IBM Rational Software

Drinking our own champagne

Inside the concert of RTCz development

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Rational. software

Attached

Agenda

Back to the *Jazz* basics

Team Concert for *System z*

One world, one agile team

One tool to rule them all

Lessons learned

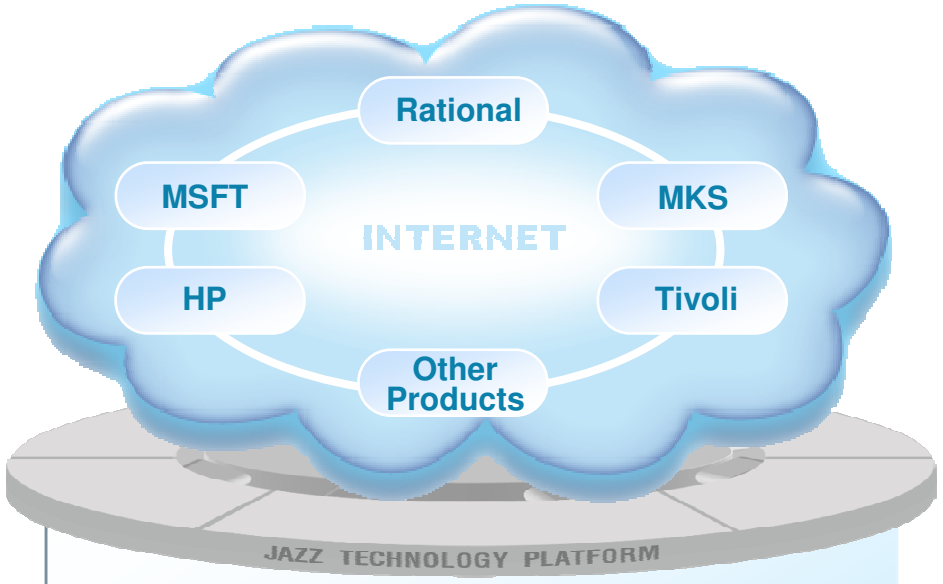
Are we there yet?

Resources

Transforming our Software Delivery

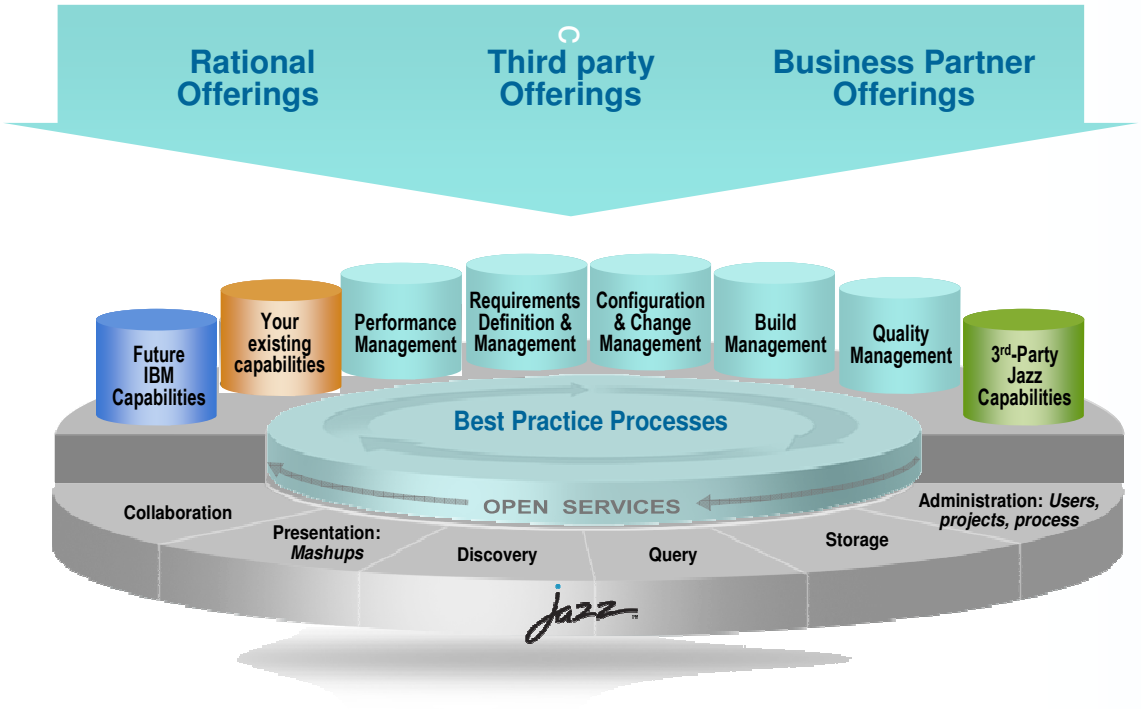
Technical requirements of a software delivery platform

- **Learn from industry mistakes**
  - Don't assume that customers will only use your products
  - Don't assume that all data will be stored in a central repository
- **Take advantage of the Internet**
  - Amazingly scalable and extensible
  - Integrates information on a massive scale
  - Collaboration on an unprecedented scale
- **Make it open and extensible**
  - Specify data independently of tools
  - Standardize data access through HTTP/REST standard protocols



Goal:
To be for collaboration tools what Visual Studio and Eclipse are for the desktop

Jazz is a platform for transforming software delivery



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

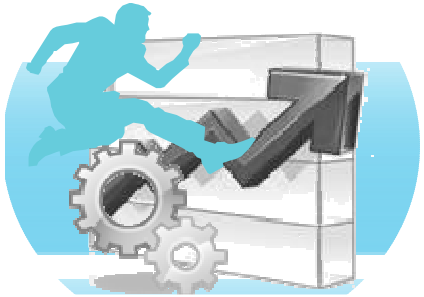
Jazz is…

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

Essential attributes of Jazz

Collaborate

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



Automate

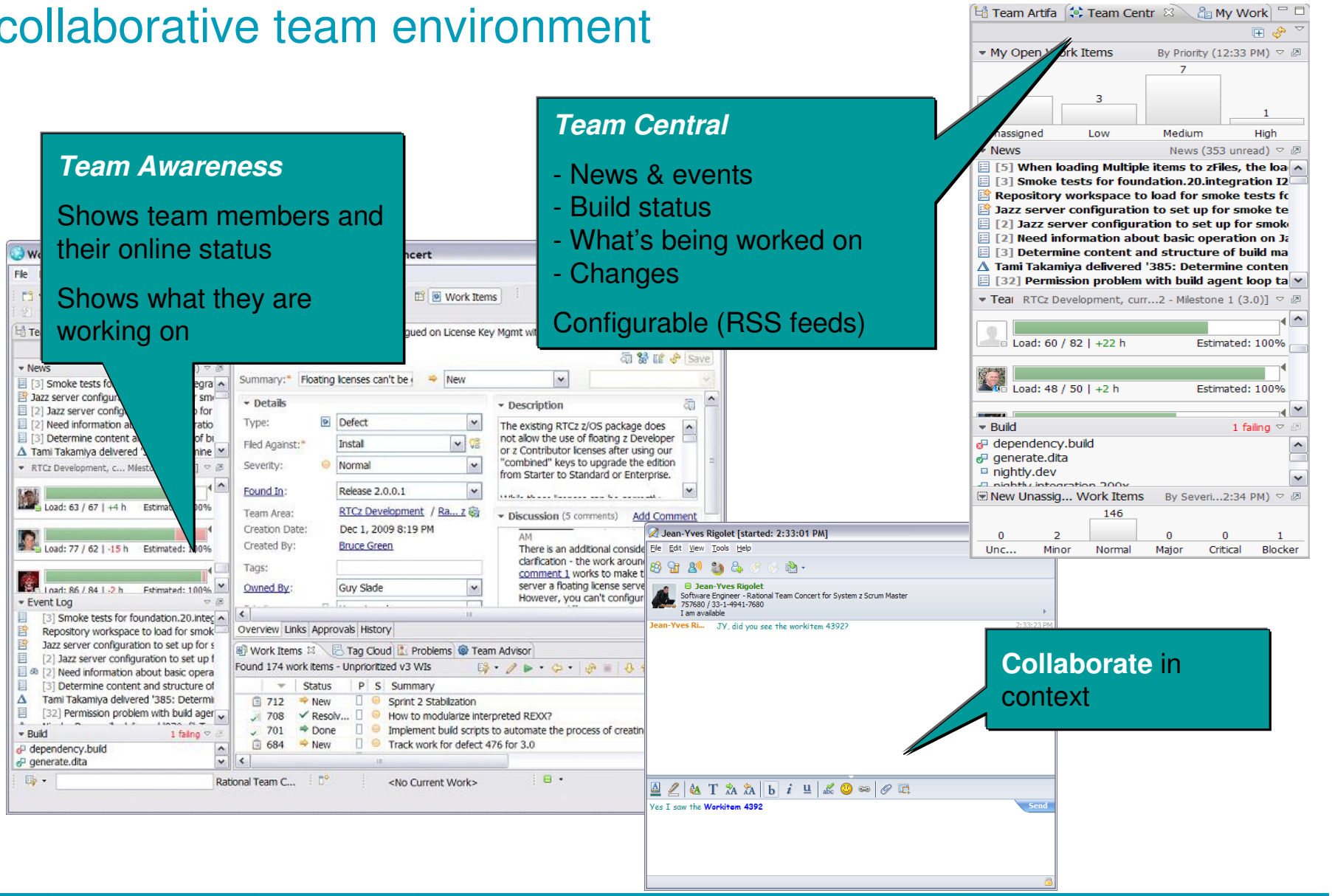
Automate non-creative tasks with automated processes and workflows

