

IBM Rational Software



Drinking our own champagne

Inside the concert of RTCz development

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Rational. software

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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?

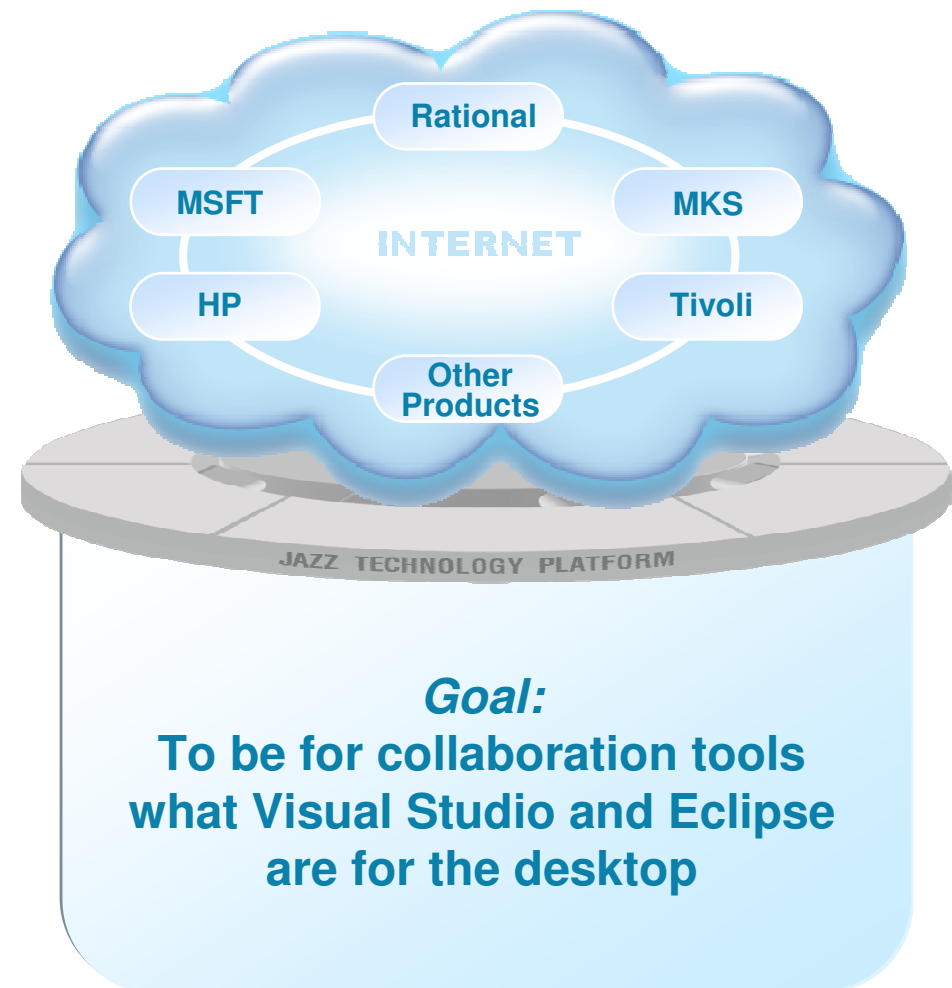
Resources



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





Jazz is a platform for transforming software delivery



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

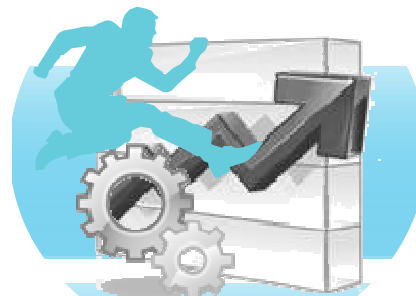
Jazz is a platform for *transforming how people work together* to deliver greater value and performance from their software investments.

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

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)

Collaborate in context

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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




Rational Team Concert For System z

JAZZ TEAM SERVER

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.

