

# Agility@Scale: Agile Planning and Best Practices with IBM(R) Rational Team Concert(TM)

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Rational. software





# Agenda



- A Scrum Planning Episode
- How we use Agile Planning for Developing RTC













#### Agile Methods

There are several Agile Methods available, however from a bird's eye view they share a common set of tooling relevant properties:

- Short development cycles (1 6 weeks)
- Self organizing development teams
  - Joint planning meetings
  - Stand-up meetings
- High personal responsibility of team members
  - Developers "manage" their work
  - Developers / Teams estimate
- Progress tracking
- Ongoing customer involvement
- Retrospectives
- Use of historical data to improve planning





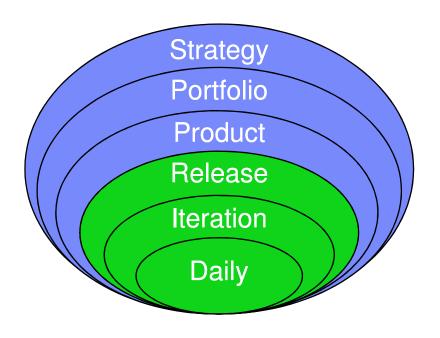








# The Planning Onion\*



Agile team plans at the innermost three levels

RTC offers support for all these levels

(\*) Mike Cohn, Agile Estimating and Planning













# Agenda



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#### Team Concert's Agile Planning Support

- Team Concert's Agile Planning support has the following key characteristics:
- Process neutral (works with Scrum, OpenUp ...), but assumes
  - ▶ short (1 6 weeks) development cycles
  - supports two level planning: release, iteration
  - supports monitoring releases, iterations
- No separation between planning/implementing of features and bug fixing
  - Both planning and defect management share a common data model
  - ▶ They are supported in the same tool and are highly integrated
  - Plans are in fact a query for work items
- Supports:
  - ▶ Top down planning (product owner, team lead, ...) **AND**
  - Bottom Up (team members) AND
  - ▶ Plan consolidation (Sprint planning meetings, stand-ups, ...)





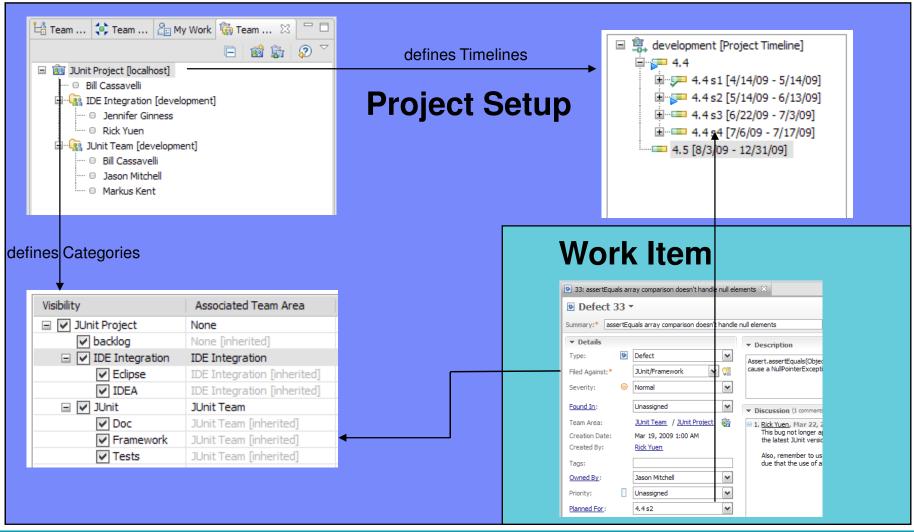








#### Project Areas, Timelines, Iterations and Categories









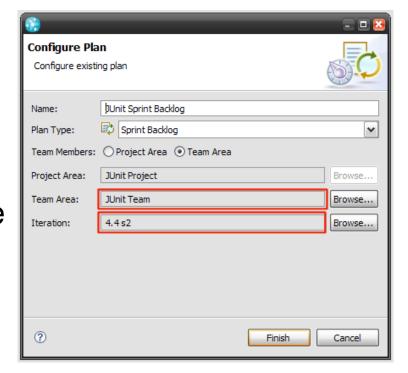






#### Plan Definitions

- Plans are owned by a team or project and are associate with an iteration
- Plan contents is derived from this:
  - All work items which have a Filed Against value set to a category owned by the plan's team or project and are planned for the plan's iteration.
- They have a plan type, defining the "onion" type of a plan









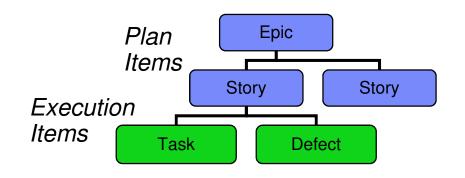


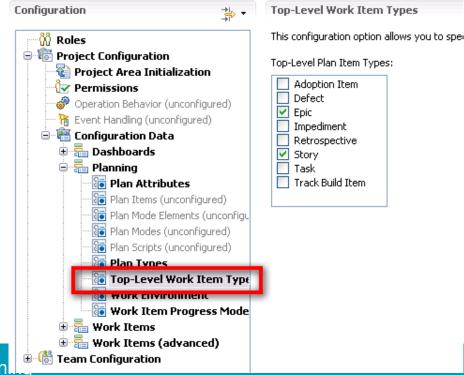




#### Plan and Execution items

- Work items have two flavors:
  - Execution Items: work items which have work assigned. In Scrum these are task, defects, ...
  - Plan Items: work items that are relevant for the planning. In Scrum these are Epics and Stories
- RTC allows to customize which work item types are plan items and which types are execution items.

















