



WHERE TEAMS ARE **R-HEROES**

# Collaborative Software Development with Jazz and IBM Rational Team Concert

*IBM Rational Technology Events*

# Agenda

- Today's Software Development Landscape
- All that Jazz
  - ▶ Introduction
  - ▶ Architecture
- Rational Team Concert
  - ▶ Overview
  - ▶ Getting Started with a new Team
  - ▶ Software Configuration Management
  - ▶ Build Management
  - ▶ Change and Traceability
- Wrap-up and Next Steps



## Demos

- Throughout the event, you will see in-depth demonstrations of the products in action



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## Today's reality: An intense focus on business outcomes



**Align *IT* investments with rapidly evolving business priorities**



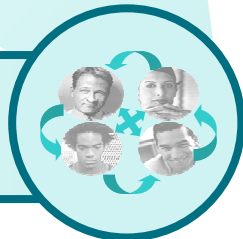
**Manage value and mitigate risks by improving project management**



**Control costs & improve global operational efficiencies**



**Ensure security and compliance in a changing global environment**



***Integrate value in organizationally diverse environments***



## Creates pressure on software delivery and solution sourcing



*"2/3 of our projects span multiple business units and locations"*



*"People knew it was a train wreck; no one could see what to do"*



*"The business is always changing what they want and we are the last to know"*



*"We run on the Web... we run fast so new code makes us really nervous"*



*"As-is won't do, we need new business models and capture the best talent"*

- Increasing reliance on out sourced partnerships & software reuse
- Interest in replicating the proven models of open, community-governed software delivery models
- Popularity of Agile development
- Investments in SOA and Web 2.0 to enable new business models



### Impact of growing modularity

- ▶ More granular service functionality used across business applications
- ▶ Larger number of projects and assets including custom, outsourced and packaged



### Impact of accelerating change

- ▶ Asset are impacted by frequent updates and changing interdependencies
- ▶ Effective cross-organizational visibility and synchronization becomes an imperative!



## The defining challenges in effective software delivery

**Only 37% of stakeholders are satisfied with the speed of internal application development<sup>1</sup>.**

**Only 42% are satisfied with the quality<sup>1</sup>.**

**50% of outsourced projects are expected to underperform<sup>2</sup>.**

### *Silos of people, process, and projects*

#### **Geographic Barriers**

- Poor communication
- Language, culture, time
- Process gaps resulting in rework
- High degree of friction

#### **Organizational Barriers**

- Lack of meaningful collaboration
- Weak project governance
- Lack of domain expertise
- Poor LOB oversight
- Security of IP when outsourcing

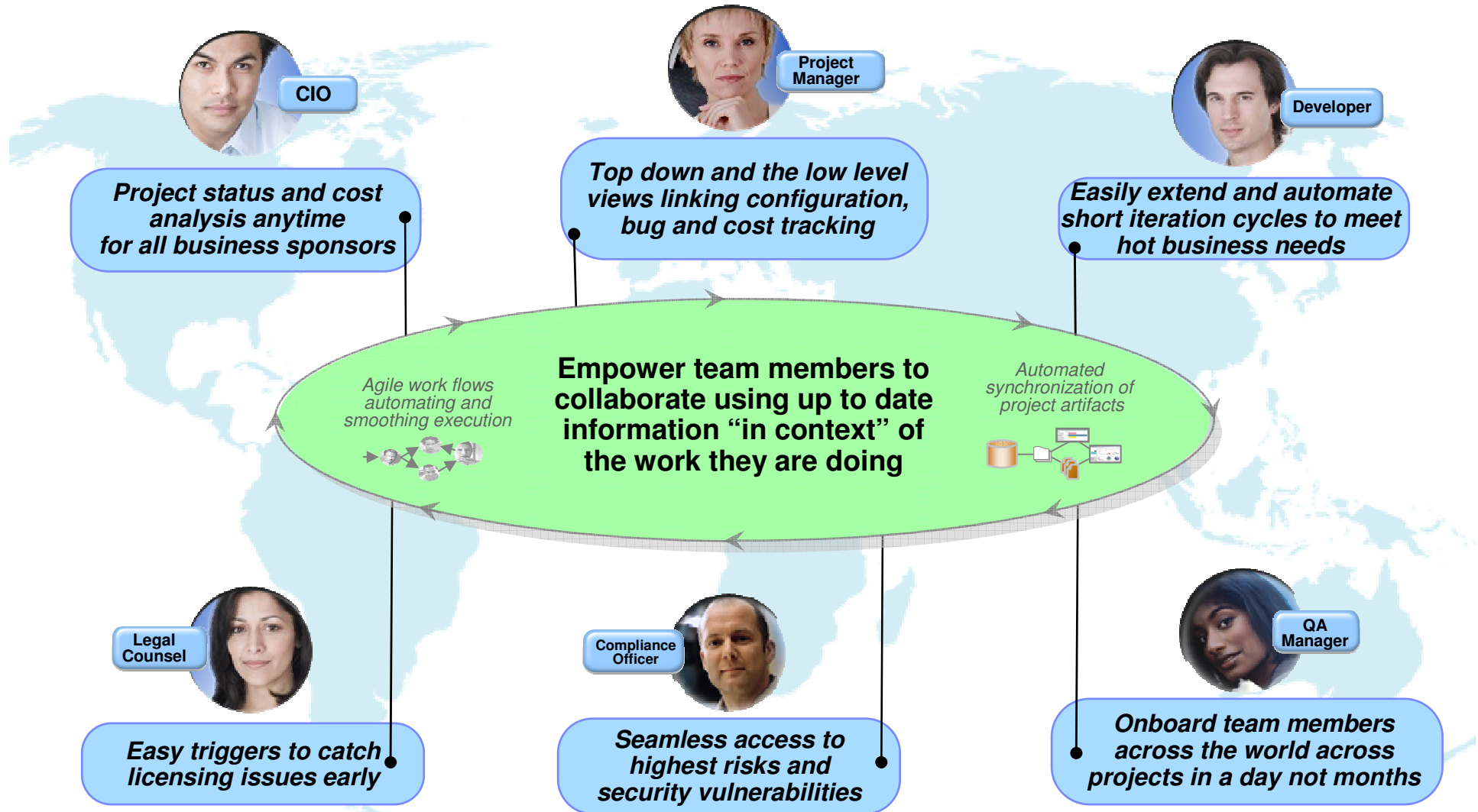
#### **Infrastructure Barriers**

- Incompatible tools / repositories
- Unreliable access artifacts
- Lengthy on-boarding
- Inflexible tooling integration

Source: <sup>1</sup>Forrester, <sup>2</sup>Gartner



# Customer Speak: What they would like to see possible



# Envisioning a platform that can transform software delivery

**A open technology initiative to *transform how people work together* to deliver greater value and performance from their software investments**



- Robust, extensible and scaleable
- Globally distributed, fluid and dynamic
- Community-based and open at Jazz.net



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# The Jazz project

*People working together to deliver great software*

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

A major investment by IBM to create a scalable, extensible team collaboration platform.

IBM's vision for the future of software delivery -- supporting a workforce that is increasingly organizationally and globally distributed, fluid and dynamic.

An evolution of the Rational portfolio, which will evolve to support the Jazz technology platform over time.

A community at **Jazz.net** – the online venue for open commercial development of select Jazz-based products.





## How Jazz is different

### Dynamic integration of

#### People

Desktop/database integration → **Global integration**  
Function first → **Team first**  
Pre-determined tool function → **Dynamically extensible**

#### Process

Rigid rules → **Creative collaboration**  
Manual tasks → **Process aware and transparent**  
Proprietary infrastructure → **Internet standards**

#### Projects

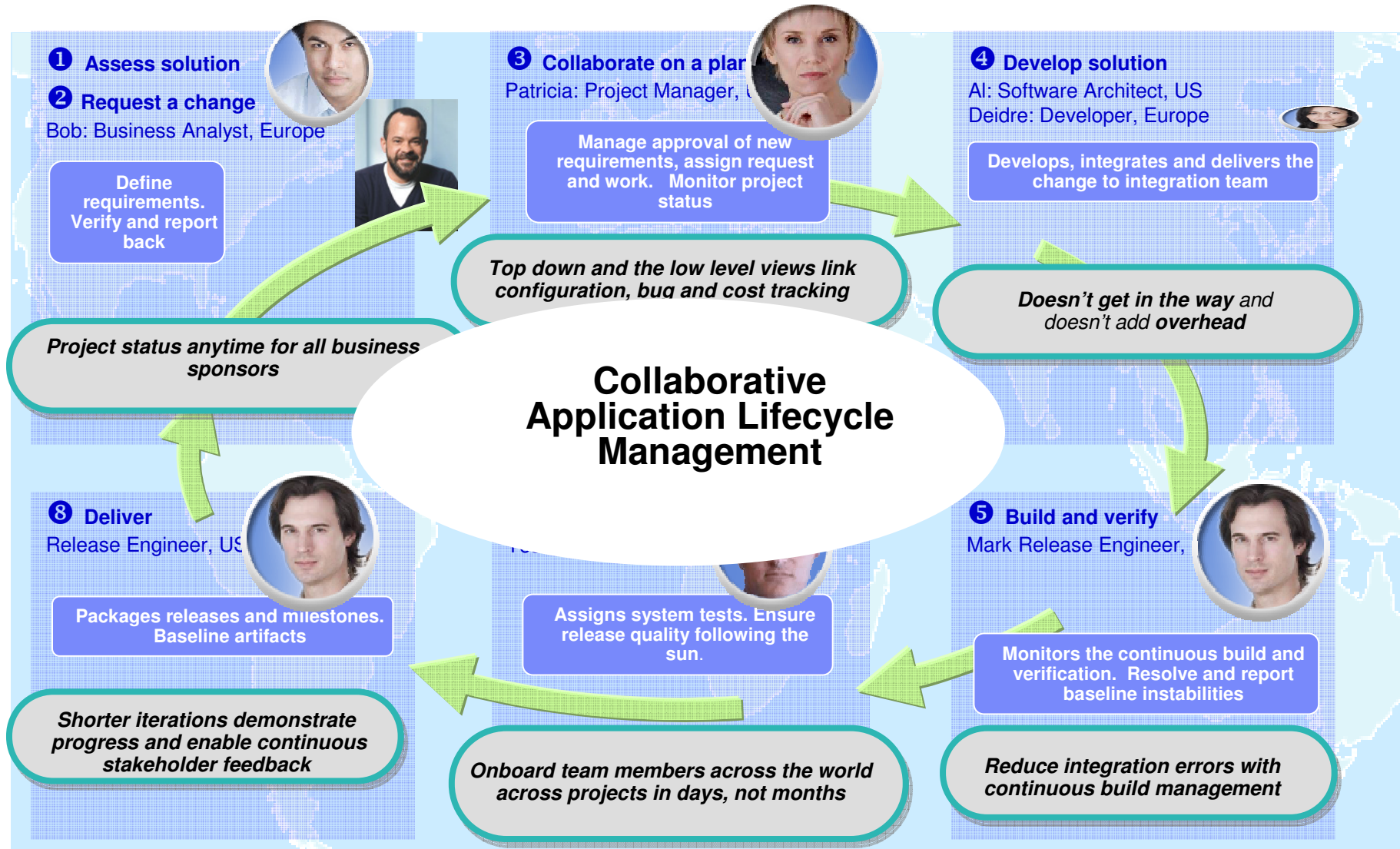
Lengthy project onboarding → **Day one productivity**  
Hindsight analysis → **Continuous steering**  
Status guesstimates → **Real-time insight**

...across the software lifecycle





# Dynamic processes streamline team communication and collaboration



# Jazz.net: Delivering greater openness and customer participation in the products they depend on for software delivery

- IBM is opening up the Rational Software Delivery Platform for greater ease of consumption, extensibility and integration to meet the unique usage needs of our customers
- IBM is providing transparent, collaborative customer participation in the development of new Rational technologies through an open commercial community





## Create a jazz.net account

Jazz.net registration is now open to everyone! In most cases, we can validate your registration and send you your password right away if you provide us with complete and accurate information.

### \*Create a jazz.net User ID:

[Check this User ID for availability](#)

### Personal Information:

\*First name:

\*Last name:

\*E-mail:

\*Re-type E-mail:

\*Company or Organization name:

\*Select the entry that best describes you:

### Mailing Address:

\*Address line 1:

Address line 2:

\*City:

State/Province (required U.S./Canada):

Zip/Postal Code (required U.S./Canada):

\*Country/region:

If you have a [registration code](#), enter it below:

### Why register?

Creating a jazz.net account allows you to take part in the Jazz community. You can download product Betas, and other previews of Jazz technology.

You'll be able to interact directly with the Jazz development team and other members of the Jazz community through forums and mailing lists, and help guide the evolution of the Jazz platform.

### Still not sure?

Watch the [guided tour](#) of Jazz.net.



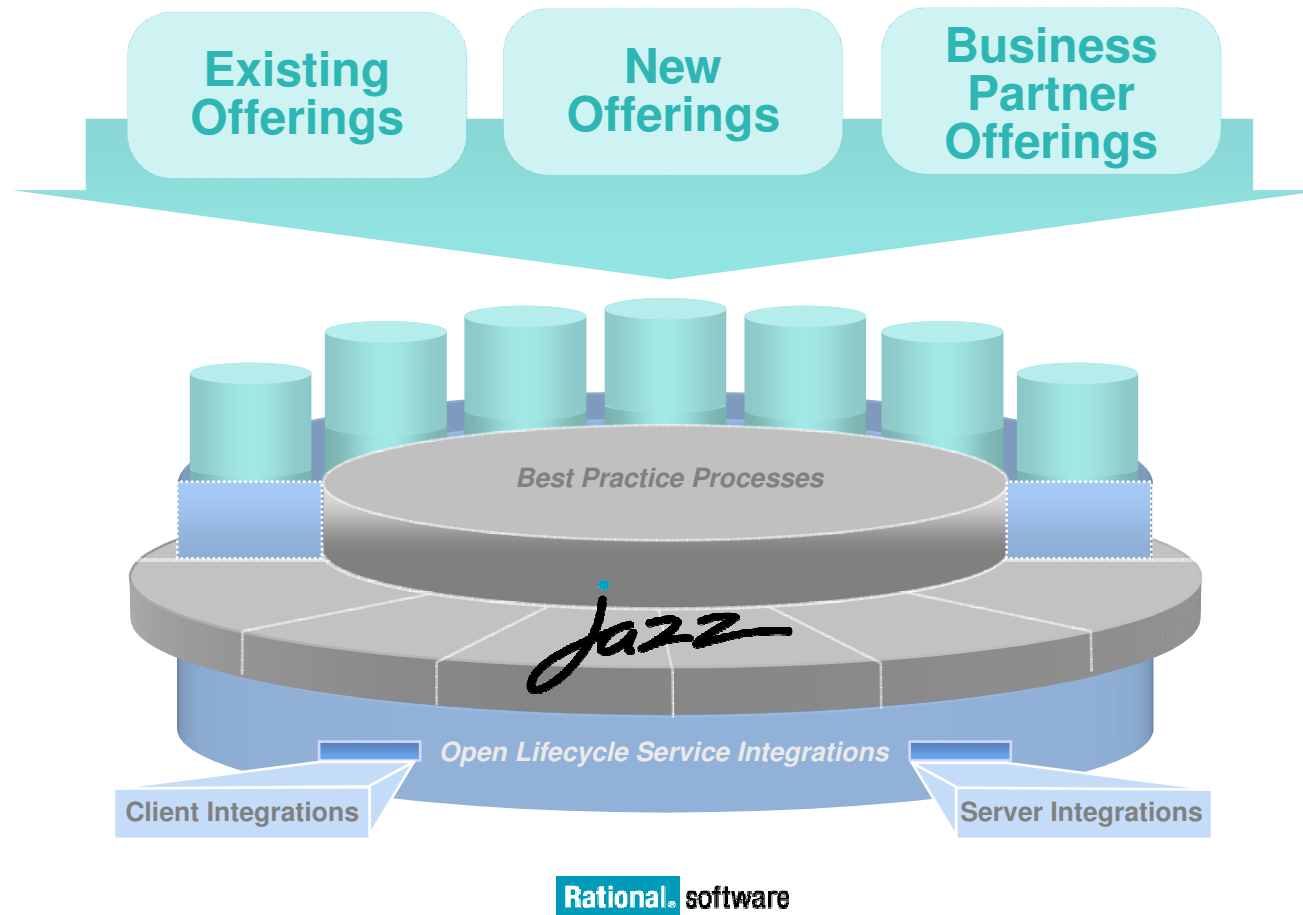
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# An evolution of value for new and existing customers

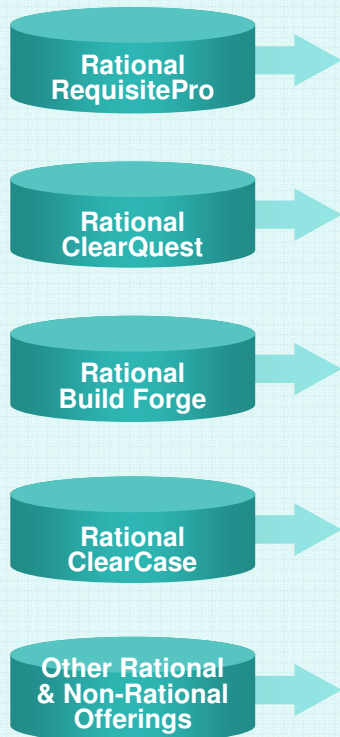
## *The next generation of the IBM Rational Software Delivery Platform*



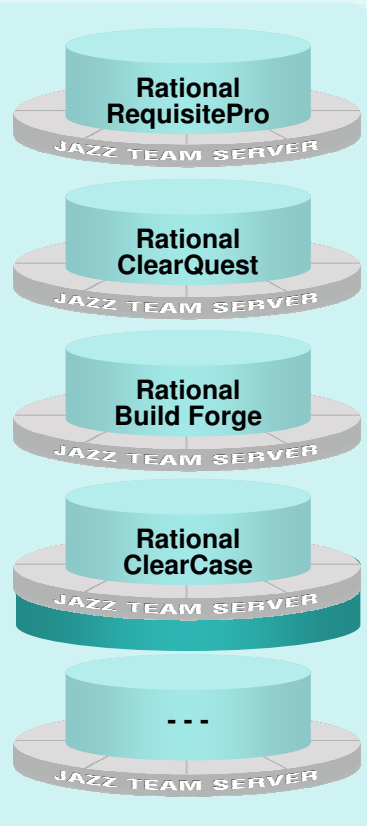
# An evolution for new and existing customers

