Empowering software delivery through Rational Collaborative Lifecycle Management Solution

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IBM Software

Innovate2012

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Agenda

- A case for effective ALM
- What is ALM?
- Planning, Tracking & Monitoring – the 5 imperatives
- Planning, Tracking & Monitoring using the IBM Rational CLM Solution
- Q & A

Innovation is being driven by software

Mobile banking will be the most widely used banking channel by 2020, if not sooner

The average 2010 automobile contains more lines of software code than a fighter jet

Will it perform?

Is it secure?

Are we compliant?

Source: *Mobile banking: A catalyst for improving bank performance*, Deloitte, 2010; and *This Car Runs on Code, Robert Charette,* IEEE Spectrum, 2009

Realities can stall software-driven innovation

Complexities in software delivery compounded by market pressures

Complex, Multi-platform Systems and Applications

62% of companies have agile projects requiring integration with legacy systems

Increasing Mandates

2010 Spending in U.S. on governance, risk and compliance was **$29.8 billion**

Globally Distributed Software and Product Supply Chains

50% of outsourced projects are expected to under perform

Cost Reduction

70% budget locked in maintenance and **37%** of projects go over budget

Unpredictability in Software Delivery

62% of projects fail to meet intended schedule

Changing Requirements and Time to Market

30% of project costs are due to rework and poor execution of requirements

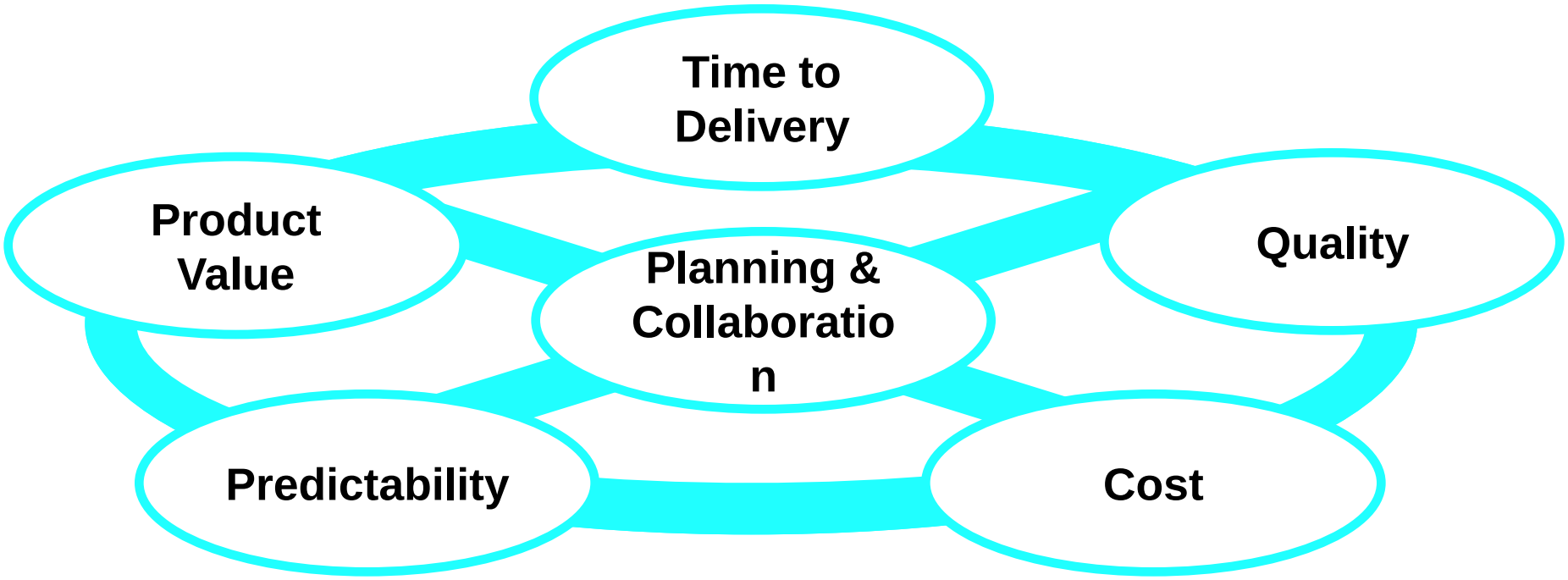
Source: Numerous sources, see speaker notes for details

Software is the Source of Competitive Advantage

GM reduced time to market, delivering the Volt in only

29 months

Productivity is achieved by improving in 5 areas



Silos inhibit productivity

Analysts

Project Managers

Quality Professionals

*"At some point,
you take a step back,
and you realize you have an awful lot
of siloed systems that are limiting transparency
across strategic projects."*

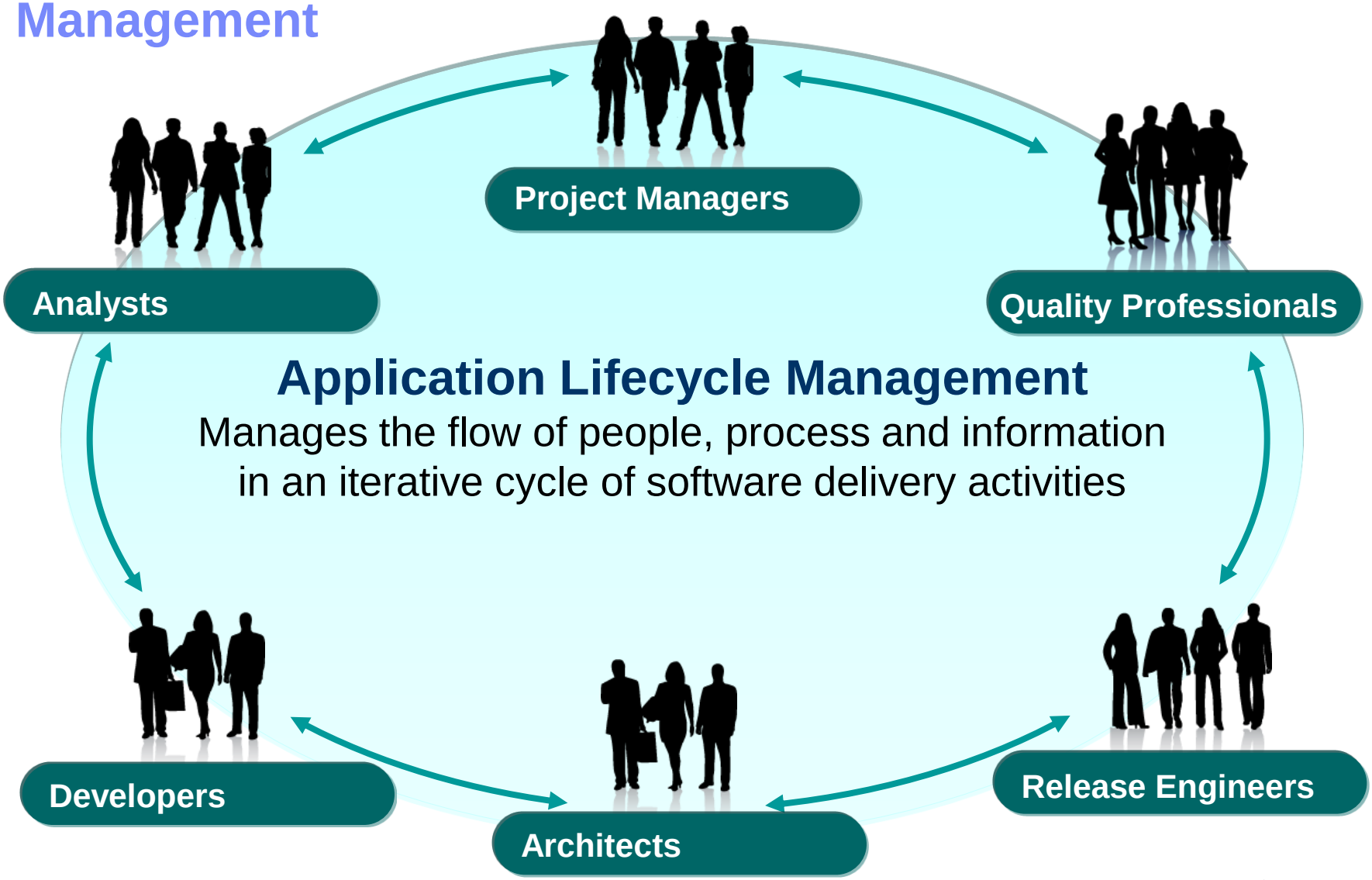
Development Director
Temenos, Inc.