#### Plan Types

- RTC support Daily, Iteration and Release planning
- Release Planning:
  - contains planning work items for
    - The plan's iteration and all its child iterations
    - The plan's team area or project area and all its child team areas
  - Support for teams of teams
- Iteration Planning:
  - contains execution and planning work items for
    - The plan's iteration
    - The plan's team or project area
- Daily planning
  - My Work View





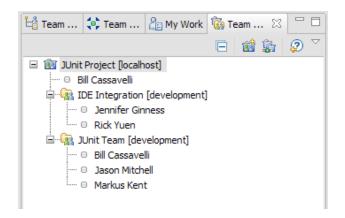


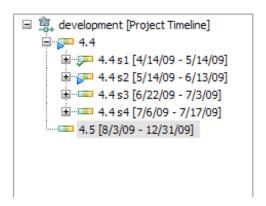






#### Plan Types - continued





- Release plans
  - ▶ JUnit Project / 4.4 (for projects): shows all plan items associated with the JUnit Project, IDE Integration team or JUnit team and planned for for 4.4, 4.4s1, 4.4s2, 4.4s3 or 4.4s4
  - ▶ IDE Integration team / 4.4 (for teams): shows all plan items associated with the IDE Integration team and planned for 4.4, 4.4s1, 4.4s2, 4.4s3 or 4.4s4. In addition is shows all execution items associated with the IDE integration team and planned for 4.4
- Iteration plan for JUnit Team / 4.4s2
  - ▶ Shows all work items associated with the JUnit team and planned for 4.4s2













#### Background: Estimation and Sizing

- Agile planning separates estimating the size from estimating the duration
- The size is often estimated in relative values. Scrum uses Story Points
- The effort is typically estimated in Ideal Hours/Days
- Velocity measures a teams rate of progress
  - Completing 2 Stories of 5 story points in one iteration gives a velocity of 10
  - Good guess is to assume the same velocity for the next iteration
  - team velocity is what matters







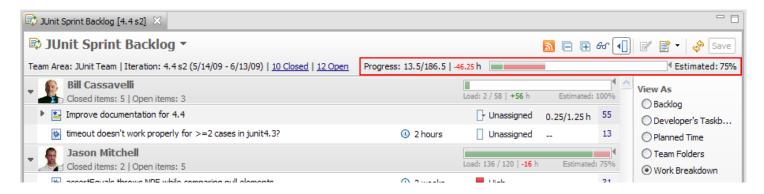






#### Estimation and Sizing in RTC

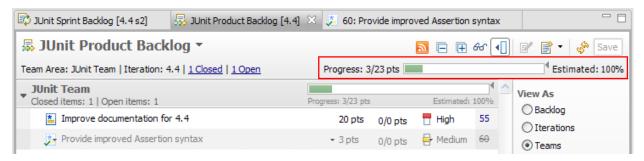
Effort: Execution items are estimated in ideal hours.



 Size: Plan items are estimated using a configurable numerical sizing attribute

Scrum uses Story points. Other sizing attributes could be: lines of code, function

points, ...













# Velocity

RTC provides a velocity report





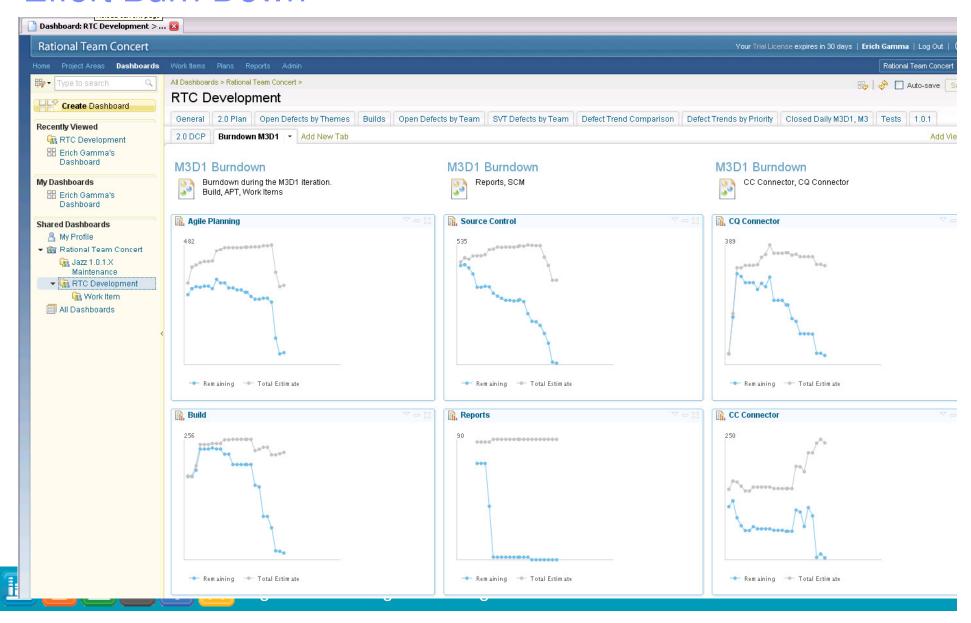








#### Effort Burn Down





#### Background: Release Planning

- Create a high-level plan that covers more than one iteration
  - a prioritized backlog of estimated plan items
  - created by the product owner
  - has a release date
- Define the iterations/iteration length
- Updated with regular frequency









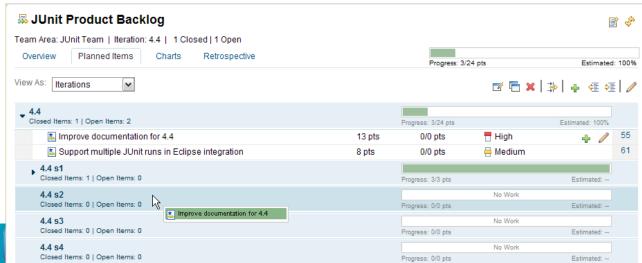






# Release Planning in RTC

- Configure the project areas time line
- Create a plan of type release plan / product backlog
- Take velocity reports or other historical data to find out how many story points a team can handle per iteration.
- Assign the plan items to the iterations, based on the backlog order and the team's velocity.