## The Evolution of the IBM Rational Software Delivery Platform

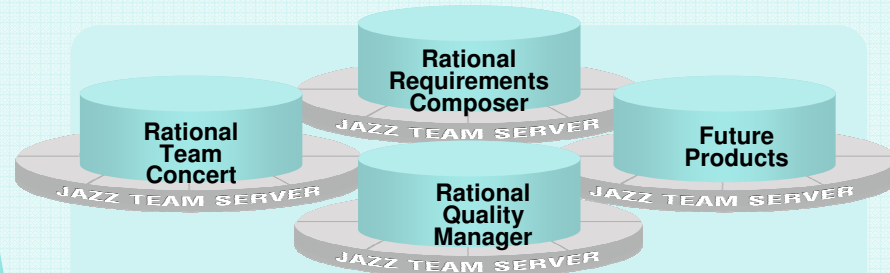
### Existing Offerings



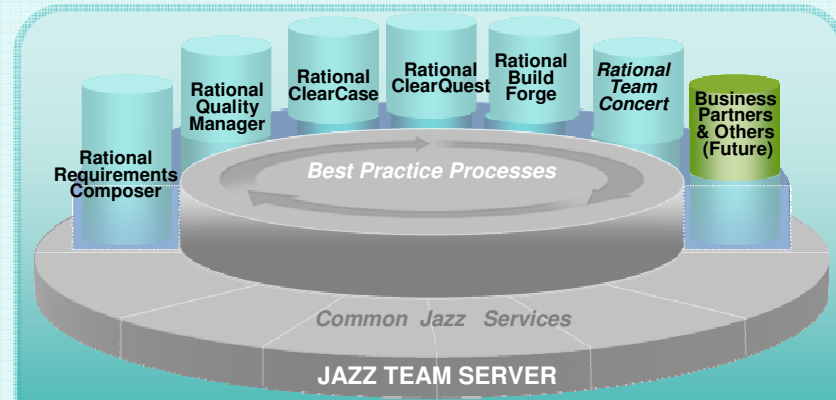
Evolution to Jazz Technology Platform



### New Offerings



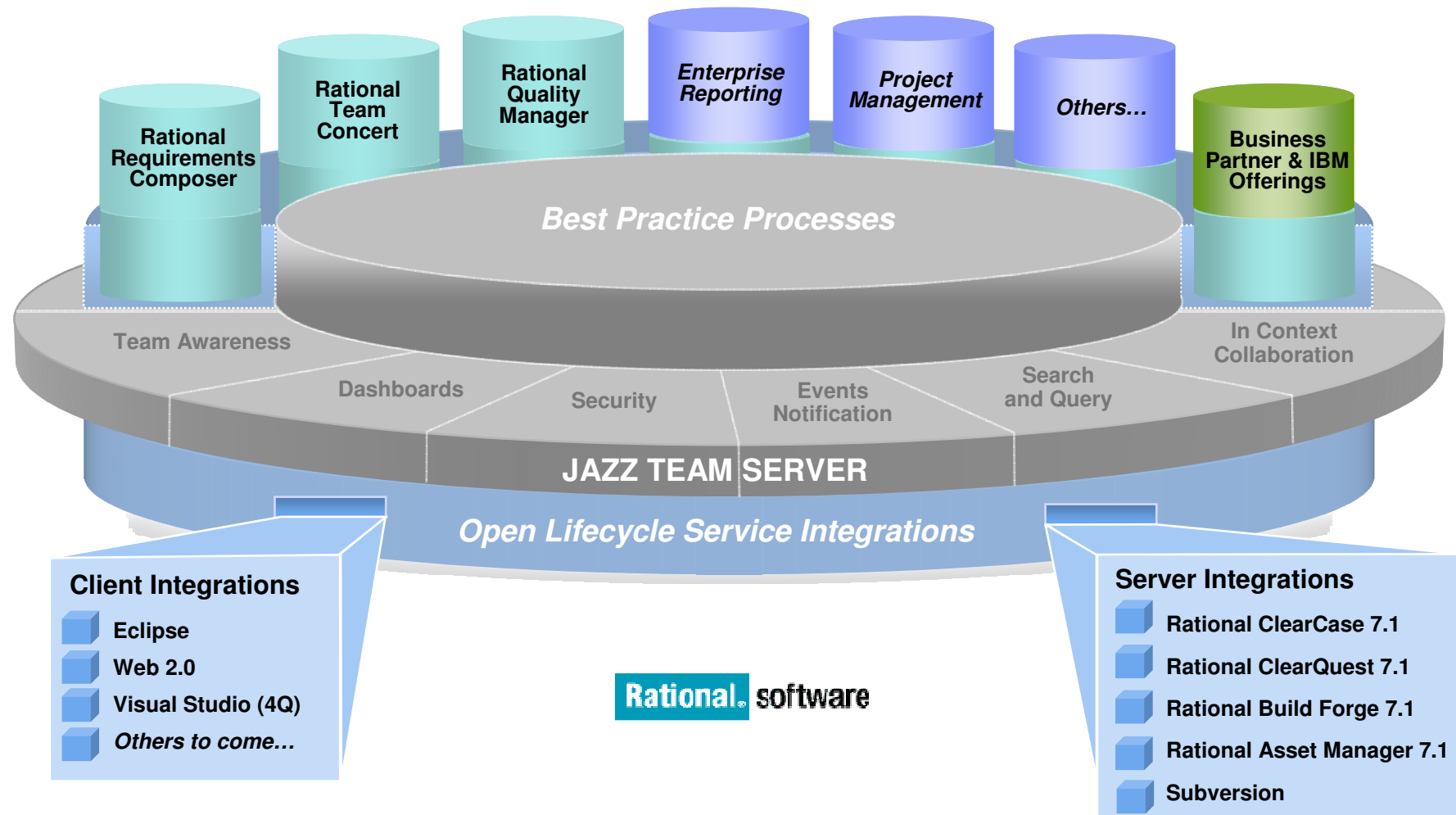
Built on the Jazz Technology Platform



**FUTURE IBM RATIONAL SOFTWARE DELIVERY PLATFORM**

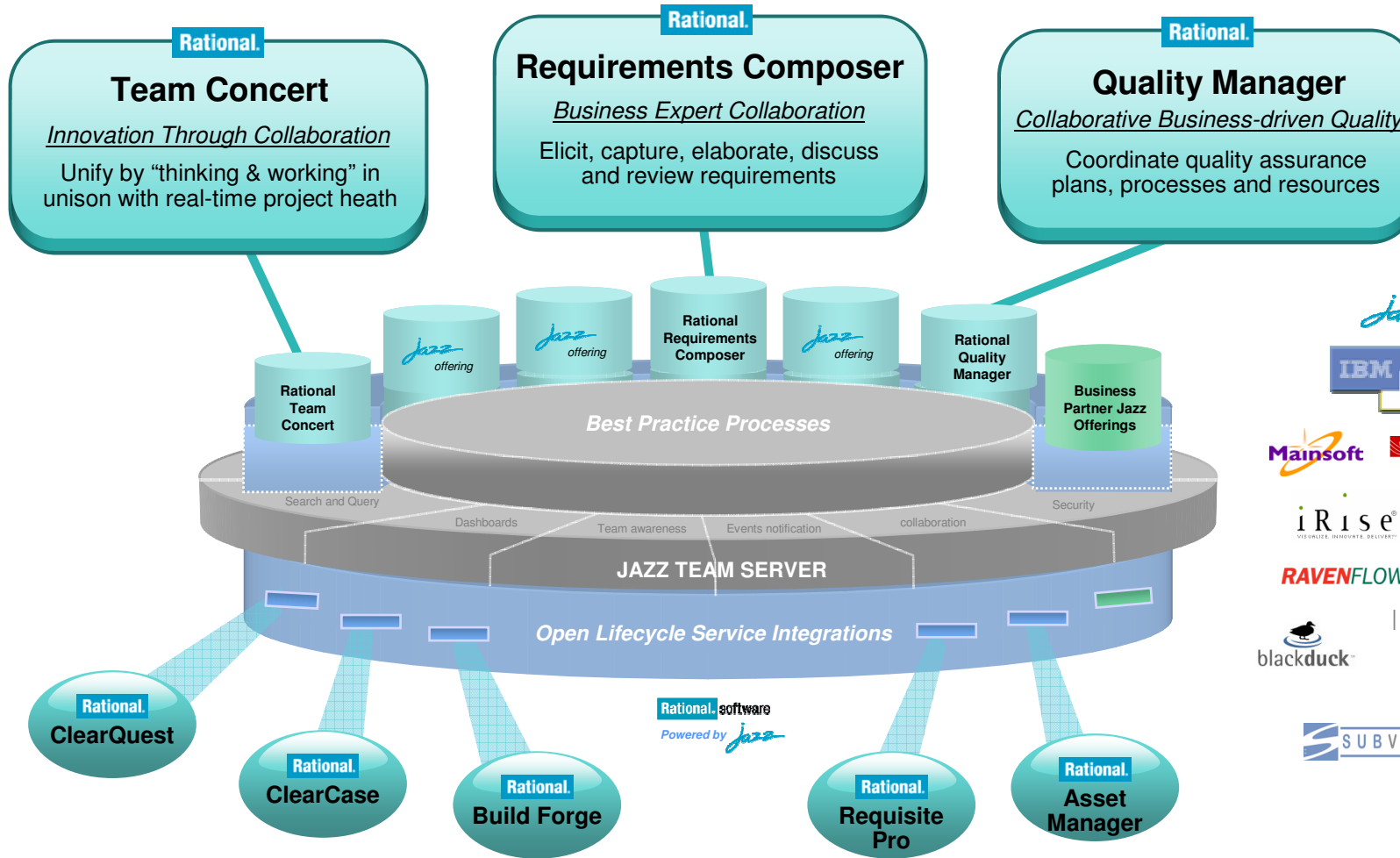


# Jazz Architecture



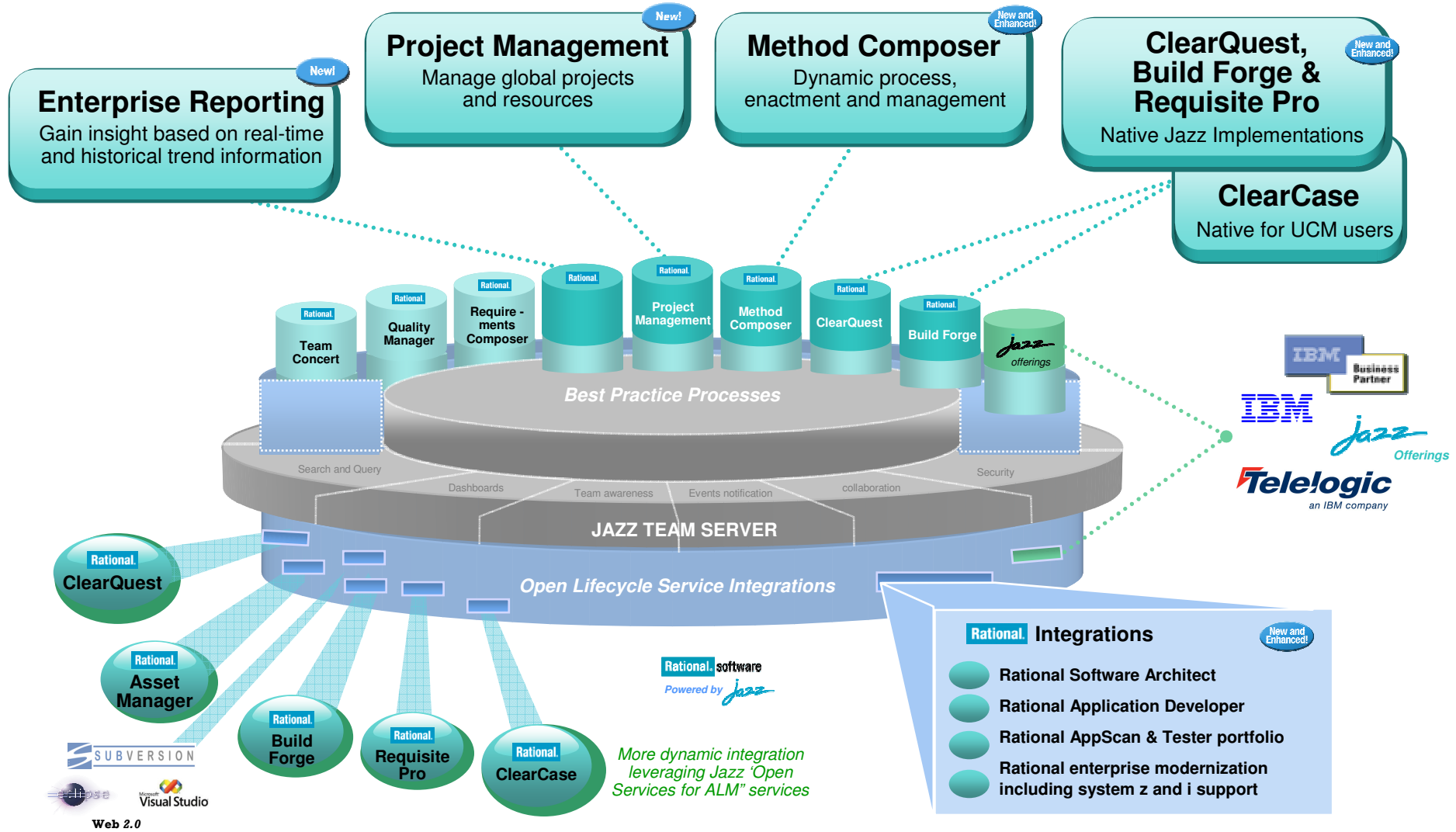


# Introducing the first wave of new *Jazz* offerings





# The road ahead: What to expect from Rational **Jazz** in 2009



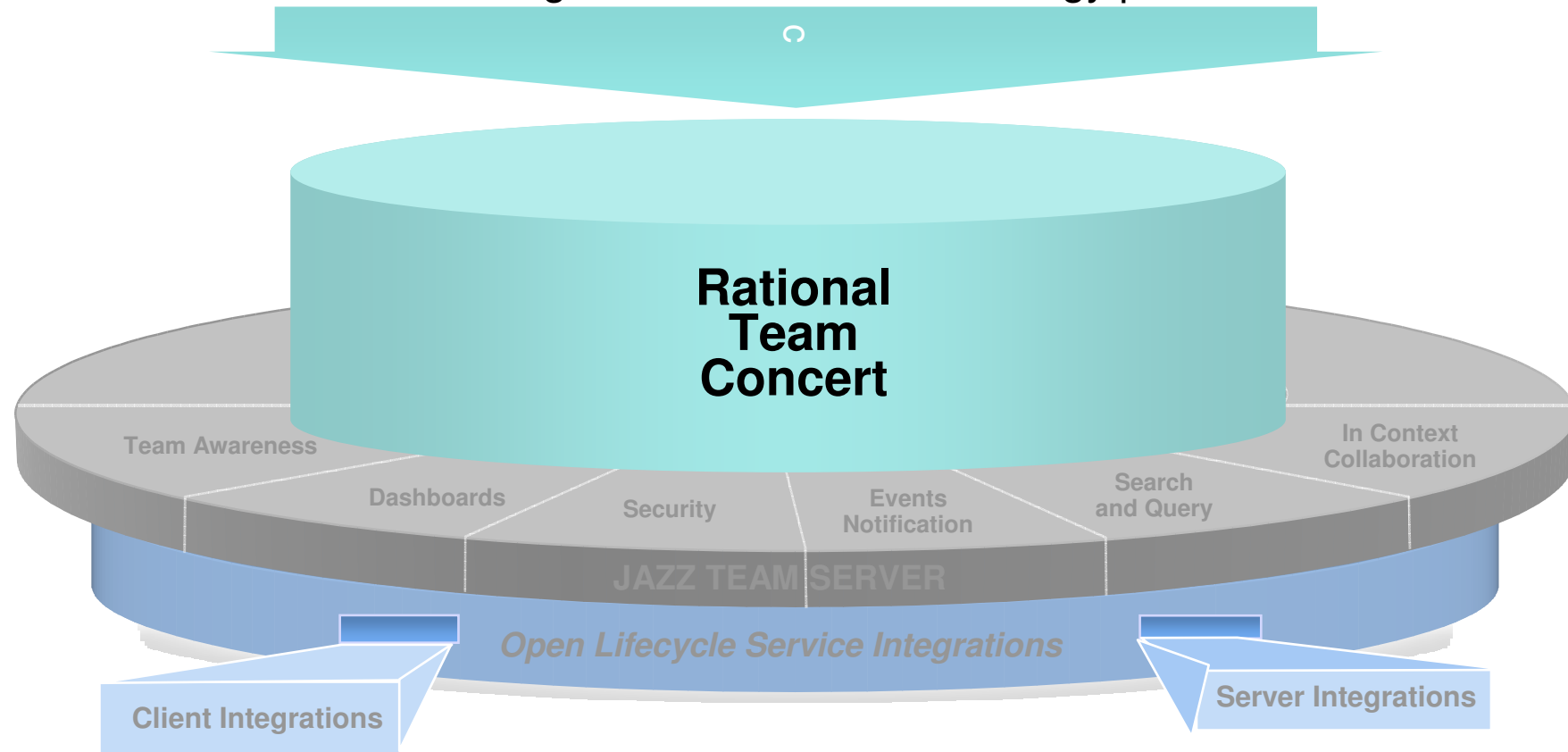
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# Today's focus: Rational Team Concert

The first offering built on the Jazz technology platform



**Rational.** software



# Software innovation through collaboration

- **Real time, in-context team collaboration**
  - ▶ Make software development more automated, transparent and predictive
- **"Think and work in unison"**
  - ▶ Integrated source control, work item and build management
- **Assess real-time project health**
  - ▶ Capture data automatically and unobtrusively
- **Automate best practices**
  - ▶ Dynamic processes accelerate team workflow
  - ▶ Out-of-the-box or custom processes
- **Unify software teams**
  - ▶ Integrate a broad array of tools and clients
  - ▶ Extend the value of ClearQuest and ClearCase
  - ▶ Visual Studio Client (4Q08)
  - ▶ Support for System z and System i servers (2H08)

