

IBM Software Group

Transforming Software Development through Web 2.0 Collaboration

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Rational software

→ Go to **IBM**

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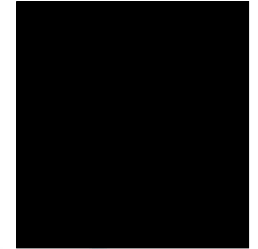
Patterns of successful business transformation *Enabled by the billion user Internet*

**Narrow
market
focus**



**Expanded
market
focus**

Only 10% of the LEGO product line is sold in retail outlets -- niche products now account for nearly 15% of total (\$1.1B) sales.

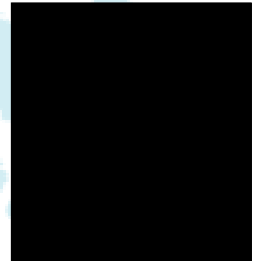


**Top-down
production**



**Peer
production**

At P&G, R&D productivity has increased 60%--since 35% of new products have elements that originate *outside* of P&G.



**Rigors of
the
'cathedral'**



**Openness
of the
'bazaar'**

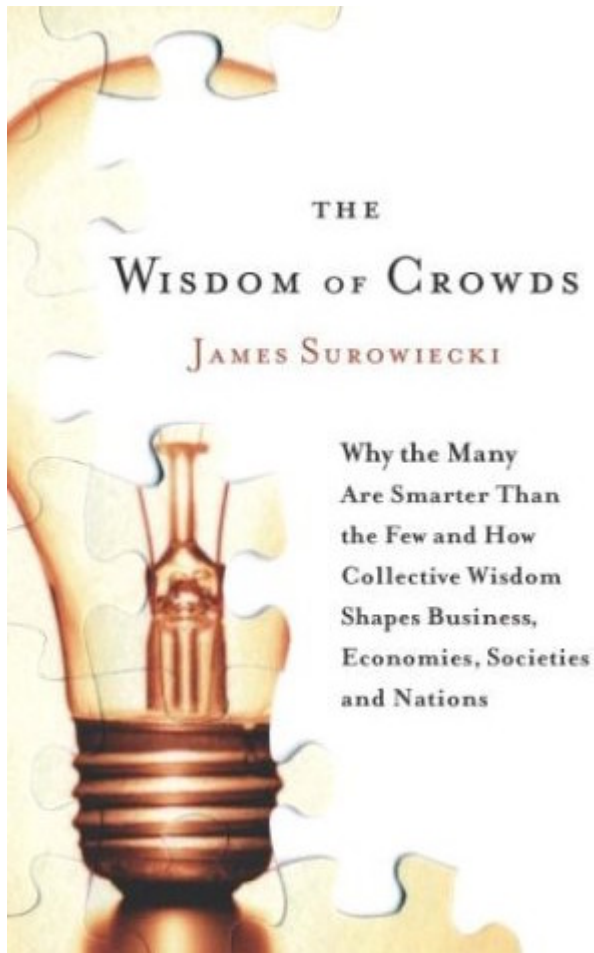
Over half of surveyed developers use open source modules in their applications.*



*Evans Data Corporation North American Development Survey, Vol II, 2007, p.135



The Wisdom of Crowds



"Under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them."

James Surowiecki



Implications for the software delivery domain

Questions we asked...