# Background: Iteration Planning

- Created during an iteration planning meeting
- Decompose plan items into tasks
- Estimate tasks and defects planned for an iteration
- Team members sign-up for tasks during the iteration
- Owner schedules his task









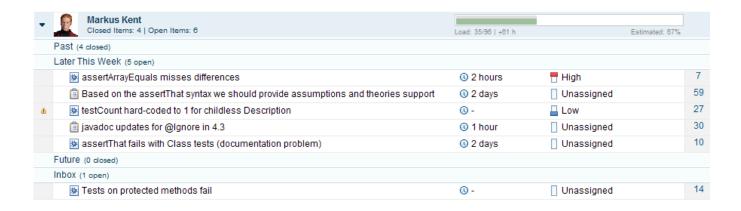






# Iteration Planning in RTC

- RTC provides different view modes
  - Breaking plan items into tasks
  - ▶ Tracking progress by owner during an iteration
  - **)**
- Use Load Bars for capacity planning
- Use Progress Bars to track progress









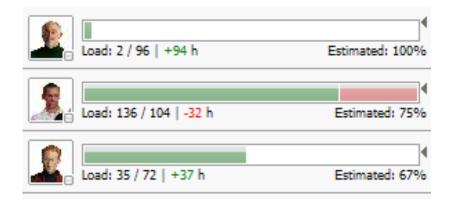






#### Work Load Bar

- Problem: avoid overbooking team members.
- Solution: Team Concert uses work load bars to show how much work is assigned to a contributor, and whether he is overbooked or not. A work load bar shows:
  - horizontally: the ratio of remaining work time (usually for an iteration) and upcoming work.
  - vertically: the percentage of estimated open work items
- So the less work items are estimated the less accurate the information is.
- > Encourages estimation



Upcoming work: 2 hours / Remaining work time: 96 hours ← not overbooked 100% of open work is estimated

Upcoming work: 136 hours / Remaining work time: 104 hours ← overbooked 75% of open work is estimated

Upcoming work: 35 hours / Remaining work time: 72 hours ← not overbooked 67% of open work is estimated, but since 33% of the work items aren't estimated there will be very likely not much work time left







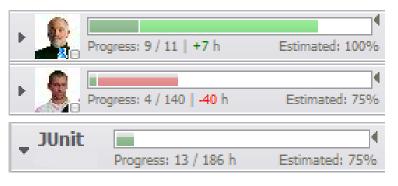






#### **Progress Bar**

- Problem: team lead needs to know how well the team is doing in terms of progress.
- **Solution**: Team Concert uses **progress** bars to reflect the progress of a team, a contributor, or other grouping elements (tags, category, ...). A progress bar shows:
  - horizontally: the ratio of resolved and total work. If an iteration information and work assignment is available a projection of this ratio onto the ratio of spent work time versus total work time is shown as well.
  - vertically: the percentage of estimated open work items
- So the less work items are estimated the less accurate the information is.



Resolved work: 9 hours / Total work: 11 hours Spent work time: 17 / Total work time: 96

spent work time. 177 Total work time. 30

Resolved work: 4 hours / Total work: 140 hours

Spent work time: 53 / Total work time: 168 hours

Resolved work: 13 Hours / Total work: 186 Hours

No projection available

9 - 11/96 \* 17 == 2 hours ahead

4 - 140/168 \* 53 == 40 hours behind













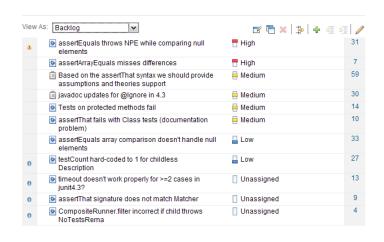
#### Background: Backlog and Planned Time

#### Backlog

Sorts the work items in backlog order. Rearranging work items in this sort mode will change its ranking on the backlog

#### Planned Time

Sorts the work items in the order in which the owner of the work item intends to work on them. The owner defines this sequence typically in the My Work View.









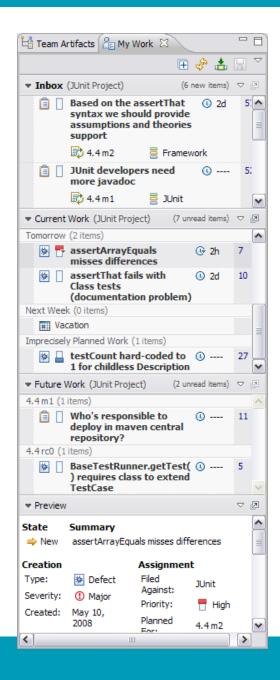






# Daily Planning

- My Work View
- Developer plans assigned work
- Adjusts estimates









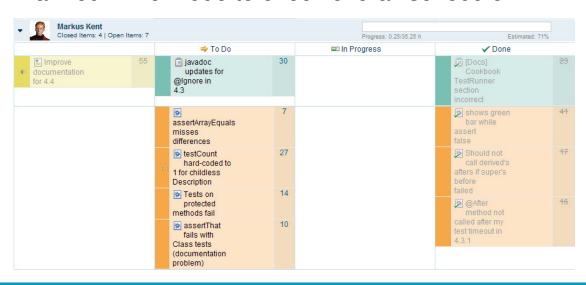


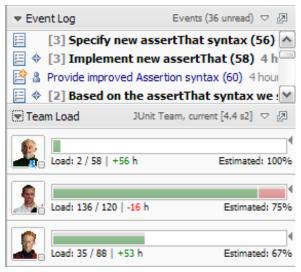




# **Daily Planning**

- Triage important defects onto the Iteration Plan
  - ▶ Team Central, Team Load and Iteration Plan
- Run daily stand ups
  - Developer Taskboard to see what people are working on
  - Planned Time mode to check overall schedule