*Open and extensible on*



- ✓ Collaborate in context
- ✓ Right-size governance
- ✓ Day one productivity

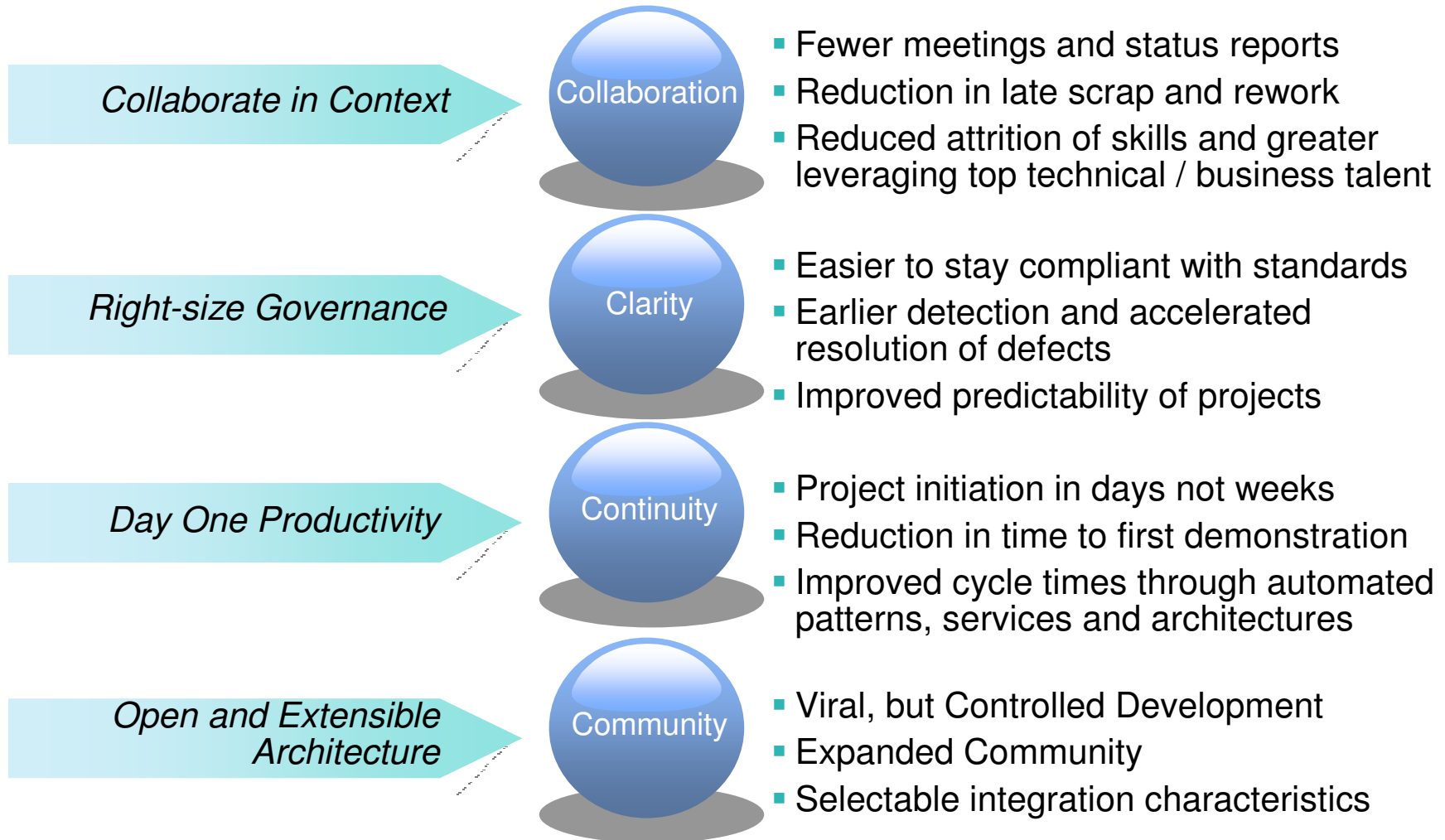
**IBM Rational Team Concert**

transparent *integrated presence*  
 wikis OPEN real-time reporting  
 chat automated hand-offs Web 2.0  
*custom dashboards* automated data gathering  
**EXTENSIBILITY** Eclipse plug-ins services  
 architecture **FREEDOM TO CREATE**

JAZZ TEAM SERVER



## Translating words to actions





# The Rational Team Concert family 2008

**Statement of Direction (2009)**

## Express-C

### Community and Academia

- In-context collaboration
- Open source middleware
- Up to 10 users per server

## Express

### Mid-sized and Departmental

- Transparent development
- Out-of-the-box processes
- Commercial middleware
- Up to 50 users per server

## Standard

### Corporate Teams

- Customizable process
- Real-time project health
- LDAP admin
- Enterprise scale and extensibility
- Up to 250 users per server

## Enterprise

### Enterprise Deployments

- Enterprise optimized extensions
- Integrated ClearCase, ClearQuest Build Forge
- Enterprise scale, security, governance & provisioning

*Eclipse™, Linux®, MS Windows®, UNIX® - z/OS® (1H 09) & i5/OS (3Q) w/ native asset & work item mgmnt*



## Rational Team Concert

### Iteration Planning

- Integrated iteration planning and execution
- Task estimation linked to key milestones
- 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 with flow relationships
- Component level baselines
- Server-based sandboxes
- Identifies component in streams and available baselines
- ClearCase connector

### Work Items

- Defects, enhancements and conversations
- Query results view and share queries with team or member
- Support for approvals and discussions
- ClearQuest connector
- Query editor interface

### Build

- work item and change set traceability
- Local or remote build servers
- Supports ant and command line tools
- Integration with build forge
- Build definitions for team and private builds

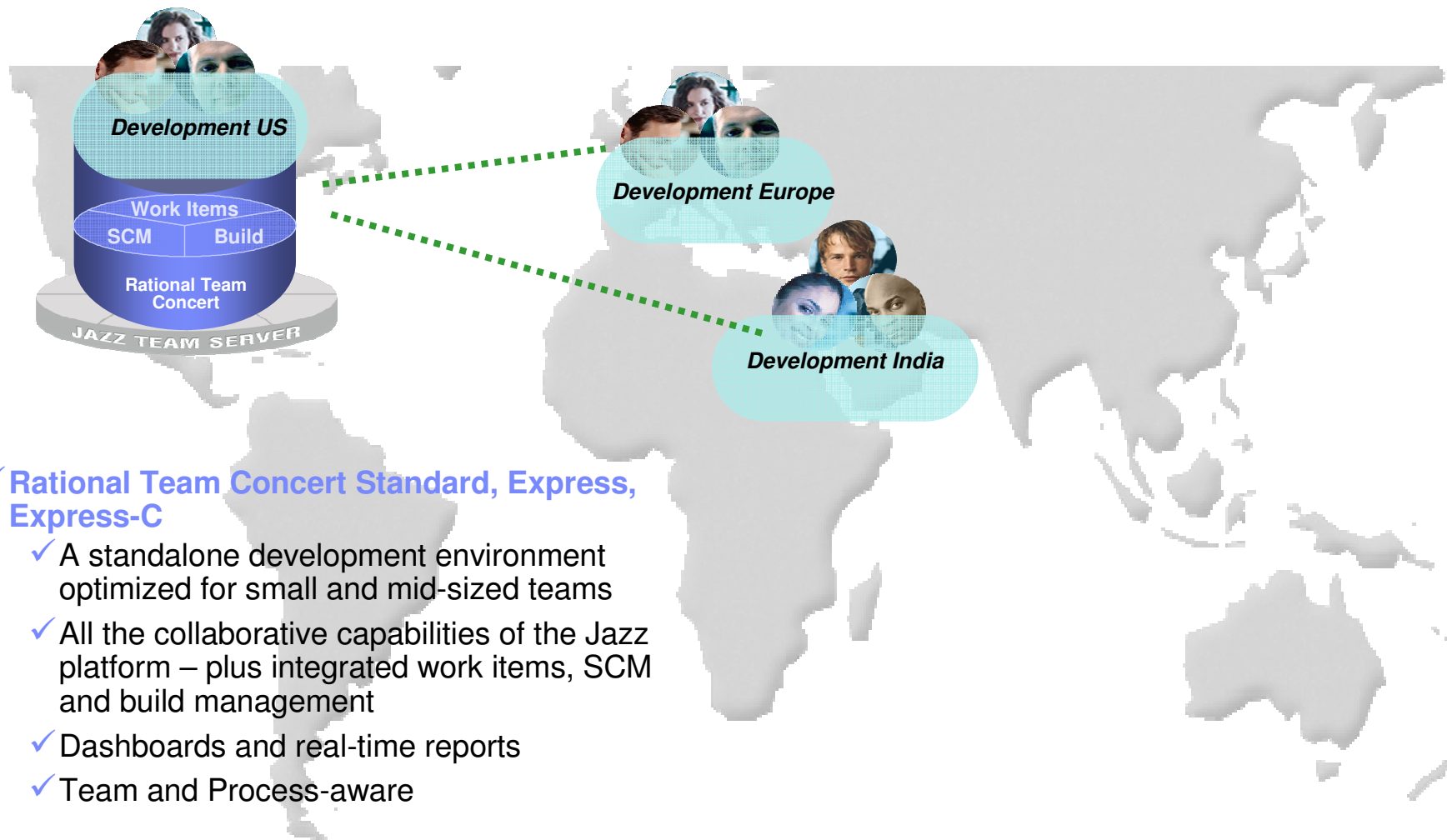
### Jazz Team Server

- 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 shows team members and status of their work





## Leveraging Rational Team Concert independently

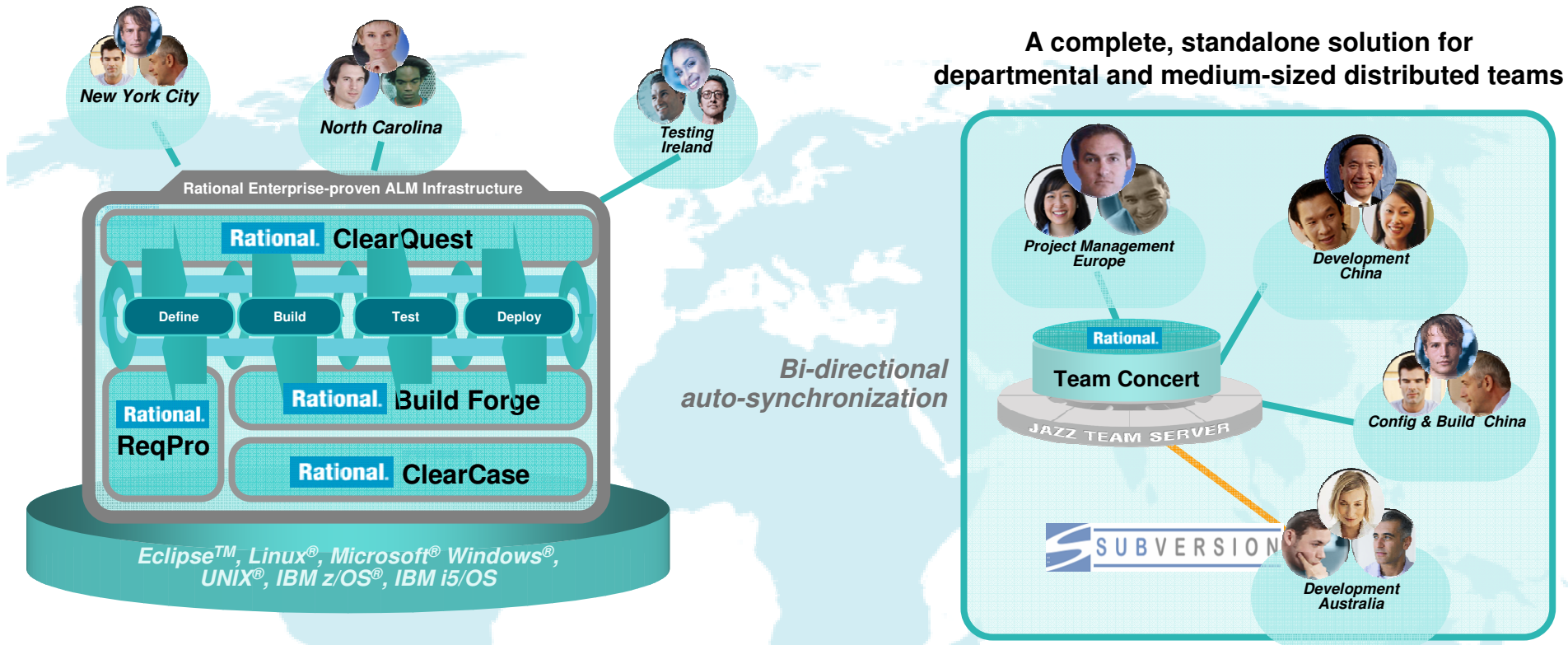


- ✓ **Rational Team Concert Standard, Express, Express-C**
  - ✓ A standalone development environment optimized for small and mid-sized teams
  - ✓ All the collaborative capabilities of the Jazz platform – plus integrated work items, SCM and build management
  - ✓ Dashboards and real-time reports
  - ✓ Team and Process-aware





# Unify distributed teams in mid-sized or enterprise settings



A complete, standalone solution for departmental and medium-sized distributed teams

- Supports departmental “satellite” or “agile” projects optionally integrated with existing enterprise-proven Rational ALM infrastructure offerings
- Enhances existing ALM offerings with new collaborative & process capabilities



# Source code management

The screenshot displays the IBM Rational Team Concert (RTC) interface. On the left, a tree view shows 'All Team Areas' with various components like 'Streams', 'Builds', and 'Work Items'. A callout points to this area, stating 'Integrated stream management solution'. The main pane shows the 'Stream' details for 'Core Library', including repository information and a list of components. A callout points to this pane, stating 'Identifies components in those streams and the baselines available for the team'. Below the components list, there are buttons for 'New...', 'Add...', 'Remove', and 'Rename'. A callout points to the 'Projects in Component' section, stating 'Development projects contained in those components'. At the bottom, a 'Pending Changes' section shows an outgoing change set with a file tree view. A callout points to this section, stating 'Working with Change Sets'. On the far left, another callout points to the workspace list, stating 'Individual user server workspaces'.

Individual user server workspaces

Working with Change Sets

Identifies components in those streams and the baselines available for the team

Development projects contained in those components



# Work items

Predefined, custom and personal queries

Subscribe to work items you're interested in

The screenshot displays the IBM Rational Work Items interface. The main window shows a 'Defect 12' with the following details:

- Summary:** UWS Add JavaDoc to CLI code
- Type:** Defect
- Severity:** Normal
- Found In:** Unassigned
- Created:** Jun 6, 2007 5:11 PM
- Created By:** Jerry Jazz
- Team Area:** UWS Temperature Conversion Team /
- Filed Against:** Core/Command Line
- Owned By:** April Blues
- Priority:** Unassigned
- Planned For:** -> 1.0 M1
- Estimate:** 1 h
- Time Spent:** None
- Due:** None
- Resolved:** Jan 24, 2008 4:30 PM
- Resolved By:** April Blues

The description reads: "We need to add JavaDoc to our code. Note that I have sized this at one day and targeted it for M1. This means do it now while Zach gets the build going but only spend at most this much time on it, maybe less. We just need to get a start on it now." The discussion section contains one comment: "We have decided to make the change|".

At the bottom, a query results table shows:

I	Status	P	S	Summary	Owned By	Created By
12	Resolved			UWS Add JavaDoc to CLI code	April Blues	Jerry Jazz
10	Resolved			Expose functionality via public get method to core temperature ...	Unassigned	Jerry Jazz

Understands and persists work item's relationship to SCM and build artifacts

Integrated discussion threads

Query results



# Builds

**Create build definitions for team and private builds**

**Supports Ant and command line build tools**

**Identify work items and change sets that went into the build**

**Create local or remote build servers**

**Historical view of the build queue with status**

**Build workshop.squawk.core.continuous.build**  
**B20080303-1042-workshop.squawk.core.continuous.build**

**Completed**  
 Duration: 27 seconds  
 Start Time: March 3, 2008 1:41:40 PM  
 Completed: March 3, 2008 1:42:07 PM  
 Status Trend: [Progress bar]

**Contribution Summary**  
 Changes: [Show changes](#)  
 Logs: [1 log](#)  
 Repository Workspace: [workshop.squawk.core.build.workspace](#)  
 Snapshot: [workshop.squawk.core.continuous.build\\_20080303-1041](#)  
 Work items: [1 included in build](#)

**General Information**  
 Requested by: Zach Builder  
 Build Definition: [workshop.squawk.core.continuous.build](#)  
 Build Engine: [workshop.build.engine](#)  
 Build History: [12 builds](#)  
 Tags:   
 Deletion allowed

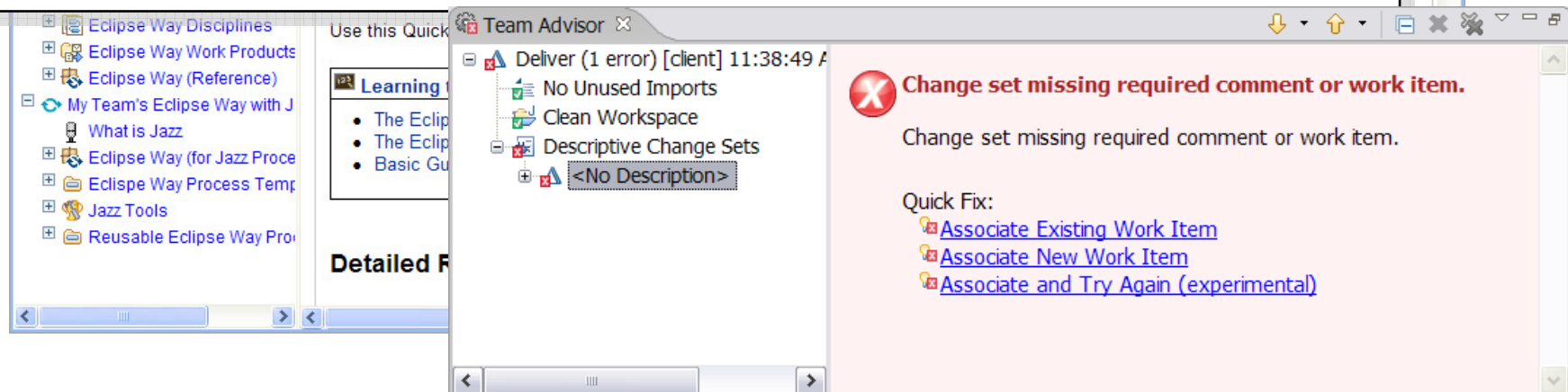
Build	Label	Progress	Estimated Completion	Start Time	Duration	Tags
workshop.squawk.core.c...	B20080310-2231...	Completed		March 10, 2008 10:30...	34 seconds	
workshop.squawk.core.c...	B20080305-2325...	Completed		March 5, 2008 11:25...	19 seconds	
workshop.squawk.core.c...	B20080305-2324...	Completed		March 5, 2008 11:24...	33 seconds	
workshop.squawk.core.c...	B20080303-1057...	Completed		March 3, 2008 1:57:0...	24 seconds	
workshop.squawk.core.c...	B20080303-1048...	Completed		March 3, 2008 1:48:1...	28 seconds	
workshop.squawk.core.c...	B20080303-1042...	Completed		March 3, 2008 1:41:4...	27 seconds	
workshop.squawk.core.c...	20080303-1017	Completed		March 3, 2008 1:17:5...	26 seconds	
workshop.squawk.core.c...	B20080201-1707...	Completed		February 1, 2008 8:06...	30 seconds	v20...
workshop.squawk.core.c...	B20080128-1359...	Completed		January 28, 2008 4:59...	39 seconds	wor...
workshop.squawk.core.c...	B20080123-1623...	Completed		January 23, 2008 7:23...	10 seconds	
workshop.squawk.core.c...	B20080123-1621...	Completed		January 23, 2008 7:21...	18 seconds	



# Enables process awareness and guidance

## ■ Team Advisor

- Rules can be run when delivering changes to enforce team or organizational standards
- Helps ensure higher quality results through enforcement of agreed-upon standards
- Rules are configurable
- “Quick Fixes” can be specified to simplify corrective action
- Process rules can be defined, refined “on the fly”, enabling continual improvements
- Out of the box processes include OpenUP, Scrum, The Eclipse Way, etc



# Iteration Planning

Understand how well you are progressing against your targets in real-time

Team Member	Work Item	Progress	Estimated
April Blues	UWS Create the temperature conversion CLI package	1 / 17   -15 h	100%
Derek Holt	UWS Define permissions	0 / 8   -7 h	100%
Jerry Jazz	UWS Define team members	0 / 4   -3 h	100%
Zach Builder	UWS Create the core temperature conversion package	25 / 37   -10 h	100%
Zach Builder	UWS Define iterations/milestones	4 hours   Unassigned	3
Zara Intern	UWS Add JavaDoc to core temperature conversion JUnit tests	1 hour   Unassigned	
Zara Intern	UWS Create the core temperature conversion package JUnit tests	2 days   Unassigned	8
Unassigned	Expose functional via public get method to core temperature conversion code	1 hour   High	

Drag-and-drop work items to change owners/create child parent relationships

Plan and execute iterations while managing team and individual load



# In-context collaboration

**Team Awareness**  
Shows team members and their online status  
Shows what they are working on

**Team Central**

- News & events
- Build status
- What's being worked on
- Changes

**Configurable (RSS feeds)**  
**Personalizable**

The screenshot displays the IBM Rational IDE interface with several tool windows:

- Team Awareness:** A window on the left showing team members (Gorkem Ercan, Litik De Roy, Nick Boldt) and their online status (No Work Time Left).
- Team Central:** A window on the right showing news, build status, and work items. It includes sections for 'My Open Work Items' and 'New Incoming Work Items' with bar charts.
- Work Item Detail:** A central window showing details for a work item, including progress (88%), created date (2008-03-02), and a discussion section with a comment from Julian Jones.
- Chat Window:** A floating chat window titled 'Kevin (K.G.) Haaland' showing a conversation between Kevin and Kartik regarding a story (45274).
- Context Menu:** A context menu is open over the chat window, listing options like 'Send File...', 'Send Clipboard...', 'Send Mail...', 'Call...', 'Chat...', 'Subscribe to Events Generated by User', and 'Add to Favorites...'.

