



IBM Software Group

IBM Rational's Jazz Vision

**Scott Rich, IBM Distinguished Engineer
Rational CTO for Northeast Europe
11 May, 2011**

Rational software

COPENHAGEN
INTERNATIONAL
SOFTWARE DEVELOPMENT
CONFERENCE 2011

goto;
conference

Training: May 9-10 // Conference: May 11-13

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Introduction - who am I and what's my perspective on Jazz?

- Scott Rich
- IBM Distinguished Engineer
- CTO for Rational in NE Europe
- srich@ch.ibm.com

- One of the leaders of the Jazz Project
 - Building tools for Agile
 - Leading a worldwide Agile team



Today's Topics

- What is Jazz? Why did we do it?
 - ▶ Rational Team Concert – a Jazz-based product

- Team Concert Today
 - ▶ How we use it ourselves
 - ▶ Recent development focus areas:
 - Application Lifecycle Management – growing the Jazz family
 - Using Jazz and OSLC to integrate other tools



The New Normal! Do more with less! Work Smarter! Ugh...

Software Development Must Deliver:

- ✓ More business solutions
- ✓ More flexibility
- ✓ More quality
- ✓ More business value



-yet-

- ✓ Less risk
- ✓ Less costs
- ✓ Less or flat resources



In our experience, Agile practices and collaborative development tools can help solve this apparent conflict.



Five Years Ago: Our Pain Points...

- ✓ joining a team
- ✓ get my environment configured to be productive
- ✓ what is happening in my team
- ✓ collecting progress status
- ✓ following the team's process
- ✓ ad hoc collaboration/sharing of changes
- ✓ starting an ad hoc team

Team
awareness

- ✓ is the fix in the build?
- ✓ run a personal build
- ✓ tracking a broken build
- ✓ why is this change in the build?
- ✓ reconstructing a context for a bug/build failure

Build
awareness

- ✓ interrupting development due to a high priority bug fix
- ✓ working on multiple releases concurrently
- ✓ tracking the code review of a fix
- ✓ referencing team artifacts in discussions
- ✓ how healthy is a component?
- ✓ collecting project data/metrics?
- ✓ keeping plans up to date

Project
awareness



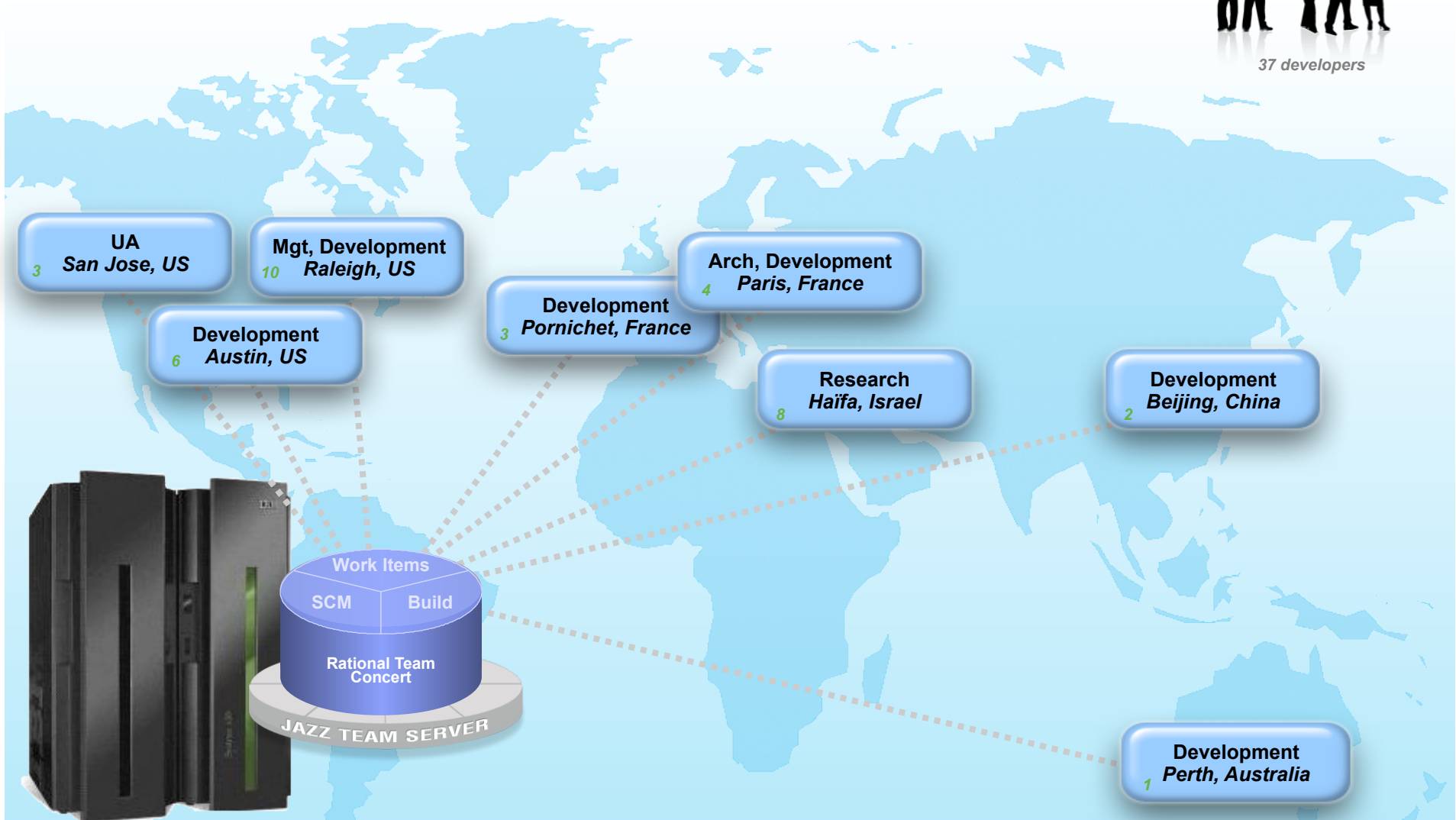
Boring and painful



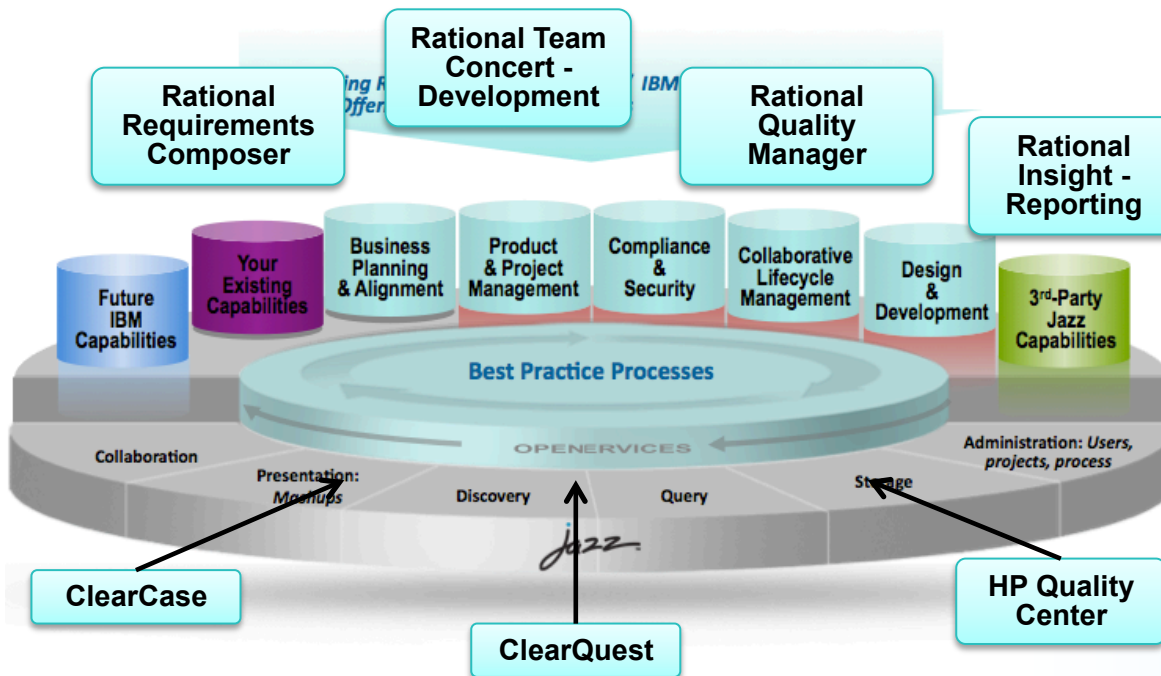
Example Team: Rational Team Concert for Z/OS



37 developers



Envisioning a platform that can transform software delivery



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

Jazz is...