Collaborate in Context

Collaboration

Right-size Governance

Clarity

Day One Productivity

Continuity

Open and Extensible
Architecture

Community



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*

Available today

**Rational Team Concert
For System z**

JAZZ TEAM SERVER

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

Collaborate in Context

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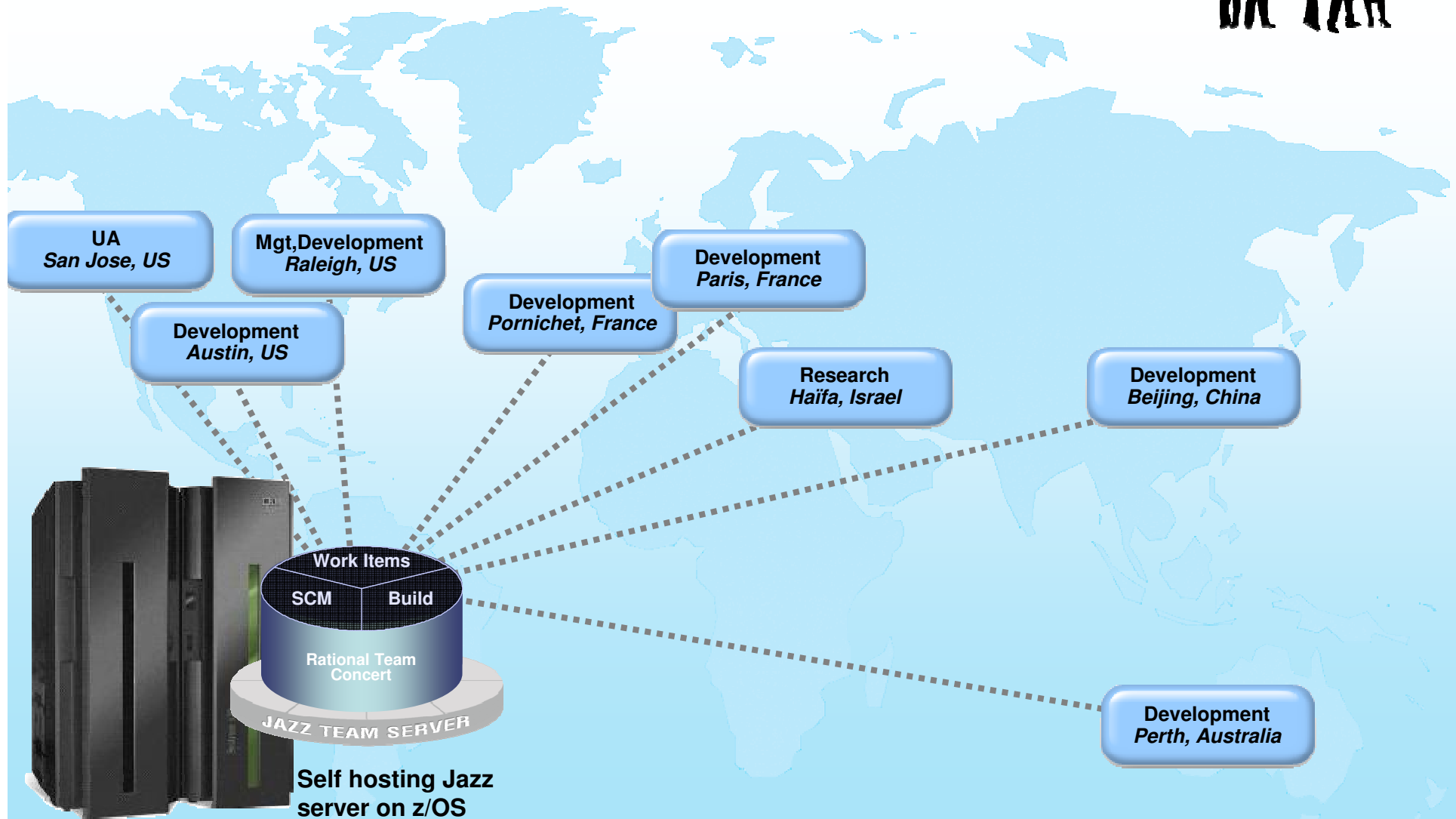
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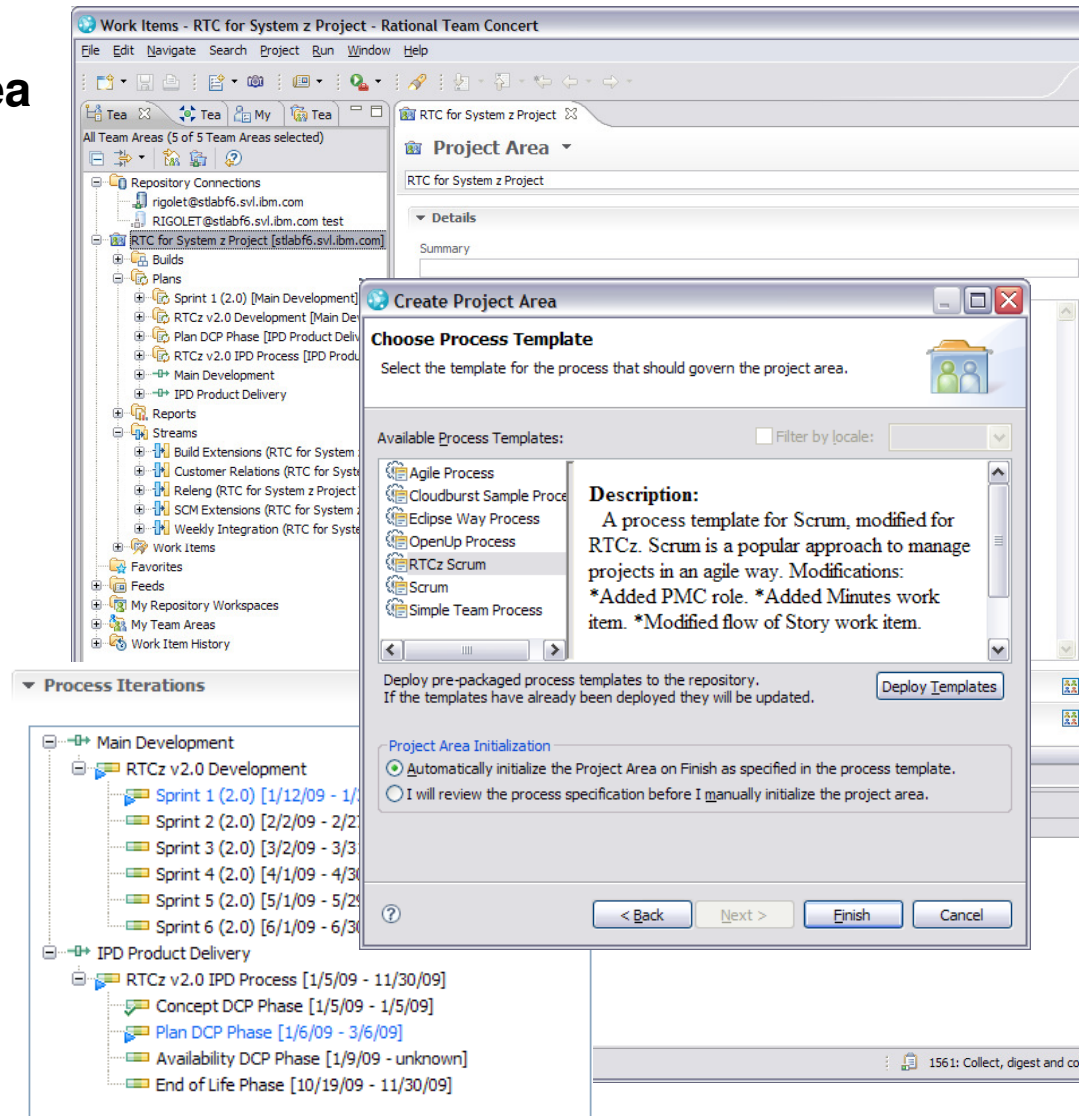