Developers

Architects

Release Engineers

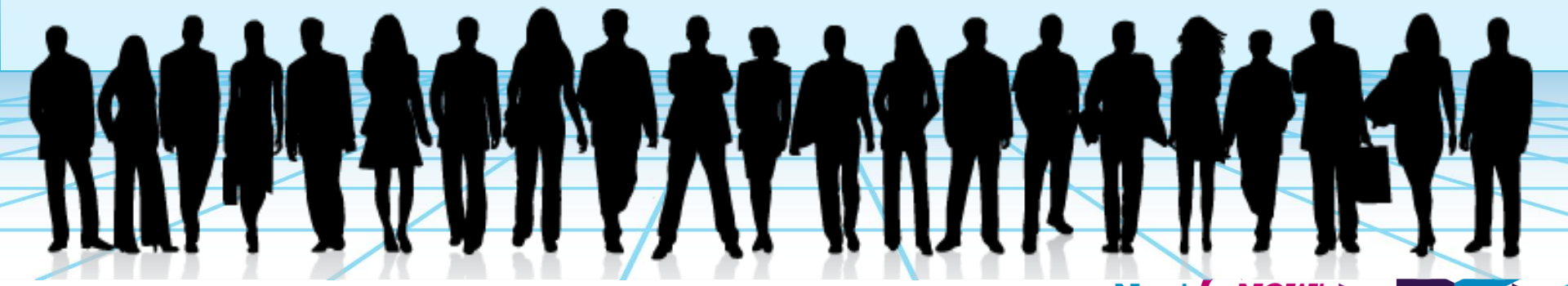
Improve productivity with Application Lifecycle Management



Five Imperatives for effective Application Lifecycle Management

To improve organizational & team productivity

1. Maximize **product value** with **In-context Collaboration**
2. Accelerate **time to delivery** with **Real-time Planning**
3. Improve **quality** with **Lifecycle Traceability**
4. Refine **predictability** with **Development Intelligence**
5. Reduce **costs** with **Continuous Improvement**

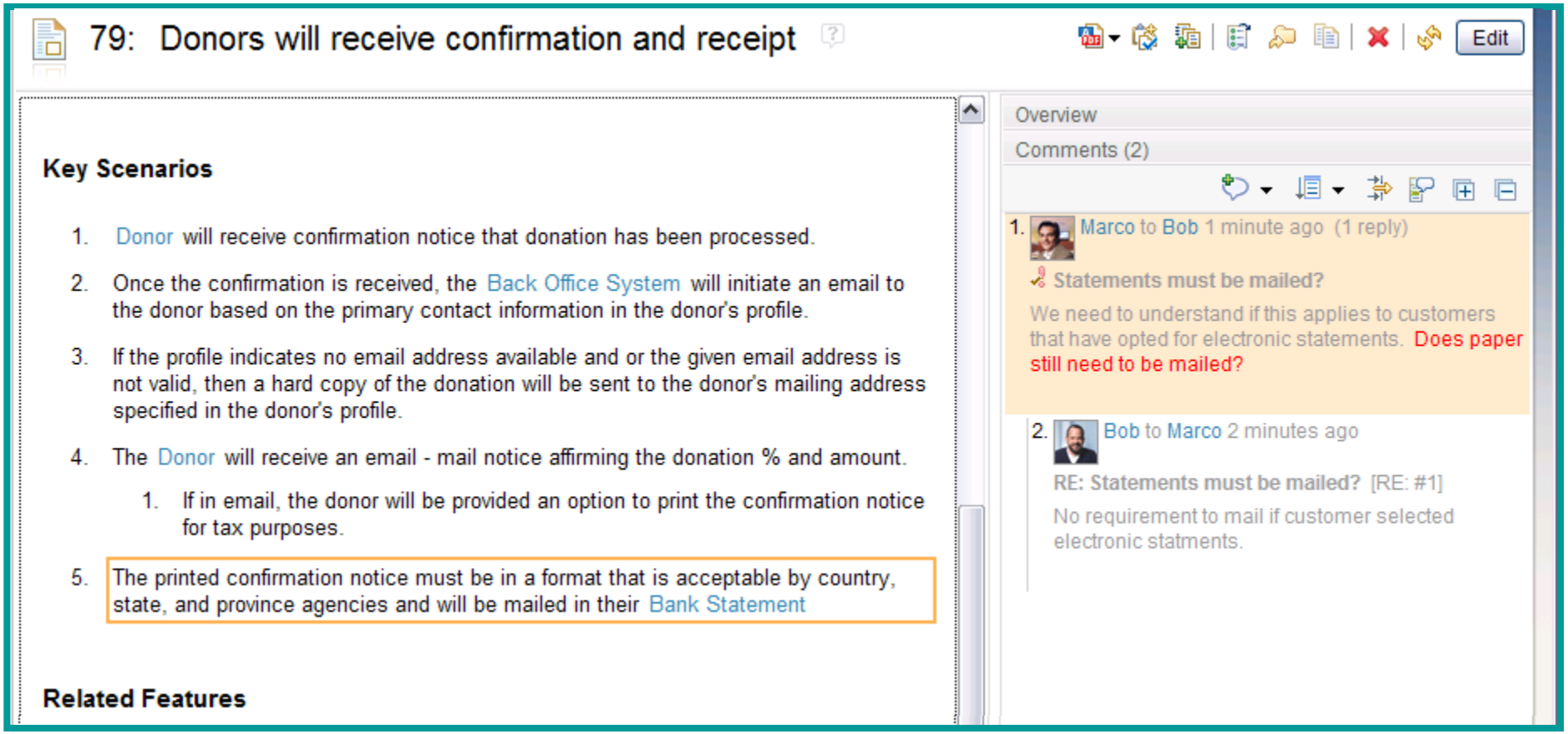


Collaboration challenges

Can your team…

- Overcome the barriers of multiple languages and time zones when working with outsourced and distributed team members?
- Bring new team members up-to-speed quickly leveraging historical information in a single source of truth?
- Quickly grasp the “who, what, when and why” of team activities?
- Do you still view Wiki’s and email as advanced collaboration tools?

Comments on are in-context of the artifact

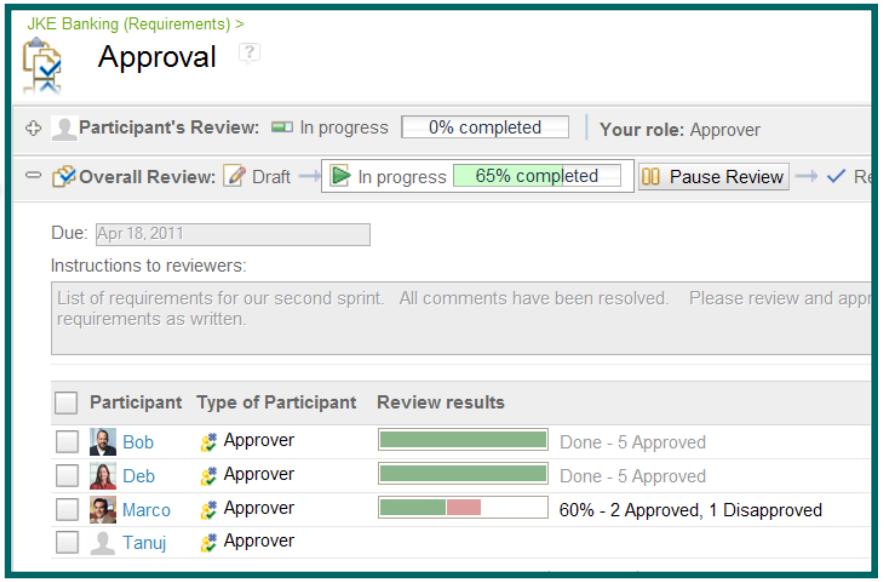


A click on the comment highlights the text under discussion.