- A scalable, extensible team collaboration platform
- A community at Jazz.net where you can see Jazz-based products being built
- Our vision of the future of systems and software delivery, supporting globally distributed teams
- An integration architecture enabling mashups and non-Jazz based products to participate
- An evolution of our portfolio which will evolve to leverage Jazz technology over time



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



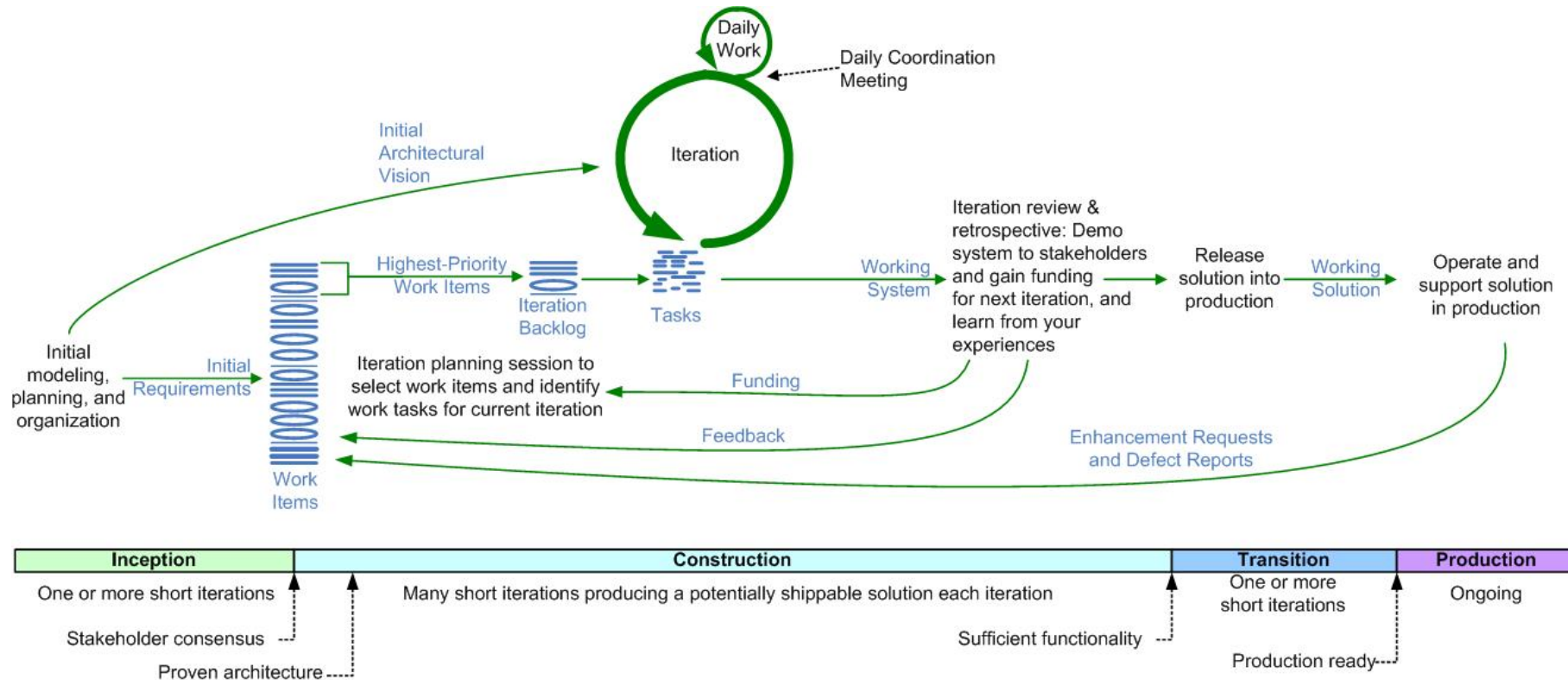
Agility @ scale at IBM



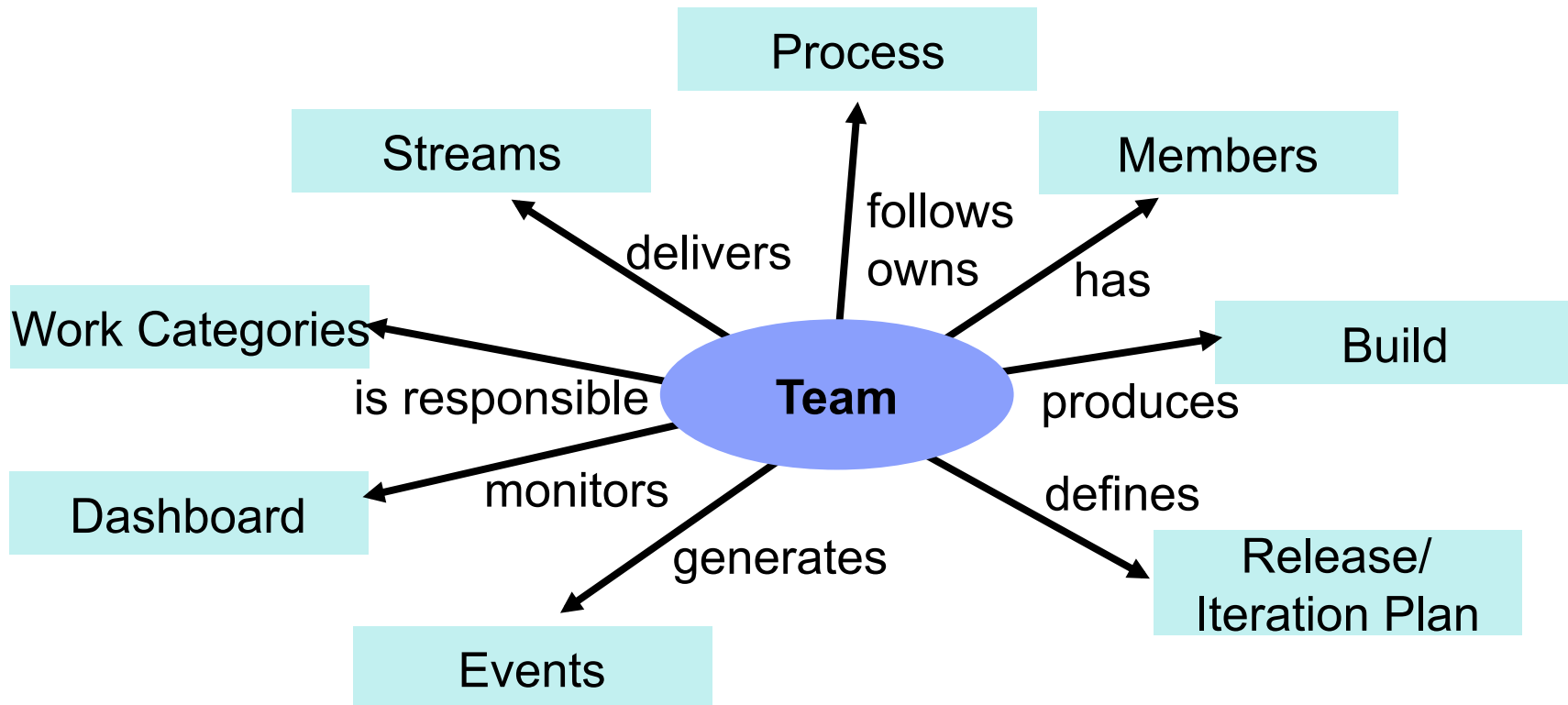
- Over 150 Rational development projects (~2800 users) using Rational Team Concert
- Plus an additional 700+ projects around IBM -- hosting 8500+ users!
- Boarding time for new projects - less than one day
- Applicable to agile/iterative and waterfall projects

- Rational Development
- Rational Customer Support
- WebSphere Development
- Lotus Development
- Tivoli Development
- IBM Research Division
- IBM Global Business Services
- IBM Systems and Technology Group

The disciplined agile lifecycle: An extension of Scrum



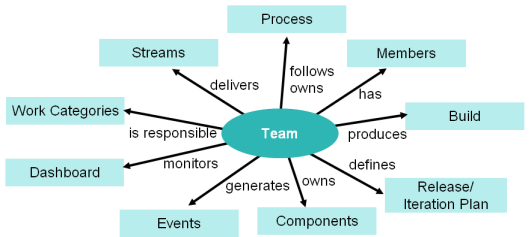
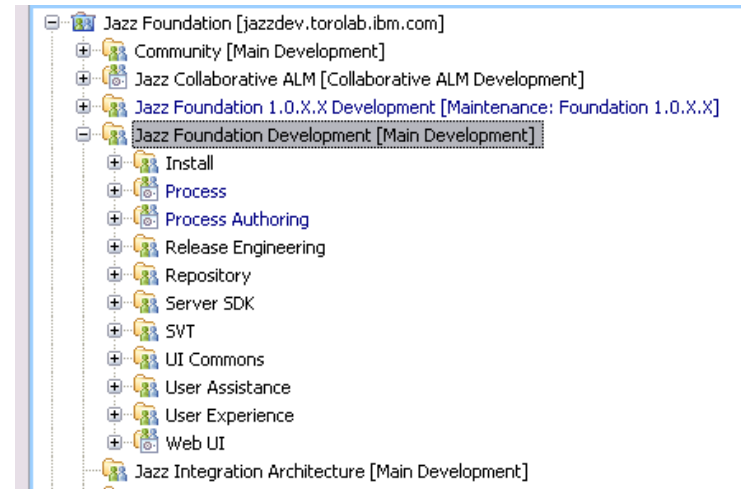
Way of Working: Team Centric