The sun never set on RTCz development



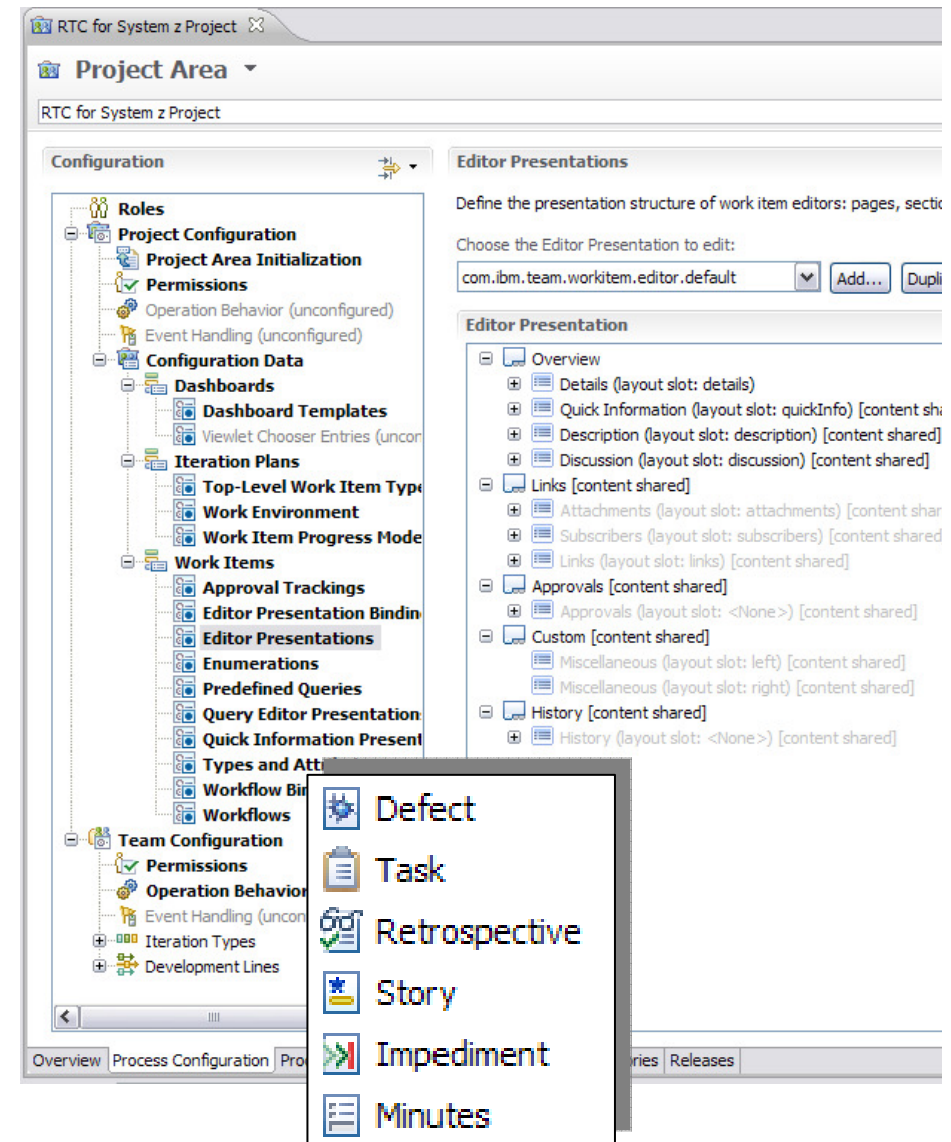
Tooling RTCz development using Team Concert