**Collaborate in Context**



# Dashboards

**Transparency, collaboration and control via customizable dashboards**

The screenshot displays a 'Development' dashboard with several key sections:

- General**: Includes tabs for 'Builds', 'Open Defects by Themes', 'Open Defects by Team', 'SVT Defects by Team', 'Defect Trends by Team', and 'Deferred Items by Team'.
- Endgame Has Started**: A warning icon and text stating 'Detailed Plan available here: End Game Plan'.
- Jazz Development Description**: A text box explaining the development process, including an 'Umbrella area for all Jazz development work' and details about development lines and releases.
- Open Track Build Items (1)**: A list showing '1841 RC1 status'.
- Current Development Plans (33)**: A table with progress bars for various components like 'CQ Connector', 'Component Development', 'Foundation & Work Items', 'Install', 'PMC', 'Process', 'Release Engineering', 'Repository', 'SCM', 'UI Design', 'User Assistance', 'Web Dashboards', and 'Web UI'. Some items show 'No planned work' or 'No estimated work'.
- Risks (10)**: A list of risks such as '48863 [Risk] Migrating/importing SVN repositories' and '48865 [Risk] Migrating from an existing bug tracking system'.
- RFS (28)**: A list of Risk-Free States (RFS) like '9619 [RFS] Monitoring a continuous build' and '9629 [RFS] Create iteration plan, assign work, track progress'.
- Jazz Development Event Log (2 new)**: A log of recent events, including 'Test scenario: Process author creates/refines a Process Template (51513) Now'.

**Clearly understand team goals**

**Risks, issues, challenges surfaced at both the team and project level**

**Real-time status**





# Dashboards and reporting

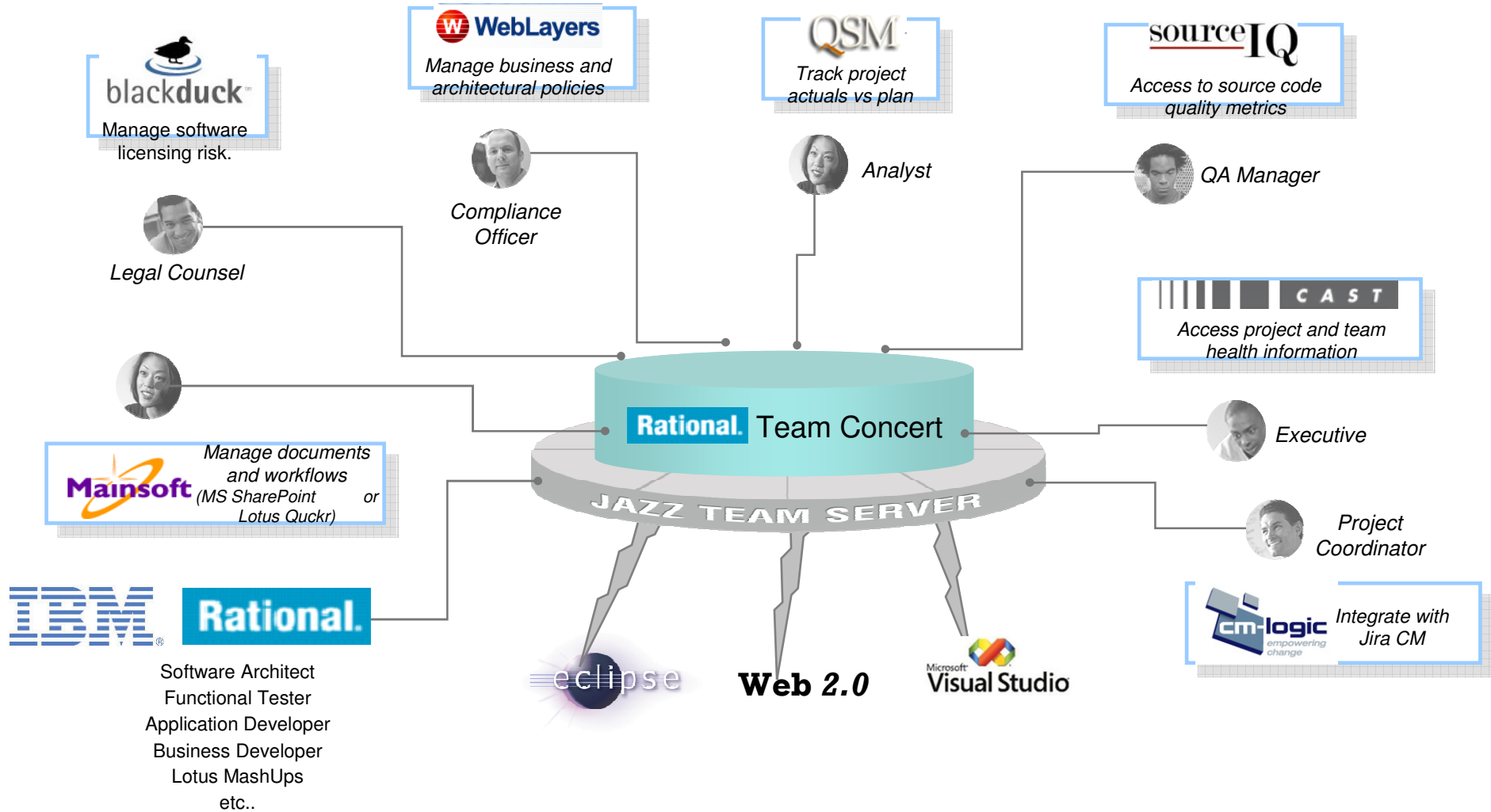
The screenshot displays a dashboard with several panels:

- Work Item Comparison (Cont'd)**: Three line charts showing trends for different team areas over time (4/7/08 to 4/21/08). Callout: "Trending by project or by individual team".
- Work Item**: A chart showing work item counts over time. Callout: "Team member details".
- Process**: A chart showing process metrics over time.
- Build**: A chart showing build metrics over time.
- Current Work Item Plans (2)**: Shows "Current Iteration: 0.6 RC1" and progress bars for "Foundation & Work Items". Callout: "Current milestone status".
- Work Item Event Log (15 new)**: Lists recent events such as "WebUI - Hide comment is confusing - lost work (51725) 10 minutes ago".
- Work Item Members (16)**: A list of team members and their roles.
 

André Weinand	componentlead, contributor, integrationstreamadmin, integrationbuildmeister
Benjamin Pasero	contributor
Christof Marti	contributor, integrationbuildmeister
Dirk Baeumer	parttime, contributor, integrationstreamadmin, integrationbuildmeister
Erich Gamma	contributor, newcomer, integrationstreamadmin, integrationbuildmeister, dashboardadmin, projectadmin, PMC
Frank Lyner	contributor
Johannes Rieken	parttime, contributor, integrationbuildmeister
Larry Smith	contributor, integrationbuildmeister
Marcel Bihl	contributor
Mark Buquor	newcomer, parttime
- Work Item Builds**: Shows a recent build: "Succeeded: continuous.workitem.jazz C20080424-0748 10 minutes ago".



# Extend team collaboration to a broad range of software professionals



## Customer feedback

*"By helping us to make project deliveries more repeatable and predictable, we anticipate that Rational Team Concert will **reduce project overrun costs by 20%.**"*

*--Matt Pomroy - Business Unit Executive, Software Engineering, Ascendant Technology*

*"Its automated project management dashboards are transparent to everyone – not just managers. This immediate and **automated feedback helps keeps teams on track and motivated** to achieve project goals."*

*--Han Jie - Senior Consultant, Siemens*

*" Where we previously used separate systems, with Rational Team Concert we now have well integrated functionality. **Our developers are more efficient because they are better able to focus on important issues.** Our project managers greatly value the ability to customize these dashboards and **instantly provide status** on their milestones!"*

*--Mika Koivuluoma - Production Manager, TietoEnator*

*"Having a **unified and extensible environment is very compelling for us.** Rational Team Concert provides **the team transparency and visibility needed to keep work progressing** so everyone knows what's going on without finger-pointing."*

*--Carson Holmes - Unified ALM Services Manager, Noblestar*



## DEMO

- Introduction to Rational Team Concert



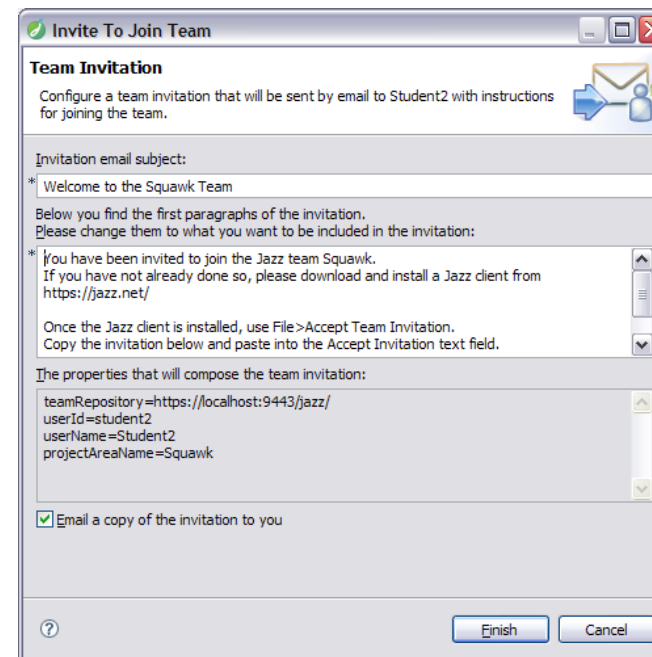
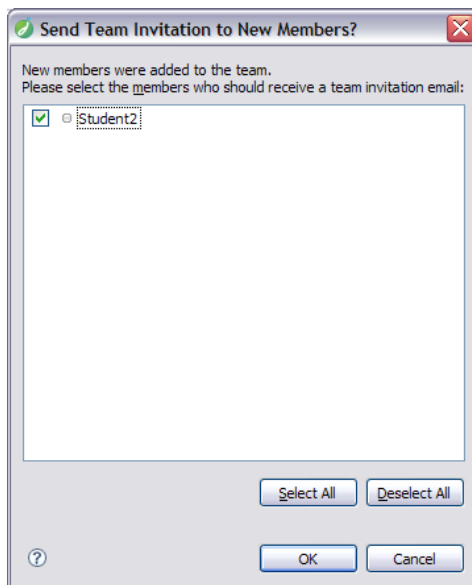
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## Joining a Team

- For most environments, joining a project can be complicated
- Team Concert makes this as easy as possible
- Adding a new team member to a project generates a Team Invitation email
- Contents of the email can be used to set up the new team member's access to the project resources in Team Concert



## Communication

- Users of Team Concert can use a variety of tools to communicate with team members
  - ▶ E-mail
  - ▶ Instant Messaging/Chat
  - ▶ RSS feeds
  - ▶ Web UI
  - ▶ Team Concert client
- Team members can use all the typical communication mechanisms to keep working together as a team, regardless of where they are physically located. This collaboration allows for a single view of project data
  - ▶ Integrated Instant Messaging/Chat for immediate feedback
  - ▶ RSS feeds to notify you of significant events on the project in real time
  - ▶ The Web UI used for anyone on the team, or who has an interest in the project





## DEMO

- Joining a new project
  - ▶ Connect to project
  - ▶ Network with new team



# Agenda

- Today's Software Development Landscape
- All that Jazz
  - ▶ Introduction
  - ▶ Architecture
- **Rational Team Concert**
  - ▶ Overview
  - ▶ Getting Started with a new Team
  - ▶ **Software Configuration Management**
  - ▶ Build Management
  - ▶ Change and Traceability
- Wrap-up and Next Steps

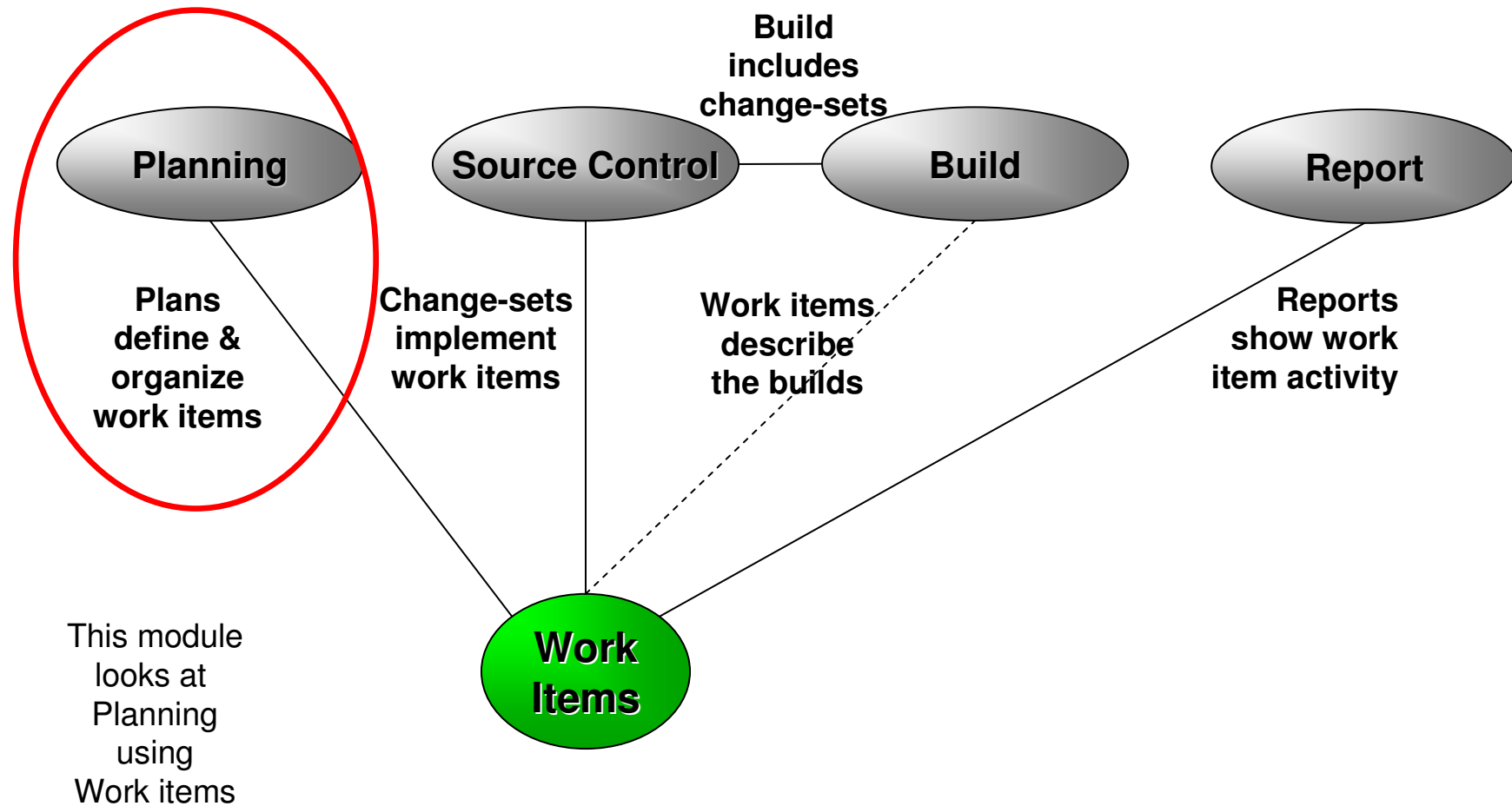


## Units of work

- Rational Team Concert allows you to divide your work into **work items**
  - The set of work item types is **open-ended**
  - Standard types: **Task, Enhancement, Defect**
  - The set is **defined by each team**
  - The work item **life cycle** is **configurable**
  - All work items are **stored** in the **repository**
- 
- The way that Rational Team Concert uses **Work items** means that all your work can be planned, tracked and stored under configuration management. Allowing for both the top down view and the low level view of data and project status.