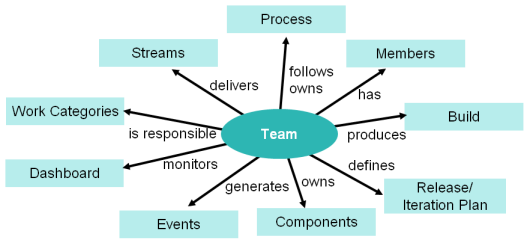
Teams are self-tuned but share a common rhythm



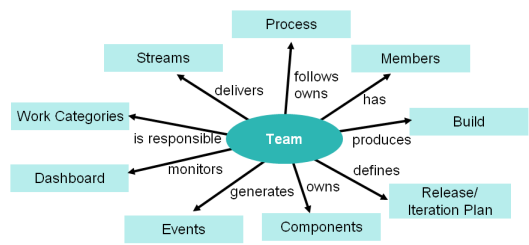
Scaling up: Teams of Teams



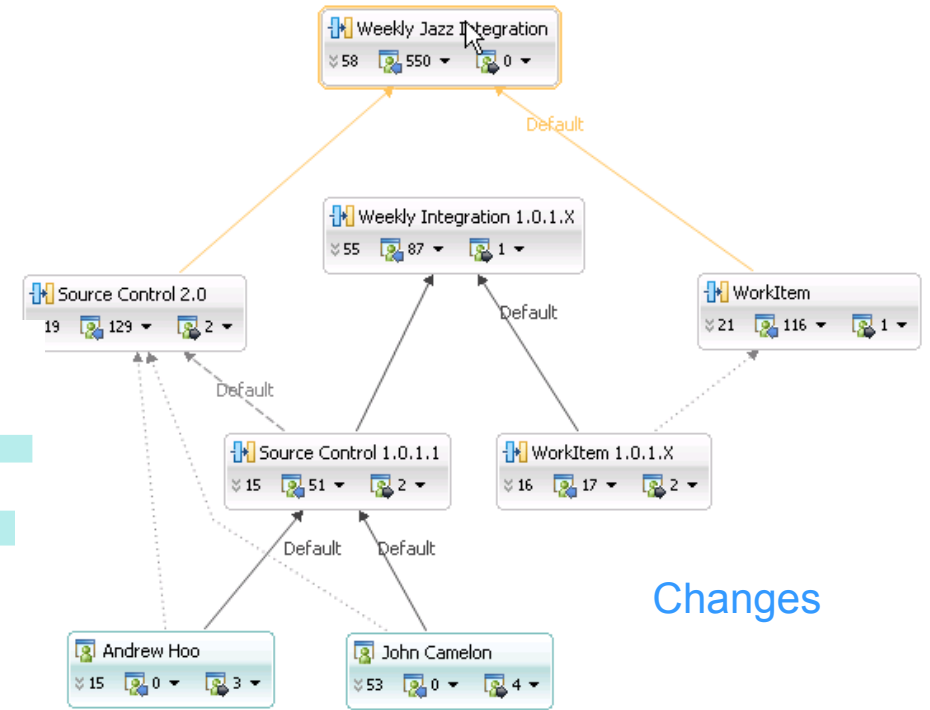
Jazz Development



Process



Repository

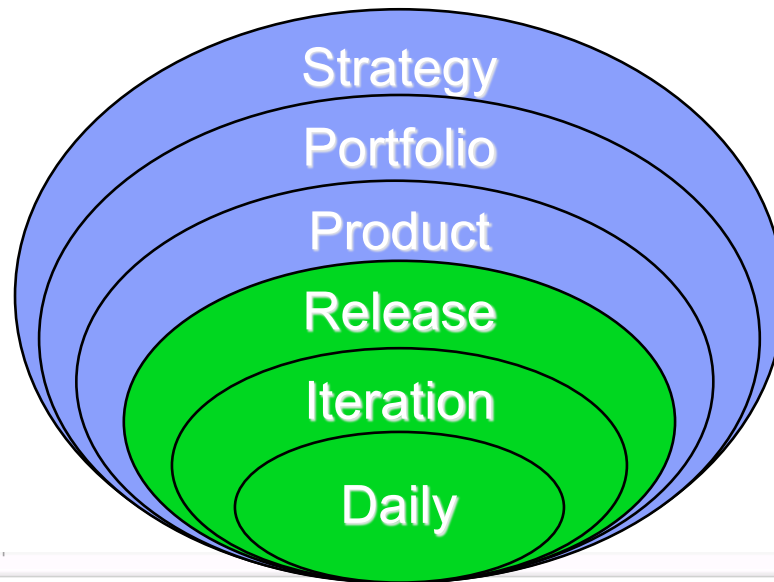


Changes

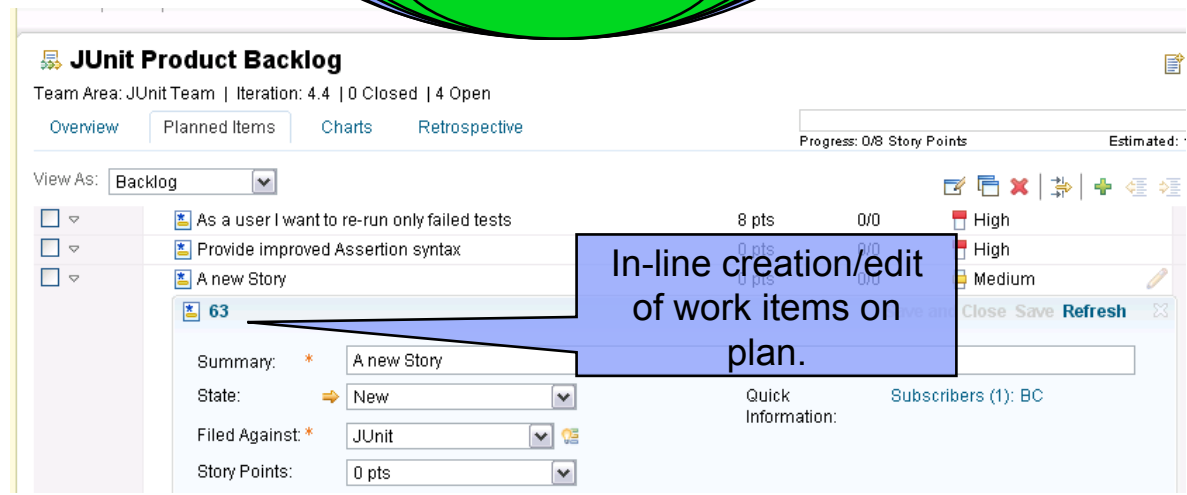


Planning with the Agile “Planning Onion”

- The Planning Onion
 - (Mike Cohn Agile Estimating and Planning)
 - ▶ Daily (my work view)
 - ▶ Iteration
 - ▶ Release
 - View by iteration
 - View by team



- All this is available in Eclipse or the Web



Backlog Plan Mode

Easily rank work items to define priority

- Ideal for managing SCRUM backlog
- Ranking is reflected in all planning views, e.g. iteration plans and release plans
- Supports separating size from effort estimation

JUnit Product Backlog
 Team Area: JUnit Team | Iteration: 4.4 | 0 Closed | 4 Open

Overview | **Planned Items** | Charts | Retrospective

Progress: 0/8 Story Points | Estimated: 100%

View As: Backlog

Item	Size	Progress	Priority	Effort
As a user I want to re-run only failed tests	8 pts	0/0	High	62
Provide improved Assertion syntax	0 pts	0/0	High	60
Improve documentation for 4.4	0 pts	0/0	Medium	55
No download link to latest version			Medium	12

Drag and drop work items to rank them relative to others.

Taskboards track Work in Progress

Accelerate stand-up meetings, increased transparency

See the work currently in progress

Markus Kent Closed Items: 4 Open Items: 7		Progress: 0.25 / 1.25 h		Estimated: 71%	
To Do		In Progress		Done	
Improve documentation for 4.4	55	javadoc updates for @Ignore in 4.3	30	[Docs] Cookbook TestRunner section incorrect	23
Provide improved Assertion syntax	60	Based on the assertThat syntax we should provide assumptions and theories support	59		
		assertArrayEquals misses differences	7	shows green bar while assert false	41
		testCount hard-coded to 1 for childless	27	Should not call derived's afters if super's before failed	17
		Tests on protected methods fail	14	@After method not called after my test timeout in 4.3.1	16
		assertThat fails with Class tests (documentation problem)	10		

assertArrayEquals misses differences

Drag and drop work items to change their state.