- **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



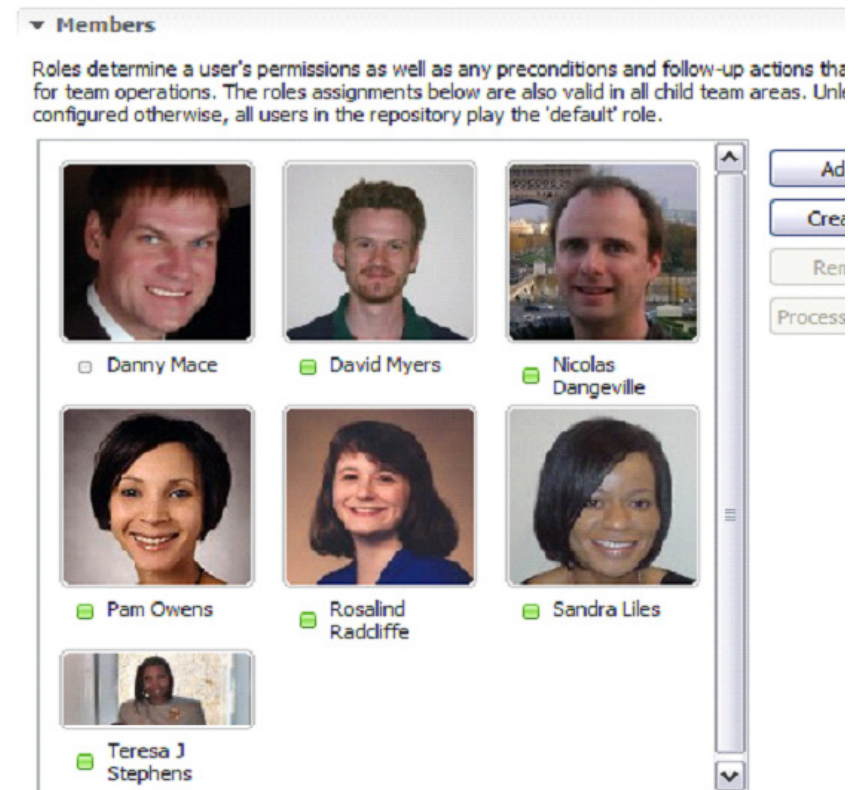
RTCz Scrum process

- **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 *committed 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**