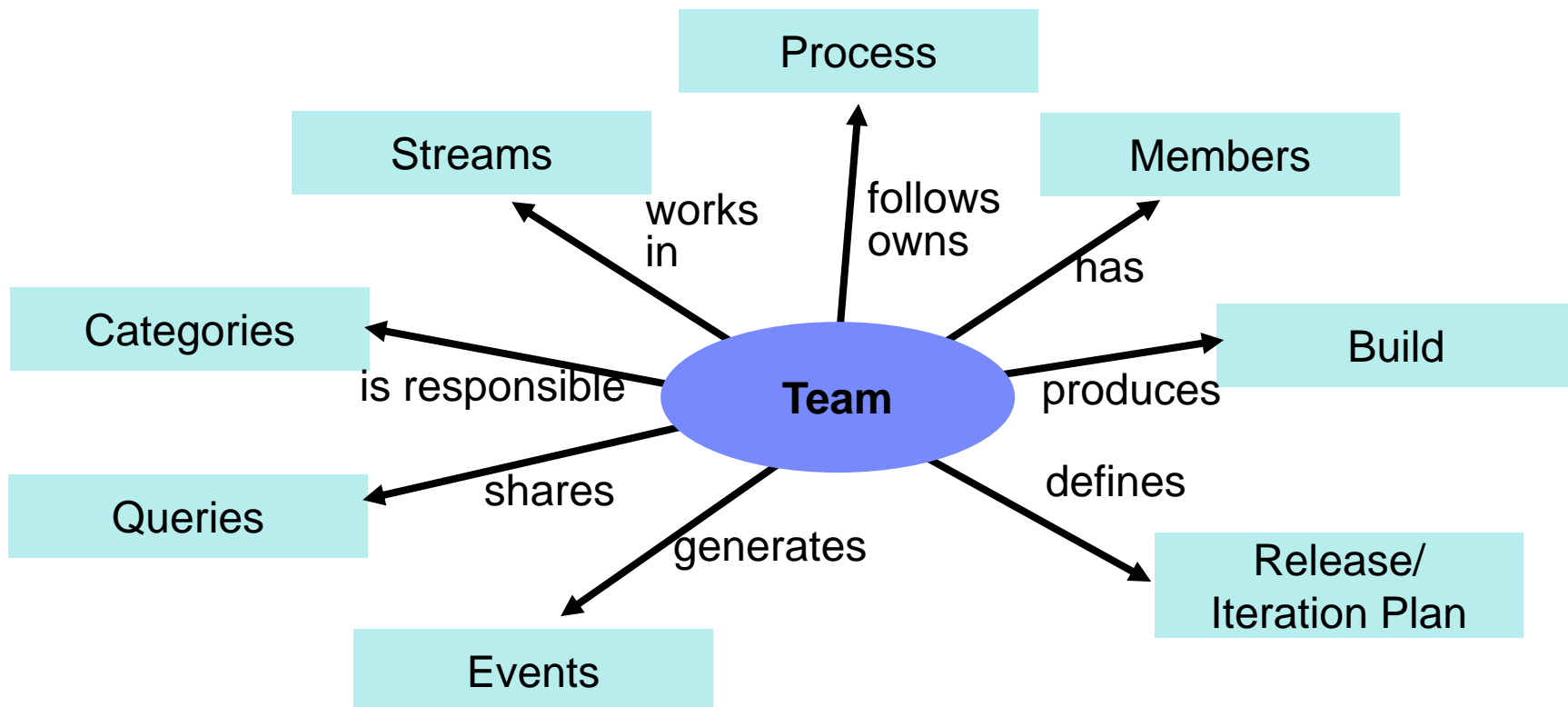
If software teams adopted the principals of the collaboration economy...

- 1 How would software delivery teams and processes change?
- 2 How would we as a vendor change?
- 3 How would application lifecycle management change?



Team first principles

- Tools know the team
- Each team is different
- Teams are self-organizing



How would software delivery teams and processes change?

- Function first → **People first**
- Manual tasks → **Automate what makes sense...**
- Pre-determined tool function → **Dynamically extensible**
- Proprietary infrastructure → **Internet standards**
- Lengthy team and project onboarding → **Day one productivity**
- Rigid process → **Creative collaboration**
- Project post-mortems → **Continuous steering**
- Best guesstimates → **Collective bottom-up estimates**
- Ad hoc shared artifacts → **Managed reuse**
- Local standards → **Industry standards**



Recreating the virtual water cooler

- Instant messaging
- Virtual meeting room
- Application sharing
- Centralized info mgt; searching and indexing
- Configuration control of shared artifacts
- Co-browsing
- Electronic document routing and workflow
- Calendaring and scheduling
- Online event notification
- Project resource profiling
- White boards
- Online voting and polling
- Team member presence
- Tools for connected/disconnected use
- Threaded discussions
- Access to personal and project blogs
- Project dashboards and metrics
- Self-publication of content
- Self-administration of projects
- Lightweight peer-to-peer conferencing
- Lightweight group conferencing
- Non-intrusive auditing of changes
- Multiple levels of information visibility
- Personalization of content

Know what is
going on,
without having
to ask.



Implications for the software delivery domain

Questions we asked...

If software teams adopted the principals of the collaboration economy...

- 1 How would software delivery teams and processes change?
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- 3 How would application lifecycle management change?





Designed to integrate both partner and competitor resources
Simplifying collaboration across the software delivery lifecycle

An open invitation to collaborate on a common integration architecture for software delivery



