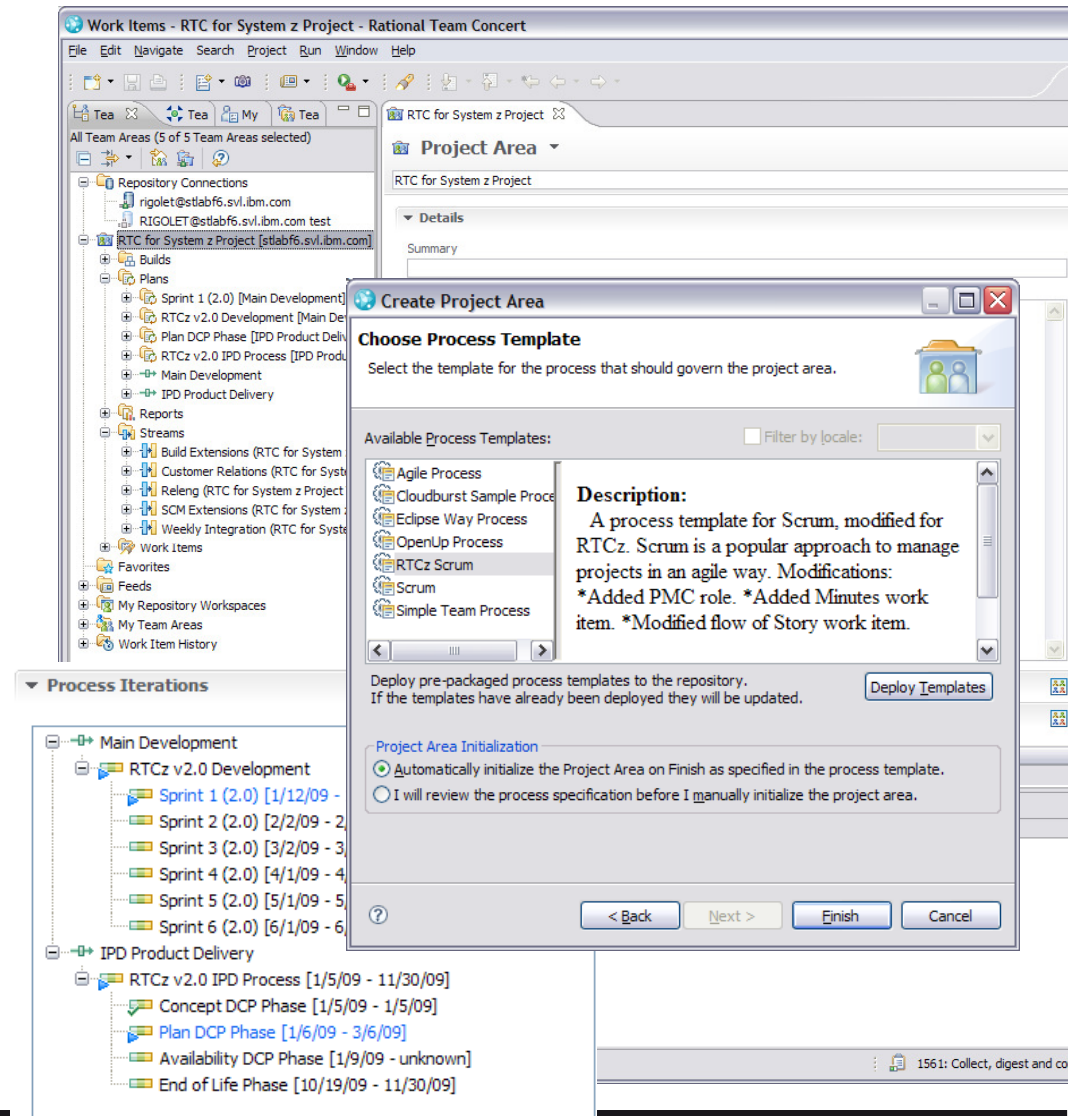


Our Development Rhythm



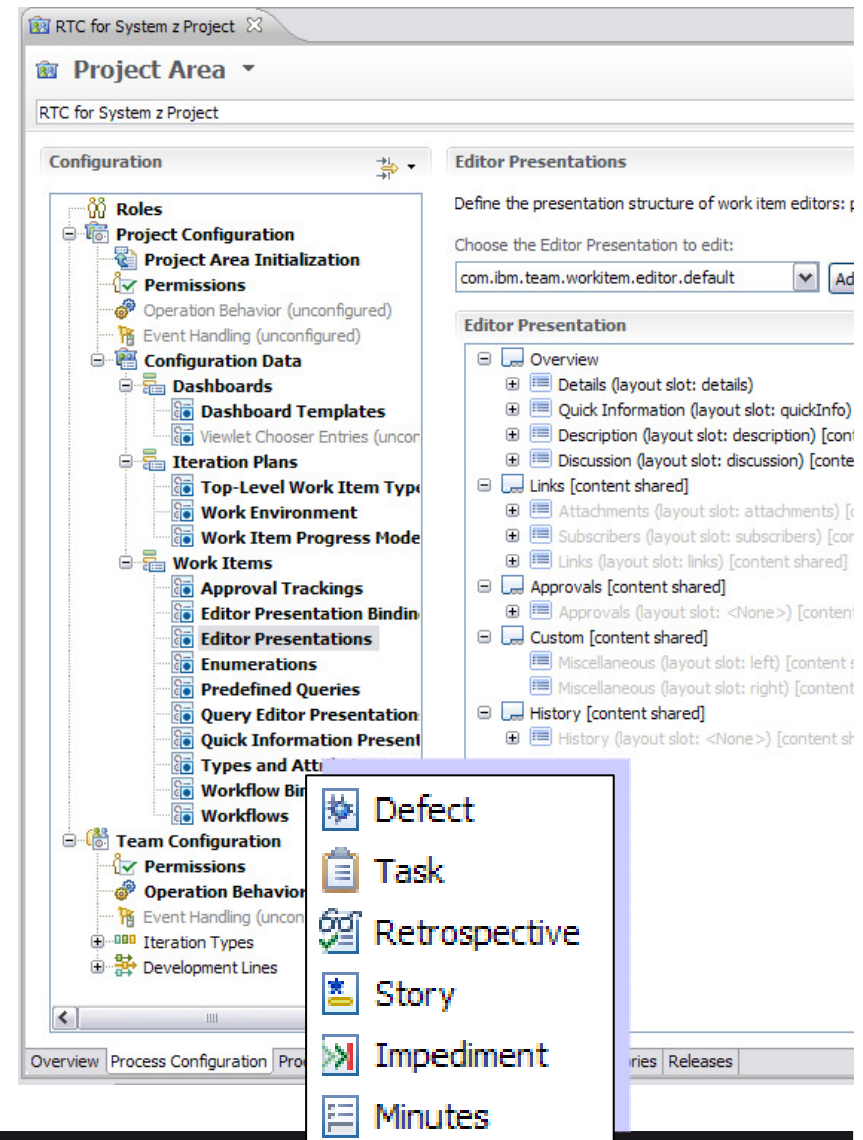
Drinking our own Champagne with Rational Team Concert

- **Development project**
 - Self hosting on *System z*
 - Access from [Jazz.net](#)
 - ‘Enterprise Extensions for RTC’ project
 - Interactive, based on the Scrum template
- **Geographically Distributed Development team**
 - 5 main [Scrum teams](#)
 - RTP (Raleigh, US)
 - FASL (France & Australia)
 - BF (Austin, US)
 - UA (San Jose)
 - Power (Toronto, Canada)
- **2 parallel development lines**
 - Release v3.0
 - Release 2.x maintenance



Scrum Applied

- **Development process**
 - Based on the standard Scrum process template
 - Roles: *Stakeholder, Product Owner, Scrum Master, Team Member*
 - Artifacts: *Work Items, Product Backlog, Sprint Backlogs*
- **Minor process adaptations**
 - New role: PMC (*Project Management Council* - based on Stakeholder role)
 - New Minutes work item
 - Updated permissions
 - PMC can update Plans
 - Limited operations for externals
 - New automatic tasks when joining a team
 - [Joining a Team] Update your calendar with your Scheduled Absences
 - [Joining a Team] Update your Work Environment



Stakeholder roles, aka '**Chickens**'

Development roles, aka '**Pigs**'

- '**Chickens**' are not part of the actual Scrum process, but they must be *engaged* and *provide feedback*.