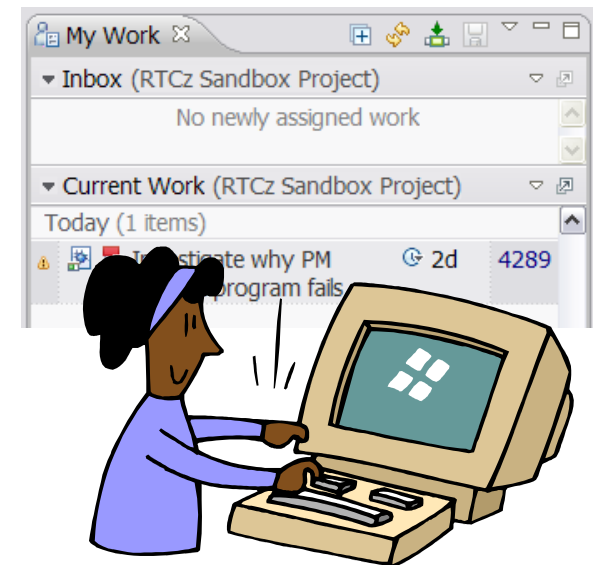
- **Team Members:** Adir, Gregory, Heba, Mohamed, Ramy, Semion, Mordechai, Uri

Scrum team in action



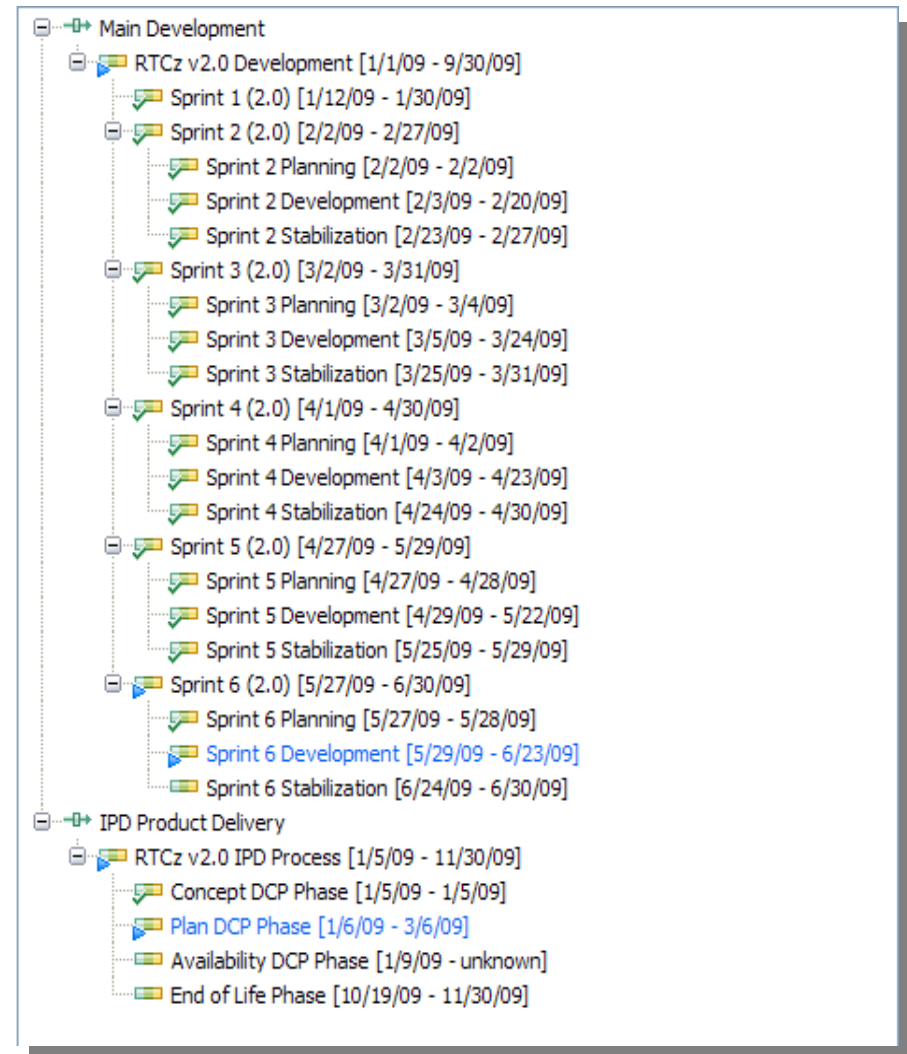
A day in the life... of a Scrum team member