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.

A collaborative team environment



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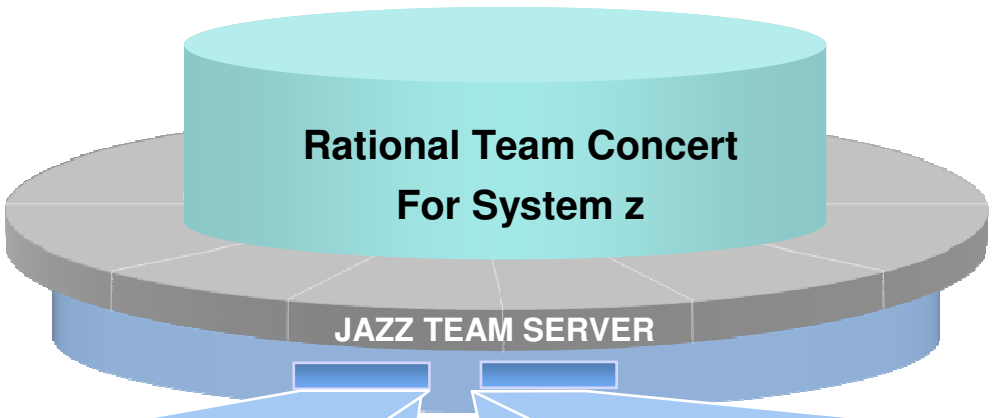
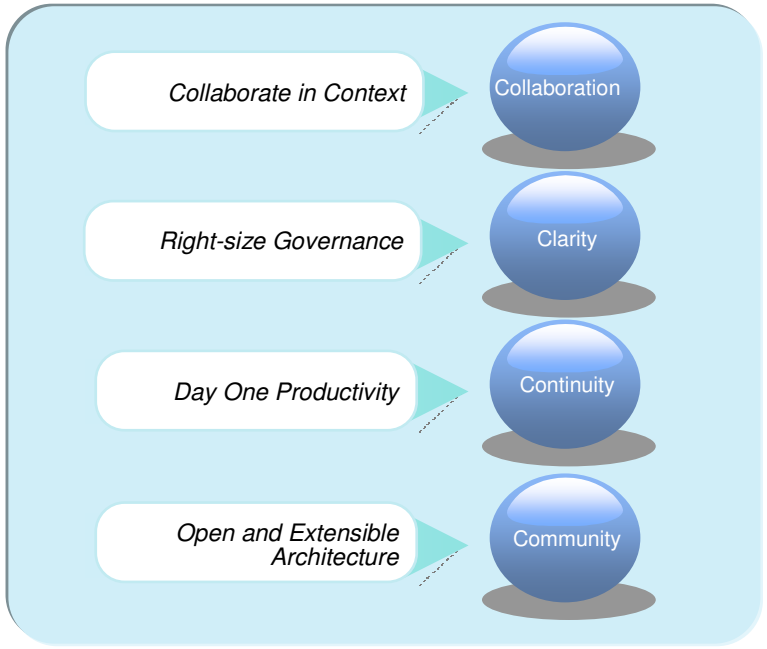
Team Concert *for System z* delivered in 2008
version 1

Rational Team Concert for System z brings together diverse teams allowing them to work together to build solutions





Client Integrations

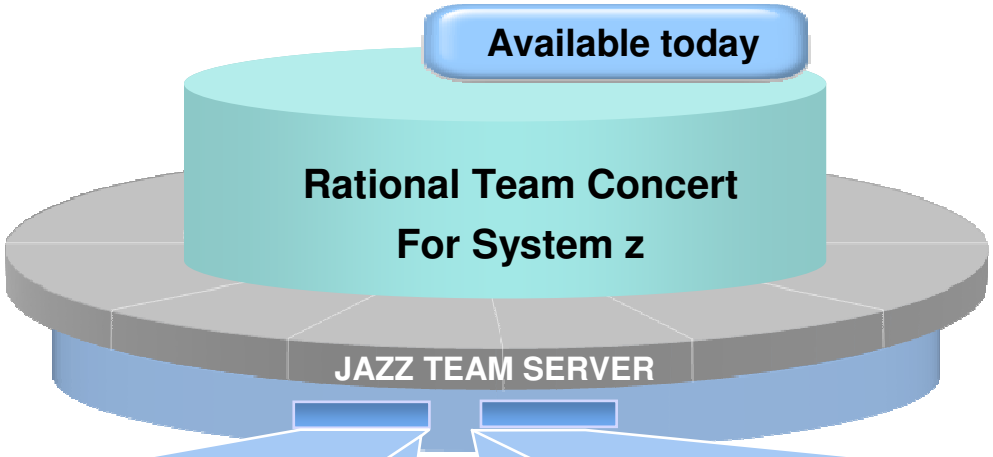
- Eclipse and Eclipse-based products
- Web 2.0
- MS Visual Studio (beta)

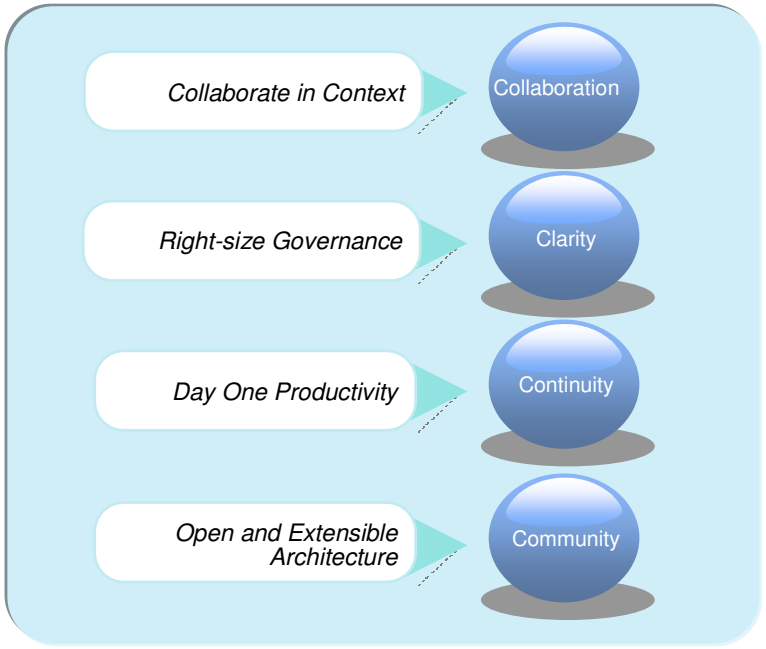
Extensions for System z

- z/OS or Linux on System z deployment supporting server consolidation for distributed deployment
- DB2 for System z and WebSphere for z/OS support
- Team collaboration and governance while continuing existing SCM for host artifacts.