Project Management Council (PMC)

Product Delivery

- '**Pigs**' are the ones *committed to the project* and the Scrum process.

5 main development Scrum teams

RTP, Raleigh

FASL, France & Australia

BF, Austin








User Assistance\Docs, San Jose

Power, Toronto

Bidi, SUPA research

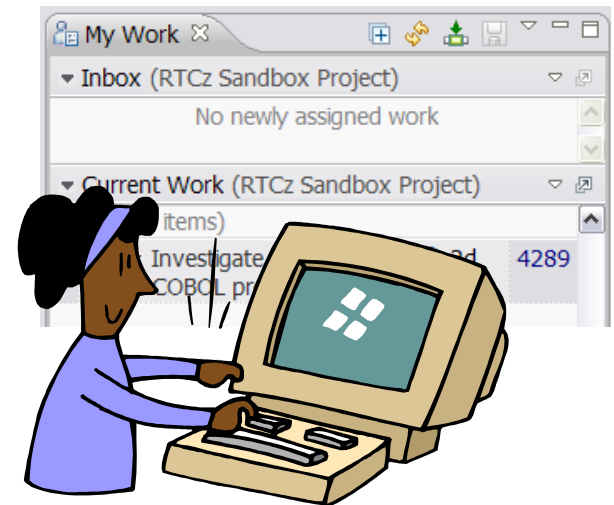
▼ Members

Roles determine a user's permissions as well as any preconditions and follo for team operations. The roles assignments below are also valid in all child configured otherwise, all users in the repository play the 'default' role.

 <input type="checkbox"/> Danny Mace	 <input checked="" type="checkbox"/> David Myers	 <input checked="" type="checkbox"/> Nicolas Dangeville
 <input checked="" type="checkbox"/> Pam Owens	 <input checked="" type="checkbox"/> Rosalind Radcliffe	 <input checked="" type="checkbox"/> Sandra Liles
 <input checked="" type="checkbox"/> Teresa J Stephens		

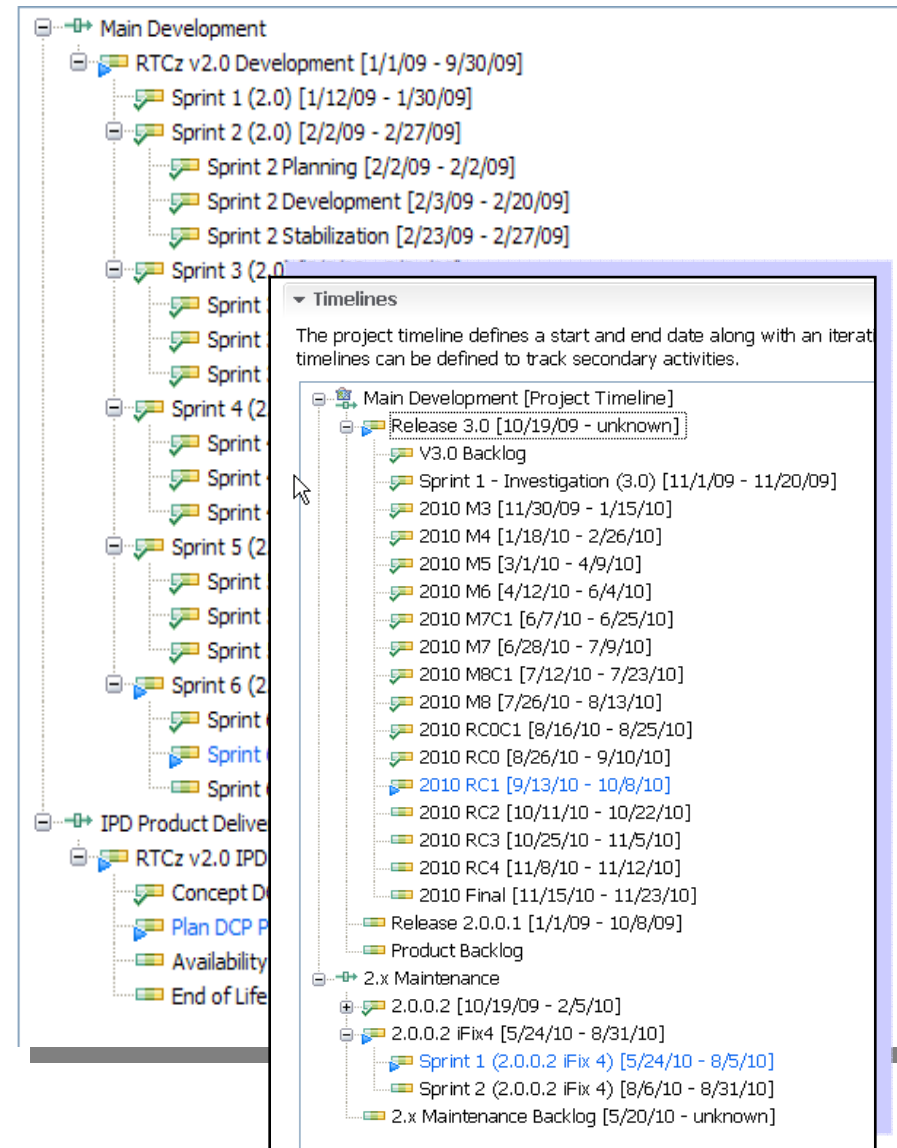
A day in the life... of a 'Pig'