- 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*



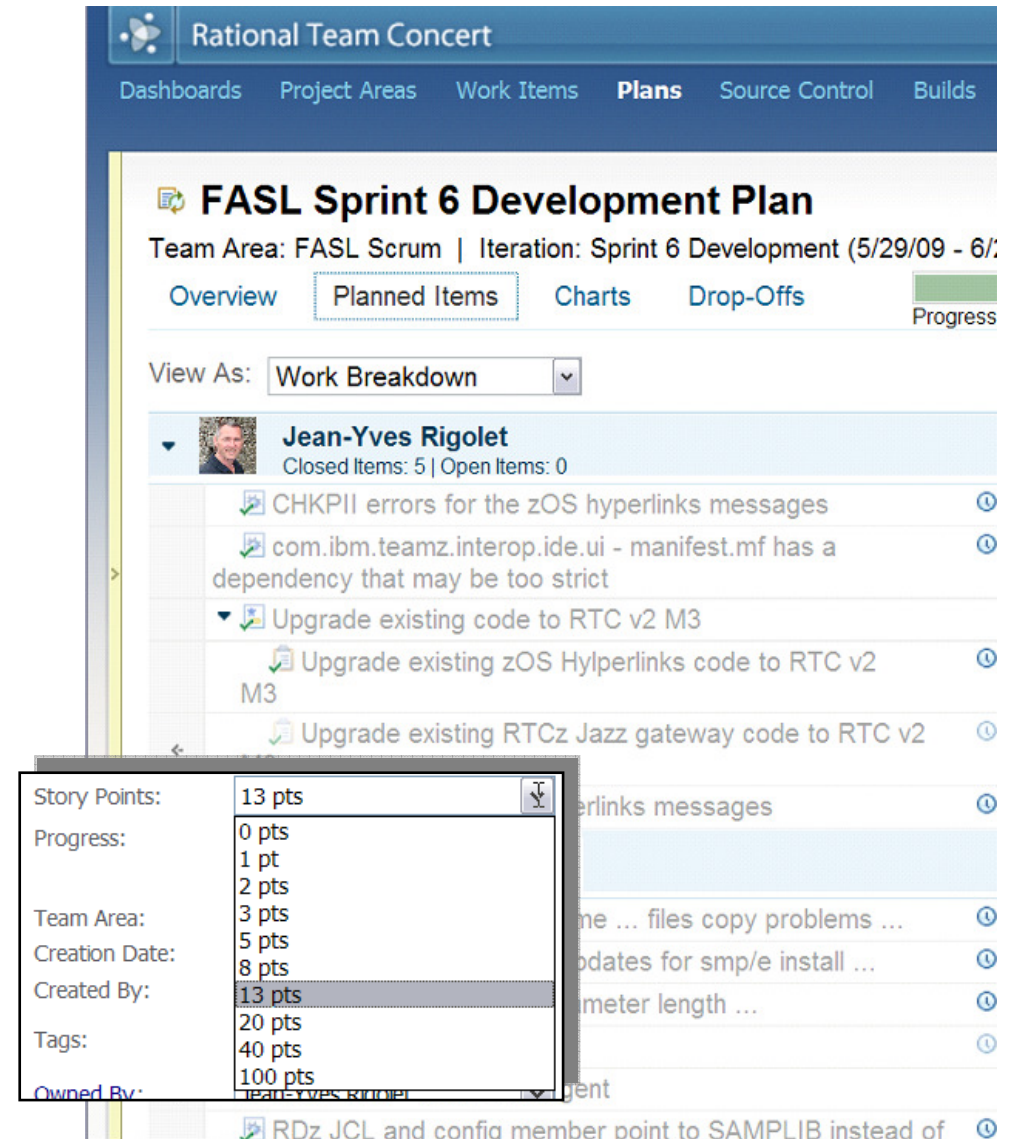
RTCz development rhythm

- **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



Rational Team Concert

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

FASL Sprint 6 Development Plan

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

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

View As: Work Breakdown

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

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

Story Points: 13 pts

Progress: 0 pts, 1 pt, 2 pts, 3 pts, 5 pts, 8 pts, 13 pts, 20 pts, 40 pts, 100 pts