Planning/Execution: Feature Teams

A feature team is a cross functional team owning a plan item

The screenshot displays the 'Plan Item 99043' page in the Jazz Collaborative ALM system. The page is divided into several sections:

- Summary:** Support task tracking as a service
- Status:** Dev Status is 'Defined', Risk Status is 'Yellow'.
- Risk Description:** A section for describing risks.
- Roadmap:** 'Exploration Done' is set to '2010 M4' and 'Implementation Done' is set to '-> 2010 M6'.
- Team:** 'Feature Team Lead' is 'André Weinand'. The 'Feature Team' list includes: André Weinand, April L de Vries, Craig Lawton, Erich Gamma, Jennifer Hayes, John Whitfield, Larry Smith, Patrick Streule, and Pratik Shah.
- Weekly Status:** A chronological log of updates:
 - 2/22/2010:** finished exploration. Details can be found in [Story 94074](#). End of M4 we will have a list of tasks to be addressed in M5. Delegated artifact creation in RTC has been implemented (see [item 103616](#)).
 - 3/5/2010:** added two proposals to [story 10844](#) (see description).
 - 3/12/2010:** added more details to [story 94074](#); prepared detailed tasks for RQM team.
 - 3/26/2010:** RQM has defined done criteria; embeddable Web UI implementation on track; discussion with UX and Web UI Foundation teams; investigation for [item 108424](#); we are planning to provide a patch for Foundation.
 - 4/1/2010:** embeddable Web UI implementation done; can be explored in standalone Module Test web app. Waiting for RQM to consume it; discussions with UX and Web UI foundation teams; planning to base implementation on Open Social in M6; Process is willing to accept a patch for the proposal presented in [item 108424](#).
 - 4/9/2010:** RTC 3.0 M5 endgame.
 - 4/15/2010:**

Callouts in the image highlight:

- Feature status:** Points to the Status section.
- Roadmap:** Points to the Roadmap section.
- Feature home page:** Points to the Feature Home Page field.
- Feature team:** Points to the Feature Team list.

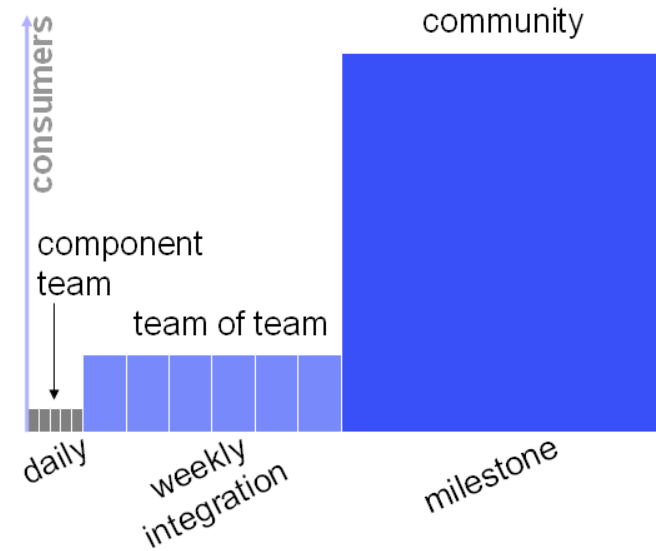


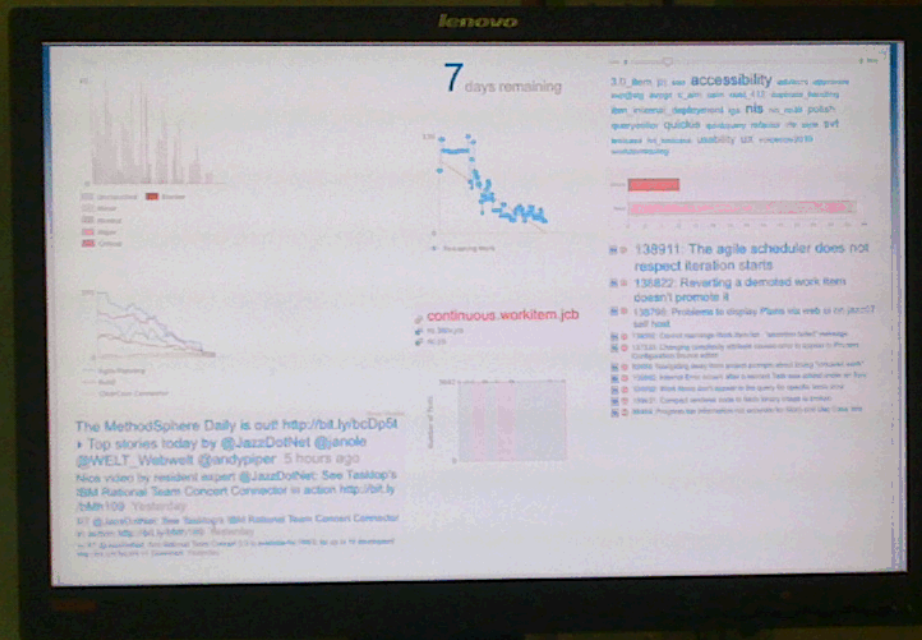
Building

- Team of Teams
 - ▶ Scheduled weekly integration build
 - Stabilized until green
 - ▶ Continuous integration stream
 - Share changes, rarely green

- Each Team
 - ▶ Continuous builds
 - ▶ Always green

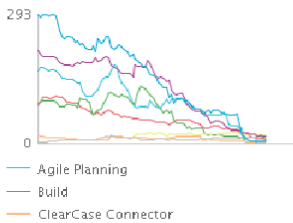
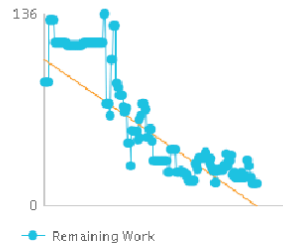
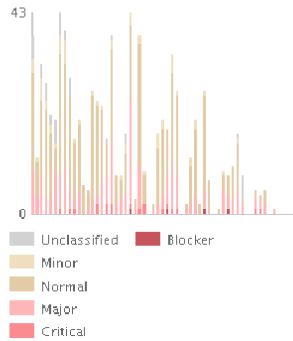
- A Developer
 - ▶ Personal builds



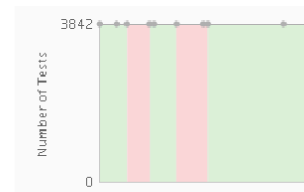



Show Header

7 days remaining

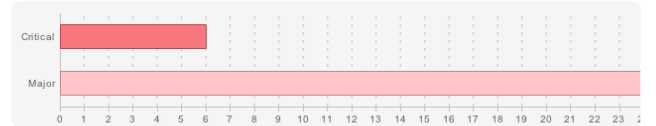


continuous.workitem.jcb
 rtc.300x.jcb
 rtc.jcb



Less ▶ More

3.0_item [2] aao **accessibility** advisors approvals avp@stg
 avpgc c_alm calm cust_412 duplicate_handling
 ibm_internal_deployment iga nis nis_rtc30 polish queryeditor
 quickie quickquery refactor rfe style SVT testcase tvt_testcase
 usability UX voicenov2010 workitemtooling



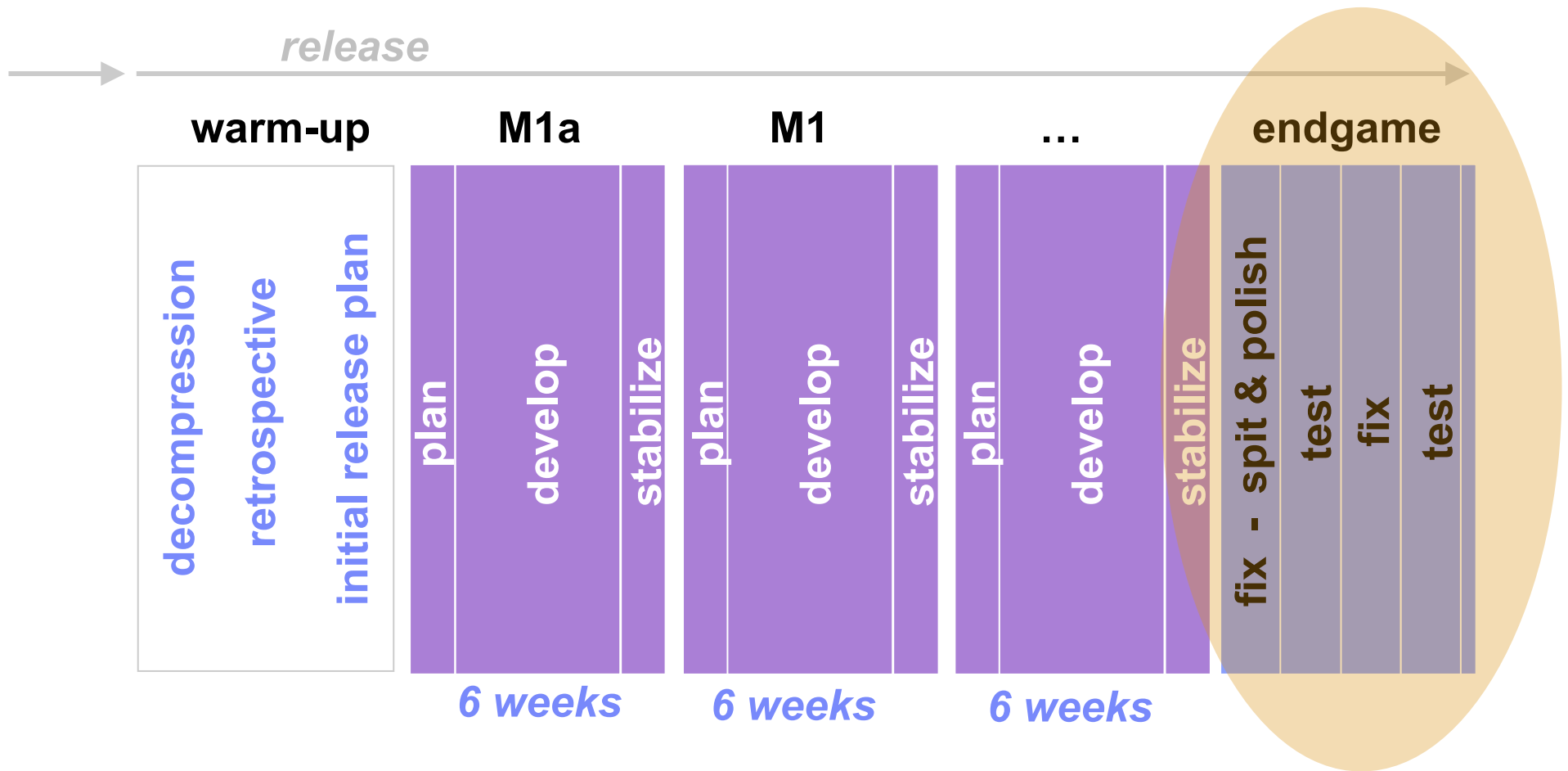
- 🔍 138911: The agile scheduler does not respect iteration starts
- 🔍 138822: Reverting a demoted work item doesn't promote it
- 🔍 138798: Problems to display Plans via web ui on jazz07 self host
- 🔍 138392: Cannot rearrange Work Item list - "assertion failed" message
- 🔍 137333: Changing complexity attribute causes error to appear in Process Configuration Source editor
- 🔍 82658: Navigating away from project prompts about losing "unsaved work"
- 🔍 105862: Internal Error occurs after a second Task was added under an Epic
- 🔍 100092: Work Items don't appear in the query for specific team area
- 🔍 139431: Compact renderer code to fetch binary image is broken
- 🔍 88454: Progress bar information not accurate for Story and Use Case WIs