- Always starts with a daily scrum
- Think!... Document ... Write JUnit testcases... Code... Test
 1. Check *My Work*
 2. API First; *improve the collaboration with your clients*
 3. Test Driven Development (TDD); *solidify your code*
 4. Update work items; *let other members know what you've done*
- Deliver code to the **Team Stream**
 - Test team integration; *now your component is not alone*
- Deliver code to the **Integration Stream**
 - **Daily & Weekly** builds
 - Test project integration; *we now have a product*
 - Control JUnit testcases execution; *check the overall quality*
- **Recurrent activities**
 - Actively participate in design meetings; *across Scrum teams*
 - Regular JUnit jam sessions; *leverage the know-how within the teams*
 - **Scrum of Scrums** meetings when appropriate; *keep the rhythm*



Development Rhythm

- **Project timelines**
 - Release 2 started Jan 2009
 - RTCz v2001 packages were available on Oct 8, 2009 and v2002 on Feb 2
 - Release 3 started Oct 2009
 - RTC Beta2 Sep 21 2010
- **Monthly Sprints**
- **Iterations and main phases**
 - Initial iteration (training, envt set up,...)
 - 5 development iterations
 - All Sprints include FVTs
 - End-game & Cleanup
 - Including SVTs, TVTs, GVTs
- **3 sub phases in all development iterations**
 - Planning (2-3 days)
 - Development
 - Stabilization (3-4 days)



Sprint planning detailed

- **First days of each Sprint**
 - Get **Sprint directions** from Product Owner
 - Analyze **Stories** with the Architects
- **All Scrum team members are involved**
- **1 Sprint planning per Scrum team**
- **Check time budget**
 - Verify absences in RTC
- **From *Product Backlog*...**
 - Query Work items
 - Team members try to fully understand **User Stories** with the help of the Architects
 - Give estimates using the **Planning Poker technique**
- **...To *Iteration Plan***
 - Fill Sprint backlog with selected Stories based on **team velocity** and priorities

Rational Team Concert

Dashboards Project Areas Work Items **Plans** Source Control Builds

FASL Sprint 6 Development Plan

Team Area: FASL Scrum | Iteration: Sprint 6 Development (5/29/09 - 6/1/09)