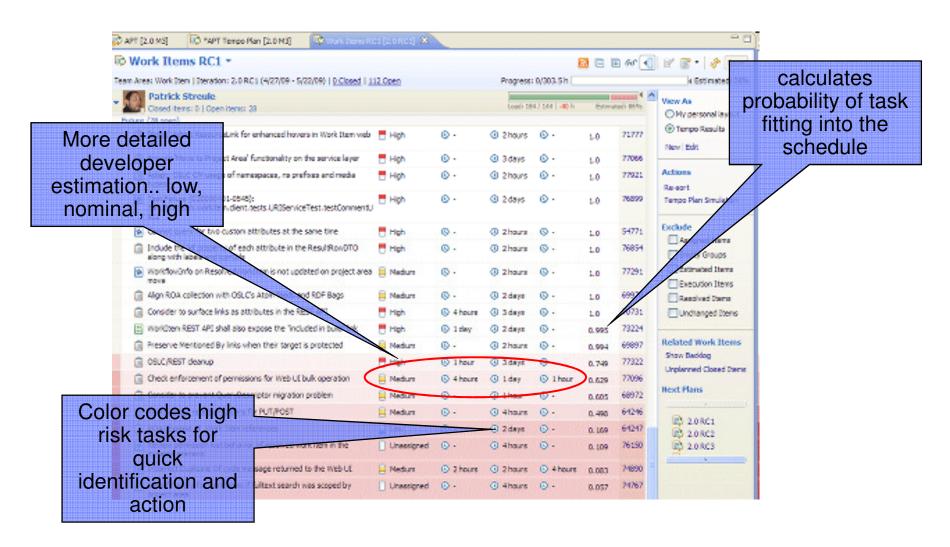








#### Plan Risk Assessment







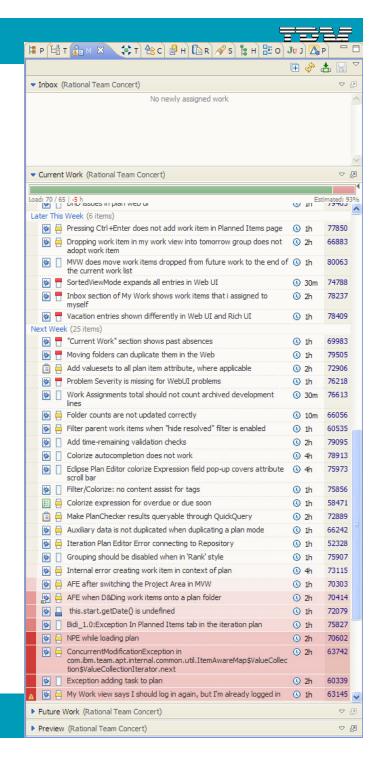






# Risk Assessment for my planned work

Probability of completion is shown in the My Work View





























#### Configuring the Plan Editor

- The Plan editor can be configured in several ways:
- Content
  - Defines the Style (flat, tree, etc), Grouping, Sorting and Filtering
- View Layout
  - Defines the visible columns
- Colorize
  - Defines colorize expressions



Plan items of the current iteration are colorized in green













# Agenda



- Agile Planning Introduction
- A Scrum Planning Episode
- How we use Agile Planning for Developing RTC
- What's new in 2.0







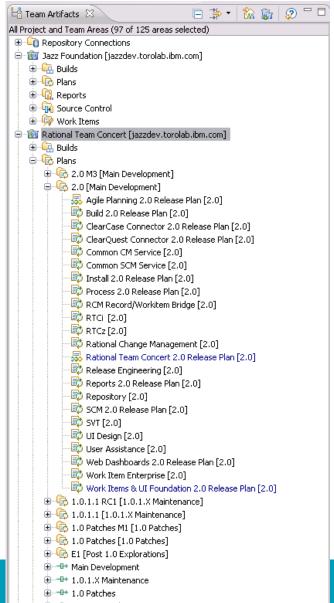






#### Using RTC to Plan and Deliver RTC 2.0 - Overview

- Release Plan
  - Define themes
  - Define plan items
  - ▶ Plan Item Work item type
- Tracking a Release
  - ▶ Effort less status tracking
  - Progress
- Iteration Planning (Scrum of Scrum)
  - Tracking cross team efforts
  - Tracking burn down across teams
  - Retrospectives
- Tracking Dependencies across teams















#### Our Distributed Team







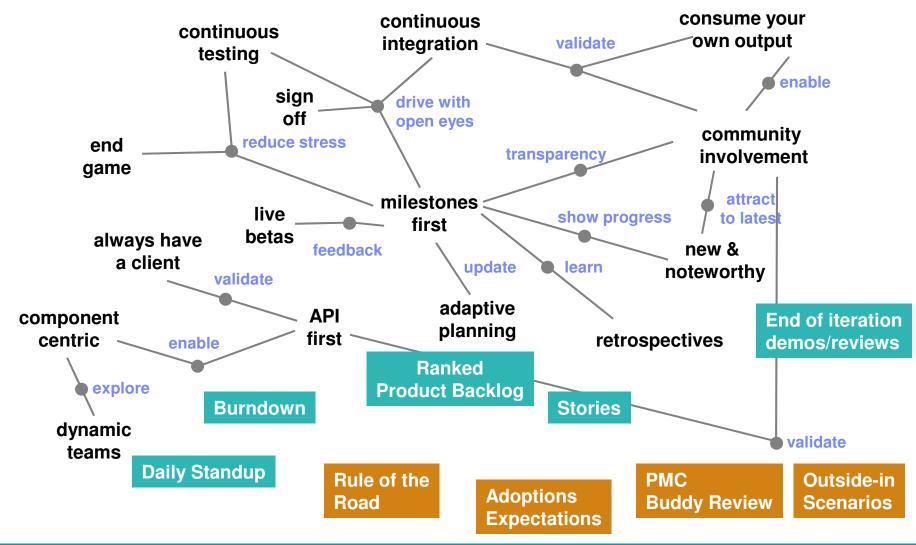








#### **Our Practices**















#### Our Tracked Items

- Planning
  - Plan items, Stories, Tasks
- Tracking
  - Build status
  - Adoptions
- Feedback
  - Defects
  - ▶ Enhancement
  - Retrospectives





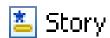


























#### Our Release plan

- Defines
  - themes and features
  - coarse grained
- Themes define the high-level customer value
- Product wide backlog of Plan Items/features
  - ranked
- Plan items are broken down into Stories and Tasks