The MethodSphere Daily is out! <http://bit.ly/bcDp5t> ▶ Top stories today by @JazzDotNet @janole @WELT_Webwelt @andypiper 5 hours ago
 Nice video by resident expert @JazzDotNet: See Tasktop's IBM Rational Team Concert Connector in action <http://bit.ly/bMh109> Yesterday
 RT @JazzDotNet: See Tasktop's IBM Rational Team Concert Connector in action <http://bit.ly/bMh109> Yesterday
 lo/ RT @JazzDotNet: And Rational Team Concert 3.0 is available for FREE for up to 10 developers! <http://bit.ly/hTaUxN> << Download Yesterday

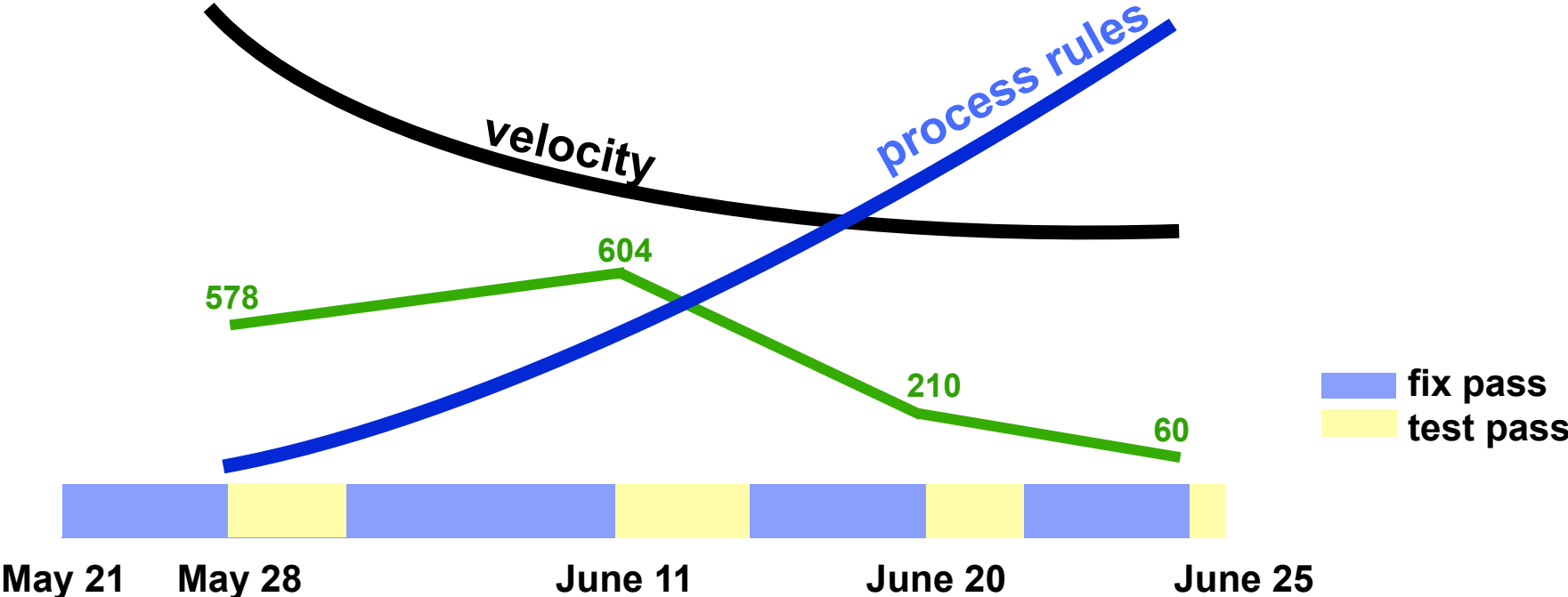
🔍 [2] Better sorting of user content assist proposals based on comments history (140355) 1 hour ago



Endgame Focused and Disciplined



Endgame Convergence



Raising the Bar: Approvals

Operation Behavior

Operations	Everyone (default)	PMC	compon...	contributor	parttime	projecta...	connect...	dashboa...	integrati...	integrati...	co
Save Team Area (server)											
Reports											
Deploy Report (server)											
Deploy Report Template (server)											
Display Report (server)											
Manage Report Folder (server)											
Source Control											
Deliver (client)											
Deliver (server)											
Work Items											
Save Work Item (server)											

The deliver operation is performed when changes or baselines are delivered from a workspace to a stream.

Preconditions and follow-up actions are configured for this operation

Final (ignore customization of this operation in child team areas)

Preconditions (7 available):

- -
 -
 -
- IBM Copyright
 - No Compile Errors
 - Require Work Item
 - Approved Changes

Name:

Fail if

User

Description:

All changes you release in RC4 need two separate approvals and one review. The first approval needs to list your component lead as approver. The approval needs to list two members of the PMC as approvers. The Review needs to list two team members as reviewers.

Required approvals:

- Approval: 1 componentlead
- Approval: 2 PMC
- Review: 2 contributor

Follow-up actions (0 available):



Endgame Tracking

All Dashboards > Jazz Project >

Jazz Development*

General | RC5 Candidates | **RC4 Candidates** | Open Defects by Themes | Builds | Open Defects by Team | SVT Defects by Team | Defect Trend Comparison | Defect Trends by Priority

Deferred Items by Team | Closed Daily | Add New Tab Add Viewlet

RC4 Candidates

Work items which are candidates for RC4 are tagged with **rc4candidate**. Work item needs to stay at least 4 hours in this state.

All RC4 Candidates (113)

- 57494: Copyright comments are being echoed on the screen when running repotools
- 57331: Sametime 8.0 opens team chat when executing chat in context.
- 57244: Query Editor: Selected columns are missing in the 'sort columns' list
- 57354: NullPointerException when malformed url provided in provision profile file
- 56119: Update web About screen(s) for GA
- 57154: Deadlock saving screenshot

Page 1 of 19

RC4 Candidates ClearCase Connector (0)

No work items found.

RC4 Candidates Dashboard (6)

- 56887: Viewlets targetting work item queries from different project areas are broken
- 57278: Viewlets contain broken links
- 53513: Add comments and examples to extension point schemas
- 57499: Run the copyright tool for the Dashboard projects
- 56856: Error dialog encountered dropping a viewlet on IE7

RC4 Candidates Agile Planning (13)

- 57331: Sametime 8.0 opens team chat when executing chat in context.
- 57159: Chat in context doesn't work after connecting via VPN from Home
- 57448: Personal Plan Mode shows all non-personal items as outplace items
- 51673: NPE in WorkItemWorkingCopyManager.disconnect
- 56946: Filter estimated item filters too much
- 56750: Provide hotfixes in the Sametime update site

Page 1 of 3

RC4 Candidates ClearQuest Connector (0)

No work items found.