# Work Items are central to Rational Team Concert

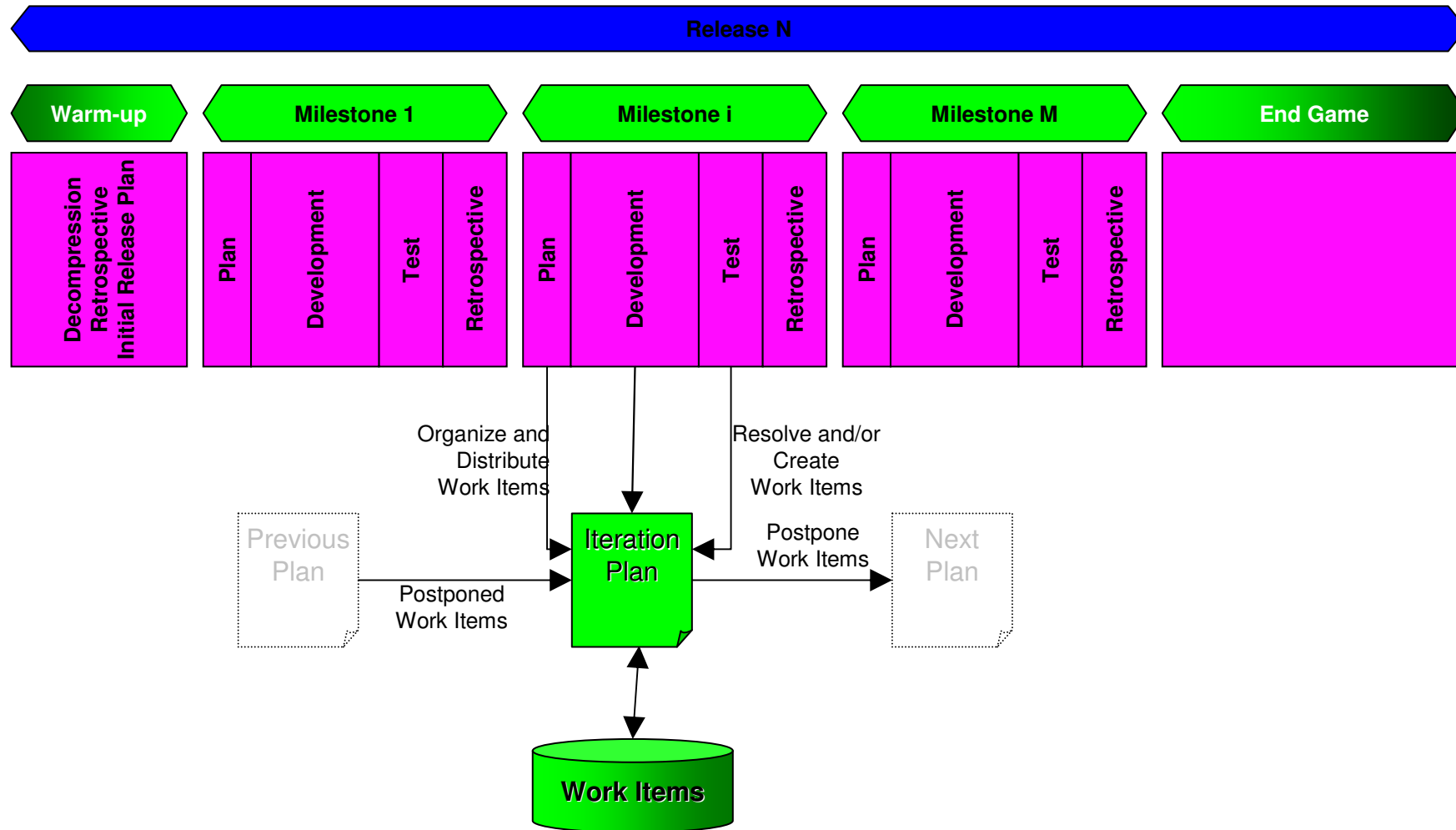


# Work Item details

The screenshot shows the 'Enhancement 37' work item details in IBM Rational. The title bar indicates '37: Create a Lion Squawker'. The main header shows 'Enhancement 37' and a 'Summary' field containing 'Create a Lion Squawker'. A 'New' button is highlighted with a red box. The 'Details' section includes several fields, many of which are also highlighted with red boxes: 'Type' (Enhancement), 'Severity' (Normal), 'Found In' (Unassigned), 'Created' (04-Apr-2008 17:20), 'Created By' (student1), 'Team Area' (Core Library / Squawk), 'Filed Against' (Squawk/Core), 'Owned By' (student1), 'Priority' (High), 'Planned For' (-> 1.0 M2), and 'Estimate' (20 m). The 'Description' section contains the text 'Create a Lion Squawker'. At the bottom, there are tabs for 'Overview', 'Links', 'Approvals', and 'History', and a 'Discussion' section with an 'Add Comment' button.



# Iteration planning in Rational Team Concert





## The Iteration Plan

- A collection of work items...
  - ▶ Assigned to a given milestone
  - ▶ For a given team
- Plans are live
  - ▶ Changing work items changes the plan
  - ▶ Changing the plan directly changes the work items
  - ▶ Create new work items from the plan
- Plan structure is dynamic
  - ▶ Easily be grouped by owner, category, duration, priority, etc.
- Plans are visible
  - ▶ Available to everybody on the team
  - ▶ Observable by interested outsiders



## Work Item Queries

- Provides real-time project health information and transparency of status through automated data gathering.
- Rational Team Concert provides a query mechanism to find work items in a Project Area allowing for more project transparency.
  - ▶ The query scope for work items is the project area.
- The user interface includes
  - ▶ an editor for building structured work item queries
  - ▶ an end-user configurable work item view to browse the query results.



## DEMO

- Planning your work
  - ▶ Create a new Enhancement
  - ▶ Create a new Iteration



## Real time collaboration

- The modules before showed how the project team plans the work for an iteration.
  - ▶ But how does the project keep track of all the planned work items?
  - ▶ How do I see who may help me with my actual problem?
  - ▶ How do I get the most recent status of the project?

What if your tool knows the actual status of your team's work?

Rational Team Concert stores all artifacts for the development project in one repository and provides powerful query capabilities to retrieve and display data.



## Real time collaboration

- Query and Reporting capabilities are available in the Eclipse Client and the Web UI.
  - ▶ Define queries on Work Items to find your work and the work of others.
  - ▶ See who is online and ready to collaborate with you.
  - ▶ See the event log for build or work item events that are interesting to you and follow RSS feeds for News.
  - ▶ Generate, display and export reports on the status and health of the project.
- Rational Team Concert displays the information in automatically refreshed views that are configurable, so that you are up to date with the information you need in real time.





## Reports – Displaying the project status

- Rational Team Concert uses the BIRT\* reporting engine
- A huge variety of report formats are designed and available to display an actual overview of your projects:
  - ▶ Reports for the health of your builds
  - ▶ Reports for viewing the team load and the distribution of work items
  - ▶ Reports for your code
  - ▶ Etc.
- Reports can be arranged in the Web UI to Dashboards
- Reports can be exported to: .pdf, .xls, .doc, .ppt Formats

\*BIRT is an open source Eclipse-based reporting system that integrates with your Java/J2EE application to produce compelling reports.



# Reports – Displaying the project status

The screenshot displays the 'Jazz Project Dashboard' interface. At the top, it shows the user is logged in as 'Robin Bater' and the project name 'The Jazz Project'. The navigation bar includes 'Home', 'Dashboards', 'Work Items', 'Iteration Plans', and 'Reports'. The dashboard is divided into several sections:

- Left Sidebar:** Contains options to 'Create New Dashboard', 'Find Dashboard', and 'Shared Dashboards' (My Profile, Jazz Project).
- Main Content Area:**
  - Jazz Project Dashboard:** Includes a 'Home' dropdown, 'Trend Reports', and 'Feeds' buttons.
  - M6 Started:** A notification stating 'Current iteration changed to M6.' with a warning icon and a '1 2' indicator.
  - Welcome:** A message: 'Welcome to the Jazz Project dashboard. You can visit this space often to monitor all the vital signs of the Jazz Project at a glance, fed by the live data from the repository.'
  - Jazz Project Description:** A detailed text block describing the project's goal to build a scalable team collaboration platform and the roles of development and maintenance work.
  - Server Status:** A box showing system metrics: Database: **Connected**, Services: **Ok**, Memory: 28% free of 982MB allocated / 1000MB Max, Version: 0.6.0.I20080307-1427, Uptime: 2 days, 2 hours.
- Right Column:**
  - Jazz Project Teams (44):** Lists 'Jazz Development' and 'Jazz Maintenance'.
  - Useful Links:** Lists 'Wiki', 'Planning', 'Release Engineering', 'Developer Setup', and 'Project Documents'.
  - Jazz Team Blog (10, 9 new):** Lists recent blog posts with their dates, such as 'See you at EclipseCon 2008' (11 days ago) and 'The Team Concert User Workshop: behind the scenes' (14 days ago).



# Reports – Displaying the project status

Display your choice of reports and queries in your own dashboard, e.g. to control the flow of work items.

The screenshot displays the 'Jazz Project Dashboard' interface. At the top, it shows the user is logged in as Robin Bater. The dashboard includes a navigation menu with 'Home', 'Dashboards', 'Work Items', 'Iteration Plans', and 'Reports'. On the left, there are options to 'Create New Dashboard', 'Find Dashboard', and 'Shared Dashboards' (My Profile, Jazz Project).

The main dashboard area contains several reports:

- Recently modified (129) Tags:** A list of tags such as 'actionbuttons(2)', 'admin(1)', 'blank(1)', 'bundle(1)', 'cli.discard(2)', 'engine(1)', 'errorhandling(3)', 'from\_wi(1)', 'fvt(2)', 'globalization(6)', 'icon(1)', 'ignores(1)', 'leftpanel(1)', 'm2d4patch5(1)', 'm5patchcandidate(1)', 'm6feature(2)', 'm6pmc(1)', 'mac(1)', 'nls(1)', 'os(1)', 'performance(1)', 'polish(2)', 'productionicon(1)', 'svt(4)', 'svt\_spt(4)', 'usability(1)', 'ux\_blueprint(1)', 'verify(2)', and 'webui\_alignment(3)'. A 'Show More' link is visible at the bottom.
- Open Work Items by Type (All):** A stacked area chart showing the number of open work items from 2/1/07 to 2/1/08. The categories are com.ibm.team.apr.common.workitem, Plan Item, Enhancement, and Task.
- Open vs Closed Work Items (All):** A stacked area chart showing the number of open and closed work items from 2/1/07 to 2/1/09. The categories are Open and Closed.
- Open Work Items by Priority (All):** A stacked area chart showing the number of open work items by priority (Unassigned, Low, Medium, High) from 2/1/07 to 2/1/08.
- Blocking Work Items (All):** A line chart showing the number of blocking work items from 2/1/07 to 2/1/08.
- Closed Work Items by Priority (All):** A chart showing the number of closed work items by priority (Unassigned, Low, Medium, High).
- New Work Items by Severity (All):** A bar chart showing the number of new work items by severity (Unknown, Major, Unclassified, Critical, Minor, Blocker, Normal) from 6/6/06 to 11/1/07.



# Reports – Displaying the project status

You are logged in as Robin Bater | [Logout](#)  
The Jazz Project

Home | Dashboards | Work Items | Iteration Plans | **Reports**

**My Reports**

**Shared Reports**

- Build
  - Build Health (Continuous)
  - Build Health (Weekly)
  - Code Coverage
  - Code Health
  - Frequent Test Failures
  - Frequent Test Regressions
- Data Warehouse
  - Data Warehouse Metrics
- Repository
  - Integral Range Statistics
  - Latest Metrics
  - Latest Metrics by Namespace
  - Metrics
  - Metrics by Namespace
  - Range Statistics
  - Scalar Statistics
- Source Control
  - Project Activity
  - Stream Size Counts
- Work Items
  - Blocking
  - By Owner (Live)
  - By Priority
  - By Team Area (Live)
  - Closed Daily by Severity
  - Comparison
  - Defect Backlog
  - Defect Discovery Rate
  - Deferred Work Items
  - New by Severity
  - Open by Type
  - Open vs Closed

## Build Health (Weekly) Save As... Save

Parameters

Team Area: /Jazz Development	Build Definition: weekly.integration.jazz	Duration: Last Month
Include Incomplete Builds: No		

---

### Build health

Latest Build is Clean (Mar 4, 2008 3:41:30 PM)

Number of Tests

2/10/08 2/17/08 2/24/08 3/2/08 3/9/08

- Build
- Number of Tests
- Clean Build Range
- Failed Build Range

The build was clean during 67% of this time.  
34% of builds (13 of 38) were clean in the specified time.

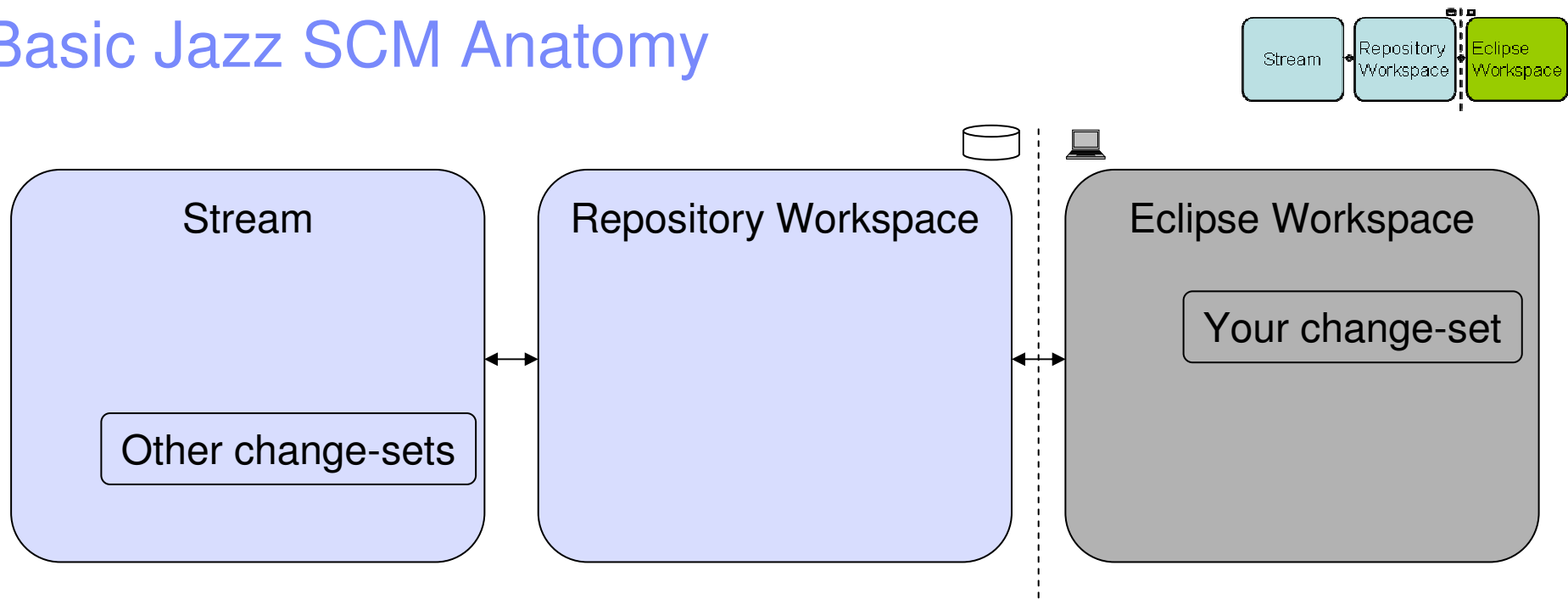
### Build duration

Hours

For a detailed Report open the Reports page and choose from a variety of available reports



# Basic Jazz SCM Anatomy

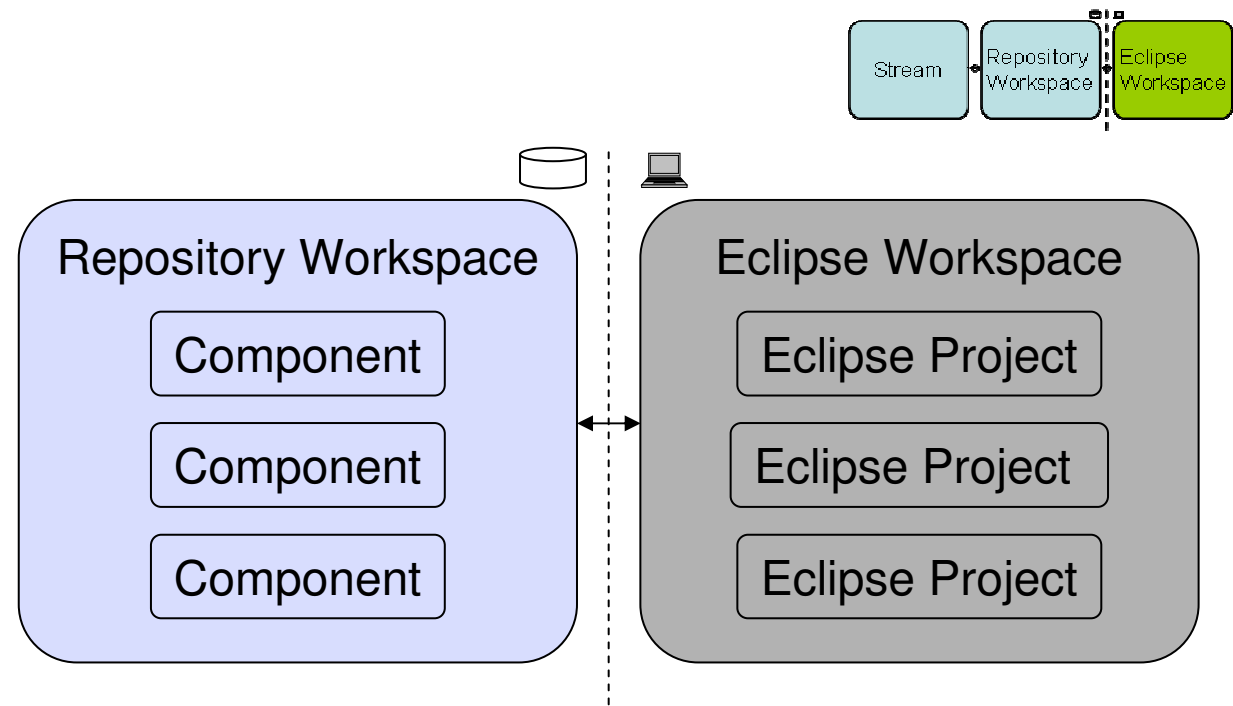


- Streams are for sharing
- Repository workspaces are your personal space
- Eclipse workspaces are where you work
- Change-sets flow back and forth
- Subsequent modules will cover each of these