Team Concert *for System z* developed during 2009 *version 2*

Rational Team Concert for System z brings together diverse teams allowing them to work together to build solutions





Client Integrations

- Eclipse and Eclipse-based products
- Web 2.0
- Microsoft Visual Studio

Extensions for System z

- Native z/OS build support
- Integration with Rational Developer for System z
- Integrated SCM solution for z/OS and distributed assets
- Flexible Deployment Platforms - z/OS, Linux on System z, or distributed

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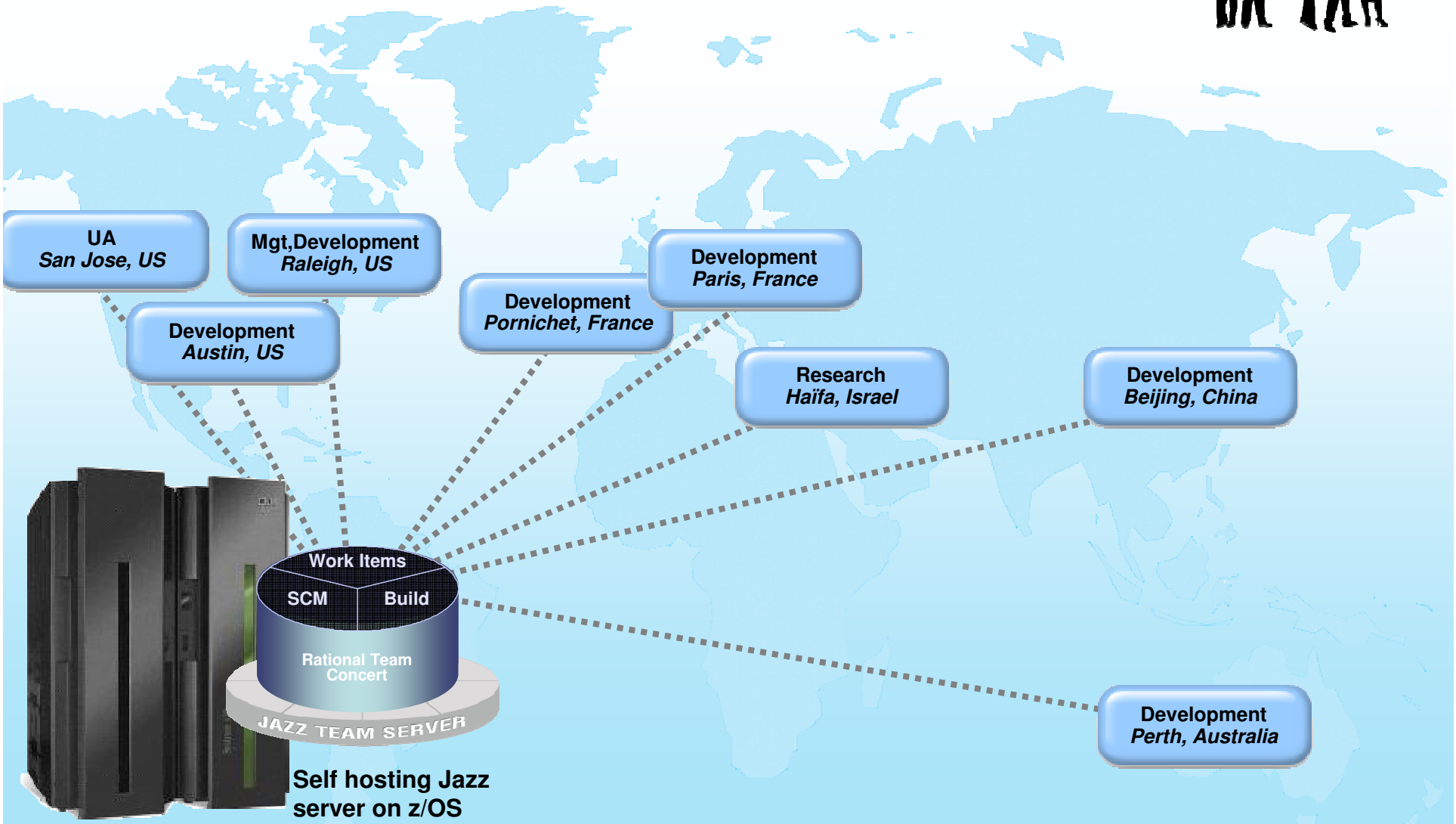
- Team Concert for *System z*
- **One world, one agile team**
- One tool to rule them all
- Lessons learned
- Next steps
- Resources