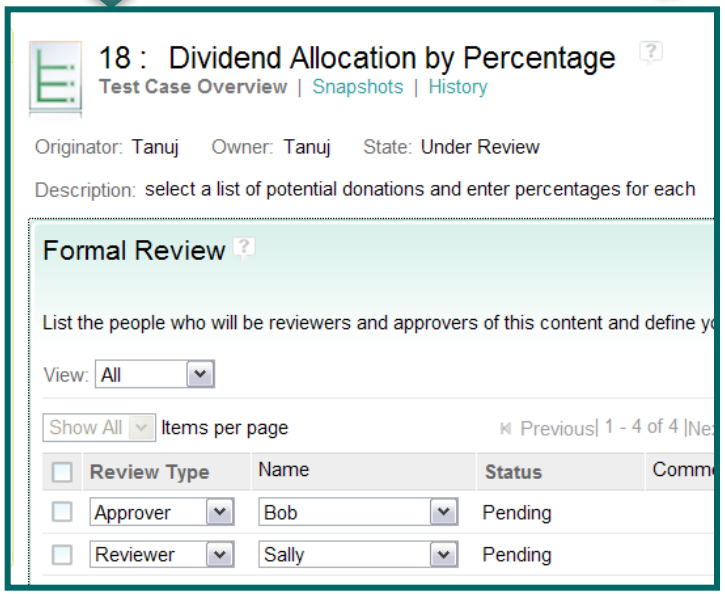
Formal Reviews drive agreement and prevent re-work

- ✓ Reviews & approvals insures artifacts are reviewed and/or approved by key team members and captures compliance requirements.

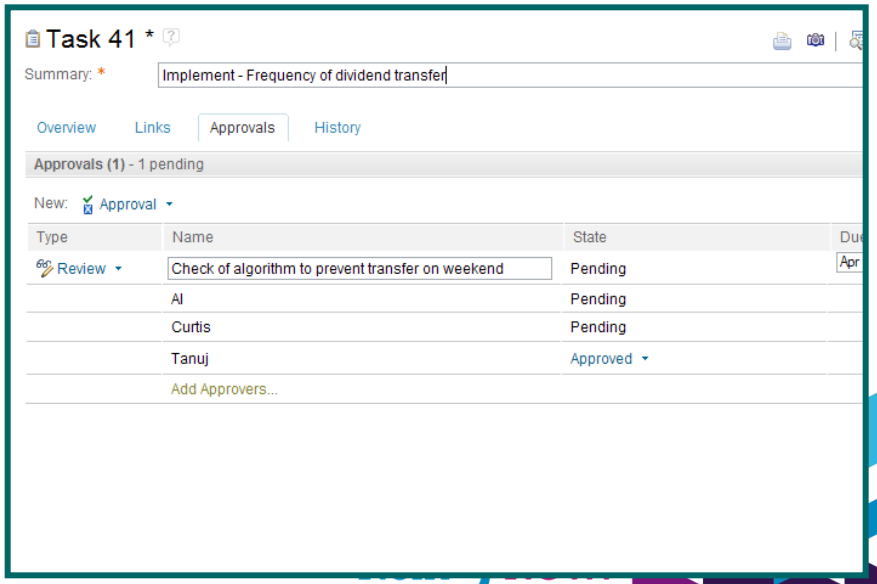
Requirements



Test Artifacts

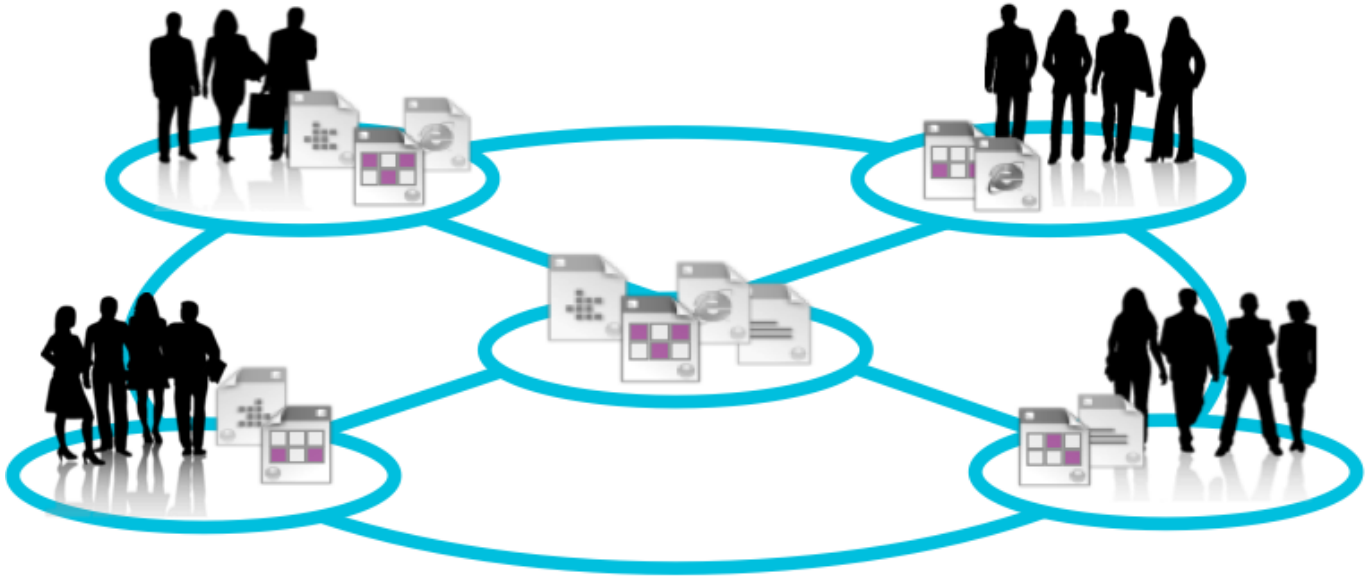


Work Items



In-Context Collaboration improves product value by:

- Making **information <u>immediately</u> accessible** to all team members in the context of their work
- Empowering teams to collaborate on and review software development artifacts so they can **incorporate feedback early and often**
- Providing **single source of truth** hosted in a shared repository so that team members can collaborate effectively around the globe