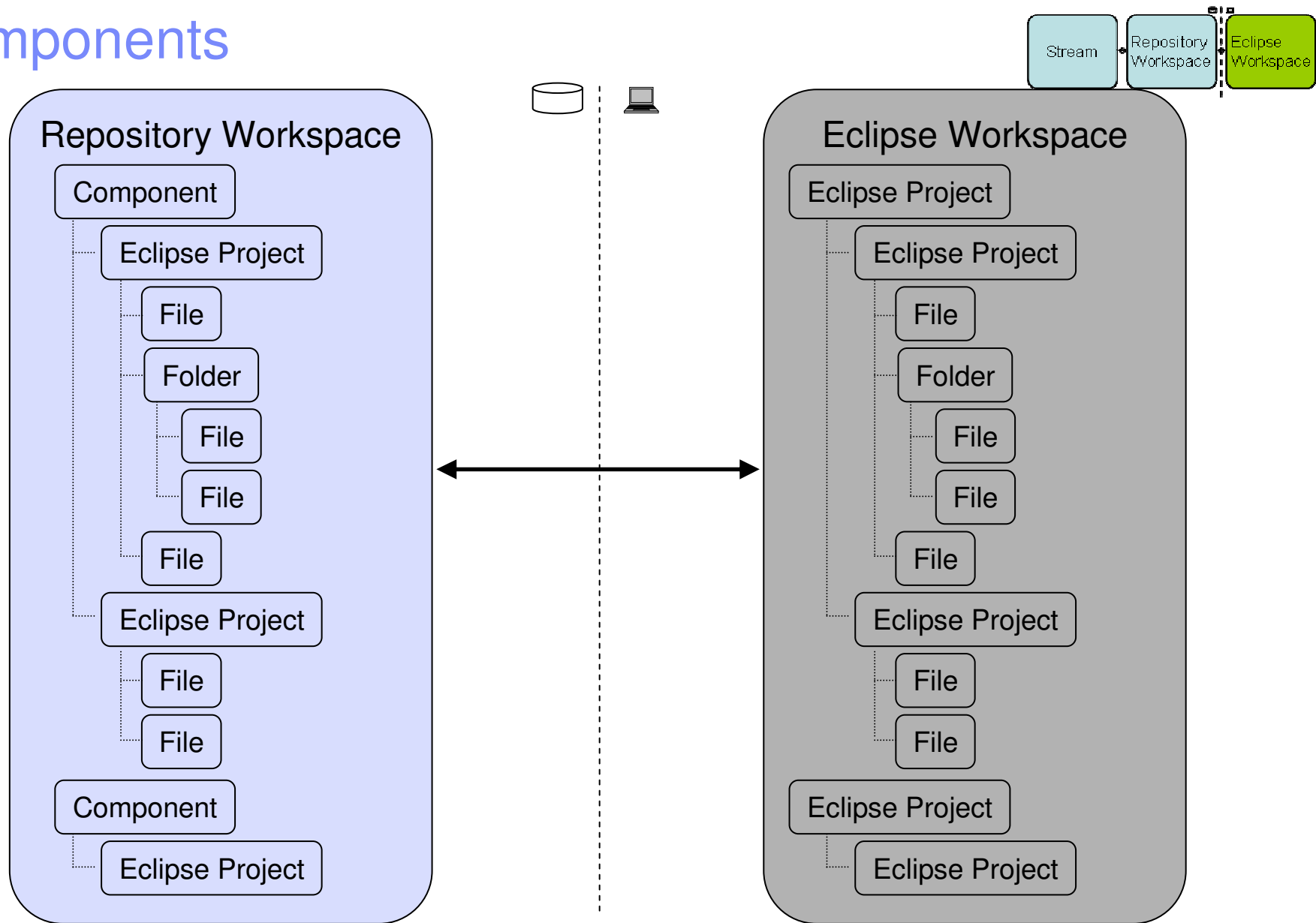
# Components...



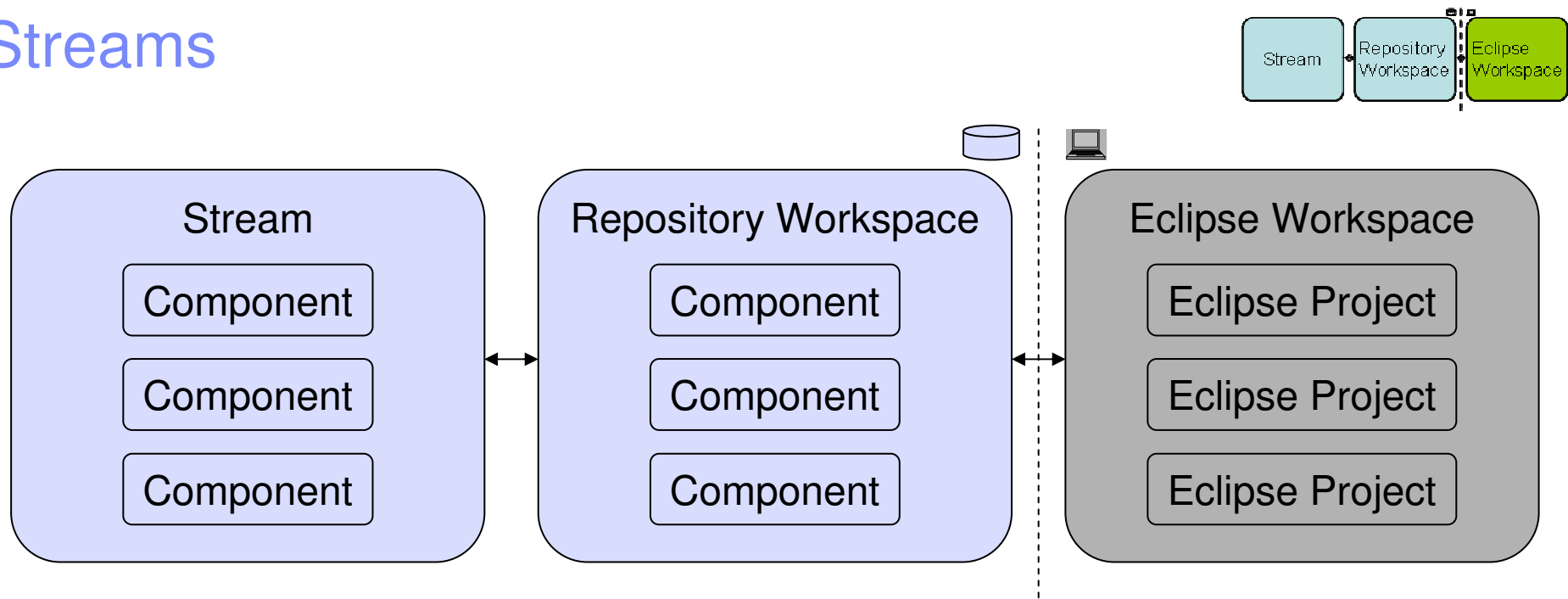
- Repository Workspaces
  - ▶ Contain components
  - ▶ Jazz understands the structure of your project
  - ▶ Components map to Eclipse Projects in an Eclipse Workspace
    - Jazz will create these Eclipse Projects for you



# Components



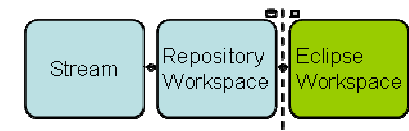
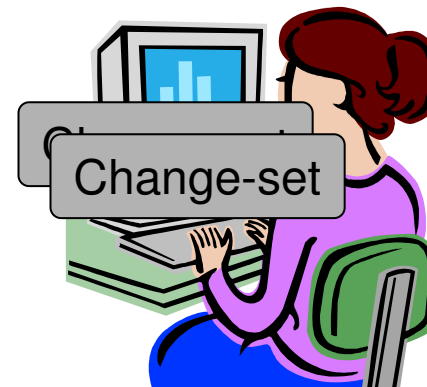
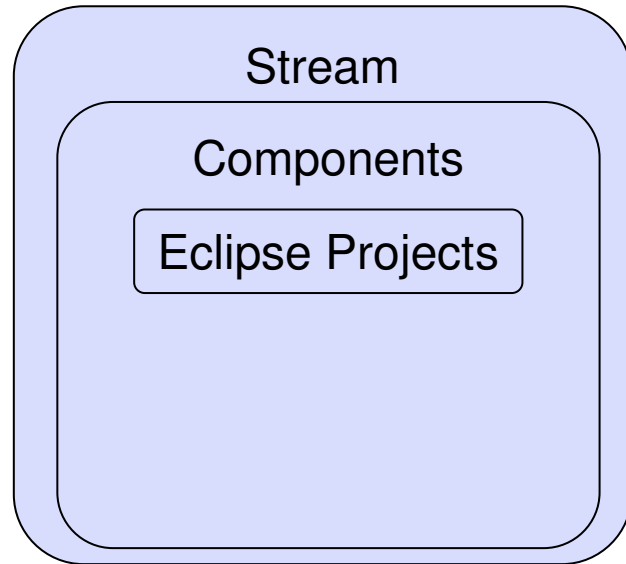
# Streams



- Eclipse Workspace
  - ▶ Where a developer actively adds and changes source
- Repository Workspace
  - ▶ A developer's private space in the repository
- Stream
  - ▶ A place to share source with your team



# Change-sets



- Components Track Changes
  - ▶ Collection of files and folders is built up from the steady build up of change-sets
  - ▶ Each change-set builds on what came before
- Change History
  - ▶ A time-ordered sequence of change-sets
  - ▶ Describes how the component's content was built from nothing

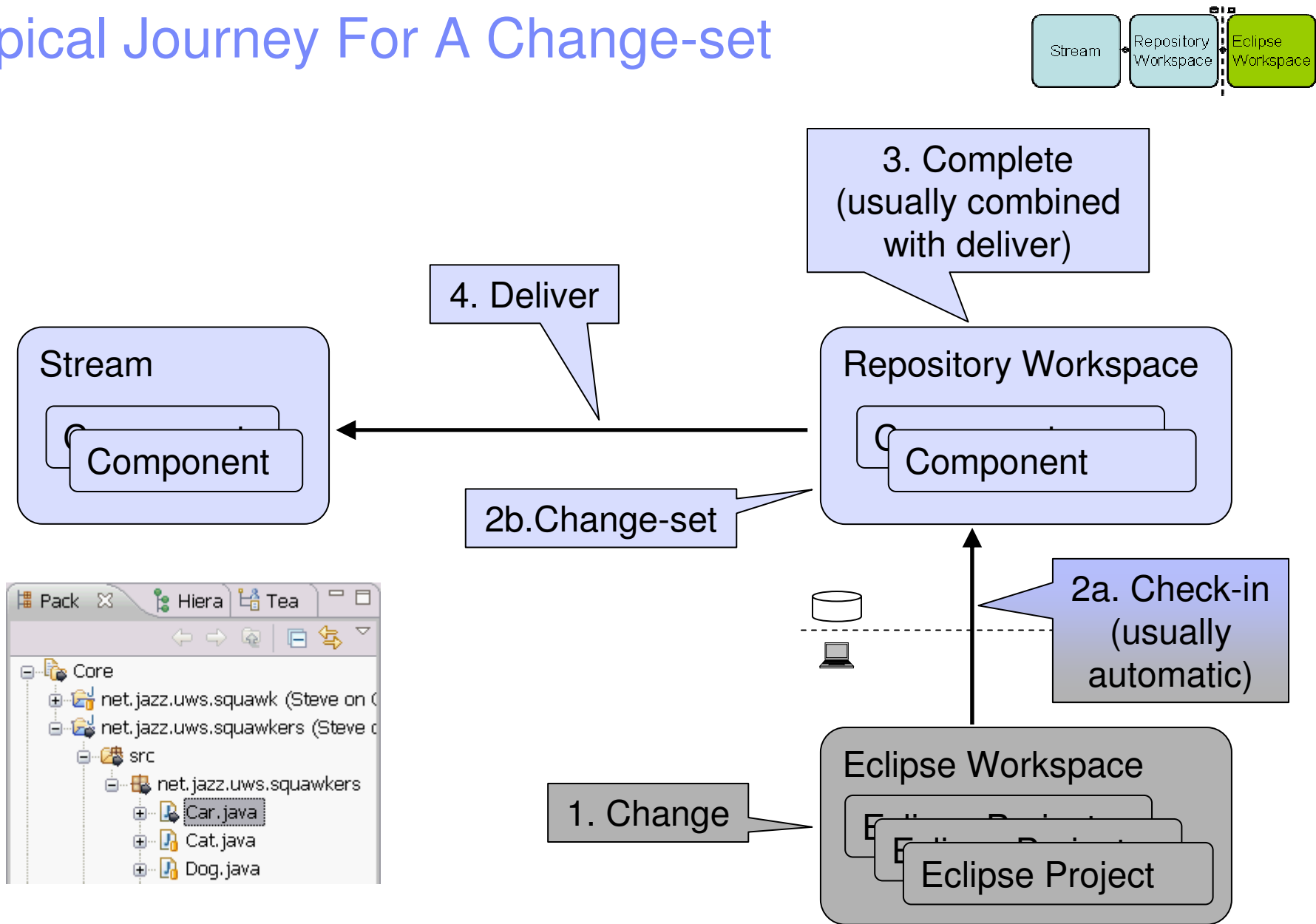


## Change-set Details

- Composed from a collection of changes to one or more files and folders
  - ▶ Manage dependencies in an integrated and transparent fashion
  - ▶ Change-set orientation is another example of Jazz understanding your project
  - ▶ A change-set that affects multiple resources is committed as a single atomic unit
- Indicates the reason for the changes
  - ▶ Traceable artifacts
  - ▶ Collaborative in nature via a comment, and/or
  - ▶ By referencing the relevant work item
- Can be shared with another team member in real time to increase productivity
  - ▶ Via a stream, or
  - ▶ From your repository workspace via a work item



# Typical Journey For A Change-set





# Change-set Delivery is Process Enabled

- The deliver operation is process-enabled, allowing the team's process to check and enforce delivery rules automatically

The image displays two screenshots of the IBM Rational IDE's 'Pending Changes' view, illustrating the process-enabled nature of the deliver operation.

**Top Screenshot (Failed Deliver):**

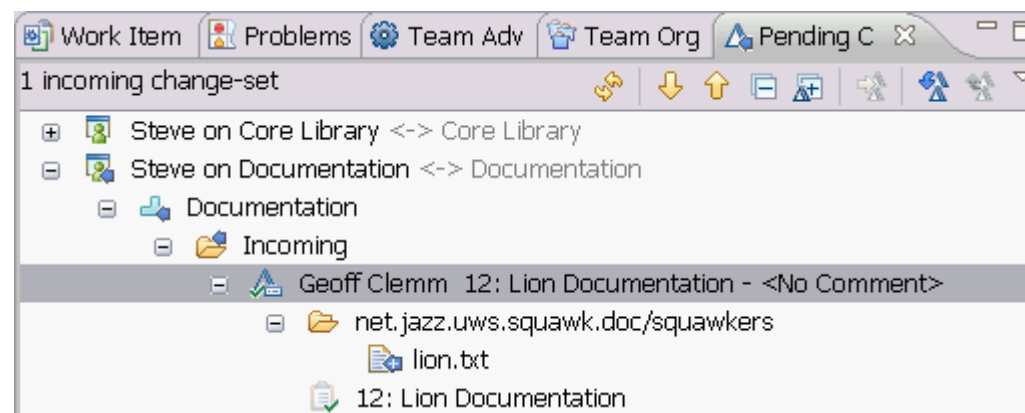
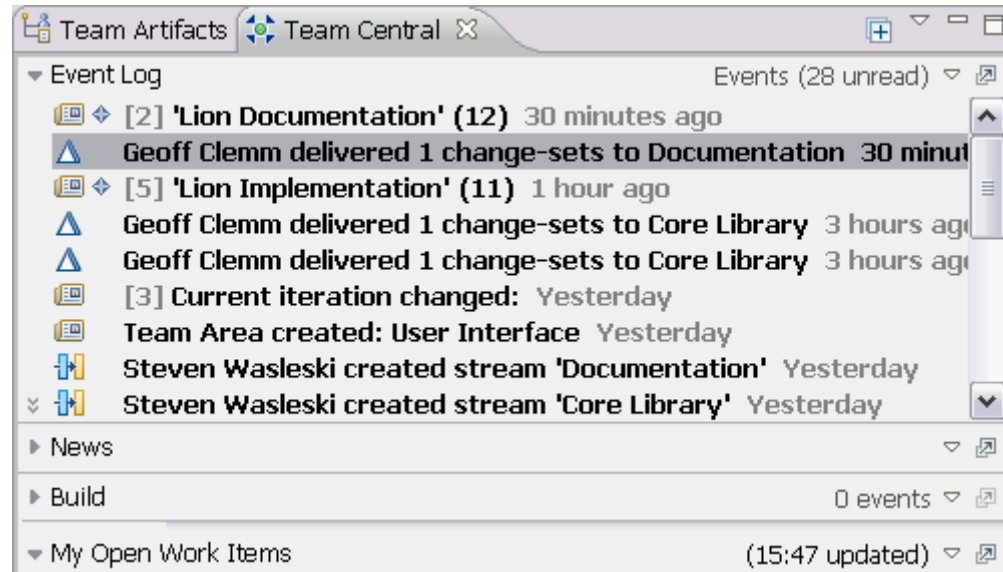
- Deliver (failed)**
- Missing work item or comment** (Problem)
- Save Work Item (succeeded)**
- Problem:** A work item must be associated with the change set or a comment must be set.
- Reason:** You shouldn't deliver a change set without associating a work item or adding a comment.
- Other users should be able to look at your changes and see why they were made.