RC4 Candidates Process (5)

- 56482: Import users does not handle invalid LDAP entries
- 57013: Take advantage of 'functional' attribute on CALs to improve usability in the web user editor
- 56477: User editor marked as dirty, but save button disabled
- 56970: Uninitialized project areas are shown on Project Area tab
- 57009: SetupCloudburstProjectParticipant should also call IWorkItemCommon.setDefaultTeamArea() as SetupProjectParticipant does

RC4 Candidates X-Team Web UI (1)

- 56892: HoverPopup should fail silently on open errors

RC4 Candidates Build (1)

- 57220: Update versions to 0.6.0.qualifier [Build]

RC4 Candidates Web UI Foundation (22)

- 57354: NullPointerException when malformed url provided in provision profile file
- 56119: Update web About screen(s) for GA
- 52716: Admin Web UI - "Type Error: 'this.domNode.style' is null or not an object"
- 52331: "Error uploading Server Activation Key" disappears too quickly.
- 55692: Not enough license assignment guidance in server setup wizard (Standard Edition)
- 56467: Default ADMIN can still partially log into the Web UI when WS Allow Admin Access is disabled

Page 1 of 4

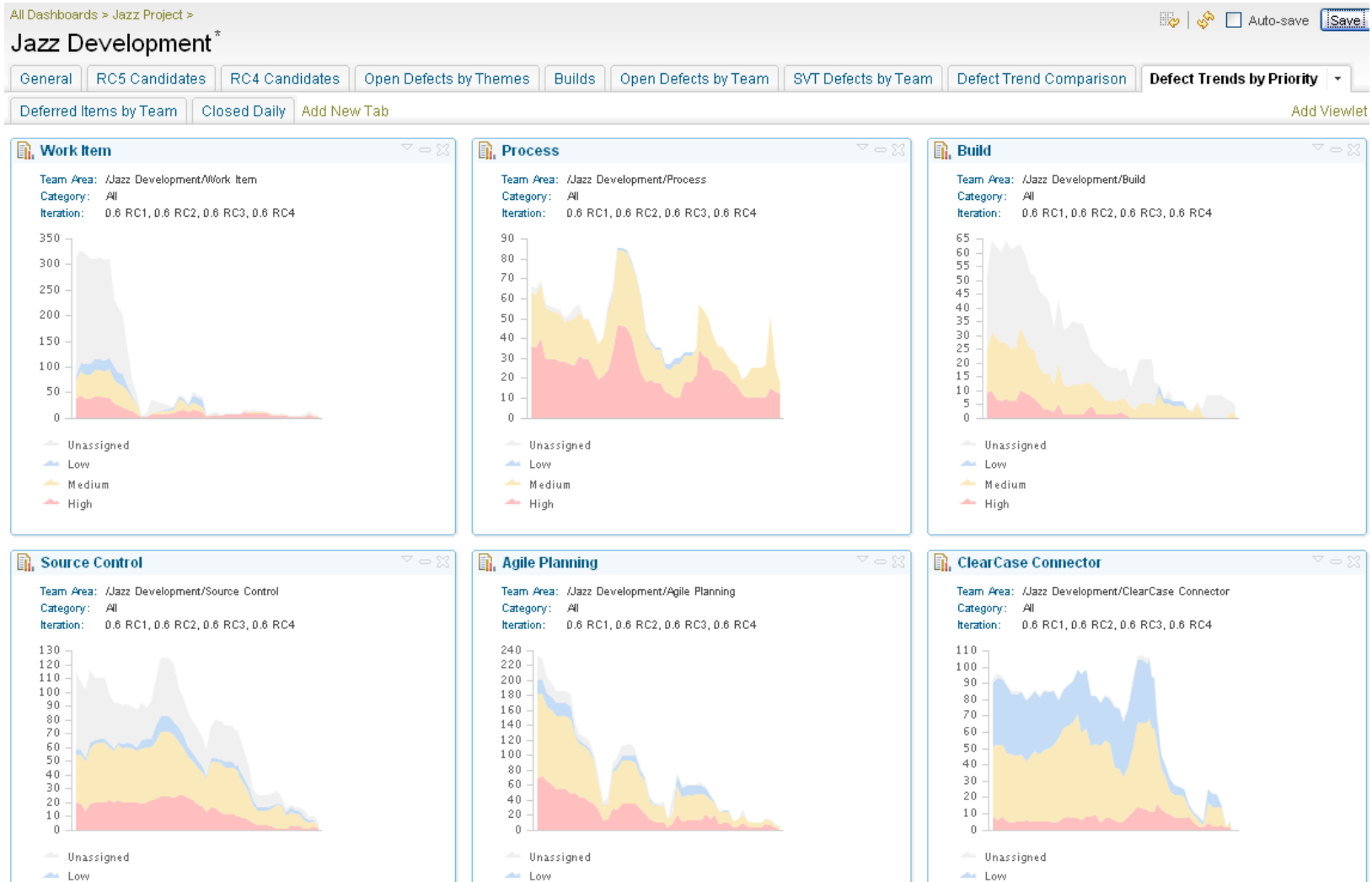
RC4 Candidates Repository (19)

- 57494: Copyright comments are being echoed on the screen when running repotools
- 56231: Jazz getClientLibrary(IWorkItemClient.class) API Call Exception
- 50467: Repotools should not be allowed to run when the server is still running
- 56063: DB2z provider should implement collectStatistics
- 57012: Response already committed error from FeedService
- 57125: More improvements of feedback from provisioning failures

Page 1 of 4



Endgame Tracking



What next? ALM, CLM and Jazz

The **Rational Collaborative Lifecycle Management solution** provides **turnkey ALM** for project teams of any size or configuration. Built on the latest Jazz technology, the solution helps organizations **transform software delivery** so it is more collaborative, transparent and productive.

- ✓ **Real-time planning**
- ✓ **End-to-end traceability**
- ✓ **Continuous process improvement**
- ✓ **Development intelligence**
- ✓ **Active collaboration**



Plan Collaboration improves value & time to delivery

- ✓ Creating a shared vision delivers what the stakeholders want
- ✓ Ensuring coverage improves quality for the release and each sprint
- ✓ Whole team buy-in improves team trust, efficiency and focus

Developers understand the business needs and test effort

Product owners clarify the business needs in a collection

Testers understand Sprint Plans and business expectations

Plan Item collaboration improves quality

- ✓ Story points include test effort
- ✓ Everyone knows what's being developed when and by whom.
- ✓ A Story is 'done' when associated tests have passed

Developers understand user story, test effort and done criteria

Product owners clarify the details of a user story



Testers define and execute test cases with a clear definition of the 'done' criteria



Lifecycle Queries reveal traceability gaps

- Show which RTC plan items implement which RRC requirements

Plan items implementing requirements

Show All Items Per Page Previous | 1 - 8 of 8 | Next Type Filter Text

Type	Id	Summary	Status	Priority	Severity	Modified Date	Implements Requirement
	29	Common User Access (CUA)	➔ New			1 minute ago	Common User Access (CUA) (122)
	28	View CD Details	➔ New			2 minutes ago	View CD Details (133)
	27	Scalability	➔ New			2 minutes ago	Scalability (151)
	26	Response Time	➔ New			2 minutes ago	Response Time (142)
	25	Localization (L10n)					Localization (L10n) (123)
	24	Internationalization (I18n)					Internationalization (I18n) (141)
	23	Globalization (G11n)					Globalization (G11n) (126)
	22	Easy browsing for available titles					Easy browsing for available titles (143)