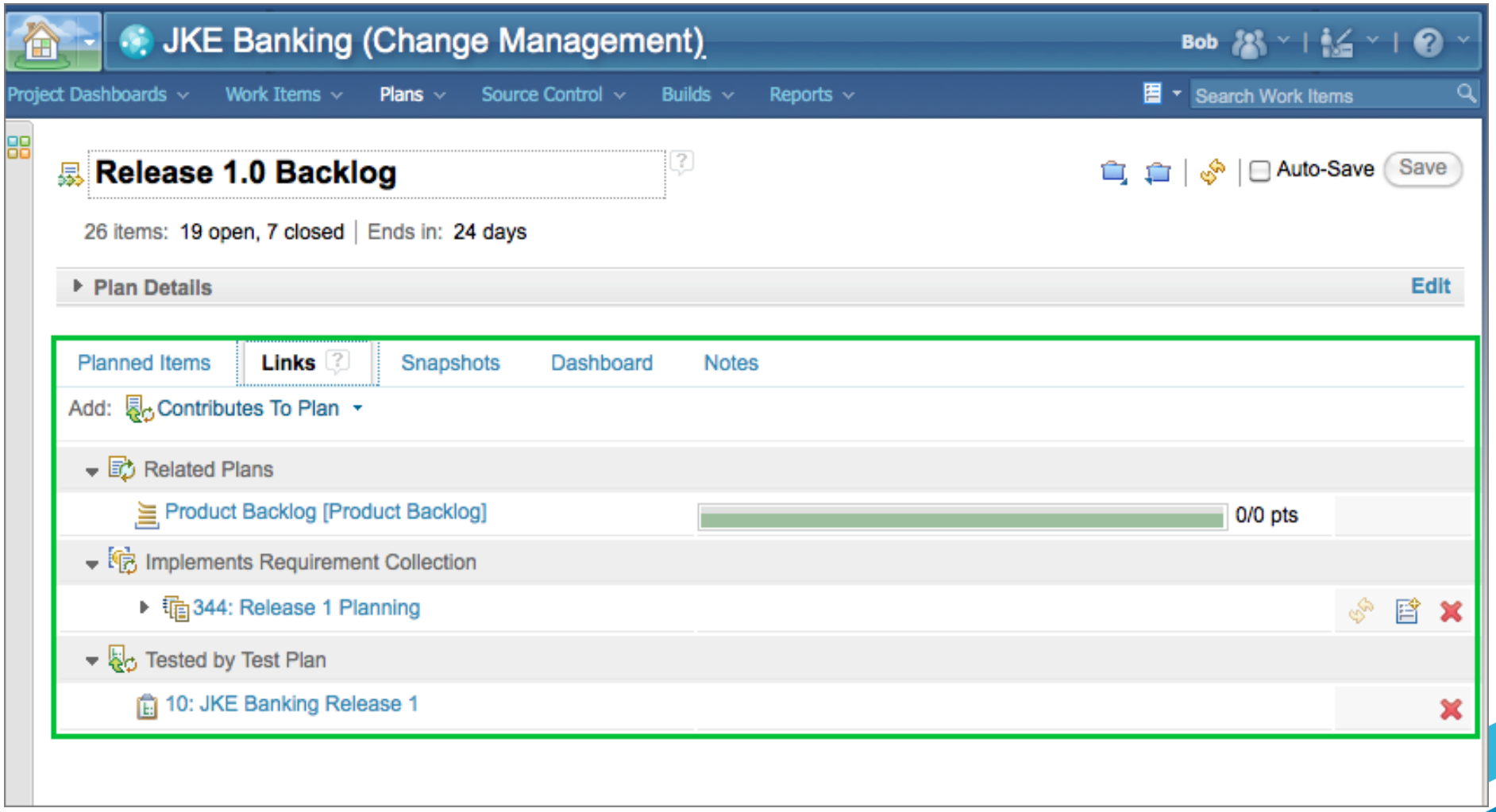


Planning challenges

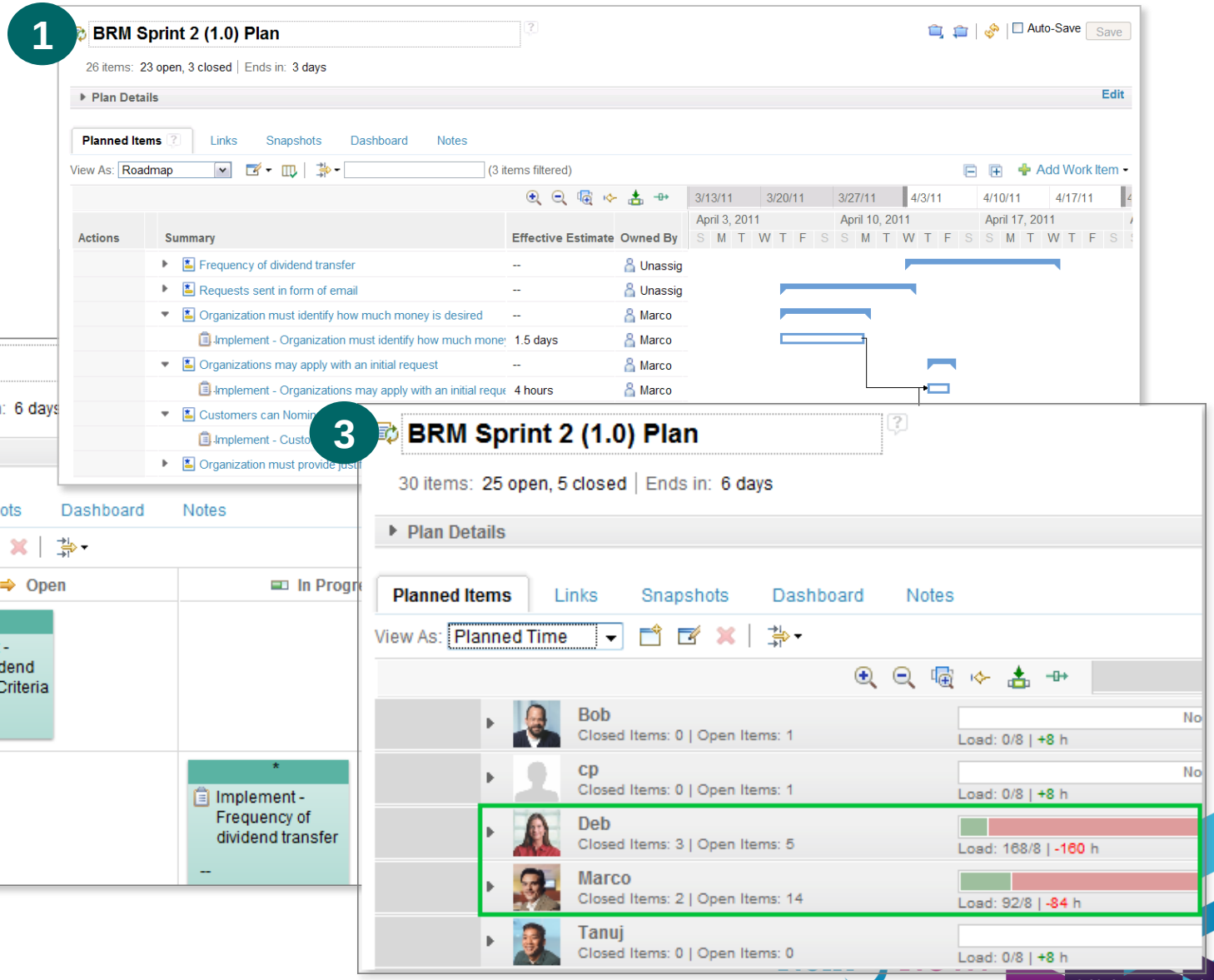
Does your team…

- View “Plan” as a noun or a verb?
- Plan for improved security and vulnerability remediation?
- Plan across the entire team, involving all stakeholders/disciplines?
- Plan for waterfall, iterative and agile environments?
- Manually collect/report status?

Ensure alignment across the business, development and test teams

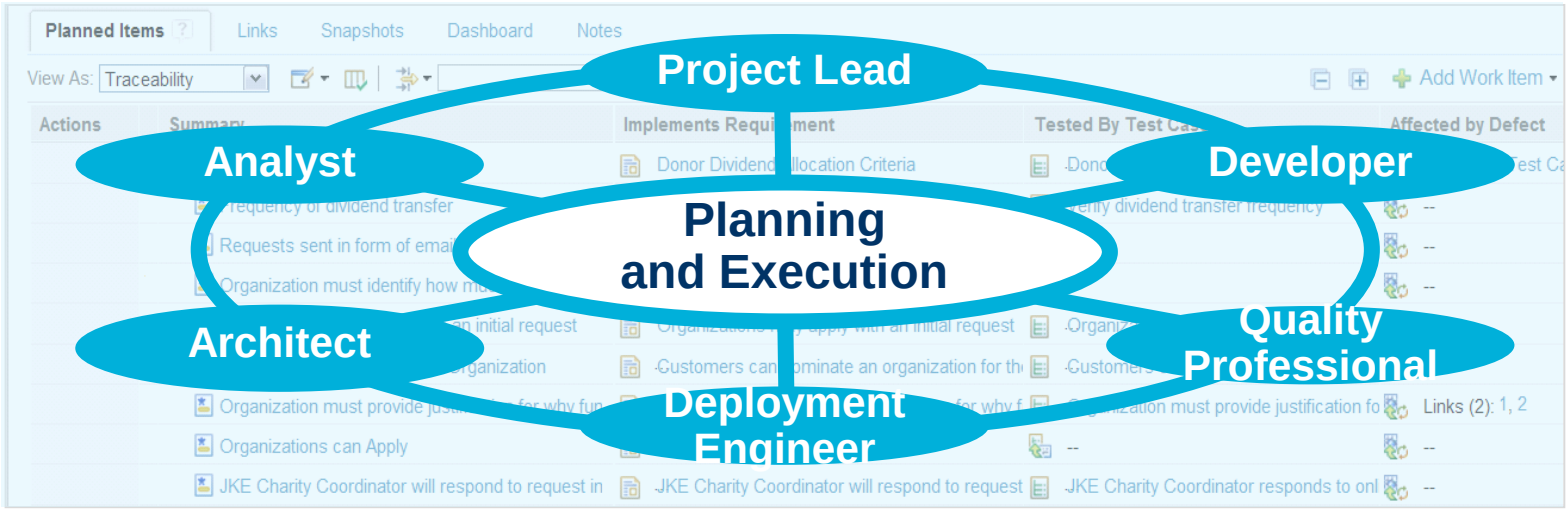


One plan with multiple views facilitate detailed analysis



Real-time Planning accelerates time to delivery by:

- Providing a **single plan** that spans requirements, development, and test, ensuring a team understanding of the overall scope of a project
- **Integrating planning with execution** ensuring the entire team understands the true project status
- Allowing **everyone to participate** in keeping the plan current and accurate
- Helping teams **respond to the unexpected** in a timely manner ensuring the team stays on schedule



Lifecycle Traceability challenges

Can your team answer…

Analyst

Which requirements are addressed in this iteration?

Are all of the requirements tested?

What defects are affecting which requirements?

Project Manager

Can we pass an audit?

Are we ready to release?

What defects were resolved in this release?

Are we aligned with the business?

Architect

Can we implement in a way that supports maintainability?

Which requirements impact the design?

Are there reusable components we can leverage?

Developer

What requirements am I implementing?

What test uncovered this defect, on which environment and what build?

What changes occurred overnight?

Release Engineer

How can I standardize when teams use different tools?

Where are the bottlenecks in our processes?