**Bottom Screenshot (Successful Deliver):**

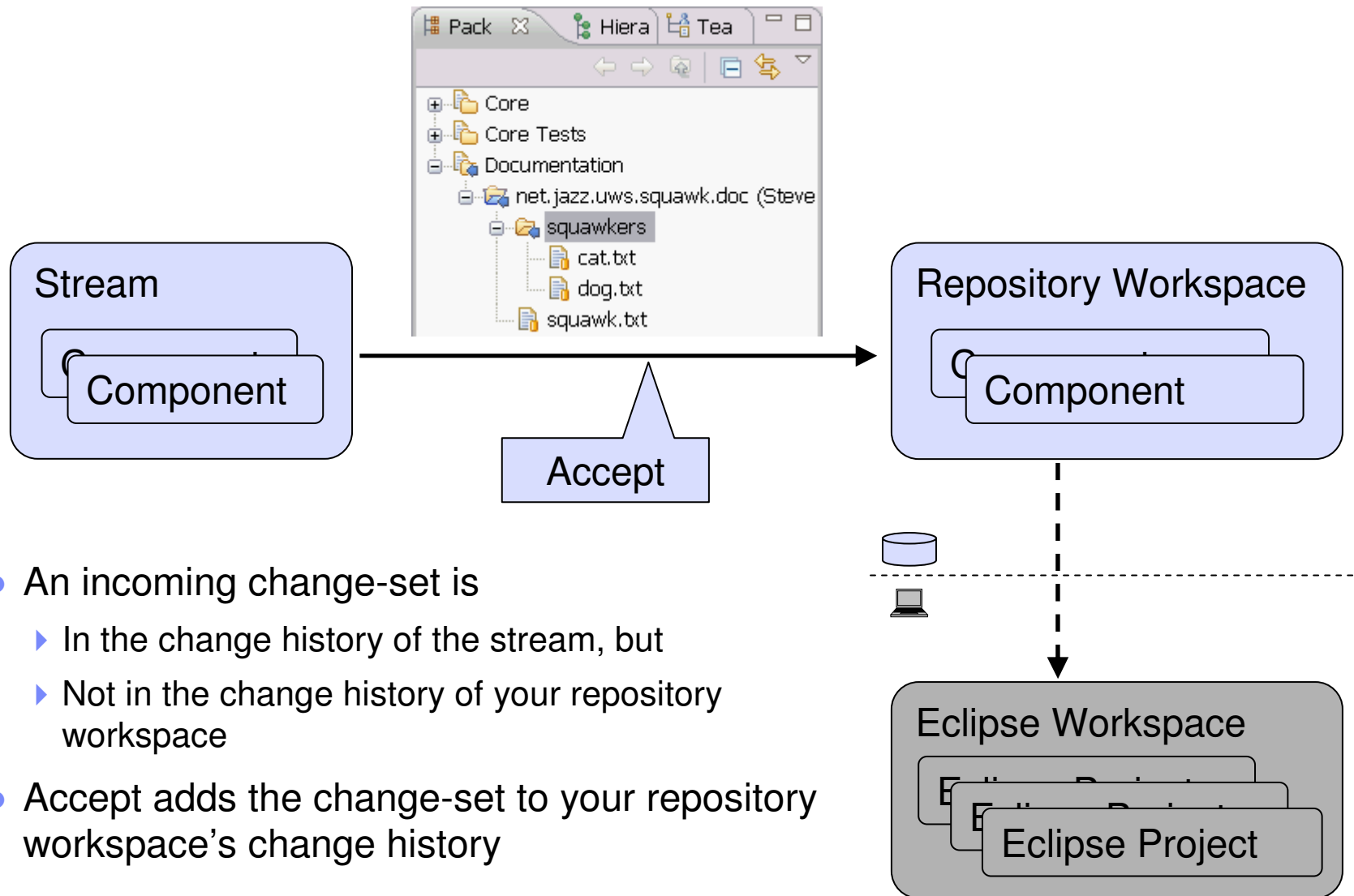
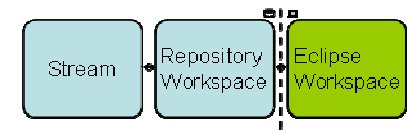
- Deliver (succeeded)**
- Save Work Item (succeeded)**
- State:** Deliver completed successfully.
- Details:** Deliver change sets from source workspace "April's Core Library Workspace" to target stream "Core Library".
- [Why did this happen?](#)



# Delivery Notifications



# Getting Teammates' Delivered Work



- An incoming change-set is
  - ▶ In the change history of the stream, but
  - ▶ Not in the change history of your repository workspace
- Accept adds the change-set to your repository workspace's change history



## DEMO

- Sharing work across your team



# Agenda

- Today's Software Development Landscape
- All that Jazz
  - ▶ Introduction
  - ▶ Architecture
- **Rational Team Concert**
  - ▶ Overview
  - ▶ Getting Started with a new Team
  - ▶ Source Configuration Management
  - ▶ **Build Management**
  - ▶ Change and Traceability
- Wrap-up and Next Steps



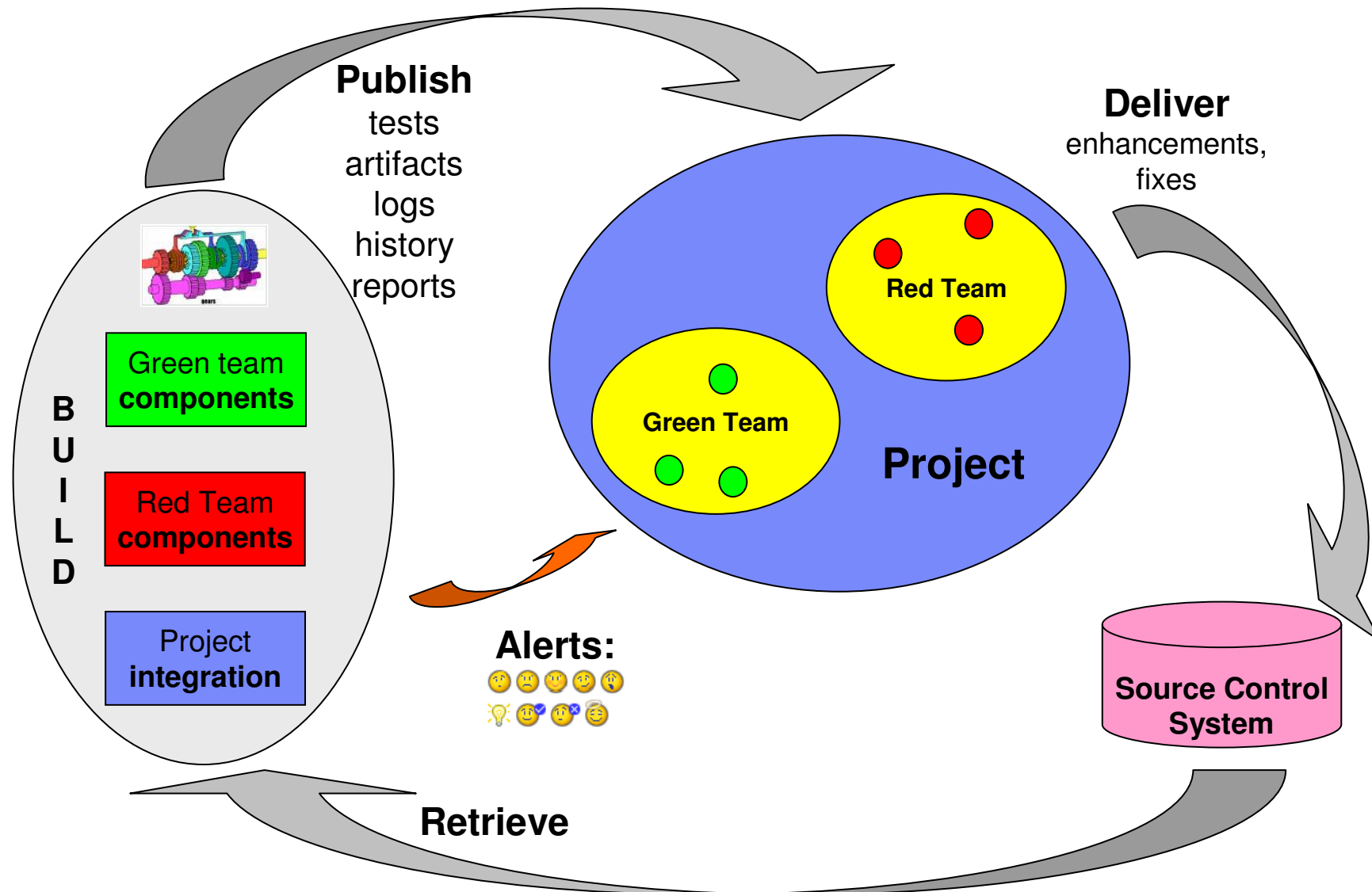
## Build Challenges and their impacts

- Silos of information contribute to reducing team productivity
- Inconsistent policies and processes for project stakeholders
- Difficult to facilitate communication, visibility, sharing, and leveraging globally distributed teams without mass chaos
- Limited to no traceability among the artifacts
- Difficulty tracking status of multiple builds
- Delays and missed deadlines for projects and releases
- Unpredictable product/project release cycles
- Costly to support/integrate/troubleshoot multiple systems to avoid mass chaos
- Failed audits, additional work needed for tracking
- No reliable status of project health and no trend analysis





# Build in the World of Agile Team Development



## Rational Team Concert Build

- Is an integral part of the project infrastructure
  - ▶ Consistent, repeatable process throughout the project
- Brings awareness of build progress and results to developers
  - ▶ Easy sharing of information
- Links build results to related Jazz artifacts
  - ▶ Integrated experience, traceability and tracking “baked in“
- Allow developers to have a private build area
  - ▶ Build and test code before delivering to the main branch
- Accommodates existing build technologies (Ant, CruiseControl , Build Forge, Maven, ...)
  - ▶ Leverages technology that fits your project best



# Build is very visible to the user

The screenshot displays the IBM Rational Team Concert interface for a Java project. The main window shows the details of a completed build for 'workshop.squawk.integration.build'. The build status is 'Completed' with a duration of 10 seconds, starting on Wednesday, January 16, 2008, at 13:51:04. The build summary indicates 0 errors, 0 warnings, 2 downloads, 1 link, 17 tests, 0 failures, and 0 errors. The build was requested by Jerry Jazz and is associated with the 'workshop.squawk.integration.build' definition.

Callouts highlight key features:

- My builds:** Points to the 'Builds' folder in the left-hand navigation pane.
- Published build:** Points to the 'Completed' status bar of the selected build.
- Recent builds:** Points to the 'Recent builds' section in the right-hand pane.
- Alerts:** Points to an alert window titled 'Build finished successfully' which states: 'workshop.squawk.core.continuous.build B20080116-1350-workshop.squawk.core.continuous.build'.
- History:** Points to the 'My Builds' table at the bottom of the interface.

Build	Label	Progress	Est	Start Time
workshop.squawk.integration.build	B20080116-1351...	Completed		Wed, 16 Jan 2008 13:...
workshop.squawk.core.continuo...	B20080116-1350...	Completed		Wed, 16 Jan 2008 13:...
workshop.squawk.integration.build	B20080115-1638...	Completed		Tue, 15 Jan 2008 16:3...
workshop.squawk.core.continuo...	B20080115-1637...	Completed		Tue, 15 Jan 2008 16:3...



## Private builds

- Private or Personal Builds allow you to build your changes before delivering them to the stream. This can provide you with some assurance that your changes will not disrupt the team when you deliver them.

The screenshot displays the IBM Rational Build tool interface for a specific build. The window title is "B20080516-1631-workshop.squawk.core.continuous.build". The main heading is "Build workshop.squawk.core.continuous.build (personal build by student1)". Below this, the build ID "B20080516-1631-workshop.squawk.core.continuous.build" is shown. A "Save" button is visible in the top right corner.

The build status is "Completed", indicated by a green checkmark. The duration is 37 seconds. The start time is May 16, 2008 4:30:44 PM, and the completion time is May 16, 2008 4:31:21 PM. A status trend bar shows a sequence of green and red bars, indicating the build's progress.

The "Reported Work Items" section shows "None reported against this build" and provides links to "Create a new work item" and "Associate an existing work item".

The "Contribution Summary" section lists the following metrics:

- Downloads: [1 download](#)
- External Links: [1 link](#)
- JUnit: [4 tests, 0 failures, 0 errors](#)
- Logs: [1 log](#)
- Repository Workspace: [Student1 Core Library Workspace](#)
- Compile: [0 errors, 0 warnings](#)

The "General Information" section includes:

- Requested by: student1
- Build Definition: [workshop.squawk.core.continuous.build](#)
- Build Engine: [workshop.build.engine](#)
- Build History: [23 builds](#)
- Tags:
- Deletion allowed

The bottom of the interface features a tabbed navigation bar with the following tabs: Summary, Build Activities, Compilation, JUnit, External Links, Logs, Downloads, and Properties.



# Builds and Snapshots

- A build can request a snapshot
  - ▶ If there are any changes in a component since the last build
    - A new baseline is created with the same name as the snapshot name
  - ▶ Convenient for reproducing build problems

The screenshot shows a web browser window with the URL `workshop.squawk.core.continuous.build_20080115-1637`. The page title is "Snapshot" and it has a "Save" button. The "Name" field contains the same URL. The "Details" section shows: "Created by: build", "Created on: Jan 15, 2008 4:37 PM", "Modified on: Jan 15, 2008 4:37 PM", and "Description: Snapshot created by automated build". The "Links" section contains: "Create a new repository workspace", "Create a new stream", "Compare with snapshot", and "Compare with repository workspace or stream". The "Components" section shows: "Build Scripts (4: workshop.squawk.com)", "Core (6: v20071108-Bow-wow)", and "Core Tests (6: v20071108-Bow-wow)". The "Projects in Component" section is empty.



# DEMO

- Build Management



# Agenda

- Today's Software Development Landscape
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  - ▶ **Change and Traceability**
- Wrap-up and Next Steps





# Builds

**Work Items - B20080314-1507-workshop.squawk.core.continuous.build - Team Concert**

File Edit Navigate Search Project Run Window Help

Team Artifacts Team Central

All Team Areas (6 of 6 Team Areas selected)

- Repository Connections
  - student1@localhost
- Squawk [localhost]
  - Builds
    - Build Engines
      - Synchronize RTC\_CC\_Connector\_Squawk\_Re
      - squawk.m1.maintenance.build
      - workshop.squawk.core.continuous.build
      - workshop.squawk.integration.build
    - Plans
    - Reports
    - Streams
    - Work Items
  - Favorites
  - Feeds
  - My Repository Workspaces
  - My Team Areas
  - Work Item History

B20080407-1554-workshop.squawk.core.continuous. 37: Build scripts need to be adapted to conform t B20080314-1507-workshop.squawk.core.continuous.

**Build workshop.squawk.core.continuous.build**  
B20080314-1507-workshop.squawk.core.continuous.build

**Completed**

Duration: 28 seconds  
Start Time: March 14, 2008 2:07:10 PM  
Completed: March 14, 2008 2:07:39 PM

Status Trend:

**Contribution Summary**

Downloads: [1 download](#)  
External Links: [1 link](#)  
Logs: [1 log](#)  
Repository Workspace: [workshop.squawk.core.build.workspace](#)  
Snapshot: [workshop.squawk.core.continuous.build\\_B20080314-1507](#)  
Compile: [0 errors, 0 warnings](#)  
JUnit: [4 tests, 0 failures, 0 errors](#)  
Changes: [Show changes](#)  
Work items: [3 included in build](#)

**Reported Work Items**

None reported against this build  
[Create a new work item](#)  
[Associate an existing work item](#)

**General Information**

Requested by: April Blues  
Build Definition: [workshop.squawk.core.continuous.build](#)  
Build Engine: [workshop.build.engine](#)  
Build History: [16 builds](#)  
Tags:   
 Deletion allowed

**Associated Release**

Released builds are available as choices in the work item "Found In" field.  
[Create a release to associate with this build](#)

**Identify work items and change sets that went into the build**

Summary Build Activities Compilation JUnit Downloads Logs External Links Properties

Work Items Problems Builds

Found 3 work items - Work items included in build B20080314-1507-workshop.squawk.core.continuous.build

I	Status	P	S	Summary	Owned By	Created By
35	Resolved			Ignore	Zach Builder	Jerry Jazz
32	Resolved			Problem with build B20080306-1029-squawk.m1.maint...	Jerry Jazz	Jerry Jazz
31	Resolved			Clean up Dog squawker	Zara Intern	Jerry Jazz

<No Current Work>



# Work Items

The screenshot displays the 'Work Items - Squawk - Team Concert' application. On the left, a tree view shows 'Squawk [localhost]' with sub-items like 'Builds', 'Plans', and 'Work Items'. The main area shows a detailed view of 'Defect 32'. The 'Details' section includes fields for Type (Defect), Severity (Critical), Found In (Unassigned), Created (Mar 6, 2008 12:31 PM), Created By (Jerry Jazz), Team Area (Core Library / Squawk), Filed Against (SquawkCore), Owned By (Jerry Jazz), Priority (Unassigned), Planned For (Patches), Estimate, Time Spent, Due (None), Resolved (Mar 13, 2008 5:17 PM), and Resolved By (Jerry Jazz). The 'Description' field contains the text: 'April, please look into this failure. Zara is on holiday. Thanks, Jerry'. The 'Discussion' section shows one comment: '1. Jerry Jazz, Mar 13, 2008, 5:11 PM Reassigned it back to myself.' At the bottom, a table lists work items found in a specific build.

I	Status	P	S	Summary	Owned By	Created By
35	Resolved	Ignore			Zach Builder	Jerry Jazz
32	Resolved			Problem with build B20080306-1029-squawk.m1.maintenance.b...	Jerry Jazz	Jerry Jazz
31	Resolved			Clean up Dog squawker	Zara Intern	Jerry Jazz

List associated work items

Drill down into the details of a work item



# Change Sets

The screenshot displays the IBM Rational Change Explorer interface for a defect. At the top, the defect is identified as "Defect 32" with a summary: "Problem with build B20080306-1029-squawk.m1.maintenance.build". The status is "Resolved" and "Fixed".

The interface is divided into several sections:

- Attachments:** A table with columns for Id, Name, Created, Created by, Size, and Type. It includes buttons for "Add File...", "Add Screenshot...", "Remove", "Rename", and "Save As...".
- Subscribers:** A section for managing subscribers with "Add...", "Remove", "Add...", and "Remove" buttons.
- Links:** A tree view showing the relationship between change sets and builds.
  - Change-Sets:** Includes "Changes in Core - Jerry Jazz 3/13/08 5:16 PM" and "Changes in Core Tests - Jerry Jazz 3/13/08 5:16 PM".
  - Included in builds:** Lists builds such as "squawk.m1.maintenance.build M20080313-1516", "workshop.squawk.core.continuous.build B20080314-1507-workshop.squawk.core.continuous.build", and "workshop.squawk.integration.build I20080314-1507-workshop.squawk.integration.build".
  - Reported against builds:** Lists the build "squawk.m1.maintenance.build B20080306-1029-squawk.m1.maintenance.build".

Two callout boxes provide additional context:

- A blue callout box points to the "Change-Sets" section with the text: "Review change sets that make up the build".
- Another blue callout box points to the "Change Explorer" view at the bottom with the text: "Change Explorer lists files that were modified for a given change set".

The bottom of the interface shows a file explorer view for the path "net.jazz.uws.squawkers/src/net/jazz/uws/squawkers", displaying a file named "Dog.java".