Localization (L10n) (123) ✕

RRC CD Collection Project One Requirements

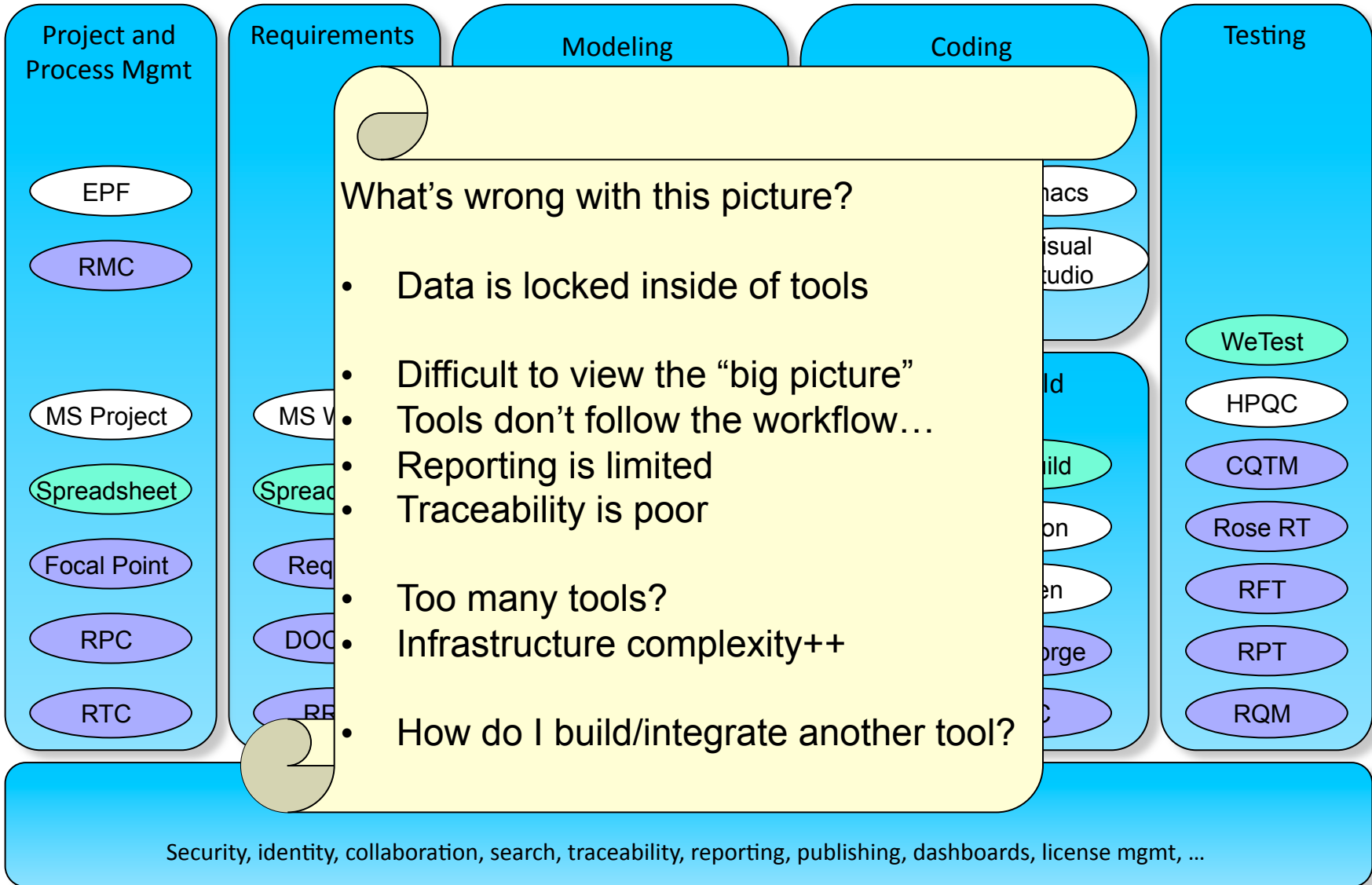
Comments (0) Links (1)

[Open Item](#)



Back in the real world: Customer Tool Landscape

IBM tools
Others
Homegrown



What's new in OSLC?



- Ten workgroups operating
 - ▶ 1.0 spec for Change, Quality and Requirements Management complete
 - ▶ Architecture, Asset, Reporting, SCM, Estimation specs anticipated in 1Q10
 - ▶ 2.0 specs for Change, Quality, Requirements, building on a common core OSLC V2 spec

- Community
 - ▶ 230+ registered community members
 - ▶ Workgroups have individuals from 25+ different companies
 - ▶ Integrators, ISVs, industrial, open source, higher education, consultants
 - ▶ Mix of IT and Systems participants

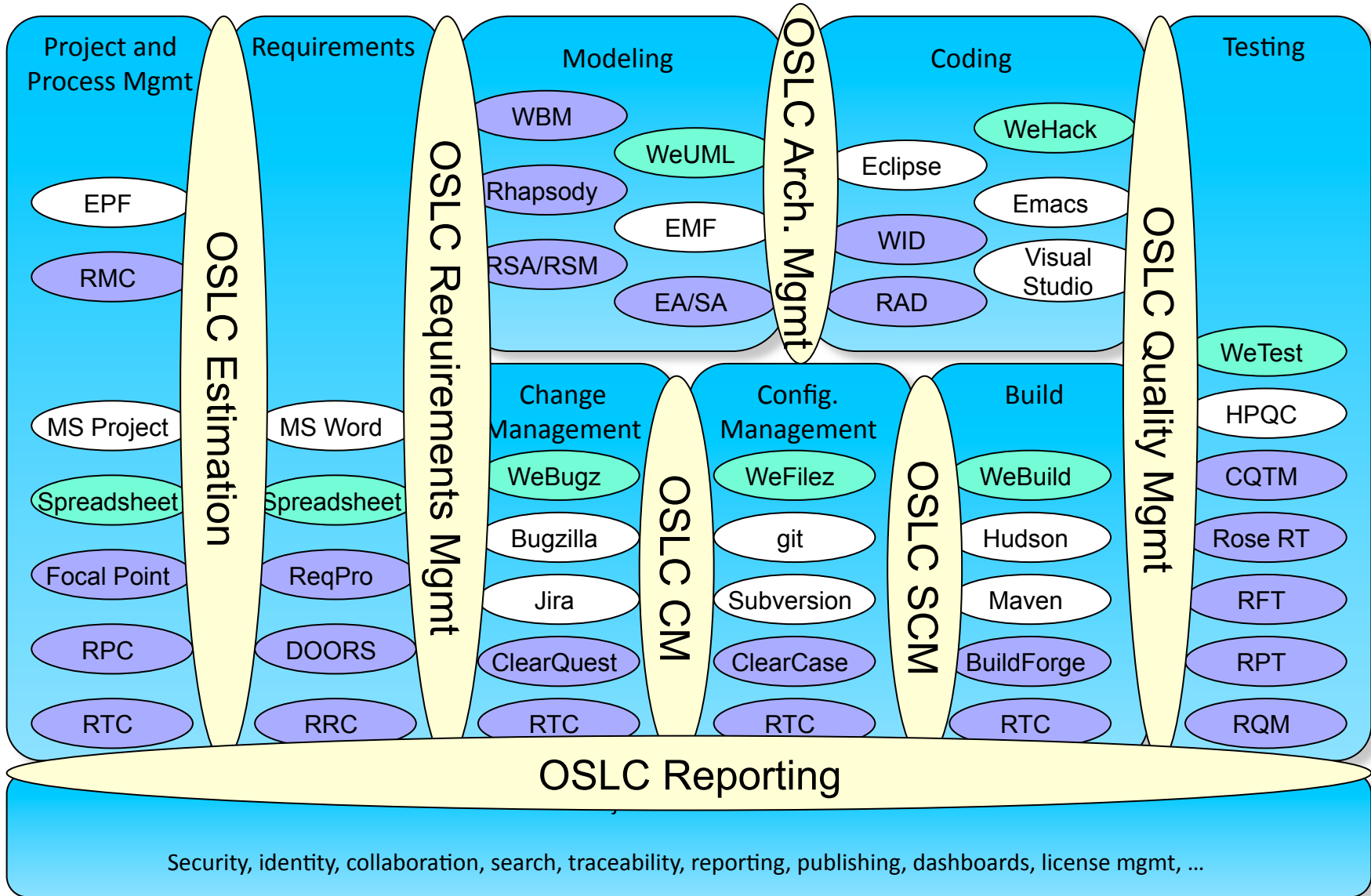


- | | |
|----------------------------|-------------------------|
| Accenture | Northrop Grumman |
| APG | Oracle |
| BigLever | QSM |
| Black Duck | Rally Software |
| Boeing | Ravenflow |
| BSD Group | Shell |
| Citigroup | Siemens |
| EADS | Sogeti |
| Emphasys Group | SourceGear |
| Galorath | State Street |
| General Motors | Tasktop (Eclipse Mylyn) |
| IBM | Tieto |
| Institut TELECOM | TOPIC Embedded Systems |
| Integrate Systems | UrbanCode |
| Lender Processing Services | WebLayers |