Are build times getting longer or shorter?

How can I speed up my builds?

Quality Professional

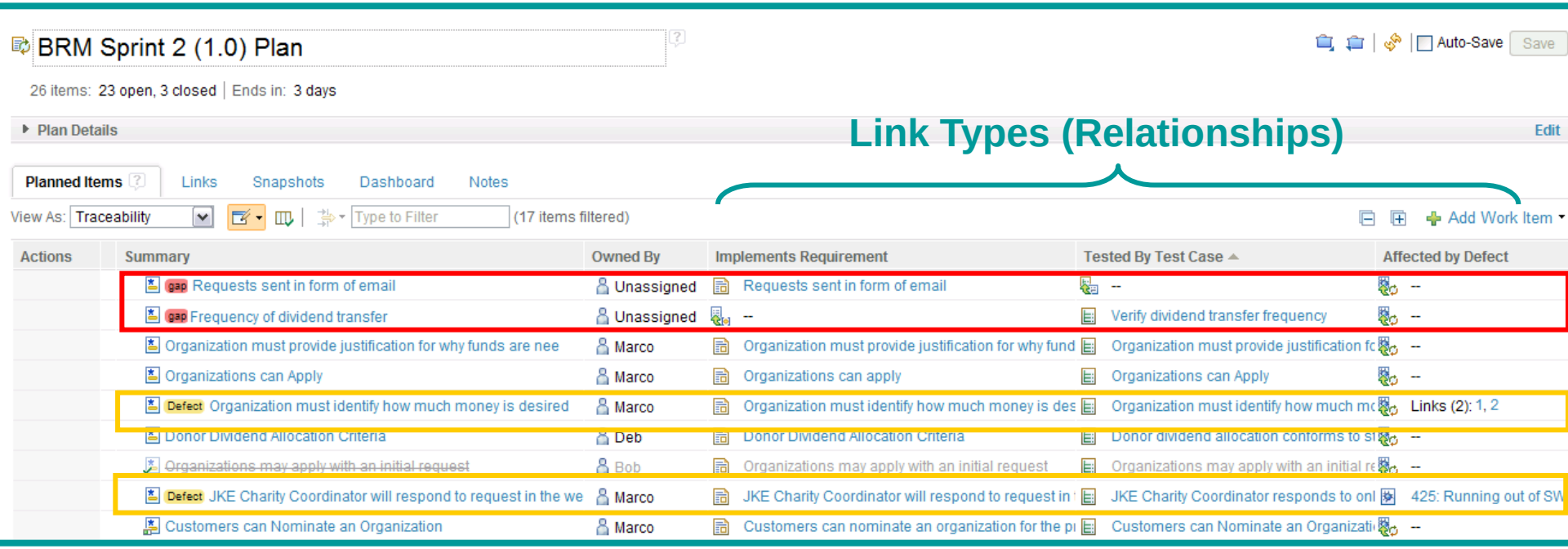
What is the quality of the build?

What is ready for me to test?

What defects have been addressed since the last build?

Team Leads have visibility into coverage & completeness

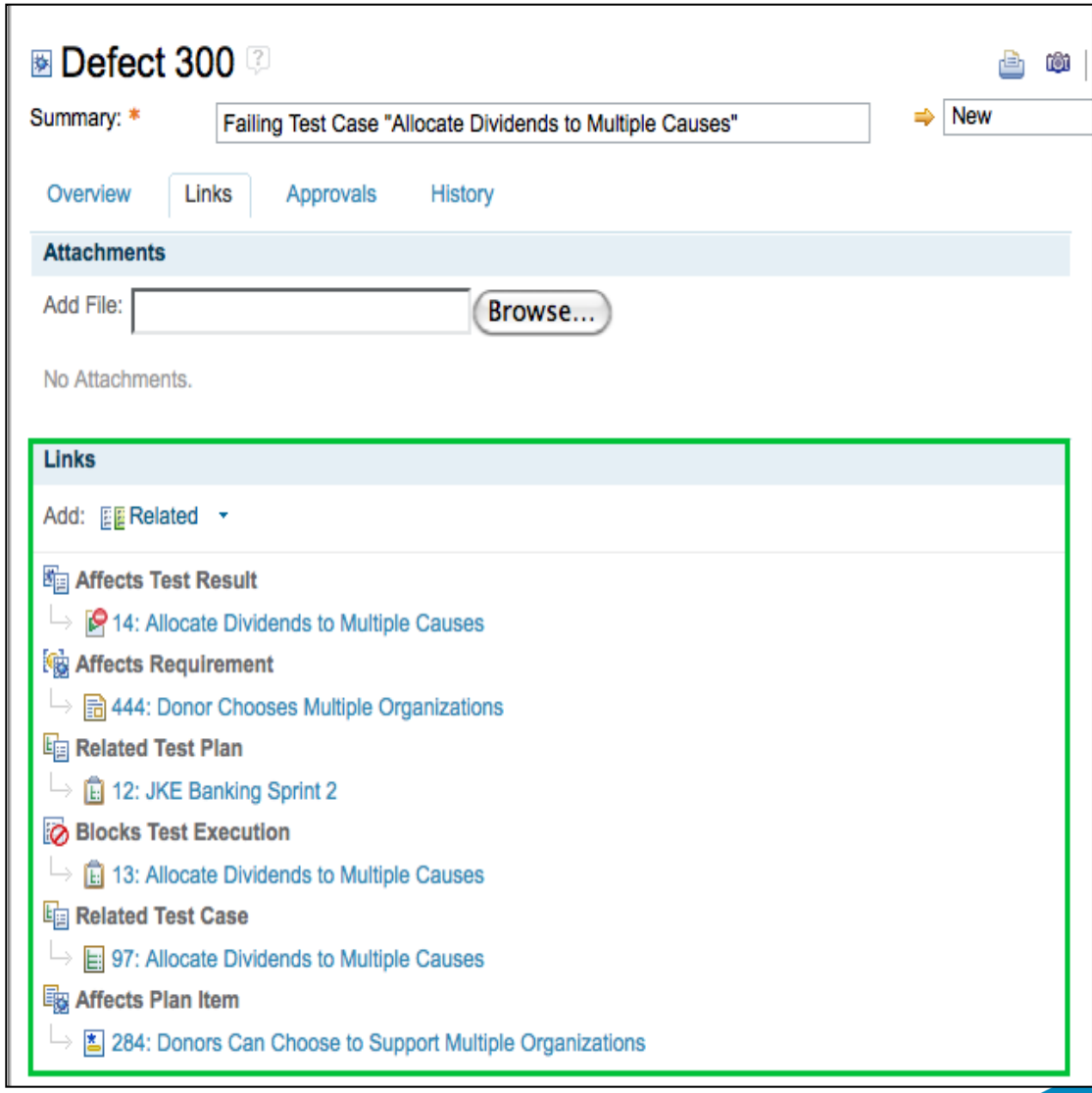
Tailor traceability View to highlight planning Gaps



Linked data is visible on all artifacts

- All roles can view the links on their artifacts.
- Each user has their own perspective and user interface for viewing links.
- Create, delete, navigate links on artifacts

- Example: Use the relationships on a defect to determine it's impact
- Traceability links on defects are automatically created



Lifecycle Traceability improves quality by:

– Establishing **relationships between software artifacts**

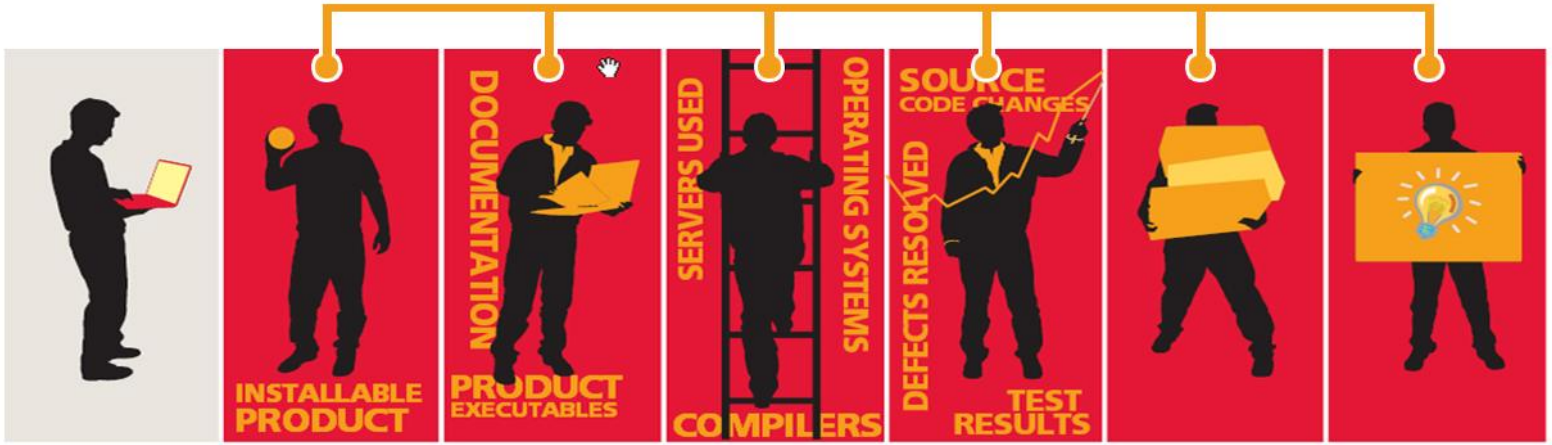
– Helping you **identify and closing artifact gaps,** ensuring **coverage** across disciplines