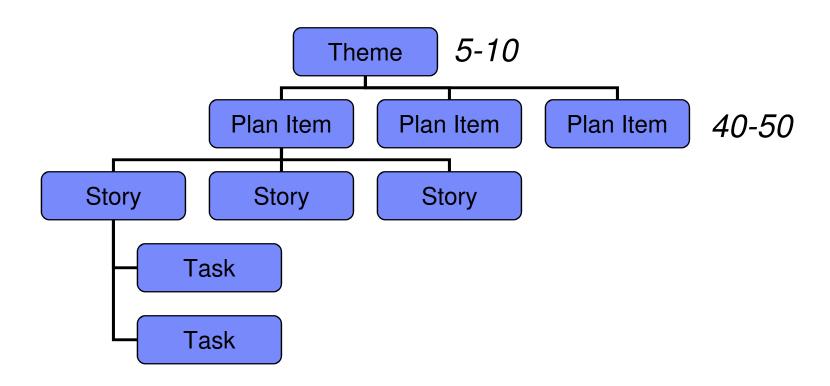








#### Our Plan Structure















# Release Planning

- Planning a release
  - Aligning with the business objectives
  - tracking progress
    - Done criteria





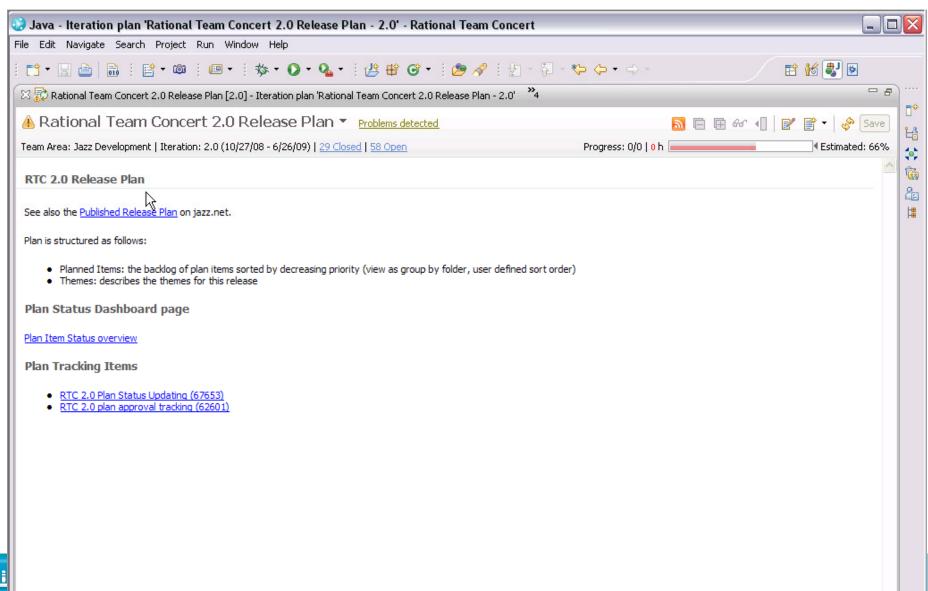






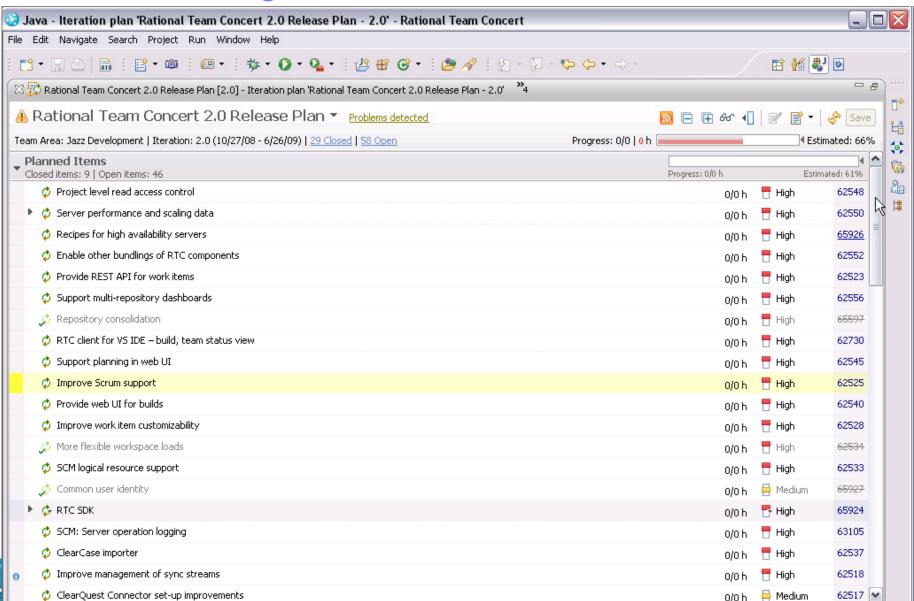


### Release Plan Overiew



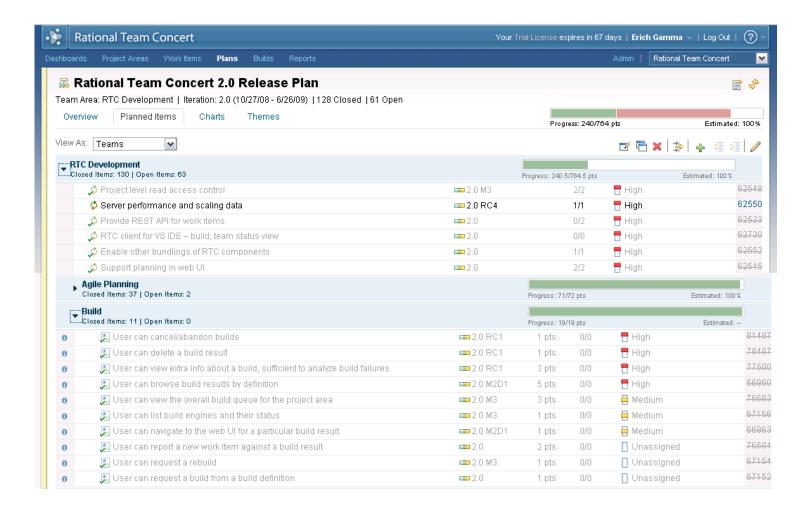