Overview **Planned Items** Charts Drop-Offs Progress

View As: Work Breakdown

Jean-Yves Rigolet
Closed Items: 5 | Open Items: 0

- CHKPIL errors for the zOS hyperlinks messages
- com.ibm.teamz.interop.ide.ui - manifest.mf has a dependency that may be too strict
- Upgrade existing code to RTC v2 M3
 - Upgrade existing zOS Hyperlinks code to RTC v2
 - Upgrade existing RTCz Jazz gateway code to RTC v2

Story Points: 13 pts

Progress: 0 pts

Team Area: 3 pts

Creation Date: 5 pts

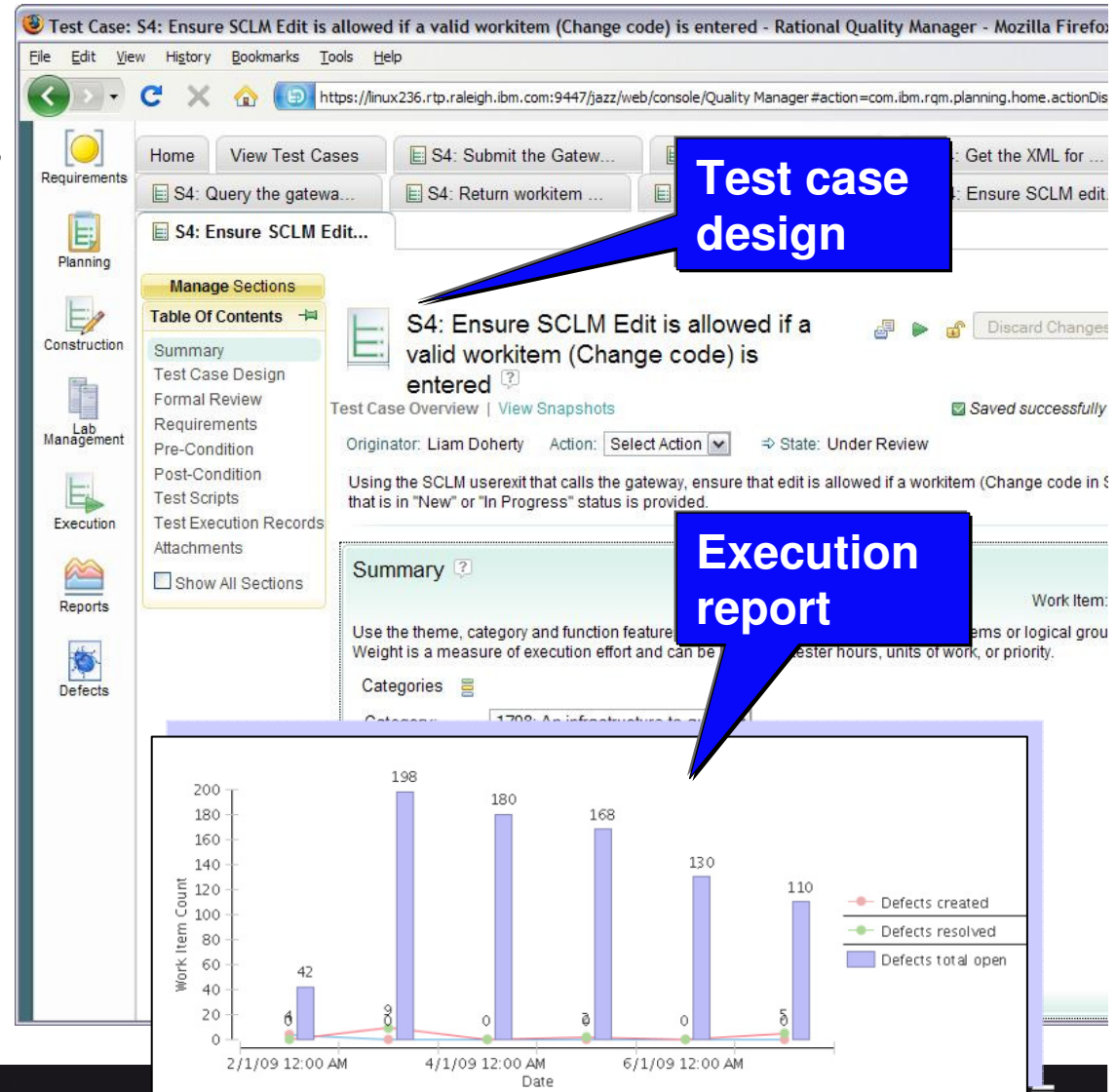
Created By: 8 pts

Tags: 13 pts

Owned By: JEAN-YVES RIGOLET

Coordinate our tests in Rational Quality Manager

- **All test plans and testcases defined in RQM**
 - FVT, SVT & Performance Test Plans
- **Defined by developers**
 - During the *Stabilization* phase
- **Tested & tasted by all members**
 - Developers, release engineer, ..., and even **managers** sometimes
 - Test execution records
- **Creating Defects on execution failure**
- **Formal reviews**
 - Test cases approvals by Product Owner & ScrumMasters
- **Metrics & charts on quality presented at Sprint stakeholders meetings**



Collaborate using Work items and Plans

The image displays the Rational Team Concert (RTC) interface. On the left, a 'Defect 4273' is shown with details such as 'Type: Defect', 'Severity: Normal', and 'Priority: 1 High'. The description includes a user's report of an issue with the 'scm script' and a discussion section with comments. On the right, a 'FASL Sprint 6 Development Plan' is visible, listing various work items with their progress, priority, and estimated time. A blue callout bubble points to the plan, stating 'Various levels of work planing'. Another blue callout bubble points to the discussion section of the defect, stating 'Discuss/exchange work with members'. A third blue callout bubble points to a chat window at the bottom right, stating 'Instant collaboration / share context'. The chat window shows a message from Jean-Yves Rigolet: 'JY, did you see the workitem 4392?' and a response: 'Yes I saw the Workitem 4392'.

Various levels of work planing

Discuss/exchange work with members

Instant collaboration / share context