# Compare Changes

**Compare changes between versions of a file**

```

/**
 * @author wasleski
 */
public class Dog extends Squawker {

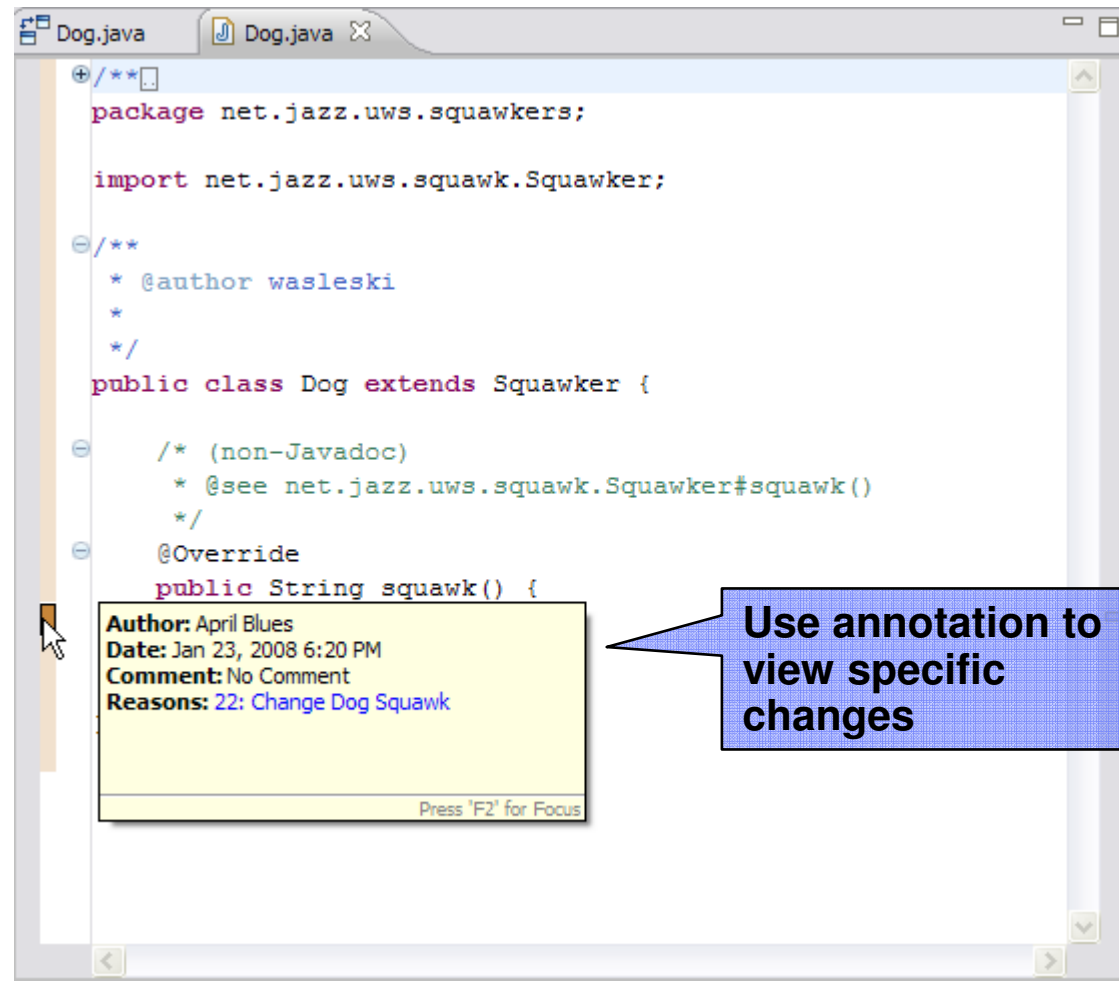
    private static final String BOW_WOW = "Bow-wow!";

    /* (non-Javadoc)
     * @see net.jazz.uws.squawk.Squawker#squawk()
     */
    @Override
    public String squawk() {
        return BOW_WOW;
    }
}
    
```

Comment	Creator	Date Created	Merges
32: Problem with build B20080306-1029-squawk.m1.mai...	Jerry Jazz	3/13/08 5:16 PM	
31: Clean up Dog squawker	Zara Intern	3/6/08 12:26 PM	
22: Change Dog Squawk	April Blues	1/23/08 6:20 PM	
Share projects	Jerry Jazz	1/23/08 2:05 PM	



# Visualize Change History



```
package net.jazz.uws.squawkers;

import net.jazz.uws.squawk.Squawker;

/**
 * @author wasleski
 */
public class Dog extends Squawker {

    /* (non-Javadoc)
     * @see net.jazz.uws.squawk.Squawker#squawk()
     */
    @Override
    public String squawk() {
```

**Author:** April Blues  
**Date:** Jan 23, 2008 6:20 PM  
**Comment:** No Comment  
**Reasons:** 22: Change Dog Squawk

Press 'F2' for Focus

Use annotation to view specific changes



## DEMO

- Exploring Changes and Traceability



# Agenda

- Today's Software Development Landscape
- All that Jazz
  - ▶ Introduction
  - ▶ Architecture
- Rational Team Concert
  - ▶ Overview
  - ▶ Getting Started with a new Team
  - ▶ Source Configuration Management
  - ▶ Build Management
  - ▶ Change and Traceability
- Wrap-up and Next Steps





## Call to action and next steps

- Schedule an onsite visit by your IBM® Rational® sales team
- Build and Deploy Proof of Technology
  - hands on training utilizing the combined CC/CQ/BF/TPM solution
- Build Forge™ Proof of Technology
  - In depth dive into IBM Rational BuildForge
- For broader exposure to our governance solutions, attend
  - ▶ Business Driven Development for Compliance POT
  - ▶ Service Oriented Architecture Governance POT
  - ▶ Tivoli Provisioning Manager POT



# Get additional resources from IBM developerWorks

- **Technical resources**

- ▶ How-to information
- ▶ Sample code
- ▶ Roadmaps
- ▶ Trial downloads
- ▶ Tutorials
- ▶ Technical articles
- ▶ Webcasts
- ▶ Demos
- ▶ Academic portals
- ▶ Sample projects

- **Web communities**

- ▶ Technology zones
- ▶ Brand zones
- ▶ alphaWorks
- ▶ Discussion forums
- ▶ Blogs
- ▶ Wikis
- ▶ RSS Feeds
- ▶ Podcasts
- ▶ Localized sites in key non-US markets

The screenshot shows the IBM developerWorks website interface. At the top, there's a navigation bar with 'Home', 'Products', 'Services & industry solutions', 'Support & downloads', and 'My IBM'. A search bar is also present. The main content area features a 'Top story' section titled 'Get started with DB2 and Ruby on Rails' with a sub-headline 'Discover how the Ruby language, coupled with the powerful Rails framework, provides a myriad of opportunities for Web solutions development. With the IBM\_DB adapter and driver, Rails applications can now interact seamlessly with IBM data servers.' Below this, there are several article teasers with titles like 'Database refactoring with db4o', 'Exception handling in WebSphere Process Server and WebSphere ESB', 'Integrate the Storage Resource Broker and Globus through WSRE', 'Introducing Composite Application Workflow', 'Signing, encrypting, and decrypting Atom', and 'In pursuit of code quality: Beware the tight couple'. A right-hand sidebar contains 'My developerWorks' with a 'Welcome guest' message and links for 'Sign in' and 'Register'. Below that, it lists 'Across the site' with categories like 'Downloads', 'Tutorials and training', 'Software products for developers', 'Technical events and briefings', and 'RSS feeds'. At the bottom, there are 'Related links' and 'Local sites' sections. A large yellow starburst graphic is overlaid on the right side of the screenshot, containing the text: '#1 Rated Vendor Developer Program (IDC)', '2nd largest developer community in industry', and '32 industry awards'.

- **Support in the community**

- ▶ developerWorks Live! Briefings
- ▶ User Group support
- ▶ Academic & University events



## Test-drive IBM Rational software

- **developerWorks provides easy access to trial versions of the latest IBM Software**

- ▶ Download free trial versions of the Rational products you've seen today:
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  - Rational Portfolio manager
  - Rational Requisite Pro
  - Rational ClearCase
  - Rational ClearQuest
- ▶ Don't want to download? Request your copy of the Software Evaluation Kit (SEK) DVD
  - More than 14 GB of downloadable trial code on two DVDs
  - Available for Linux or Windows

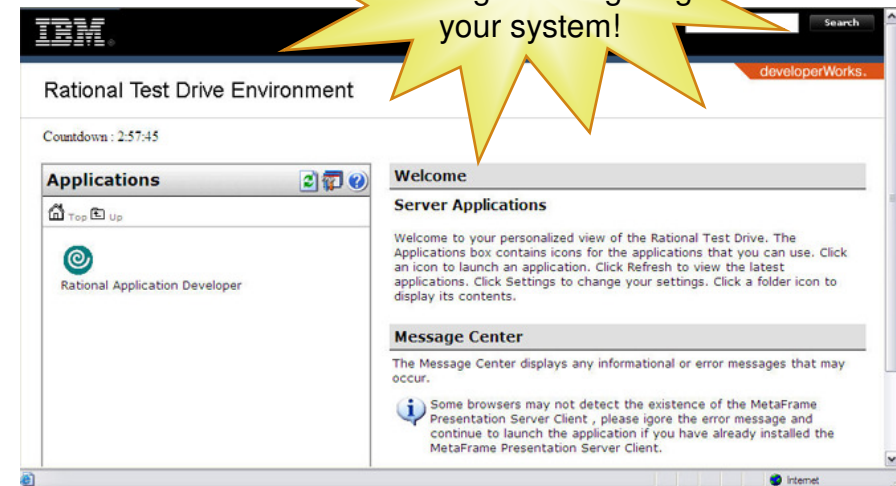
The screenshot shows the IBM developerWorks website. The main navigation bar includes 'Home', 'Products', 'Services & industry solutions', 'Support & downloads', and 'My IBM'. The 'Downloads' section is active, featuring a 'Featured download: Rational Application Developer for WebSphere Software V7.0'. Below this, there are sections for 'Information Management Software', 'Lotus® (collaboration and human productivity)', and 'Rational® (software development)'. A 'Software Evaluation Kit' (SEK) DVD is also highlighted, with a call to action: 'New! Evaluate Rational V7 desktop products'.

[ibm.com/developerWorks/downloads](http://ibm.com/developerWorks/downloads)



# Test-drive IBM Rational software online

- In addition to the trial downloads, you may now explore the capabilities of some Rational products online.
  - ▶ Register to receive an entrance ID & password and explore the product for up to three hours per session
  - ▶ Use your own data and files during your online trials to try out real-world scenarios
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Evaluate Rational Appl. Developer without installing



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New! Try Rational ClearQuest as a download or online

New! IBM Rational Build Forge

[ibm.com/developerWorks/onlinetrials](http://ibm.com/developerWorks/onlinetrials)



## Complimentary events from developerWorks

### **IBM Rational Software Delivery Platform webcast series:**

View technical webcasts covering global software delivery. See what's coming up in our 2007 schedule or browse the library of more than 80 recorded titles. Topics are available on demand and include:

- Accelerating Software Delivery with Integrated Change and Release Management
- Consolidated, real-time project views with IBM Rational ClearQuest
- Streamlining Your Software Delivery Processes with IBM Rational Build Forge

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[ibm.com/developerworks/offers/techbriefings/events.html](http://ibm.com/developerworks/offers/techbriefings/events.html)

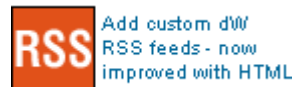


# developerWorks podcasts

Podcast	Date
<b>This week on developerWorks -- 27 Feb 2007</b> Contributing author Nicholas Chase talks about his Sudoku obsession and his new two-part article on using XForms to create your own Sudoku game. (See Scott Laningham's blog for this week's <a href="#">show notes</a> .) <a href="#">Listen</a>	27 Feb 2007
<b>This week on developerWorks -- 20 Feb 2007</b> Cameron Laird, vice president of Phaseit Inc. and longtime developerWorks contributor, talks about a better-than-JavaScript programming language for modern Web applications. (See Scott Laningham's blog for this week's <a href="#">show notes</a> .) <a href="#">Listen</a>	20 Feb 2007

- ▶ Tune in to hear the latest MP3 recordings on a variety of technical subjects by industry experts and luminaries.
- ▶ “This week on developerWorks” podcast features developerWorks content highlights for the week and interviews authors, editors, and other developerWorks contributors in an entertaining 5-8 minute podcast.
- ▶ Other podcasts include IBM Fellow Grady Booch as he discusses innovation and evolution in IT, being an IBM Fellow, and keeping an eye on the horizon.

■ Subscribe to the RSS feeds and the new developerWorks podcasts will come to you!

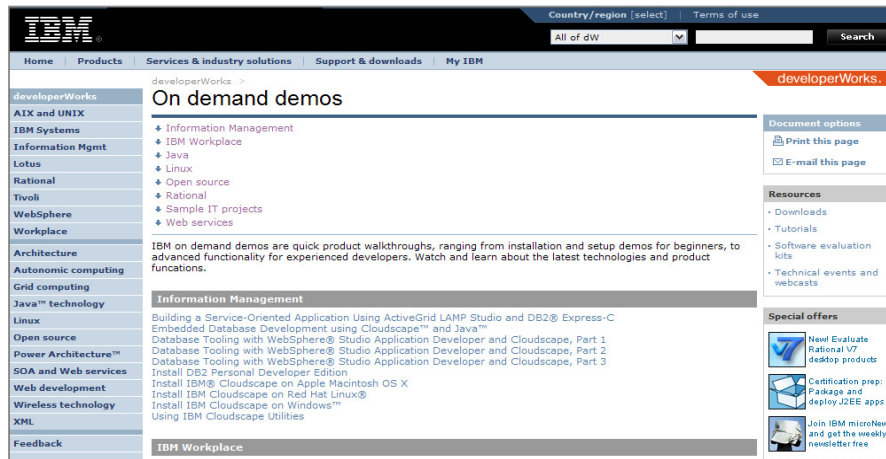


[ibm.com/developerworks/podcast](http://ibm.com/developerworks/podcast)

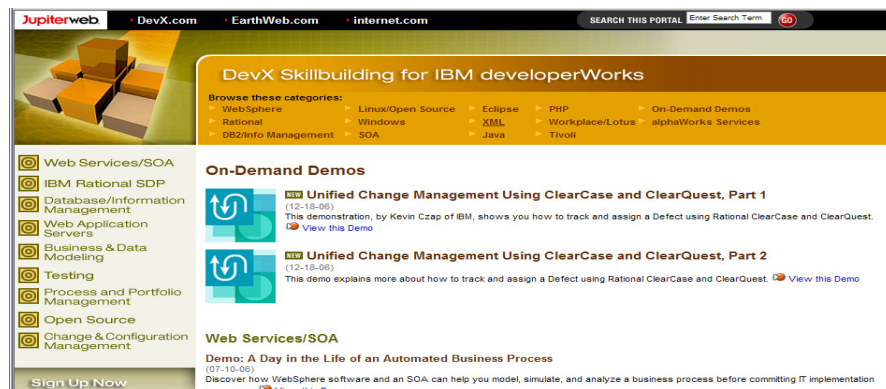




# Fast track your skills with On demand demos



[ibm.com/developerWorks/offers/lp/demos](http://ibm.com/developerWorks/offers/lp/demos)



[devx.com/OnDemandDemos](http://devx.com/OnDemandDemos)

■ Visit **developerWorks** or our partner portal on **DevX** for easy access to:

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- ▶ Real world development scenarios
- ▶ Technology-focused “how to” training demos
  - Short video clips
  - Beginner to advanced skill levels
- ▶ Additional product and technical resources to accompany each demo





# alphaWorks emerging technologies

The screenshot shows the alphaWorks website interface. At the top, there's a navigation bar with the IBM logo, a language selector set to 'United States', and a search bar. Below this is a secondary navigation menu with links for Home, Products, Services & industry solutions, Support & downloads, and My account. The main content area is titled 'alphaWorks Emerging technologies' and features a 'Featured technologies' section. This section includes a 'ThinkPlace' feature with a 'Learn more' link, and several IBM products with brief descriptions: 'IBM Simulators for IP Multimedia Subsystem', 'IBM Assembly Visualizer for Cell Broadband Engine', 'IBM Development Engagement Service', 'IBM XL Fortran Alpha Edition for Cell Broadband Engine Processor on Linux', and 'IBM GUI-Based Administration Tool for IBM Network Authentication Service'. A 'Distributed Image Management for Linux Clusters' link is also present. On the right side, there are several utility boxes: 'All downloads', 'Emerging Technologies Toolkit', 'RSS feeds', 'alphaWorks community', 'Academic resources', 'alphaWorks in the news', 'Top downloads' (listing NotesBuddy, HeapAnalyzer, etc.), and a 'Spotlight' section highlighting the 'IBM Development Engagement Service' and a tutorial on building an Ajax-enabled application. A feedback survey link is also visible, along with a 'Recently updated technologies' list at the bottom.

alphaWorks.ibm.com



# User Group Communities

The screenshot shows the IBM developerWorks community page for user groups. The page is titled "developerWorks community" and has a navigation menu with "Forums", "Blogs", and "User groups". Under "User groups", there are links for Grid computing, Linux, Tivoli, Info Mgmt, Lotus, WebSphere, Java™ technology, Rational, and XML. The main content area is divided into sections for "Grid computing", "Information Management", "U2UG", and "Java technology". Each section provides a brief description of the user group and a link to "Find a user group". The right sidebar contains various utility and support links such as "Document options", "Product support", "Meet the experts", "Events", "Emerging technologies", and "Special offers".

[ibm.com/developerworks/usergroups](http://ibm.com/developerworks/usergroups)



# IBM Academic Initiative

The screenshot shows the IBM Academic Initiative website. At the top, there is a navigation bar with the IBM logo, a 'Country/region [select]' dropdown, 'Terms of use', and a search bar containing 'Academic Initiative'. Below the navigation bar is a main menu with links for Home, Products, Services & solutions, Support & downloads, and My account.

The main content area features a large banner with the text 'Get access to academic resources.' and a photo of a classroom. Below the banner is a 'Why IBM' section with the text: 'Reap the benefits of open source, keep up with the latest technologies, prepare your students for the hottest jobs in the top fields, and get the resources you need to reach these goals, all at no charge.'

There are two columns of action buttons: 'Become a member' (Join the IBM Academic Initiative and get access to our valuable resources, at no-charge.) with buttons for 'Get the details' and 'Apply now'; and 'Already a member?' (Start taking advantage of the the software, courseware, training, teaching tools, books, and more.) with buttons for 'Download software' and 'Download courseware'.

On the right side, there are several utility boxes: 'Membership' (Join now!, Renew membership, Reset your password, Update your profile), 'Worldwide sites' (Select your country dropdown), 'Quick links' (Request or renew a Rational license key, Get help), and a box titled 'Give students access to helpful resources.' with links to 'Student software catalog (US,Canada)' and 'Student Opportunity'.

At the bottom, there are three circular icons with text: 'Learn about open source', 'Explore high school resources', and 'Read our latest newsletter'.

A left sidebar contains a list of navigation links: IBM Academic Initiative, Products & technologies, Downloads & CDs, Training, Curriculum & courseware, Skills for the 21st century, Forums & community, Certification, Library, Support, News & events, Membership, Site map, and Feedback. Below this is a 'Related links' section with links to Student Portal, developerWorks resource for developers, and alphaWorks emerging technologies.

[ibm.com/university/scholars/academicinitiative](http://ibm.com/university/scholars/academicinitiative)



# Questions

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We appreciate your feedback in order  
to improve this educational event.  
Please fill out the survey form.