### Release Backlog





## Project Release Plan: Team of Team Release Plan







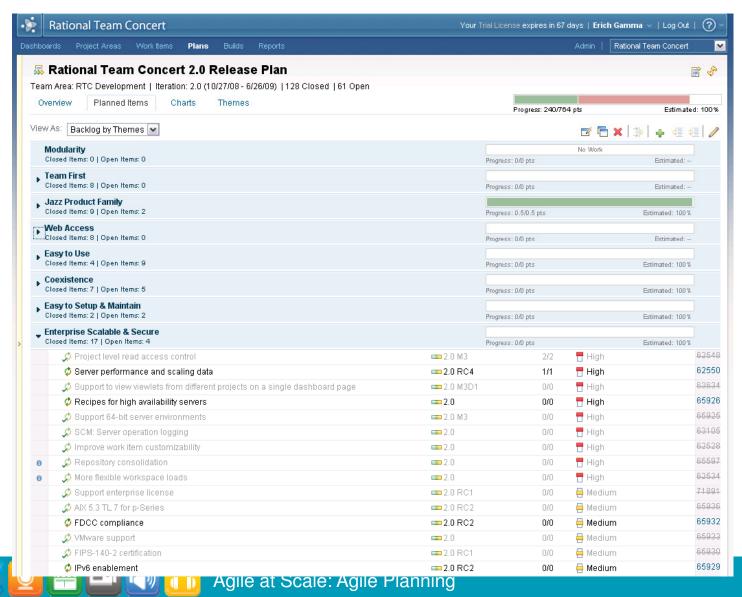






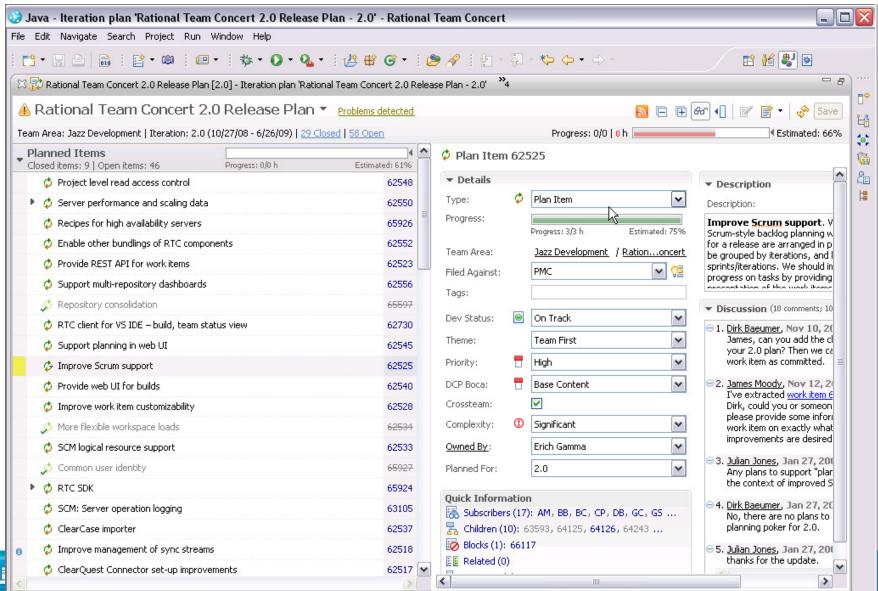


# **Backlog Grouped by Themes**





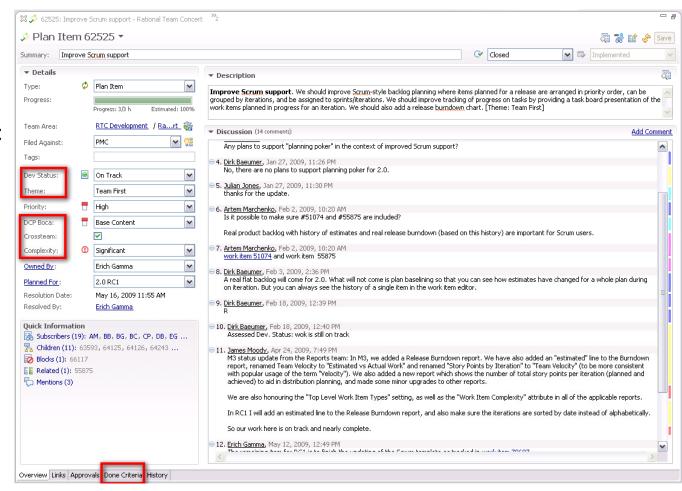
### Backlog with Plan Item Preview





#### Plan Item

- Custom Attributes
  - Complexity
  - Development status:
    - on track
    - at risk
    - behind
  - Done criteria
- Workflow
  - Proposed
  - Committed
  - Done