Share & build source code

The image displays a screenshot of the Rational Team Concert (RTC) interface, overlaid with four blue callout boxes highlighting key features:

- Build definitions:** A callout box pointing to the left-hand navigation pane, which lists various project and team areas such as "Builds", "Plans", "Reports", "Source Control", and "Components".
- Source code Components:** A callout box pointing to the "Components" section in the main pane, which lists numerous components like "Build Metadata", "Common", "Data Set Definition", "Deliver Parse Service", "File Agent", "File Agent Miner", "Jazz REST Gateway", "Mapping Component", "Releng Core", "Repotool Patch", "RSE FA Client", and "Zos Hyperlinks".
- Pending updates:** A callout box pointing to the "Flow Targets" section at the bottom, which shows a list of work items and their associated components, including "Build Agent", "Build Agent Zips", "Build Extensions", "Build Extensions FVT", "Build Extensions JUnit", "Build Metadata", and "CDI Install".
- Integration Streams and flows:** A callout box pointing to a "Flow Diagram" window on the right, which displays a network of integration nodes (e.g., "Beta Integration", "Build Forge", "Nightly Integration", "Weekly Integration", "Releng", "RTP", "FASL") connected by arrows, representing the build and integration process.

Check the project status & health

The screenshot displays the Rational Team Concert dashboard for the FASL Scrum project. The interface includes a navigation bar with options like 'Dashboards', 'Project Areas', and 'Work Items'. The main content area features several widgets: a 'Welcome to FASL Scrum' message, a list of team members, a 'FASL Open Impediments' widget with a pie chart, a 'Burndown' chart, and a 'Project Activity' bar chart. A 'Sprint 6 Development Plan' widget is also visible, showing a line graph of hours over time. The dashboard is annotated with three blue callout boxes: 'Burndown charts' pointing to the Sprint Burndown chart, 'Team communication' pointing to the team member list, and 'Various project health dashboards' pointing to the overall dashboard layout.