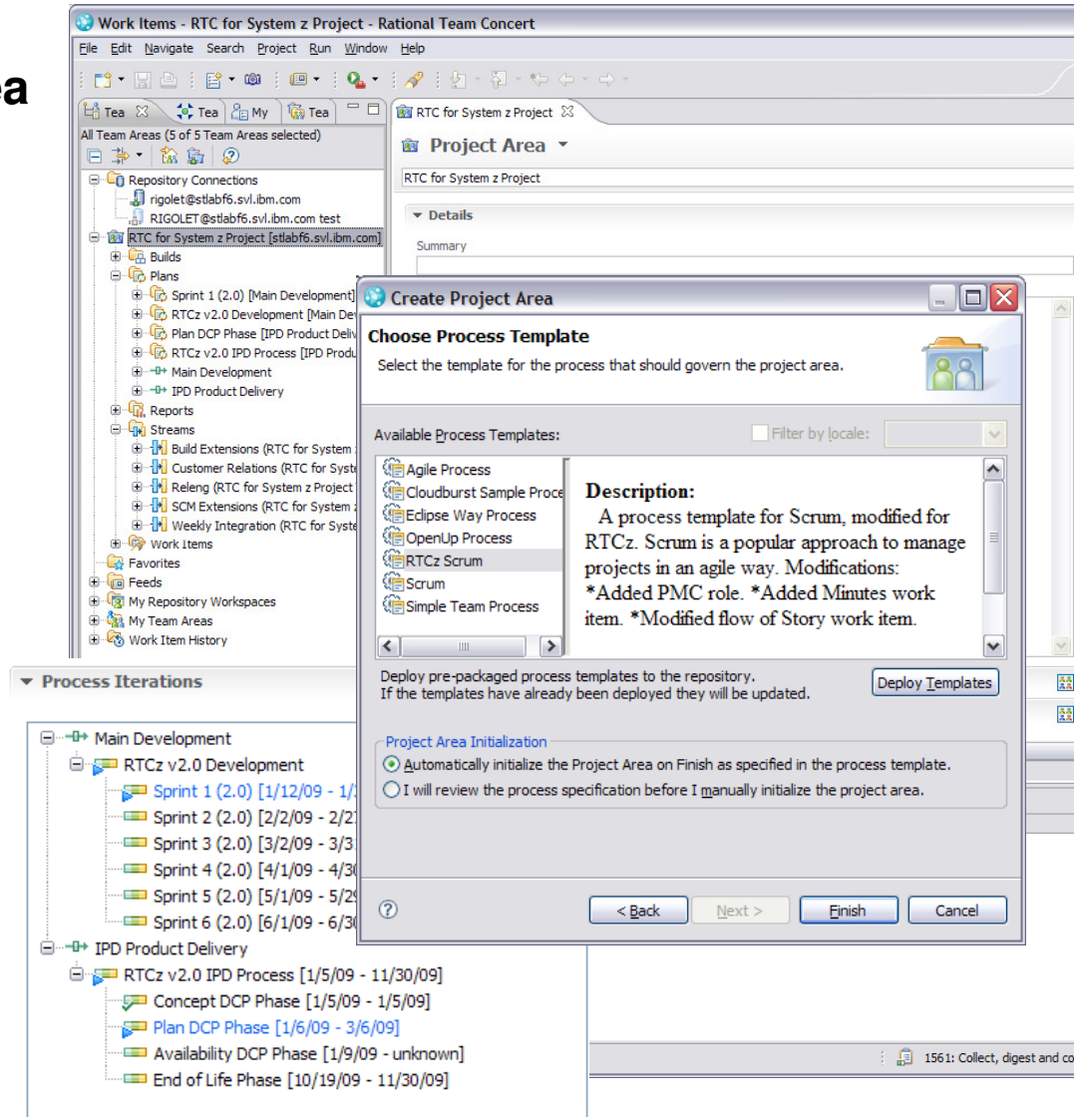
Transforming our Software Delivery

The sun never set on RTCz development



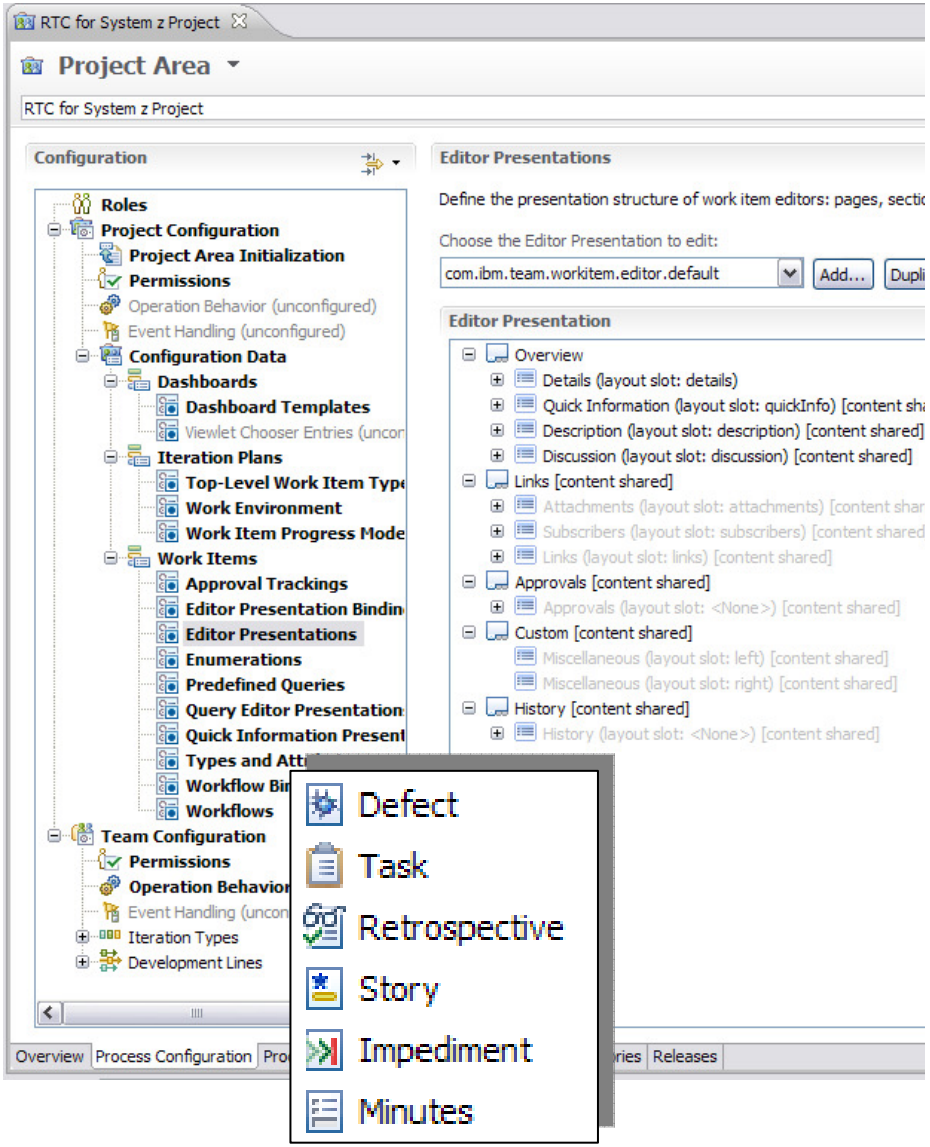
Tooling RTCz development using Team Concert

- **RTCz development project area**
  - Self hosting on *System z*
    - *Access from Jazz.net*
  - 'RTCz for System z Project'
  - Based on the Scrum template
- **Geographically Distributed Development**
  - 3 main Scrum teams
    - RTP (Raleigh, US)
    - FASL (France & Australia)
    - BF (Austin, US)
- **2 parallel development lines**
  - *No maintance*
  - Main development
    - Release v2.0
    - Post v2 development
  - Product Delivery



RTCz Scrum process

- **RTCz development process**
  - Based on the standard Scrum process template
- **Minor process adaptations**
  - New role
    - PMC: *Project Management Council* (based on Stakeholder role)
  - New Minutes work item
    - Track meeting minutes
  - Updated permissions
    - PMC can update Iteration Plans
    - Limited operations for externals
  - New automatic tasks when joining a team
    - [Joining a Team] Update your calendar with your Scheduled Absences
    - [Joining a Team] Update your Work Environment

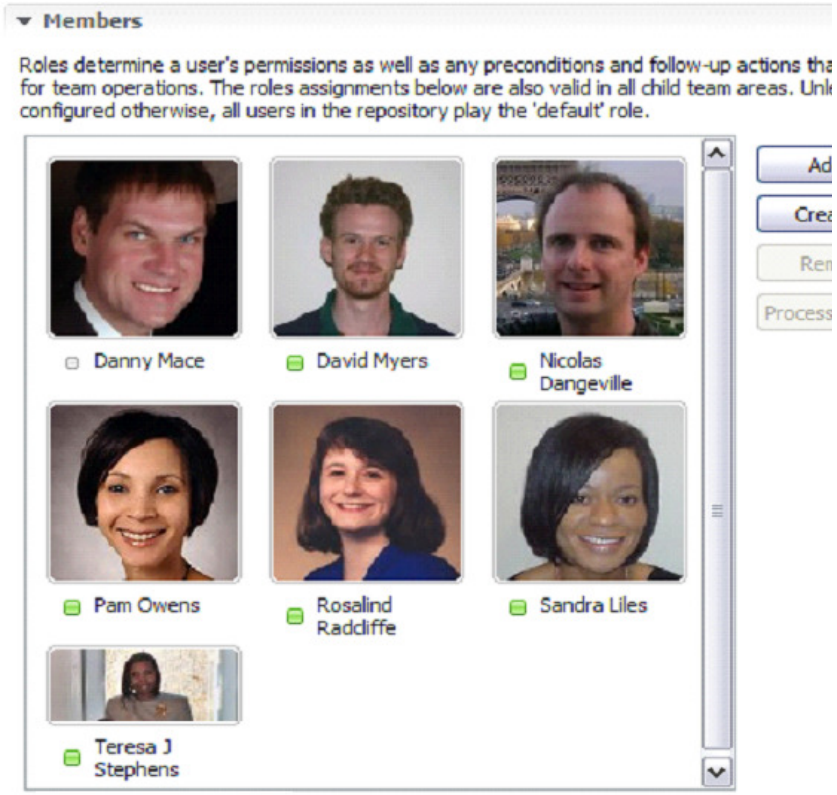


RTCz stakeholder roles, aka '***Chickens***'

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

- **Project Management Council (PMC)**
  - Stakeholders: Danny, David
  - PMC: Pamela, Teresa, Sandra, Guy, Alex, Robin, Jean-Yves
  - Architects: Rosalind, Nicolas
- **Product Delivery**
  - Stakeholders: Danny, David
  - PMC: Pamela, Rosalind, Teresa, Sandra, Nicolas