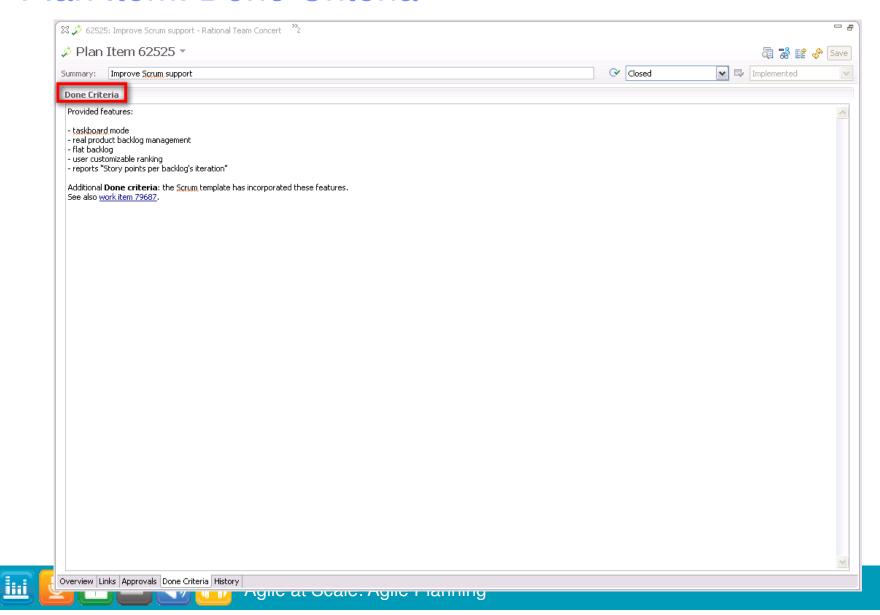








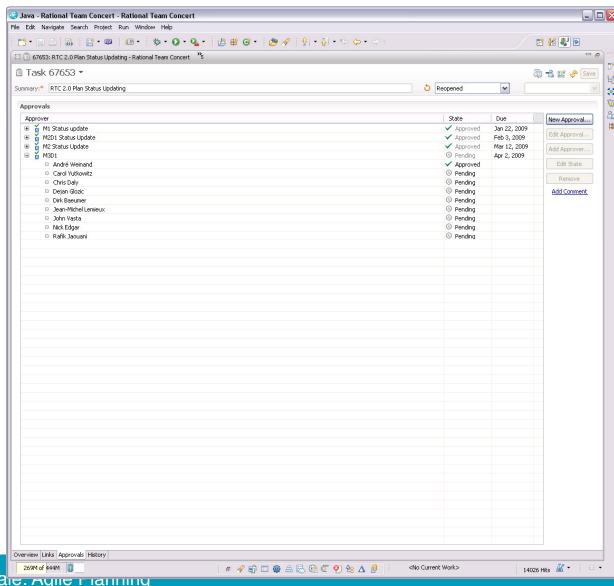
### Plan Item: Done Criteria





# Release Plan Status Tracking

- Painless status tracking
- Status updating is tracked in a task with approvals
- Status updated at end of each iteration





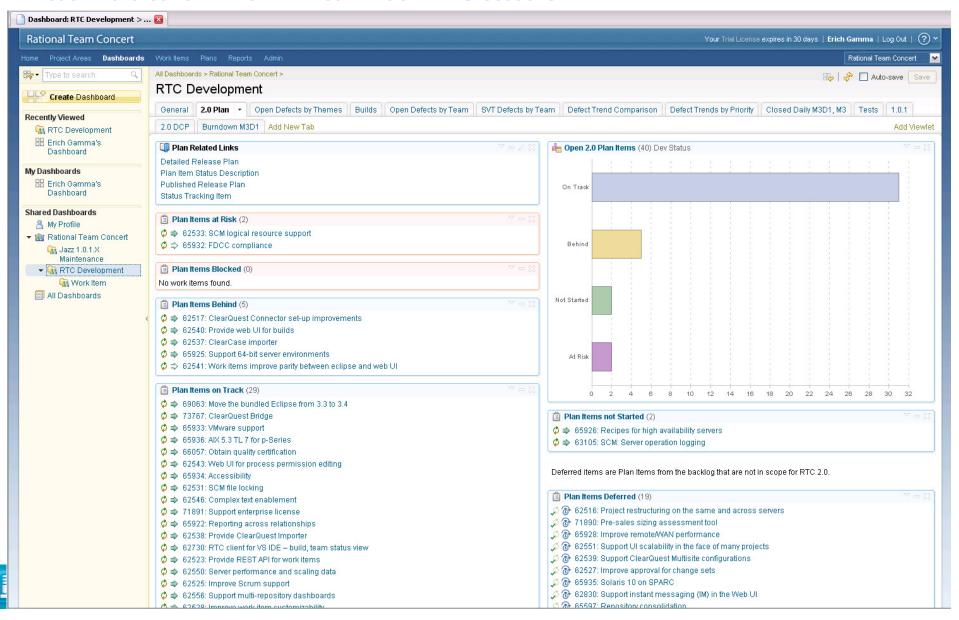








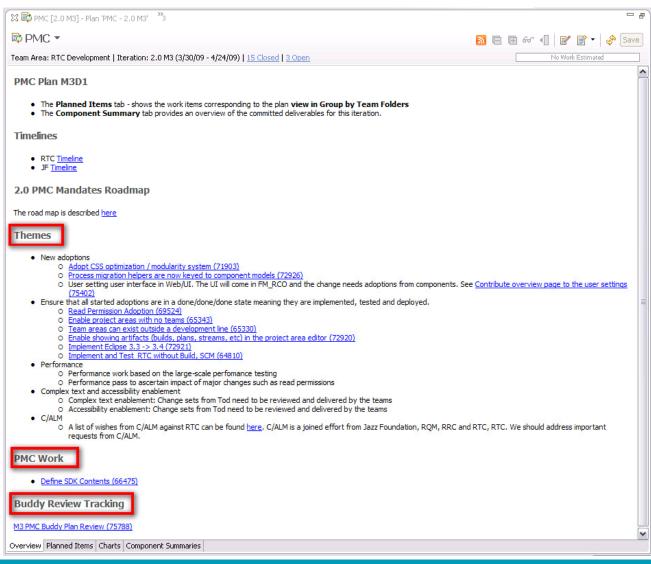
### Dashboard with Plan Item Status





### Project Management Iteration Plan

- Defines mandates from the project management team
  - Themes
- Buddy Review Tracking

















# Cross Team Dependencies/Adoptions

#### Adoptions:

- Changes from lower layers that need to be adopted by other teams
  - Require approval from the project management team
- "Lookahead planning"
  - New API delivered in M2 by team A
  - Adopted during M3 by team B, C, D