Burndown charts

Team communication

Various project health dashboards

Report Effectively to Management to Provide Them a Clearer View of Status

Rational SVT Projects Monthly Operations Review
Mar 20, 2010

Director	Product	Last Month	Current SVT Status
[Redacted]	BQM 2.0.1		
	[Redacted]		
	RFT 8.1.1		
	Robot 7.0.3		
	RPT 8.1.1		

Test Case Execution Status (Pie Chart)
Project: SVT_RI
Test Plan: Insight [Redacted] SVT Test Plan - obsolete

Test Case Execution Status

- Not Attempted
- Attempted
- Passed 79%
- Failed 21%
- Blocked
- Perm Failed
- Inconclusive

Test Case Plan/Execution Trend (S-Curve)
Project: SVT_RI Test Plan: Insight [Redacted] SVT Test Plan
Iteration: Iteratx
Iteration 3

S-Curve

- Planned Attempted
- Planned Completed
- Actual Attempted
- Actual Completed

Number of Defects

Severity

- Normal
- Major
- Blocker
- Critical
- Minor

Project Navigator

Back: to default entry

Executive Summary | Test Execution Status | Defect Trend

Produce Release Key Project Milestone Status

Project: SVT_RI
Testplan: Insight [Redacted] SVT Test Plan
Date: Mar 23, 2010 Overall SVT Status -> Green

Milestone	Plan	Outlook / Actual	Completion / Comments
Iteration 2	[Redacted]	[Redacted]	Complete
eGA	[Redacted]	[Redacted]	Green
Iteration 3	[Redacted]	[Redacted]	Green
Iteration 4	[Redacted]	[Redacted]	Green
Final SVT	[Redacted]	[Redacted]	Green

Number of Defects

- Current in DBV
- Current in SVT
- Subscribed Last Week
- Closed Last Week

Execu...

- [Redacted]
- Under [] testing.

Risks/Issues/Mitigation Status

- N/A.

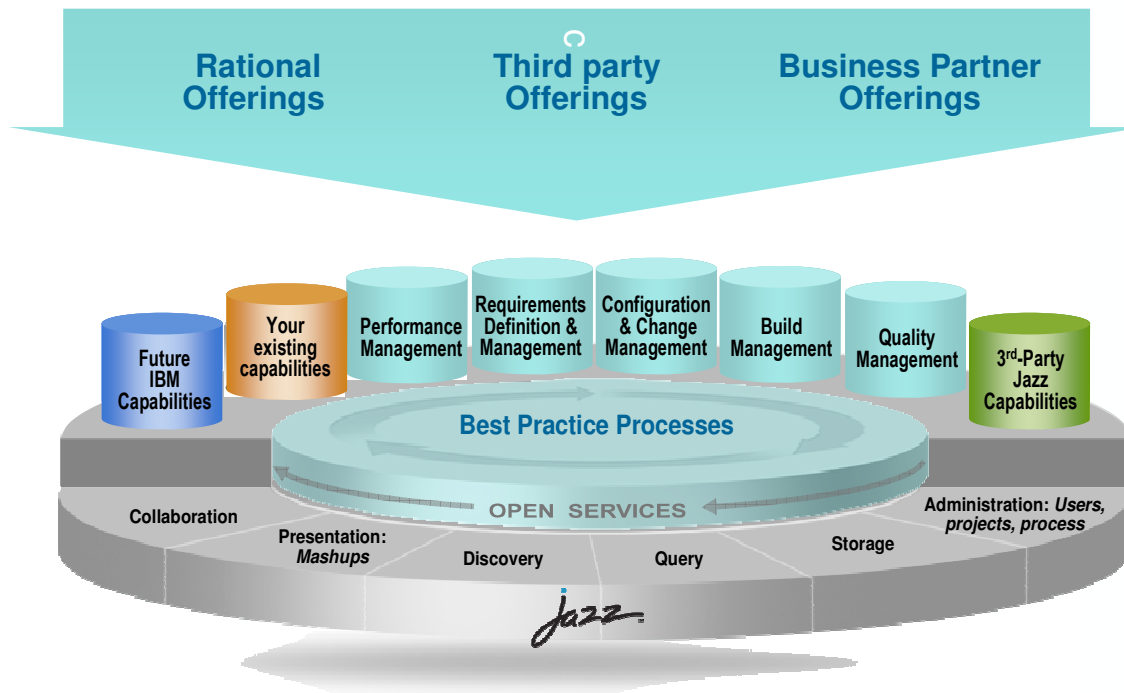
Accomplishment (last 30 days)

- Insight - CQ 7.1.1 regression test without regression defect.
- Insight - Reqpro 7.1.1 regression performance regression defect fixed

Focus Areas (next 30 days)

- Insight-Focal Point integration test.
- Insight-Reqpro 7.1.1 integration re

Jazz is a platform for optimizing software delivery



Jazz is a platform for *transforming how people work together* to deliver greater value and performance from their software investments.