Open Services for Lifecycle Collaboration

Barriers to sharing resources and assets across the software lifecycle

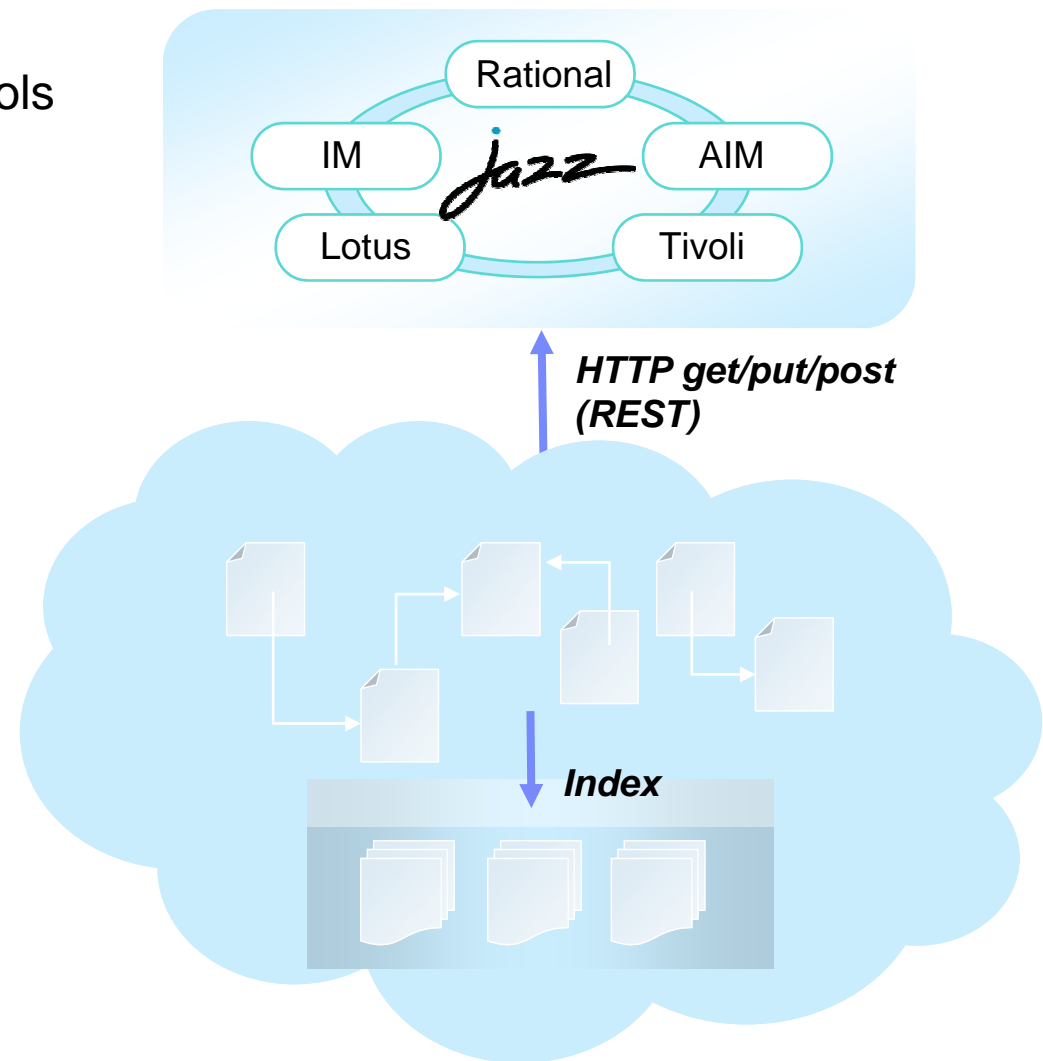
- ▶ Multiple vendors, open source projects, and in-house tools
- ▶ Private vocabularies, formats and stores

- ▶ A proposed architecture for sharing lifecycle resources
 - Described on Jazz.net through illustrative resource definitions, service implementations, and use cases
- ▶ Inspired by Internet architecture
 - Loosely coupled integration with “just enough” standardization
 - Common resource formats and services
- ▶ Innovation from the Jazz technology platform



Inspired by Internet architecture

- Data specified independently of tools
- All data are resources with URLs
- Tools (multiple) access data through HTTP/APP
- References are embedded URLs
- Resources have representations
- Unprecedented extensibility
- Search and query through “structured indexes”, independent



The Jazz Project: Transforming software delivery

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, and collaborative application lifecycle management (C/ALM) platform**.
- IBM's vision of the **future of software delivery**—globally distributed, fluid and dynamic.
- An **evolution of the Rational portfolio**, which will evolve to support Jazz technology over time.
- A **community at Jazz.net** — where you can see Jazz-based products being built.





Jazz.net community site: Transparent development

Suppose we did our development out on the Internet?



FREE!
DOWNLOAD
Express-C

Free for 10 users! Zip file download with Client for Eclipse IDE and server. Client for Microsoft Visual Studio IDE downloaded separately:
[Other Download Options...](#)

Suppose we let you try it for a team of 10 for FREE?

- An transparent development laboratory where you can...
 - Communicate with the development team
 - Track the progress of builds and milestones
 - Get the latest product trials and betas
 - Join developers and product managers in discussion groups
 - Submit defect and enhancement requests

Implications for the software delivery domain

Questions we asked...