– Provides visibility into the **completeness** of planned items by inspecting all related artifacts

– Provides easy **access to related artifacts** ensuring everyone shares the same view

– Delivers transparency which enables everyone to make **fully informed decisions** based business priorities

Instant access to details from any point in the development process



Measuring and steering challenges

Can your team…

- Track desired improvements with metrics?
- Minimize administrative overhead by relying on your environment to capture metrics?
- Provide one view of project health at multiple levels?
- Make steering decisions based on facts rather guestimates?
- We call this Development Intelligence

Information radiators provide a view of project health for all team members

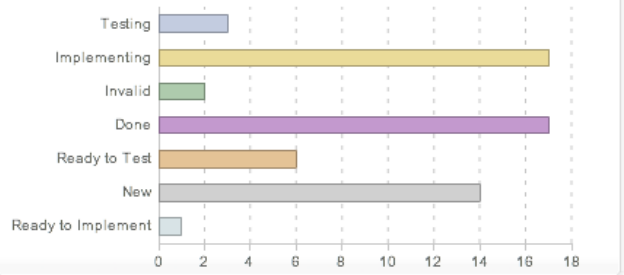
JKE Banking (Change Management)*

Overview | Time to Value (Schedule) | Product Value | Product Cost | Product Quality | Reports | Stabilization

Story Status Current Iteration

Shows the status of all stories planned for the current iteration

- Story Status (60) Status



- Current Stories (60)

150501: Improve Web UI error reporting
154382: Completion (M14) of foundation support for migrating RRC 2.x to 3.0, and JTS consolidation
155918: Provide TVT testcases and testcase updates to TVT team
154263: [Continuation] Create server diagnostics tests and reports that make various checks
155024: Track the fixing of hangs occurring on shutdown of the CLM server
155399: [Repository - M14] Performance, quality and robustness enhancements
156051: Improvements and fixes for CLM migration automation
154929: [Repository - M14] Address high severity defects, Reduce backlog
155033: Explore servlet dispatching enablement as a backup option
155486: [Repository M14] Serviceability and Consumability Improvements

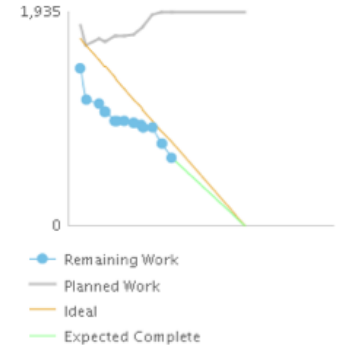
Page 1 of 6

Burndown Current Iteration

Shows the remaining amount of estimated work in hours of work items planned for the current iteration.

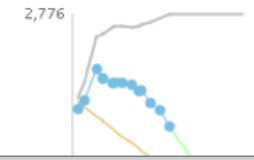
- Burndown

Show Parameters



- Burndown

Show Parameters

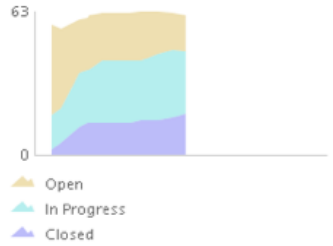


Stories Open/Closed/In Progress

Shows the number of stories which are open, in progress, done during the iteration.

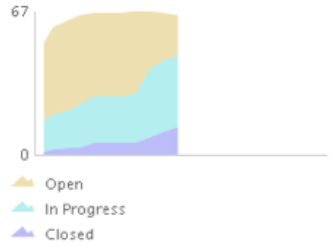
- Stories Open, Closed, in Progress

Show Parameters



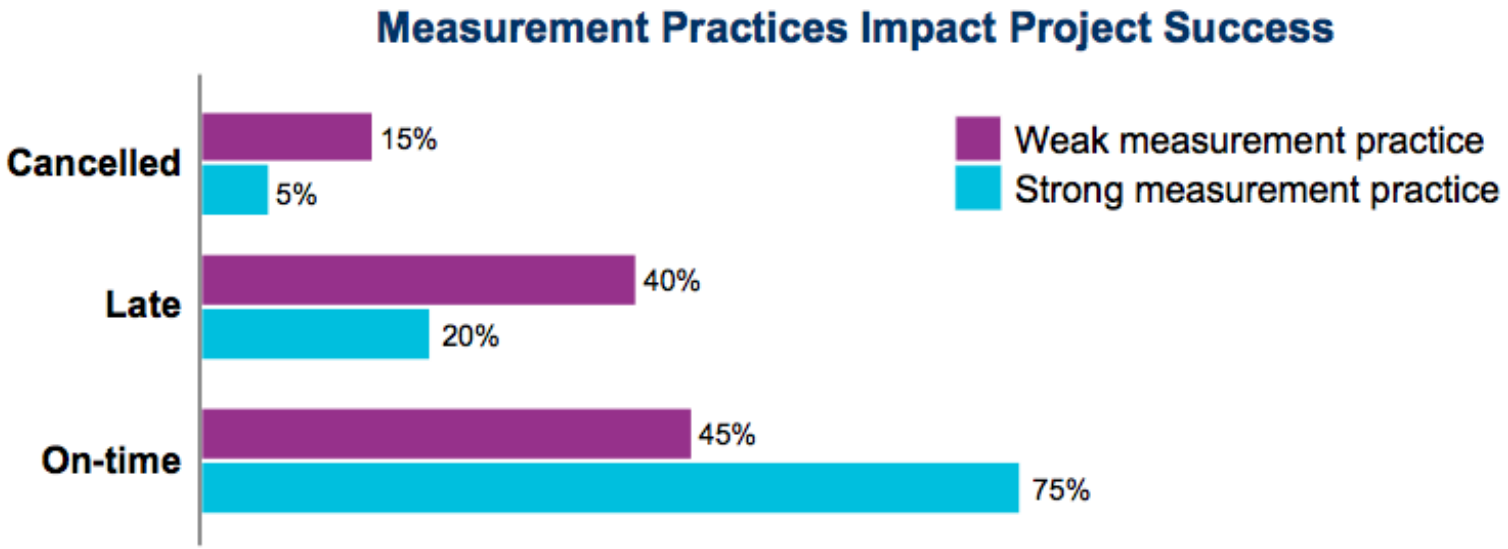
- Stories Open, Closed, in Progress

Show Parameters



Development Intelligence improves predictability by:

- Applying **Business Intelligence techniques** to software and systems development
- Enabling **fact-based decision making** (to communicate status, monitor progress, diagnose problems, identify corrective actions)
- **Steering projects and programs** to deliver on-time