- ***Light adaptation from standard Scrum***
  - Product Owner, Scrum Masters & Architects are also 'Chickens' as part of the PMC



RTCz development roles, aka '***Pigs***'

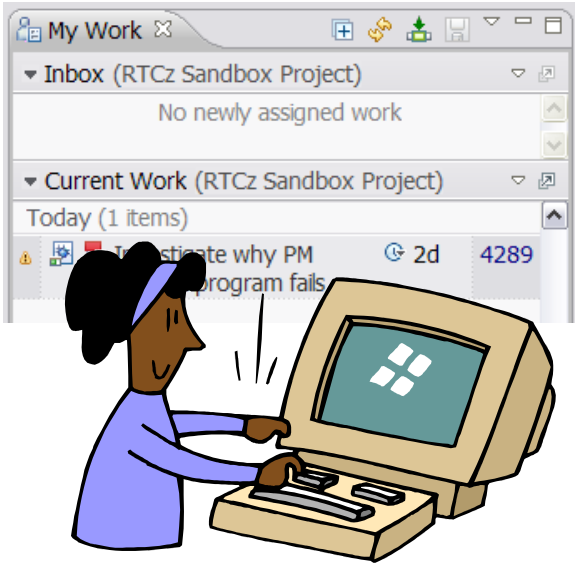
- *'Pigs' are the ones commited to the project and the Scrum process.*

- **RTCz overall project**
  - Project Owner: Guy
- **3 main development Scrum teams**
  - RTP, Raleigh
    - ScrumMaster: Robin
    - Team Members: Alex, Andrew, Bruce, Daniel, Hung, John, Matt, Steve, Tami
  - FASL, France & Australia
    - ScrumMaster: Jean-Yves
    - Team Members: Valérie, Liam, Nicolas, Jean-Bernard, Pierre, Pascal, Xavier
  - BF, Austin
    - ScrumMaster: Robin
    - Team Members: Charles, Franck, Leigh, Joseph, Su Juan, Tim, Wei
- **User Assistance - Documentation**
  - Team Members: Stephanie, Jocelyn, Patrick
- **Bidi, SUPA research**
  - Team Members: Adir, Gregory, Heba, Mohamed, Ramy, Semion, Mordechai, Uri

Scrum team in action

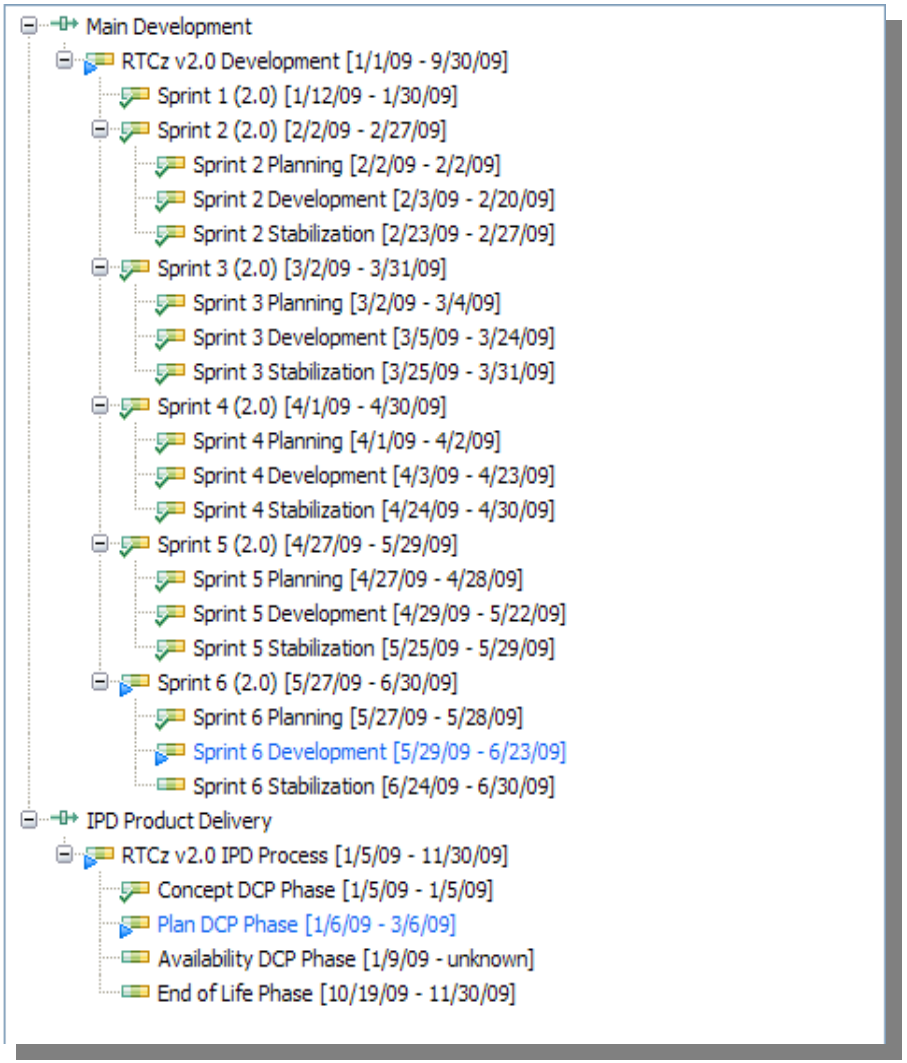
A day in the life... of a Scrum team member