If software teams adopted the principals of the collaboration economy...

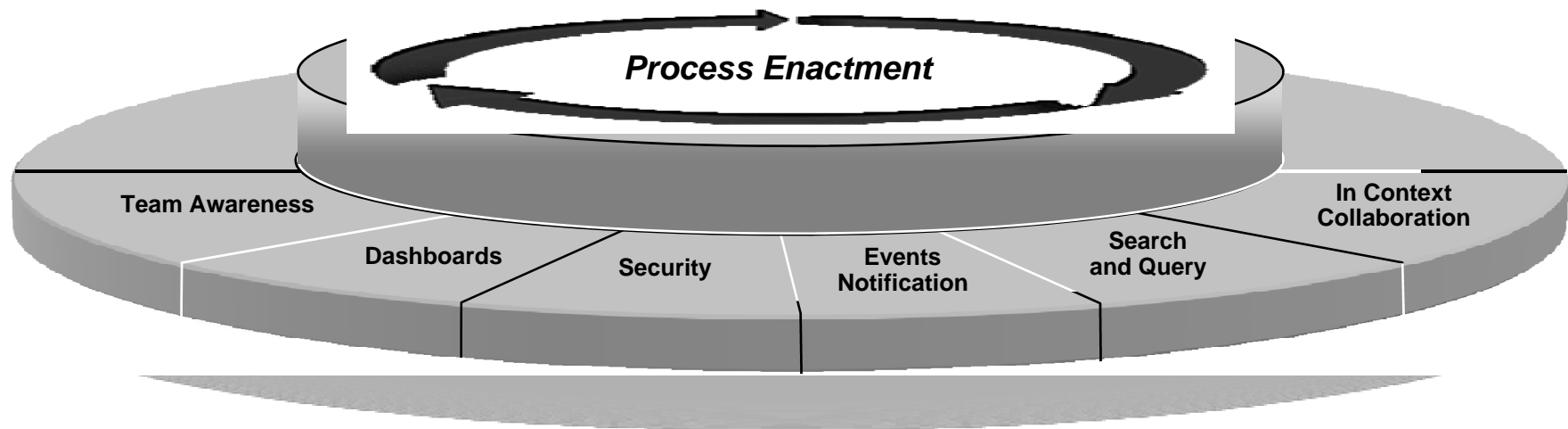
- 1 How would software delivery teams and processes change?
- 2 How would we as a vendor change?
- 3 How would application lifecycle management change?



Hasn't this been done before?

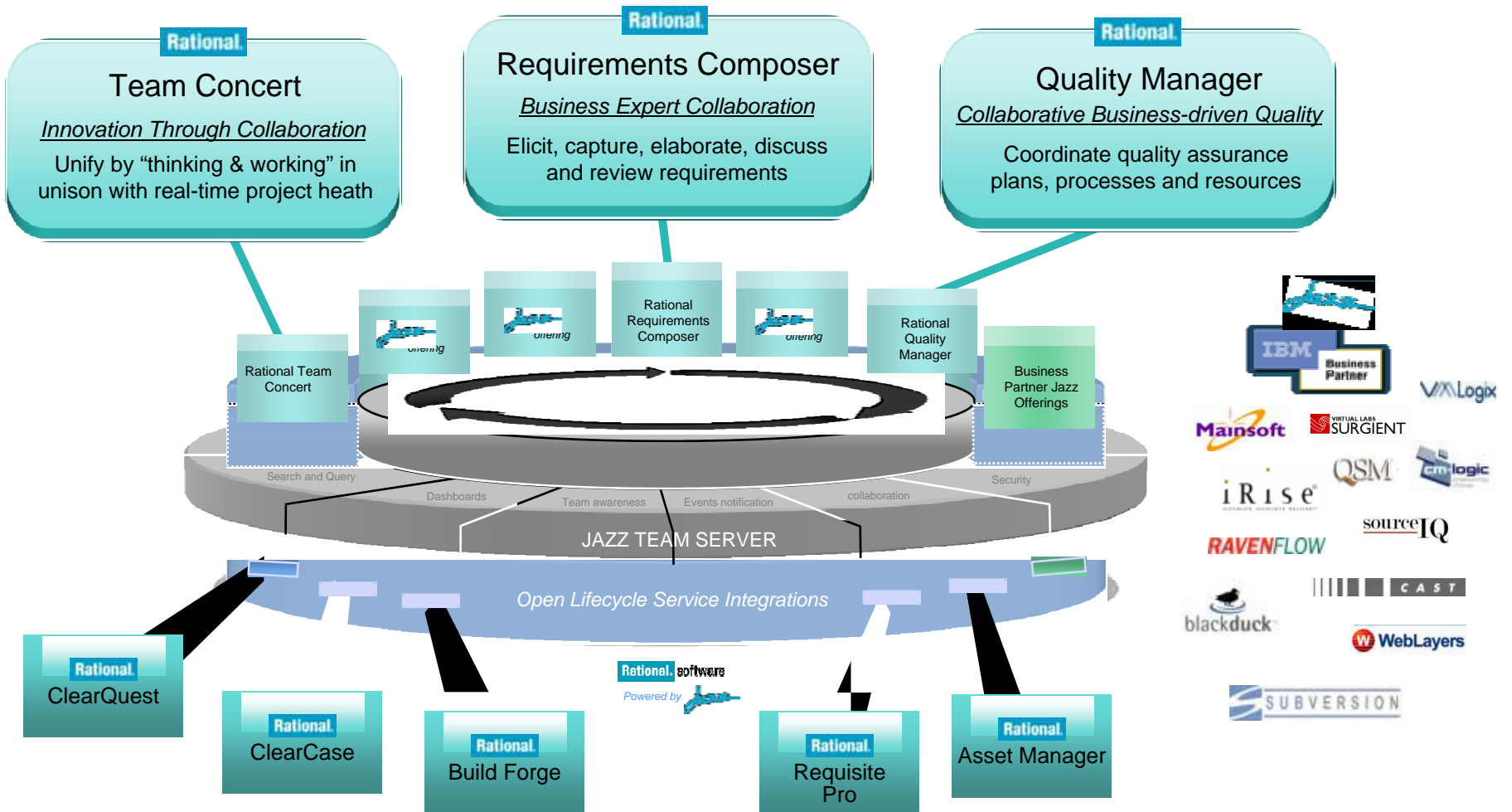
- Many previous attempts at more integrated team software engineering environments
 - ▶ Assume integration around a database/repository
 - ▶ Design a data model for software engineering for the repository
 - ▶ Provide some sort of framework for tools to integrate around the repository