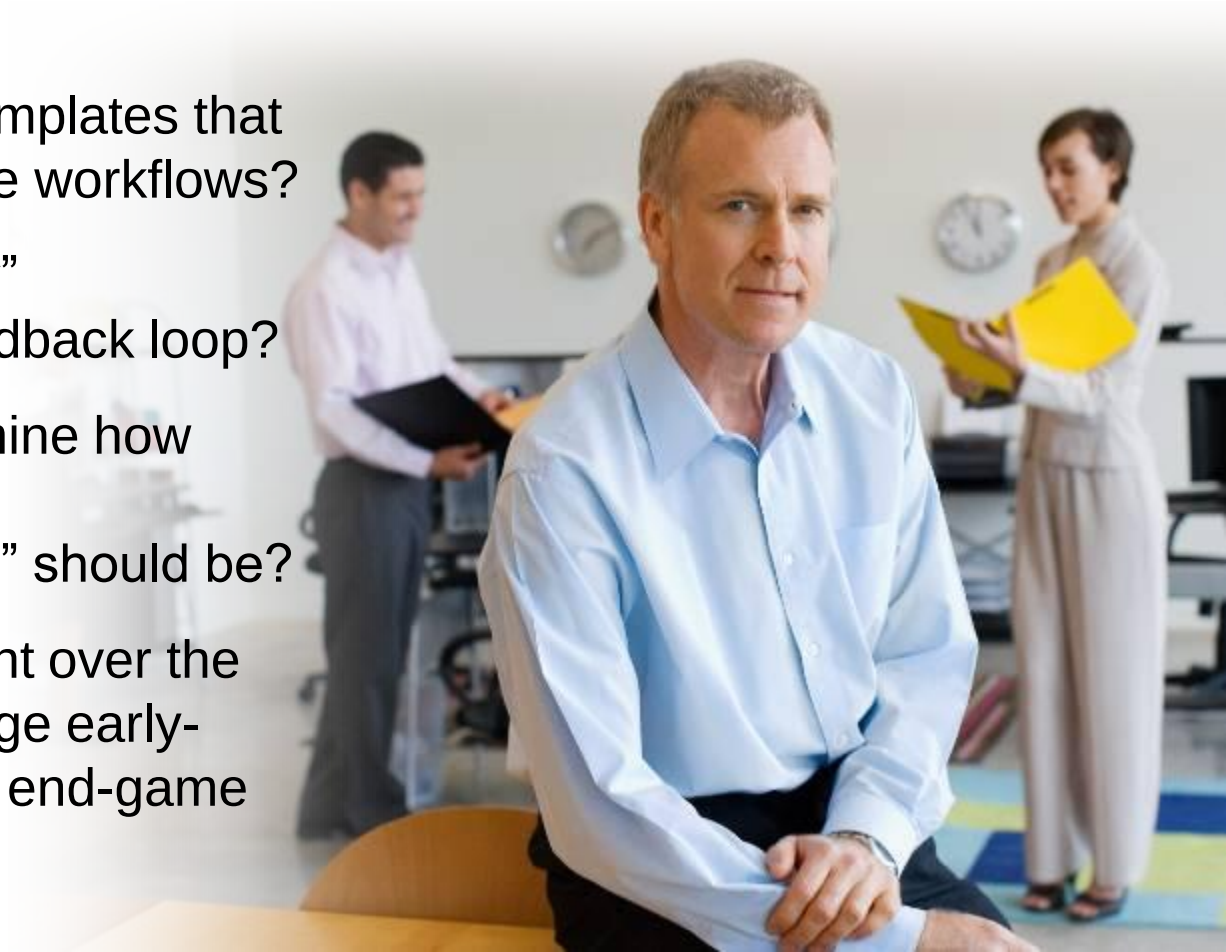


Source: Capers Jones, Measurement, Metrics and Industry Leadership, 2009 and Software Engineering Best Practices, McGraw Hill, 2010.

Continuous improvement challenges

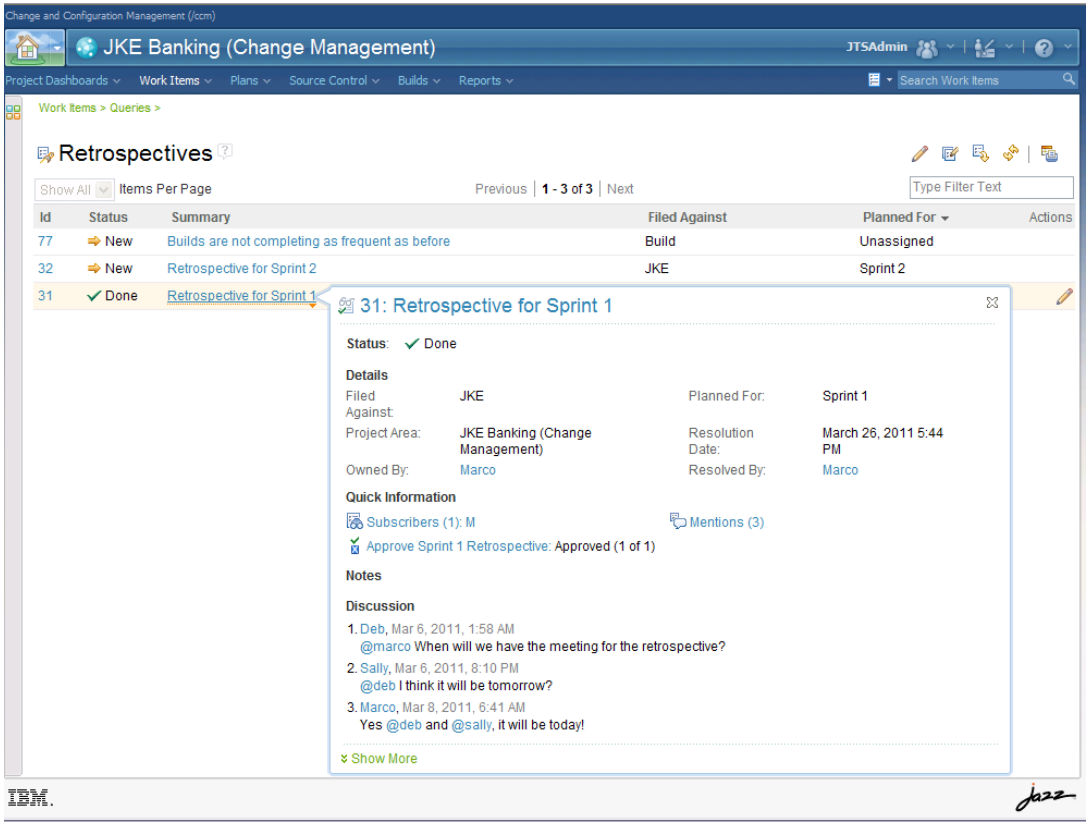
Can your team…

- Assess & act upon improvement ideas freely and as needed through out the project lifecycle?
- Leverage out-of-the-box templates that support traditional and agile workflows?
- Change process “on the fly” as part of a continuous feedback loop?
- Allow team leads to determine how strict or lax the “rules of the road” should be?
- Modify process enforcement over the life of a project, to encourage early-stage experimentation and end-game stability?