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



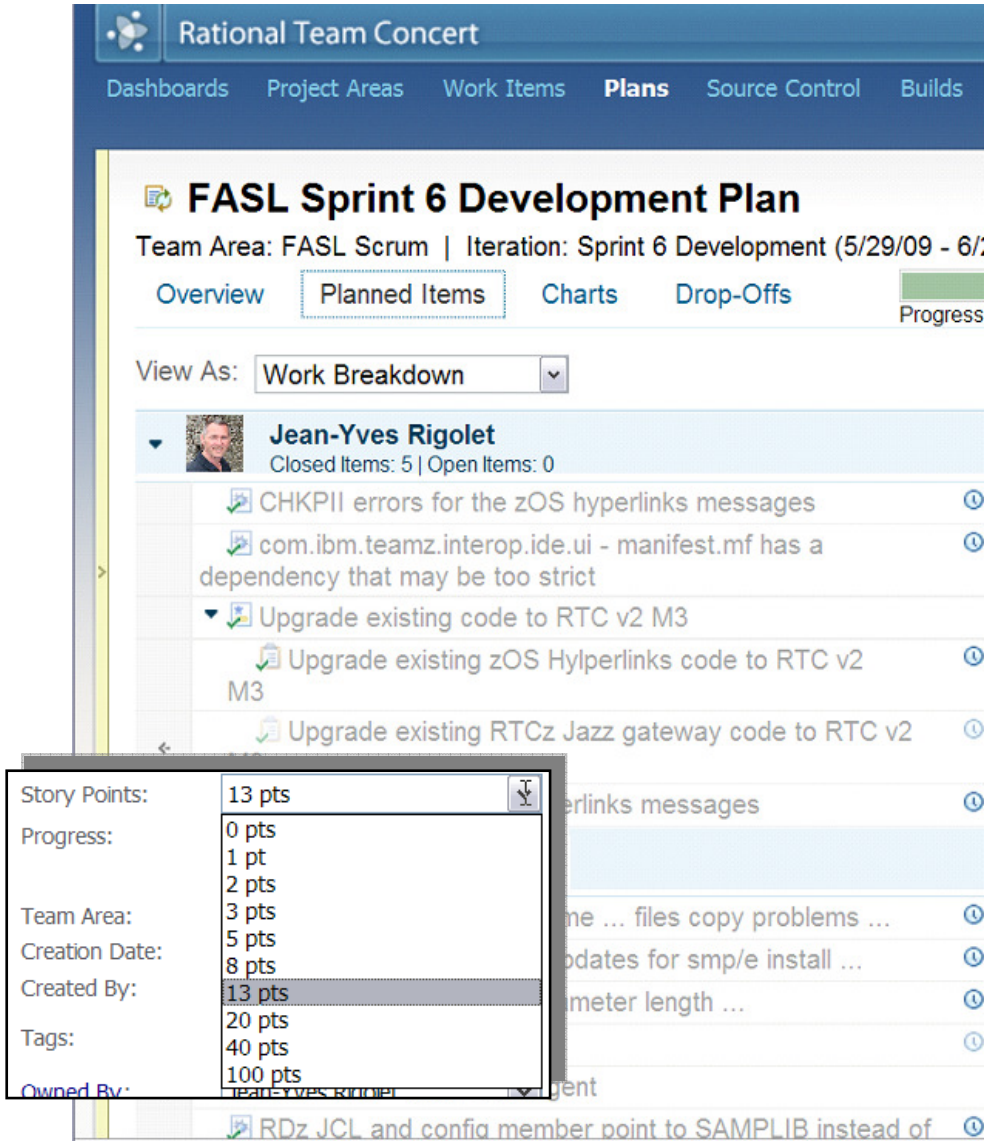
RTCz development rhythm

- **Project timeline**
  - Started Jan 2009
  - All packages were available on Oct 8, 2009
- **Monthly Sprints**
- **9 iterations**
  - Initial iteration (training, envt set up,...)
  - 5 development iterations
    - Included FVTs
  - End-game & Cleanup
    - Includes SVTs, TVTs, GVTs
- **3 phases in all development iterations**
  - Planning (2-3 days)
  - Development
  - Stabilization (3-4 days)



Sprint planning detailed

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



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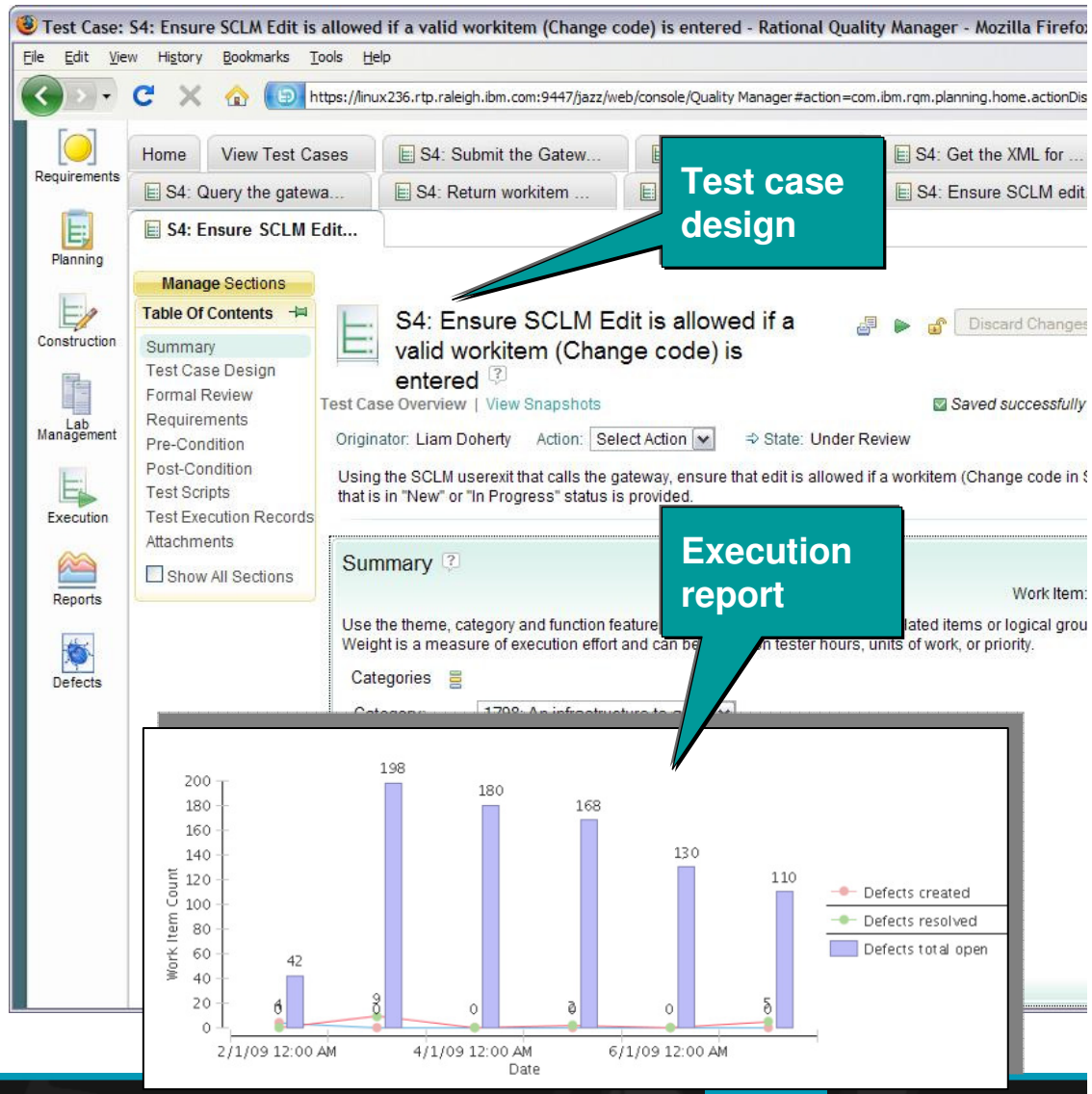
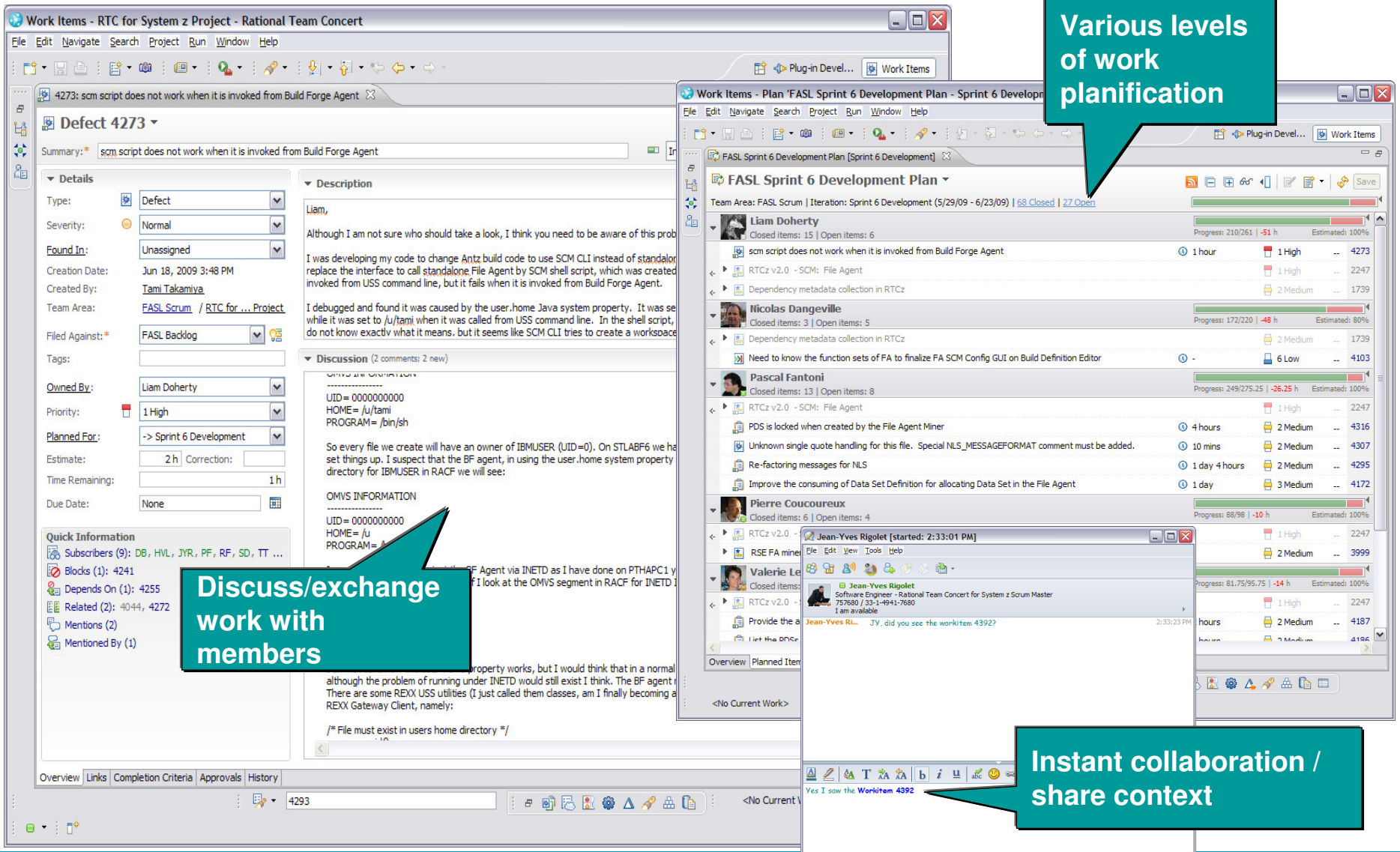
Tests coordinated using Rational Quality Manager (RQM)