A services oriented and platform based approach...

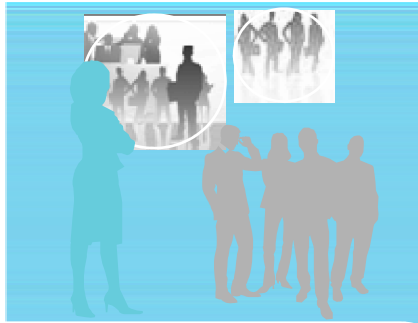




The Jazz core offerings

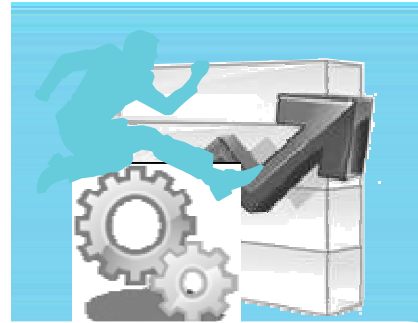


Essential attributes of the Jazz Foundation



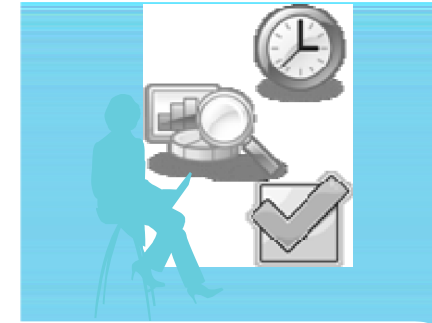
Collaborate

Deliver transparency of teams and projects for continuous, context-sensitive collaboration



Automate

Automate non-creative tasks with automated processes and workflows



Report

Deliver real-time insight into programs, projects and resource utilization.

Improve knowledge and practice maturity with an environment that develops individual and team talent.



Why collaborate?



Deliver transparency of teams and projects for continuous, context-sensitive collaboration

Reduce costs

- ▶ Accelerate project and team onboarding
- ▶ Build team cohesion
- ▶ Leverage talent across and beyond the enterprise
- ▶ Enable flexible resourcing

Why automate?



Automate processes, workflows and tasks to improve individual and team agility

- ▶ Automate best practices that improve team agility
- ▶ Reduce tedious and time-consuming manual tasks
- ▶ Minimize non-productive wait times
- ▶ Minimize administrative busywork

**Speed
time-to-
market**

Why report?



Deliver real-time insight into programs, projects and resource utilization.

- ▶ Identify and resolve problems earlier in the software lifecycle
- ▶ Get fact-based metrics -- not estimates -- to improve decision making
- ▶ Leverage metrics for continuous individual and team capability improvement

Improve quality



Example: A team dashboard

The screenshot displays the Rational Team Concert Dashboard for user Matt Holitza. The dashboard is titled "Rational Team Concert Dashboard" and includes a navigation menu with options like "Home", "Trend Reports", and "Feeds".