Jazz is...

- Our vision of the future of systems and software delivery
- A scalable, extensible team collaboration platform
- An integration architecture enabling mashups and non-Jazz products to participate
 - A community at Jazz.net where Jazz products are built
- An evolution of our portfolio

Rational Team Concert: An Overview

Agile Planning

- Integrated release/iteration planning
- Effort estimation & progress tracking taskboards
- Out of the box agile process templates

Project Transparency

- Customizable web based dashboards
- Real time metrics and reports
- Project milestone tracking and status

SCM

- Integrated stream management
- Component level baselines
- Server-based sandboxes
- Identifies component in streams and available baselines
- SVN, Git, CC bridge, connector

Work Items

- Defects, enhancements and conversations
- View and share query results
- Support for approvals and discussions
- Query editor interface
- ClearQuest bridge, connector

Build

- Work item and change set traceability
- Build definitions for team and private builds
- Local or remote build servers
- Supports Ant and command line tools
- Integration with Build Forge

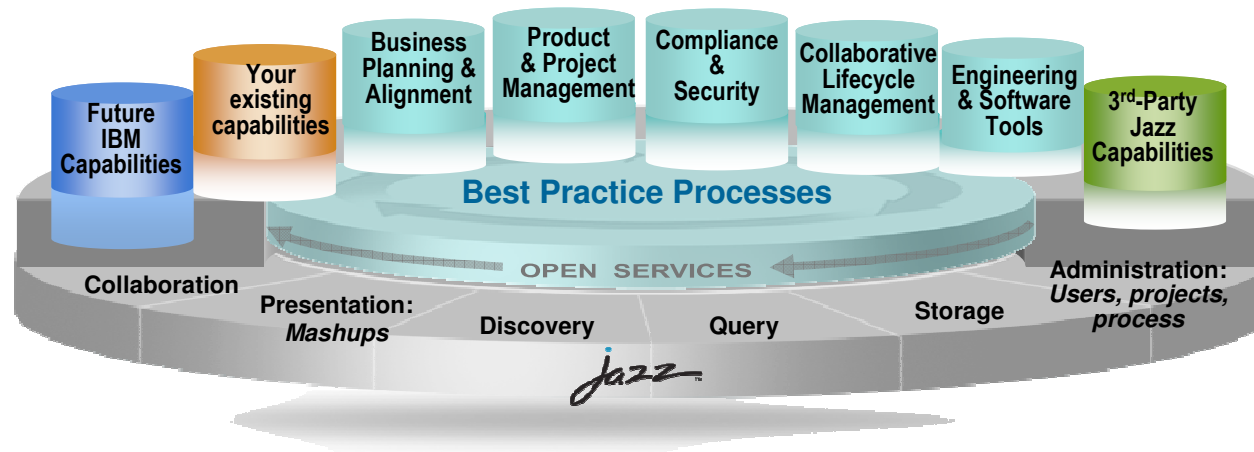
Jazz Team Server

- Single structure for project related artifacts
- World-class team on-boarding / offboarding including team membership, sub-teams and project inheritance
- Role-based operational control for flexible definition of process and capabilities
- Team advisor for defining / refining “rules” and enabling continuous improvement
- Process enactment and enforcement
- In-context collaboration enables team members to communicate in context of their work

Summary



- Achieving agility at scale requires new ways of thinking, acting, and sustained transformation
- Rational's Jazz platform
 - A unified platform that includes collaboration, automation and reporting can dramatically improve the business process of software delivery
 - Embracing open integration strategies, enables IBM and its partners to leverage and develop best-of-breed solutions
 - Achieving business differentiation with agility and confidence is a reality today!





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