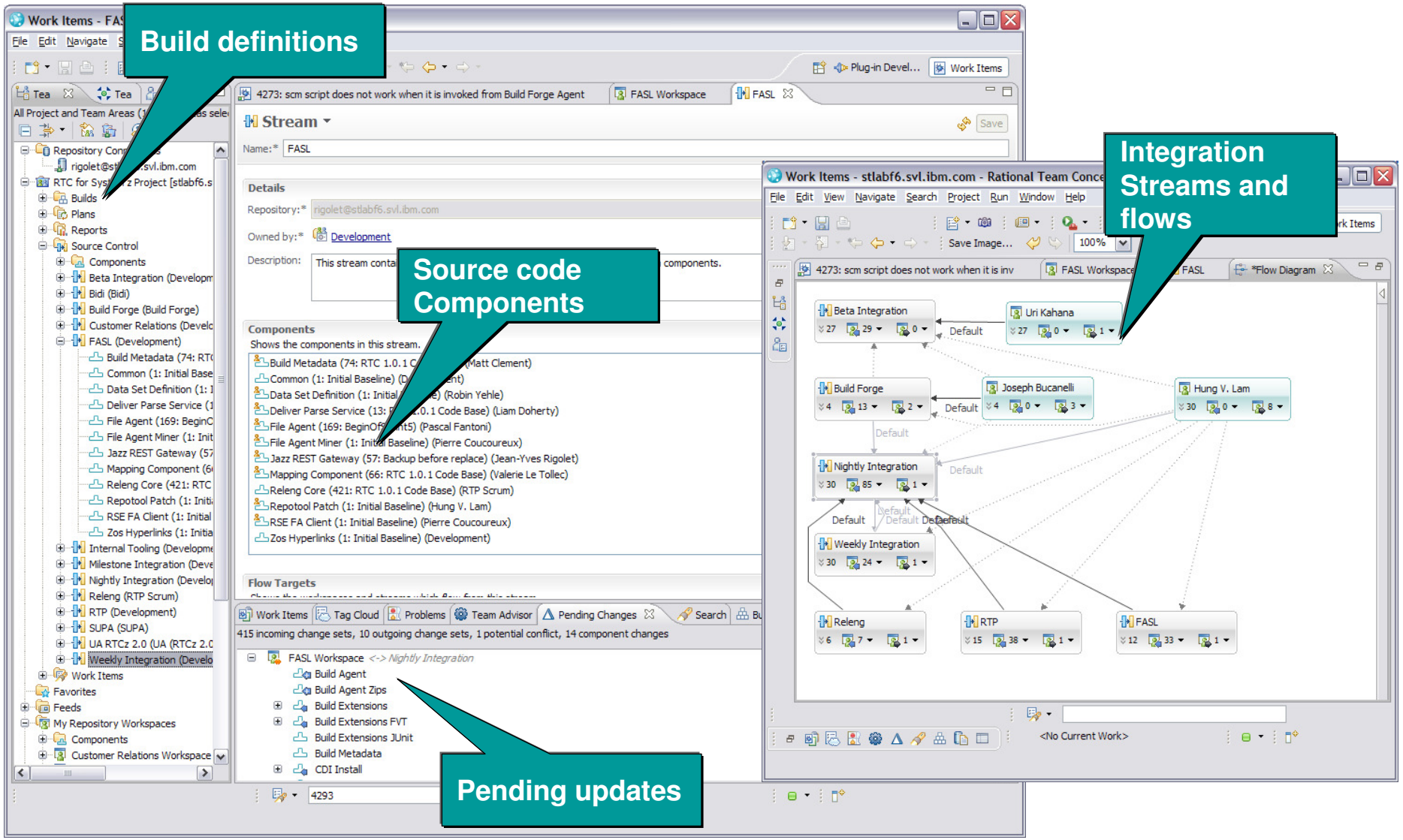
- **All defined in RQM**
  - FVT, SVT & Performance Test Plans
- **Defined by developers**
  - During the *Stabilization* phase
- **Executed by all members**
  - Developers, release engineer, ..., and managers included
  - Test execution records
- **Creating & linking Defects on failure**
- **Formal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