Key components of the dashboard include:

- Recently modified (111) Tags:** A list of project tags such as "accelerators", "accessibility", "apar", "api", "busted", "c_alm", "calm_dpp", "caremedic", "distributed", "intermittent", "java", "mustfix", "osic", "performance", "planmodel", "polish", "process", "projectmove", "rfe", "rtcp-30", "rtcx", "rtczp_needed", "service", "svt_3.0", "svt_30", "ua_rpc", "ux", "visual_studio", "visual_studio_2008", and "vsn".
- Open Work Items by Type:** A line chart showing the number of open work items over time, categorized by Task (green), Enhancement (light green), Plan Item (orange), com.ibm.team.appt.com.mon.workItem.Type.ou... (yellow), and Defect (blue).
- Open vs Closed Work Items:** A bar chart comparing the number of open and closed work items over time.
- New Work Items by Severity:** A bar chart showing the distribution of new work items by severity, including Unassigned, Blocker, Unclassified, Minor, Normal, Major, and Critical.
- Open Work Items by Priority:** A line chart showing the number of open work items over time, categorized by High (red), Medium (yellow), Low (blue), and Unassigned (grey).
- Blocking Work Items:** A line chart showing the number of blocking work items over time.
- Closed Work Items by Priority:** A line chart showing the number of closed work items over time, categorized by High, Medium, Low, and Unassigned.

The dashboard also features a sidebar with "Recently Viewed" and "My Dashboards" sections, and a search bar at the top left. The IBM logo is visible in the bottom left corner, and the Jazz logo is in the bottom right corner.



Rational Requirements Composer

Harnessing the wisdom of the business and IT

Breaking down silos to get requirements right the first time

Rational Requirements Composer

File Edit Navigate Search Window Help

Advanced... Heading 1 Arial 20 B I U S M S

Open Theresak's Dashboard Jazz Revolution2 *Jam Session Storyboard Jazz Revolution Vision x

Jazz Revolution Vision
Outlines the vision for Classics CD

Jazz Revolution.Com Vision

Version 1.0

1. Introduction

1.1 Purpose of the Vision Document

The purpose of this document is to define the problems addressed by the Jazz Revolution.com website project and to define high level business requirements, user needs, and features for that system.

1.2 Product Overview

The Jazz Revolution.com website is available on the World Wide Web. Jazz Revolution.com is an online specialty realtor of Jazz music collections. The company wishes to remain the premier destination for the global Jazz fan. It maintains a vibrant local presence for customers in Europe, Asia and the Americas that makes it easy for fans to connect with one another, share their latest finds, upload amateur tracks, follow concert schedules, discover emerging talent, and of course buy music. The website includes the following areas:

- A forum for fans to discuss their music, share their latest finds, and upload amateur tracks.
- An online catalog
- An order processing system
- An event calendar containing concert schedules

2. User Description

2.1 User/Market Demographics

Information

Overview

Comments (4 of 4)

1. please review vision document 3 replies !
Theresak Nov 18, 2009 12:57:56 PM
Stakeholders,
Please review the vision document and let me know what you think.
3. Re: please review vision document
Alice Nov 18, 2009 1:08:29 PM
Theresa - I think we need an Audition Tape feature.
It would allow users to upload "Audition Tapes" to their Musician profiles, and will allow Jam Session users to search for and listen to the Audition Tapes.
4. Re: please review vision document
Brian Nov 18, 2009 1:46:11 PM
Team - I think we should also think about a VocalRange feature.
This could allow Jam Session users to specify vocal range in their Jam session requests, and enable users to add a vocal range to their Musician profiles.
5. Re: please review vision document
Lisa Nov 18, 2009 1:52:17 PM
I agree with Brian and Alice. However, to contain scope we're going to have to remove some other requirements.

Requirements (9)

Links (0)



Rational Team Concert

Harnessing the wisdom of developers

Plan: Interactive real-time development planning around the world

The screenshot displays the Rational Team Concert interface for 'Iteration 3' (12/1/09 - 12/31/09). The interface is divided into several sections:

- Team Area:** Jazz Revolution Team | Iteration: Iteration 3 (12/1/09 - 12/31/09) | 0 Closed | 11 Open
- Progress:** 0/180 | +0h | Estimated: 100%
- Team Members:**
 - Jason Mitchell:** Closed items: 0 | Open items: 0
 - Markus Kent:** Closed items: 0 | Open items: 1
 - RayJ:** Closed items: 0 | Open items: 2
 - Unassigned:** Closed items: 0 | Open items: 8
- Task Board:**
 - To Do:**
 - Users are receiving errors when downloading purchased tracks twice (12)
 - BaseTestRunner.getTest() requires class to extend TestCase (5)
 - Give TimeoutTest.timeoutFailure more time to pass (50)
 - In Progress:**
 - Users should be able to hold an online jam session (52)
 - Support holds online chat with customer to resolve issue (62)
 - Done:** (Empty)
- View As:**
 - Backlog
 - Developer's Taskboard
 - Planned Time
 - Schedule Risk
 - Work Breakdown
 - more
- Actions:**
 - Re-sort
- Exclude:**
 - Assigned Items
 - Empty Groups
 - Estimated Items
 - Execution Items
 - Planned Items
 - Resolved Items
 - Unchanged Items



Rational Team Concert

Harnessing the wisdom of developers

Estimate: Bottoms up estimates + Monte Carlo Analysis

The screenshot shows the Rational Team Concert interface for 'Iteration 3'. It displays a list of work items assigned to 'RayJ'. A popup window titled 'Work Load for RayJ (Assigned 50% to this timeline)' is open over one of the items. The popup provides summary statistics: Total Hours Available: 80, Total Hours Estimated: 78, Items Estimated: 6 out of 6 (100%), and Quality of Planning: excellent. Below the summary is a table of work items with their priority, duration, and effort.

Priority	Duration	Effort
Medium	4 hours	56
High	4 hours	55

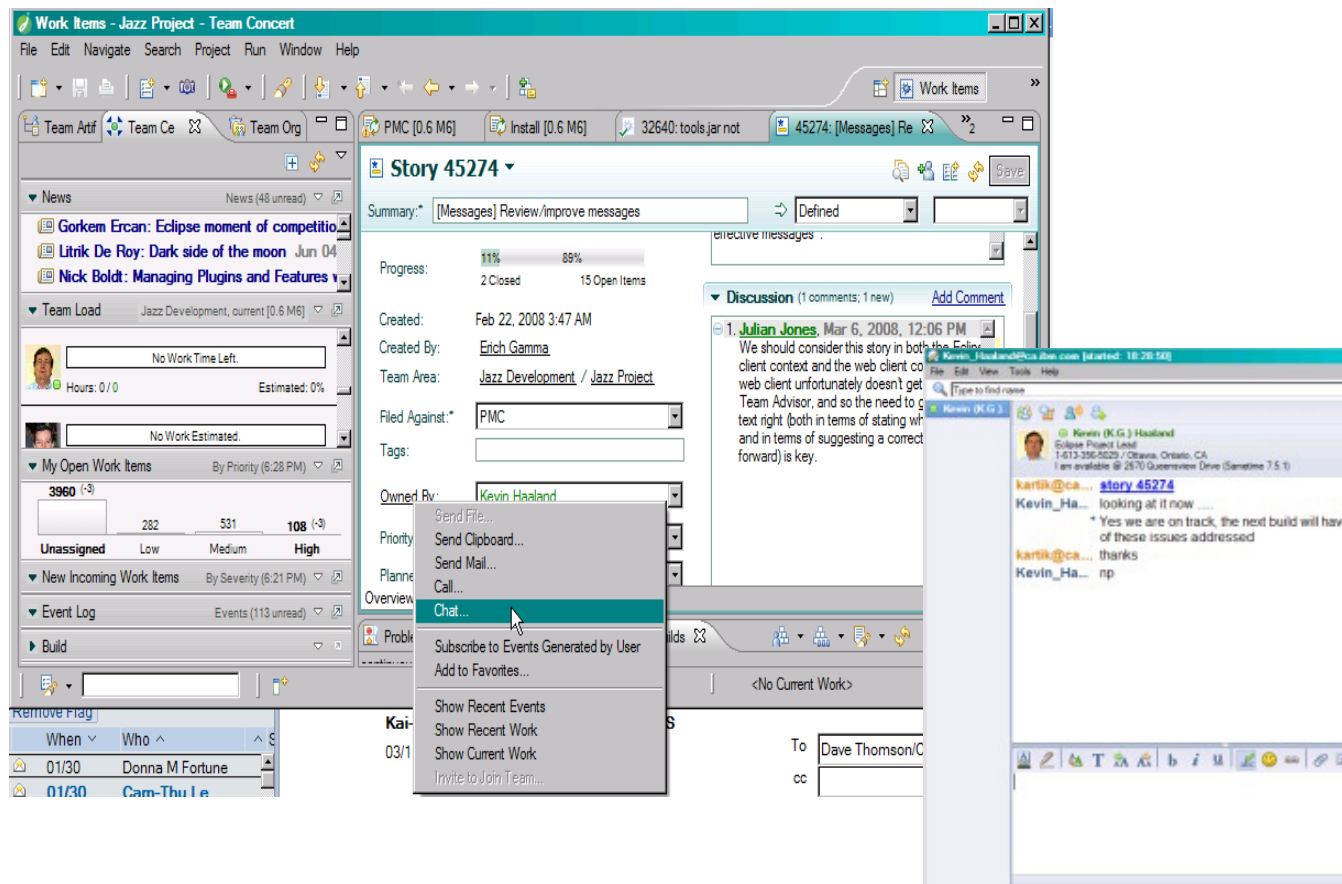
The main interface also shows team area statistics: Team Area: Jazz Revolution Team | Iteration: Iteration 3 (12/1/09 - 12/31/09) | 0 Closed | 12 Open. Progress: 0/382 | +0 h. Estimated: 100%. Individual team member views for Markus Kent and RayJ are also visible, showing their respective work item counts and progress bars.