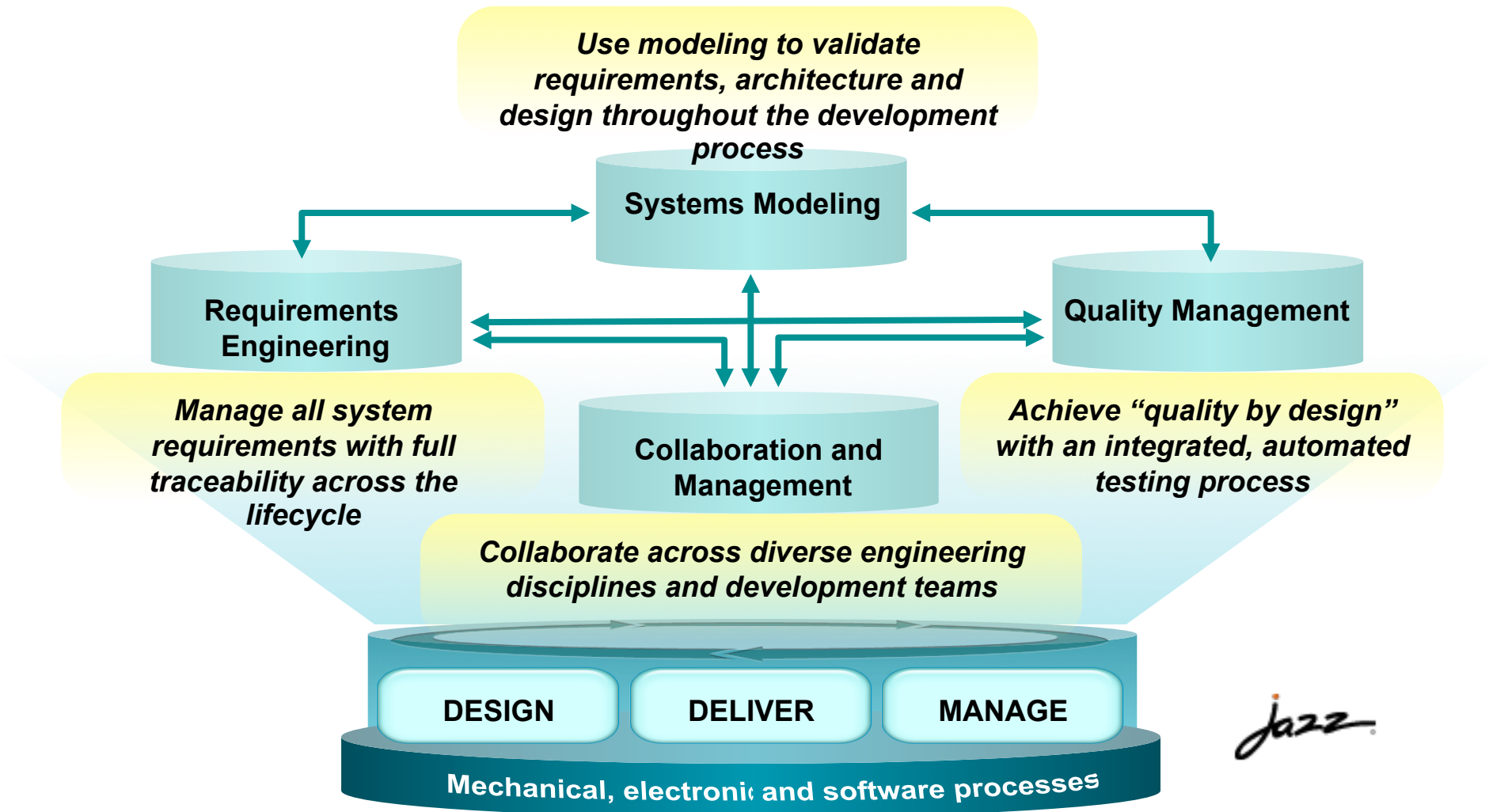


Unlocking Tool Data with OSLC

IBM tools
Others
Homegrown



IBM's vision for systems engineering and software development



DOORS 9.3 with Generic CM integratio



Integrations to Change, ClearQuest and RTC

Requirement / Change Request traceability

- ▶ **Stakeholder requirements submission:** Generate draft requirements from enhancements submitted to Change Management system
- ▶ **Requirements driven development:** Create implementation requests from requirements and monitor development progress alongside the requirements
- ▶ **Requirement defect tracking:** Associate a defect with a requirement to investigate a possible change to the requirement

URD-21233: The car shall have a six-speed manual gearbox.

Object Identifier: URD-21233
Module: User Requirements Document

Created On: 08 February 2010 Last Modified On: 14 March 2010
Created By: Martin Henderson Last Modified By: Martin Henderson

Attributes

Object Heading: Lorem ipsum et duo paulo nusquam eleifend, his animal inermis intellegebat ex. Sit ex recteque corruptit, mel ea vocibus posidonium. No pri lobortis tincidunt. Eu duo etiam facilisis, aequo patrioque ea vim.

Object Text: <read-denied>

Object Short Text: <empty>

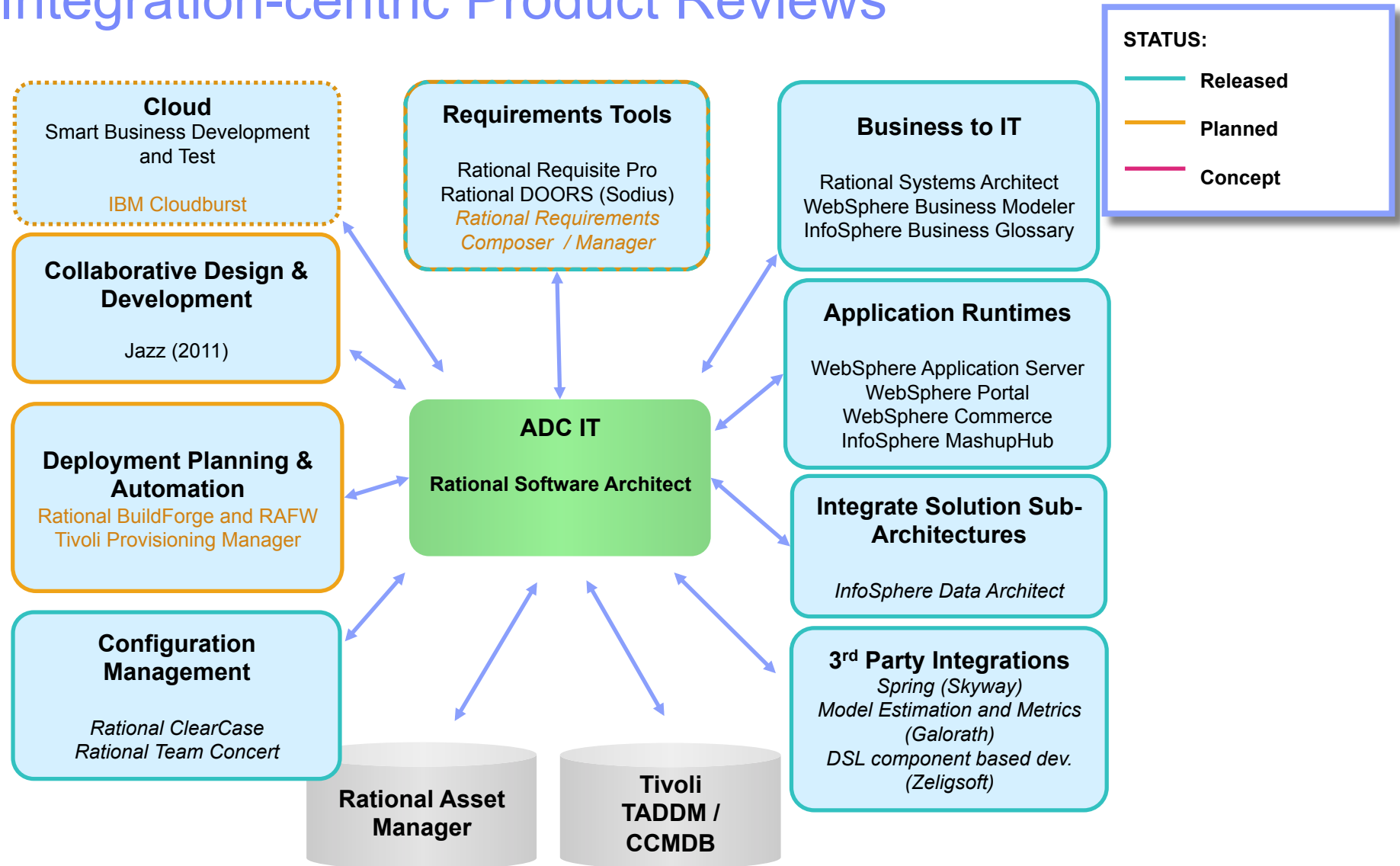
Links

▶ DOORS Out-Links (2) ◀ DOORS In-Links (7)

**OSLC-style linking
and rich hovers**



Integration-centric Product Reviews



Gartner Marketscope on Application Lifecycle Management

IBM Rational Positioned as a Clear Leader in this Expanding Segment

Gartner

Research

Publication Date: 11 November 2010

ID Number: G00208572

MarketScope for Application Life Cycle Management

Jim Duggan, Thomas E. Murphy

Organizations adopting agile practices, utilizing globally distributed teams, or exploiting complex processes and technologies are most likely to benefit from using ALM tools to plan, manage and report on their development activities. This MarketScope assesses the market offerings and their providers.

Rational. software

	RATING				
	Strong Negative	Caution	Promising	Positive	Strong Positive
Accurev			x		
Aldon			x		
Atlassian				x	
CollabNet				x	
Digite			x		
HP				x	
IBM					x
Kovair			x		
Micro Focus			x		
Microsoft				x	
MKS				x	
Parasoft			x		
Polarian Software			x		
Rally Software				x	
Seapine Software			x		
Serena Software				x	
SmartBear Software			x		
TechExcel			x		
ThoughtWorks			x		
VersionOne				x	

“Organizations are under pressure to accelerate the speed of delivery of increasingly complex applications, while improving overall productivity and quality. “

“IBM is one of the few vendors with credible offerings in almost all the requirements of ALM”

“Jazz is a solid architectural foundation for further innovation”->” This vision is only partially realized.still two to three years away.”

“We rate IBM as a **Strong Positive** because of its current market strengths and breadth of portfolio”

As of 11 November 2010
Source: Gartner (November 2010)



jazz.net

Creating a higher-fidelity connection to our customers

Home About Jazz Roles Projects Downloads Forums Library Development Community

jazz COMMUNITY SITE

We're building a new generation of products to make software and systems development more collaborative, productive, and enjoyable

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