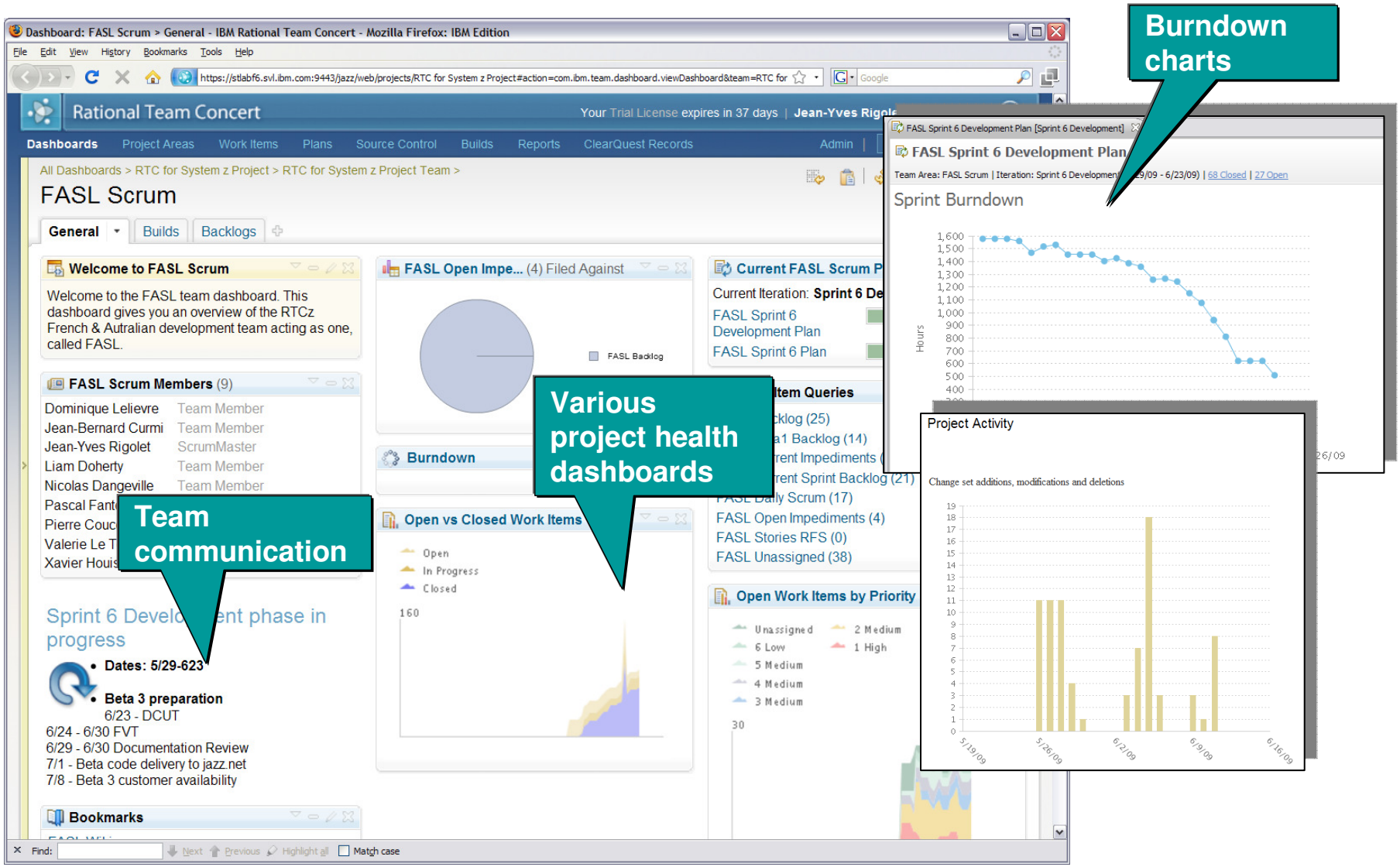
Collaborate using Work items and Plans



Share & build source code using RTCz



Check the project status and health



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Lessons learned (1/4): Getting ready for completion

- **Need to spend more time initially to better understand goals**
  - Better shape the product backlog
  - Developers need a good understanding of the architecture and goals
  - Need at least a sprint to design before starting development Sprints
- **Short development time (5 Sprints) is a difficult challenge**
- **Self hosting is not frictionless**
  - Many servers (self host, dev, build & test)
  - Keeping up with upgrades from various levels can be painful
- **Scrum teams made good progress**
  - Velocity increased over time
  - Ended to get a good understanding of the overall architecture
  - Good vision of progress, facilitated with RTCz dashboards
- **Language is a barrier to communication**
  - Various levels of English & French
  - A lot of misunderstandings due to the language & cultural differences
  - Communication improved between Scrum teams
- **Keep the rhythm**
  - Plans and dates were strictly followed, content evolved
  - Show/demonstrate regulary what has been accomplished

Lessons learned (2/4): Agile is fragile

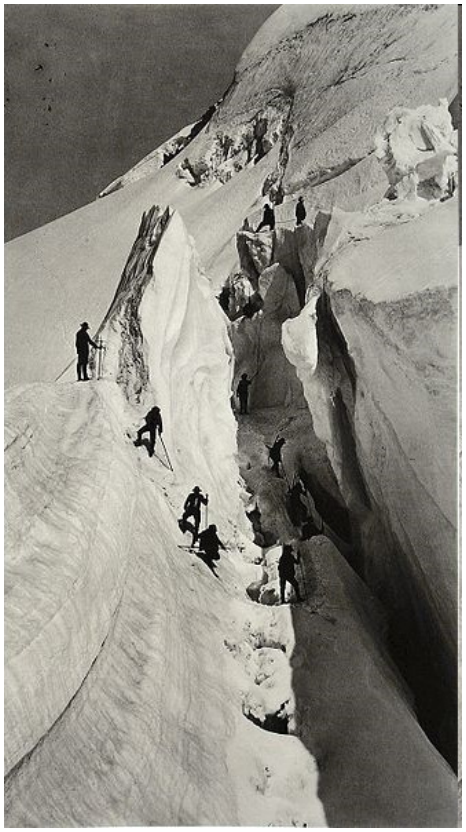
- **Overlapping Sprints was a big mistake**
  - Planning Sprint *n+1* during Stabilization of Sprint *n*
  - Planning sessions not based on Stakeholders feedback
  - Planning is using half of developers' brain when the other half is busy fixing bugs
- **Updates to plan during Sprint**
  - Members fully booked resulted in overbooking
  - External pressure due to product integration (RDz, RTC)
  - Unplanned activities (like SMP/E packaging)
- **Poor Scrum support until late in development cycle**
  - Changes made during v2 helped
- **Agile acceptance can vary amongst members**
  - Well accepted by most developers, some simply ignored it
  - Managers tend to go back to what they're used to when they are under pressure
  - Technical resources who are not developers (release engineers, admins,...) have problem to find a space in a development-oriented model
  - Most team members didn't see the Retrospectives as an opportunity to adapt
  - Don't hesitate to use the Product Owner as a shield
- **Keep fit**
  - Loss of rhythm makes it hard to restart

Lessons learned (3/4): Time is valuable

- **No time to step back & think, or simply take a break**
  - Always running due to the Scrum rhythm
  - Want to put a maximum in a release, probably too much...
    - We were too greedy
  - Lost Think Fridays; not prepared for the future
- **Try to identify Scrum smells early**
  - Confidence in agile is fragile; *don't over-estimate it*
  - Difficult to operate later; *leaves scars on members*
  - Agile training is needed for both developers and managers
  - Easy to go back to what we know best when times are hard
- **Reduced paperwork using RTCz & RQM**
  - RTCz & RQM, if used correctly by members can reduce manual/verbal reporting
  - Project health was more accurate with time and members tool knowledge
  - Development knowledge base; *track development & architectural choices (what & why)*
- **Take time to reassess backlog often**
  - Never have time to do everything; *do the right thing & do it right*

Lessons learned (4/4): Development is a team sport

- **RTCz team across multiple geos**
  - 17 time zones; From West Australia to the US West coast
  - Hard to find convenient times to set up meetings
  - Extra long working hours or split days
  - Reduced sleeping time (early mornings or late evenings)
  - It takes more time to do things in GDD than in a single location
- **Components by location**
  - Sharing components across locations make them hard to build
  - Inter-component collaboration creates development frictions
  - RTCz being at the centre of the development helped sharing code and knowledge
- **Teams by location**
  - A team must be formed from at least 2 people at one location
  - People need help from others
  - We never actually met; hard to know each other
  - We gained experience in Globally Distributed Development
- **Team members diffidence**
  - Generations can collide
  - Important messages seem to be shared out of official Scrum ceremonies
  - Only a few critics come out of the Retrospectives



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Are we there yet?

- **We've made it; RTCz v2.0.0.1 is out there for you**
  - We published 3 betas to jazz.net & RTCz was available on Oct 8
  - We set a Scrum project & applied most agile principles & Scrum
- **Now, based on our first Scrum experience we can work on RTCz v3**
  - RTCz development joined core RTC and moved to Jazz.net last summer
  - Plans already published to jazz.net; *take a look at them, we need your feedback*
- **More integration and collaboration with external teams expected**
  - Jazz, RTC, RDz, RTCp, RDp, ... with more friction expected too ;-)

The agile adoption problems we're facing today, our customers will have to face

- **We realize this is not as easy as it seems, so we are sharing our experience on *Drinking our own champagne***

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Resources

- Agile/Scrum
  - Agile Manifesto: http://agilemanifesto.org/
  - Wikipedia: http://en.wikipedia.org/wiki/Agile_software_development
  - Wikipedia: http://en.wikipedia.org/wiki/Scrum
  - Glossary of Scrum terms: http://www.scrumalliance.org/articles/39#1127
  - Scrum Alliance: http://www.scrumalliance.org/
  - Scrum Community: https://scrumcommunity.pbwiki.com/

- IBM Rational Team Concert *for System z*
  - Jazz platform: http://jazz.net
  - Product information: http://www-01.ibm.com/software/awdtools/rtcz/
  - Articles & papers:
    - In tune with IBM Jazz and IBM Rational Team Concert entreprise development tools
    - Easier, faster collaborative development by globally distributed teams

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