Rational Team Concert

Harnessing the wisdom of developers

Develop: Collaboration in-context (Web 2.0 meets software change management)





Rational Team Concert

Harnessing the wisdom of developers

Manage: Aggregate relevant data for the team, the project, the individual

The screenshot displays the Rational Team Concert web interface for a project named 'Jazz Revolutions'. The interface includes a navigation bar with options like 'Dashboards', 'Project Areas', 'Work Items', 'Plans', 'Source Control', and 'Builds'. The main content area is divided into several widgets:

- Jazz Revolution Release 2.1 (3)**: Shows the current iteration (I2) and progress bars for Iteration 1, 2, and 3.
- Recently Modified Work Items (Release 2.1) (19)**: Lists work items such as '15: Users should be able to hold a Jam session online', '66: Fix accessibility issue with help page', '65: Add new login credentials for jam session feature', '19: Add way file format to recording options', and '58: Give TimeoutTest.timeoutFailure more time to pass'.
- Jazz Revolution Members (2)**: Lists team members and their roles: Carmen (Product Owner, ScrumMaster, Team Member, Stakeholder) and RayJ (Product Owner).
- Work items by priority (Current Iteration) (19)**: A bar chart showing the distribution of work items by priority. The chart has three bars: High (red, value 7), Medium (yellow, value 8), and Low (blue, value 4).
- Recent enhancement requests (2)**: Lists requests like '15: Users should be able to hold a Jam session online' and '17: Users can archive older versions of their music files'.
- Headlines**: Features a headline 'Jam Session to be featured in January conference' with a warning icon and text: 'Team, the new jam session story will be featured in a conference in January. Please finish the jam session related features as soon as possible so the QA team can test them on the staging server.'
- News Feed (80 new)**: Displays news items such as 'Share and manage documents through the Rational Team Concert Web UI Tomorrow', 'Effective use of Rational Team Concert for daily scrums Nov 12, 2009', 'How to consume the Rational Team Concert change management services Nov 5, 2009', and 'Integrating Rational Focal Point and Rational Project Conductor Oct 28, 2009'.



Rational Quality Manager: Improve operational efficiency

What is needed: Know what to expect from others and what others expect from you

Rational Quality Manager

- Dynamic Test Plan is always current
- Team and individual task workflow
- Enforceable process discipline
- Test Lab Management
- Requirements Through to Defects

Team event log

Individual Task List

ID	Summary	Artifact
3	The artifact has been approved	Classics CD
3	Provide the Review and Approvals Section for Classics CD	Classics CD
3	Provide the Review and Approvals Section for ClassicsCD	Classics Admin
3	Provide the Review and Approvals Section for Classics CD	Classics CD

Stay on schedule and under budget.



What analysts are saying...

- ▶ **Liz Barnett, Ez-Insight:** *"With the Jazz project, Rational has developed **breakthrough technology** and is **poised to set the standard for collaborative ALM.**"*
- ▶ **Paul Herzlich, Ovum:** *"IBM has taken the opportunity to exploit the Jazz platform's power inventively. Its 'living' test plan is a **masterpiece of applying new technology to a familiar problem...** What is being delivered will demonstrate convincingly that IBM is raising the standard for a test management product."*

What customers are saying...



*"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 - 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



Additional resources



- Download Rational Team Concert Express-C (10 free developers)
<http://jazz.net>
- Find out more about Jazz foundation
<http://ibm.com/rational/jazz>
- Explore Jazz product tutorials, demos and other developer learning resources
<http://ibm.com/developerworks/spaces/jazz>
- Learn more about the Jazz technology and the future IBM Rational product roadmap
<http://ibm.com/rational/jazz/roadmap>

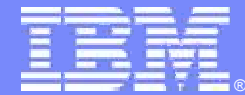




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