### Expectations

- Dependencies among teams
  - Tracked using work item links







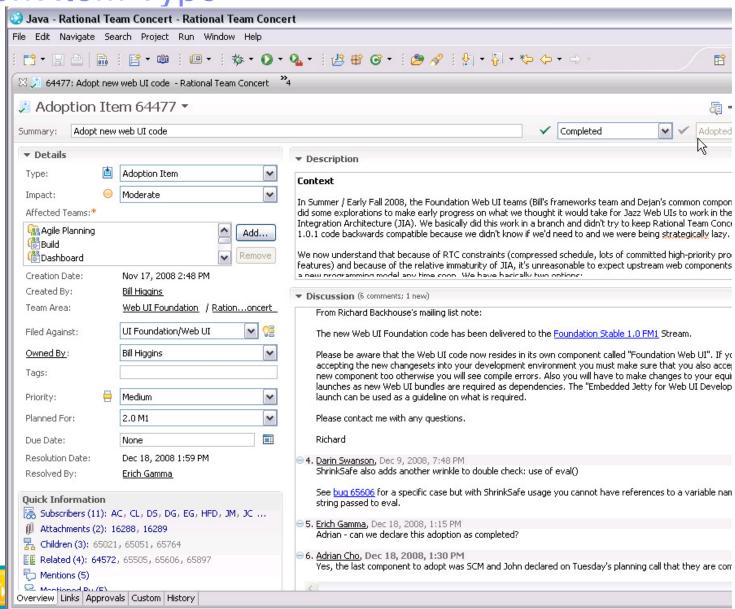






### Adoption Work Item Type

- Attributes
  - Affected teams
  - Impact
- Workflow
  - Proposed
  - Approved
  - Done









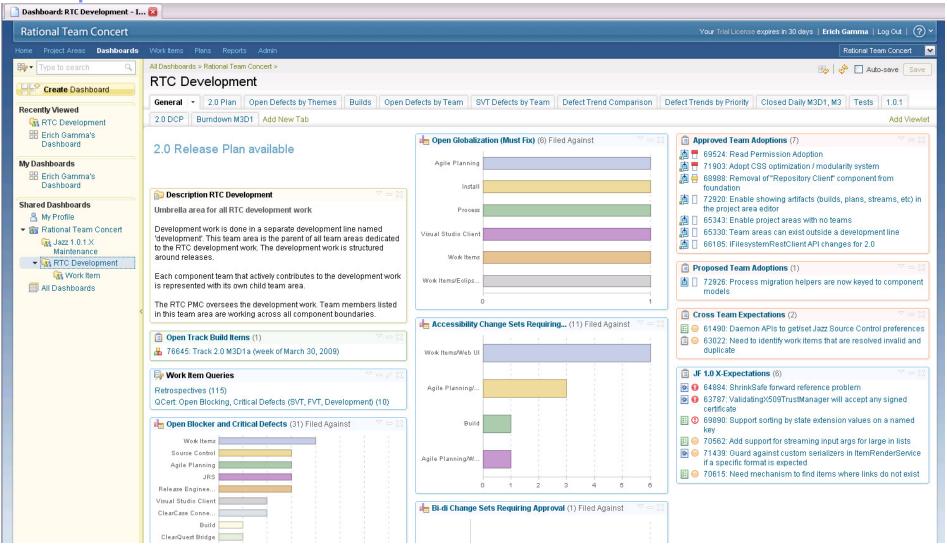








## Adoption Items on the Dashboard















### More support for Agile at Scale

#### RTC Build

- personal builds
- build snapshots
- Buildforge Integration
- Jazz SCM
  - isolation/integration using stream flow hierarchies => show our flow structure
  - private versions for code exploration
  - suspend resume for task isolation

#### Dashboards

for transparency





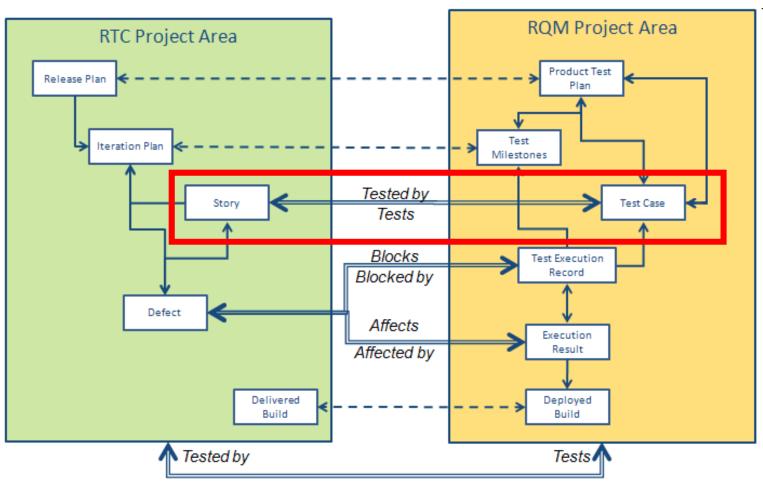


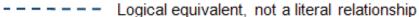






# Agile Planning & Collaborative AL M









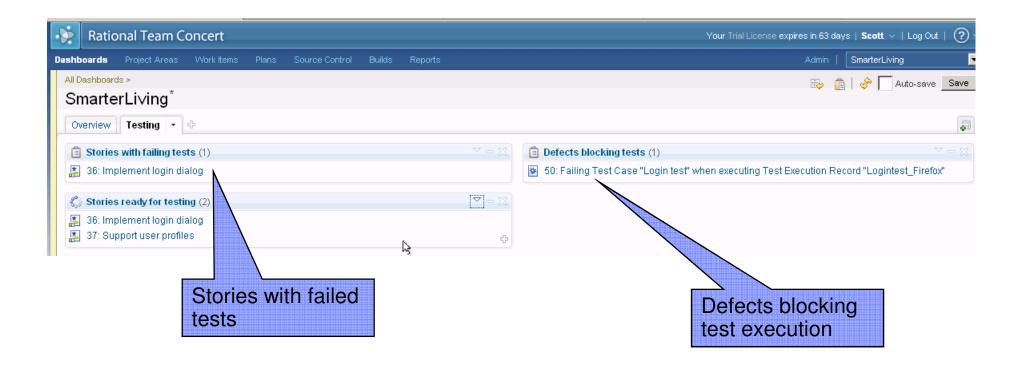








### **C/ALM Link Queries**















# Summary

- RTC 2.0 covers the planning onion
- Much improved scrum and scrum of scrum support
- Planning for everybody in eclipse and web



























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### References

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  - https://jazz.net/blog/index.php/2009/01/06/webcast-using-rational-team-concertin-a-globally-distribute-team/