Team Area: 3 pts

Creation Date: 5 pts

Created By: 8 pts

Tags: 13 pts, 20 pts, 40 pts, 100 pts

Owned By: Jean-Yves Rigolet

RDz JCL and config member point to SAMPLIB instead of

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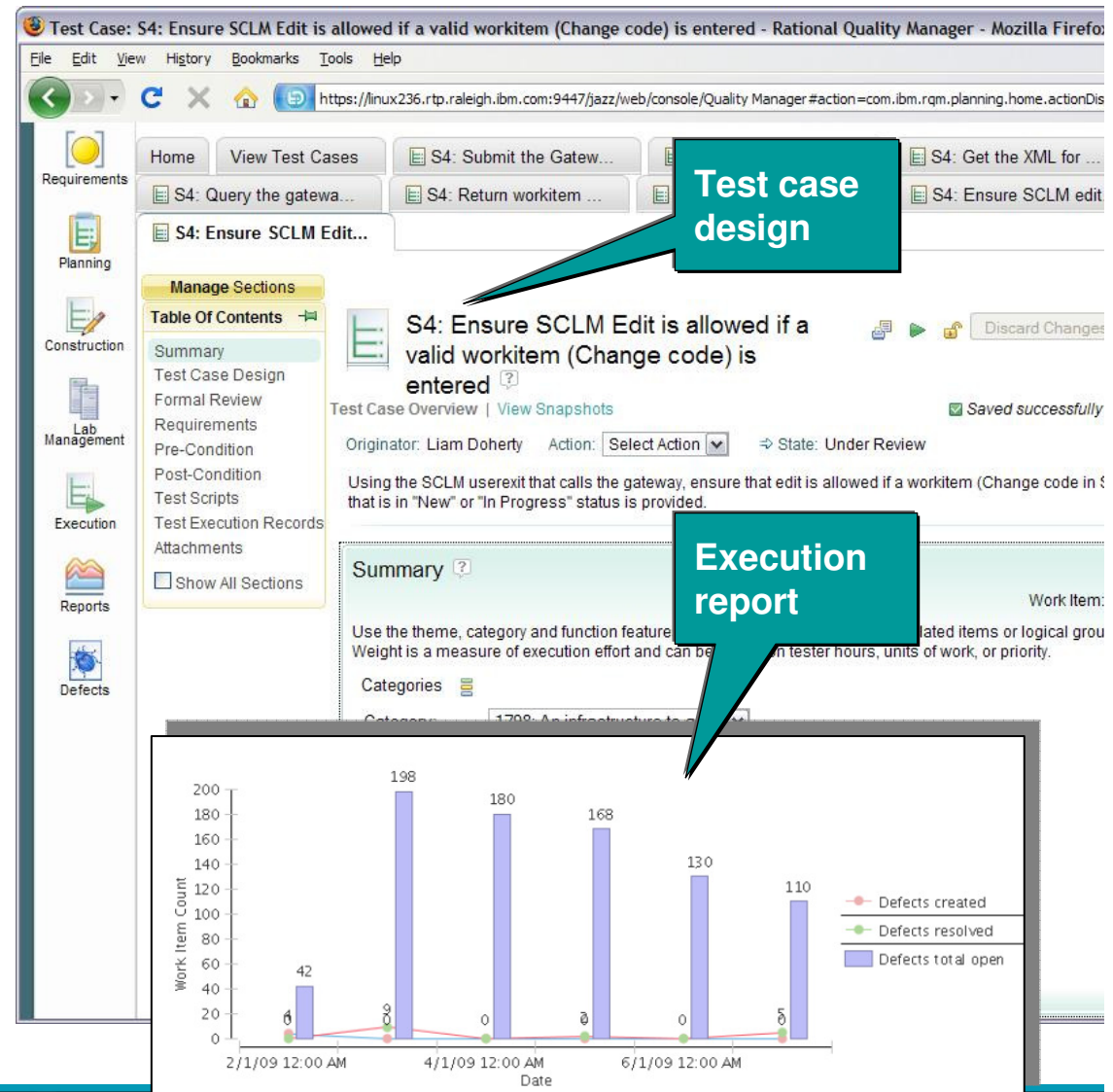
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Transforming our Software Delivery

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

Build definitions

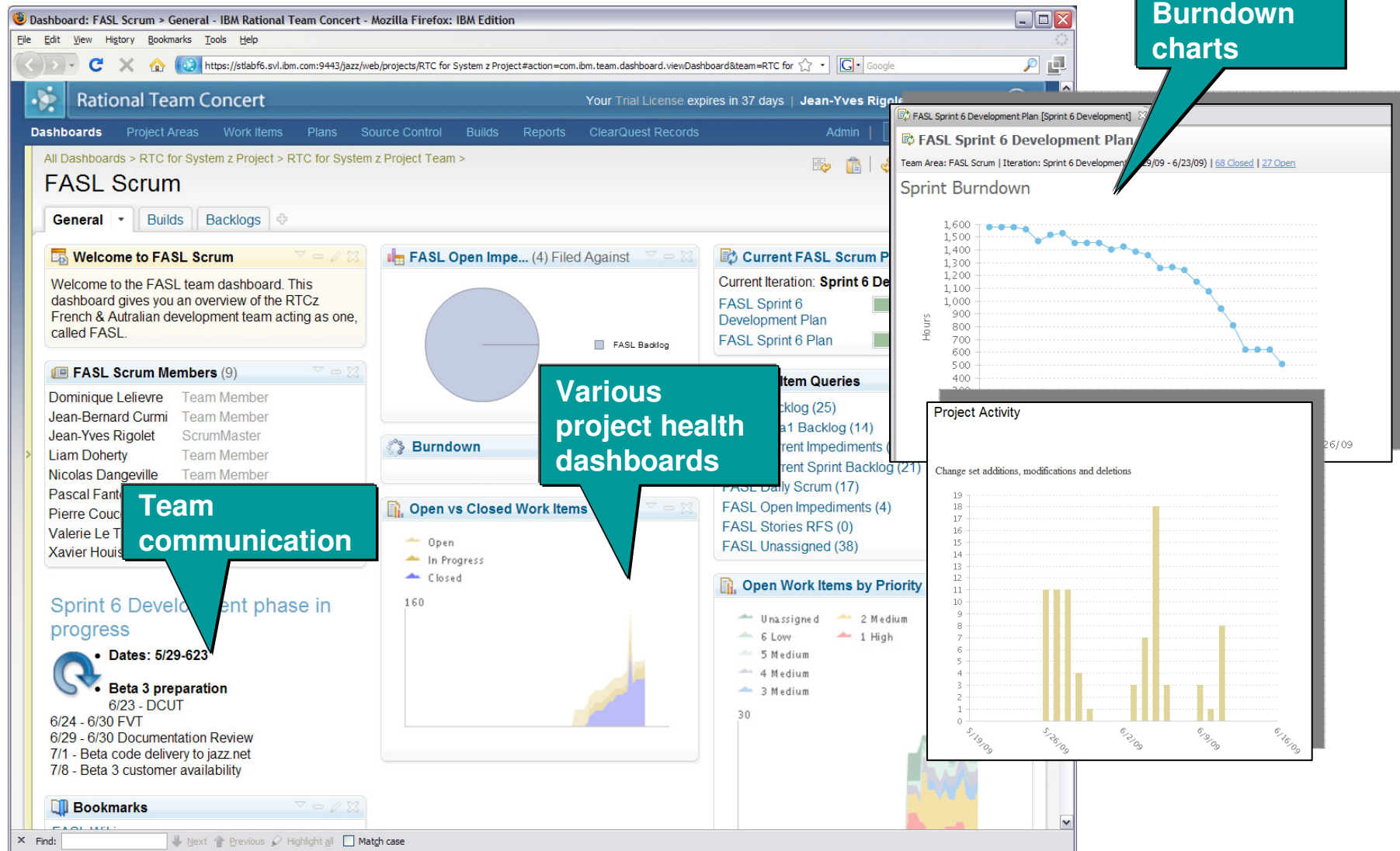
Source code Components

Integration Streams and flows

Pending updates

The screenshot displays the Rational Team Concert (RTC) interface. The left pane shows a project tree with various components like 'Build Metadata', 'Data Set Definition', 'File Agent', 'Jazz REST Gateway', 'Mapping Component', 'Releng Core', 'Repotool Patch', 'RSE FA Client', and 'Zos Hyperlinks'. The main pane shows the 'Stream' details for 'FASL', including a list of components and their owners. The right pane shows a 'Flow Diagram' illustrating the integration streams and flows between different components and users. The bottom pane shows 'Pending updates' for the 'FASL Workspace'.

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 regularly 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



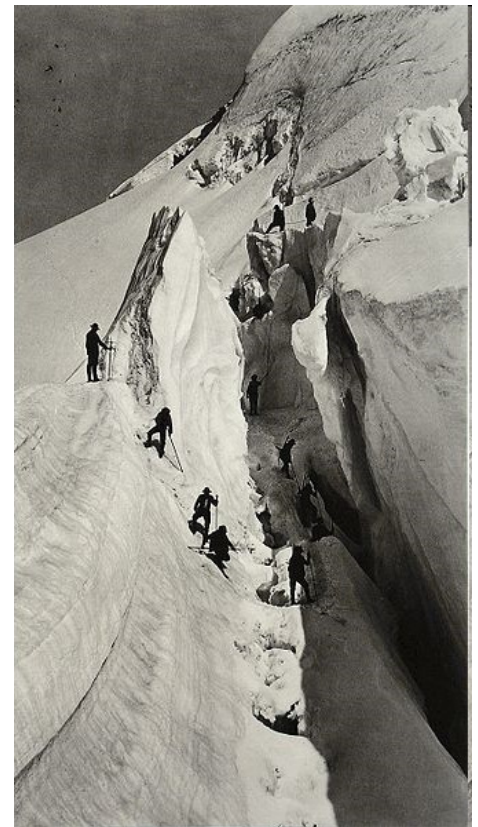
Lessons learned (3/4): Time is valuable

- **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/rtc/z/>
 - Articles & papers:
 - [In tune with IBM Jazz and IBM Rational Team Concert enterprise development tools](#)
 - [Easier, faster collaborative development by globally distributed teams](#)

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