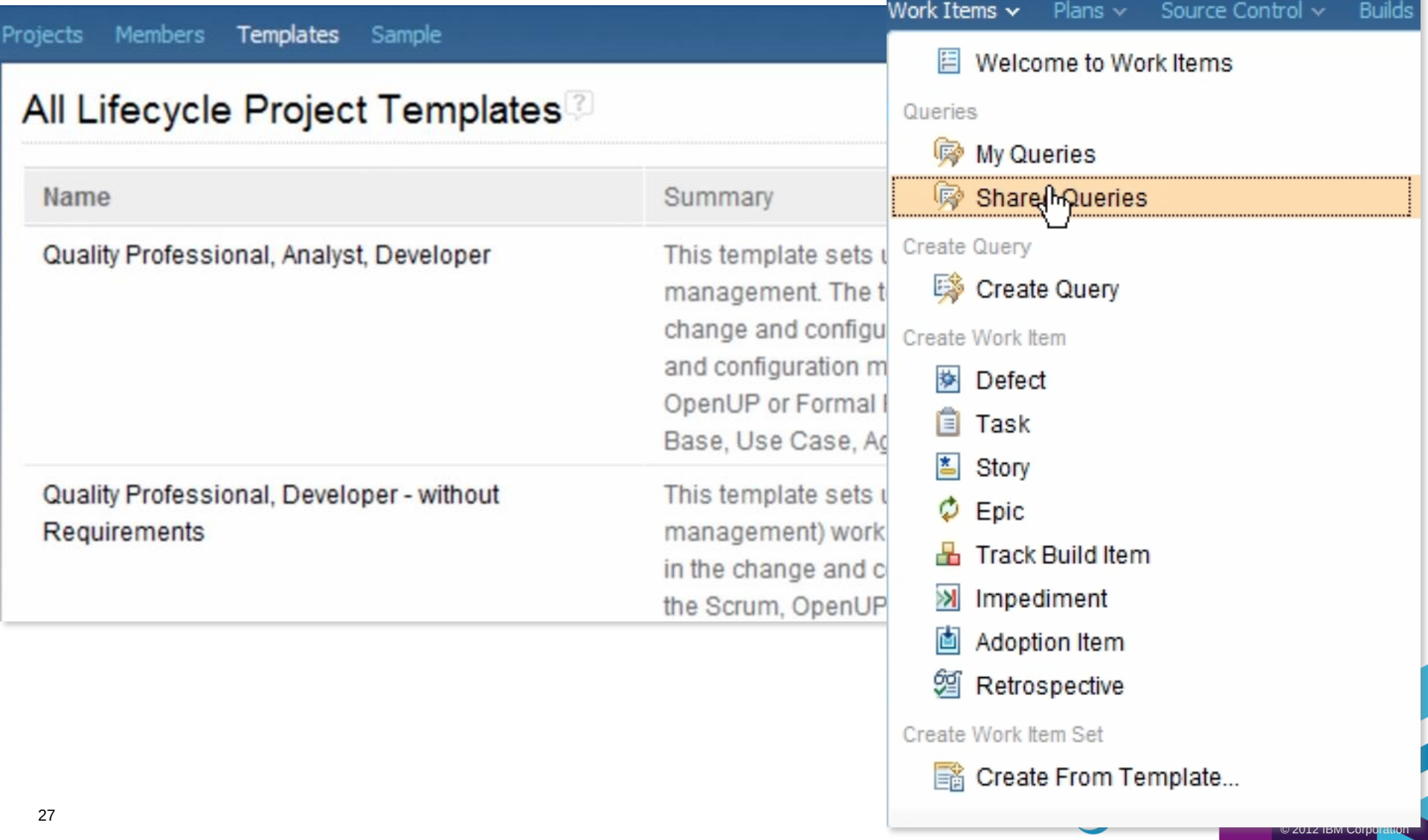


Team Retrospectives help identify areas of improvement

- Tracking Retrospectives help team members to collaborate on improvements.
  - Ranking of process improvements help to focus on where the team feels the biggest pain.
  - Metrics where available help support process improvements and show results.



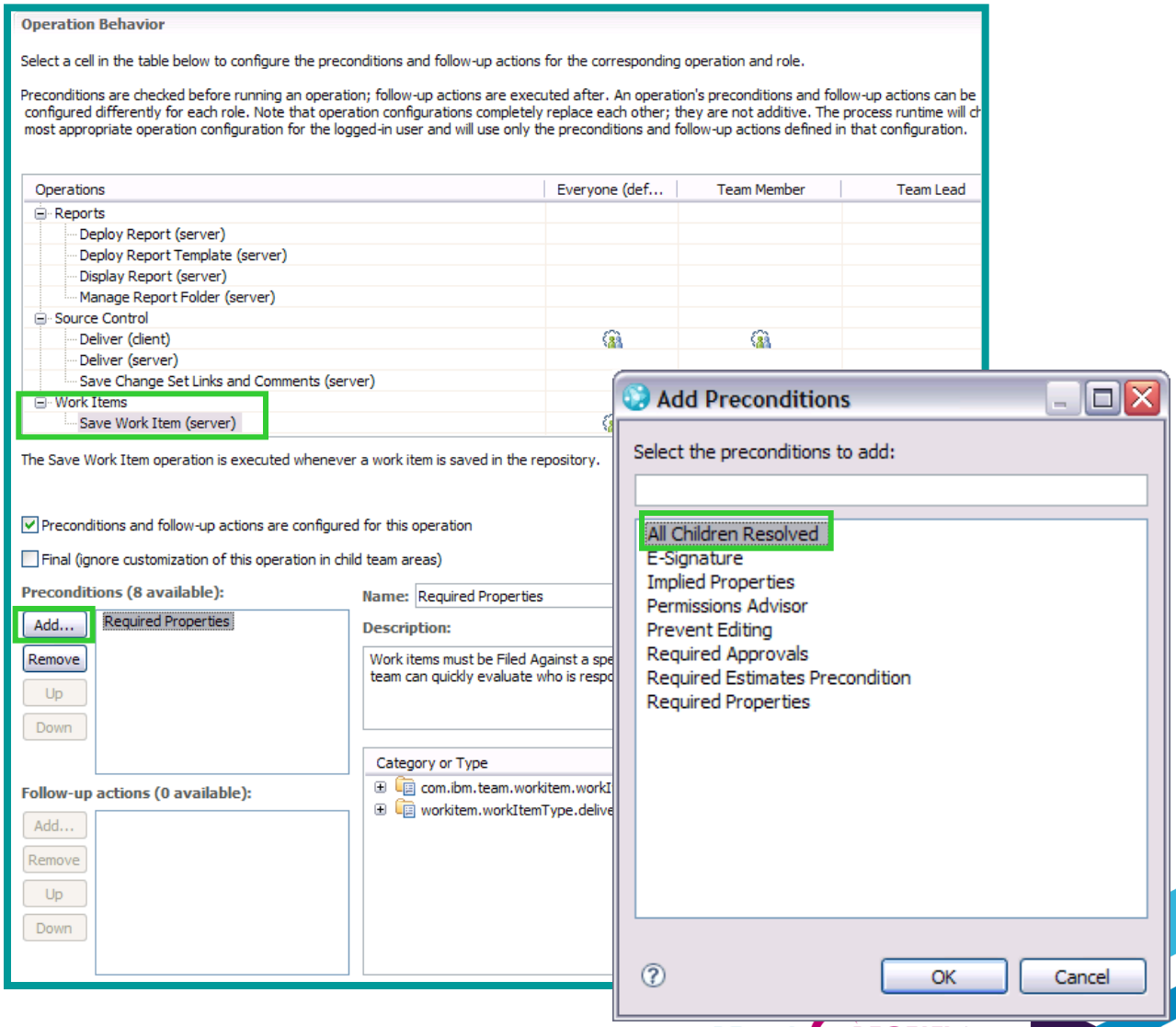
Instantiate best practices as templates for breakthrough improvement



Tweak process definition "in-flight" to correct team actions

Problem: Story completed without all work completed

Solution: Require detailed tasks completed before completing parent



Continuous Improvement reduces cost by:

- Enabling breakthrough improvement through the ongoing **adoption of best practices and automation** to reduce manual, non-creative and error prone tasks
- Promoting **incremental improvement of a project** when needed through user interfaces that are easy to customize and 'in-flight' changes to process
- Allowing **everyone to participate** with easy to adopt best practices at your fingertips.

IBM Rational solution for Collaborative Lifecycle Management

Improve productivity with an integrated ALM solution

- **Optimize your team through support of the 5 ALM Imperatives**
  - Real-time planning
  - Lifecycle traceability
  - In-context collaboration
  - Development Intelligence
  - Continuous Improvement
- **Get up and running quickly**
- **Extend as your needs evolve with role-based licensing**
- **Support heterogeneous development across multiple platforms and technologies**

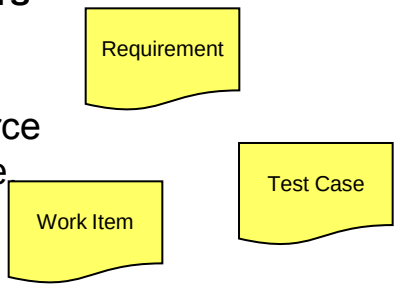
Jazz is IBM's initiative for improving collaboration across the software and systems lifecycle

The Jazz architecture overcomes limitations of the past

✓ Open choice and rich integration

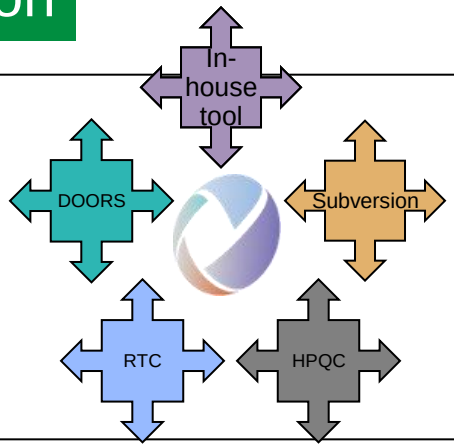
Uniform Resource Identifiers

"I can link virtually any resource to virtually any other resource regardless of where the resource lives!"



Standard Interfaces

"Each tool can evolve independently without breaking integrations!"



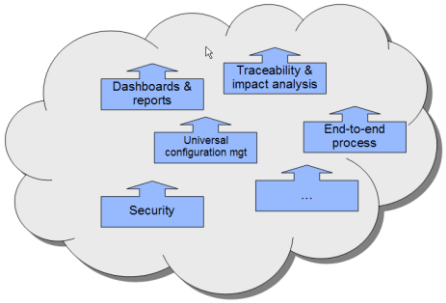
Open Standards for the Lifecycle

"Each domain can create standards without having to wait on the others or get the whole industry to agree!"

Open Services for Lifecycle Collaboration
open community. open interfaces. open possibilities

Integration Services

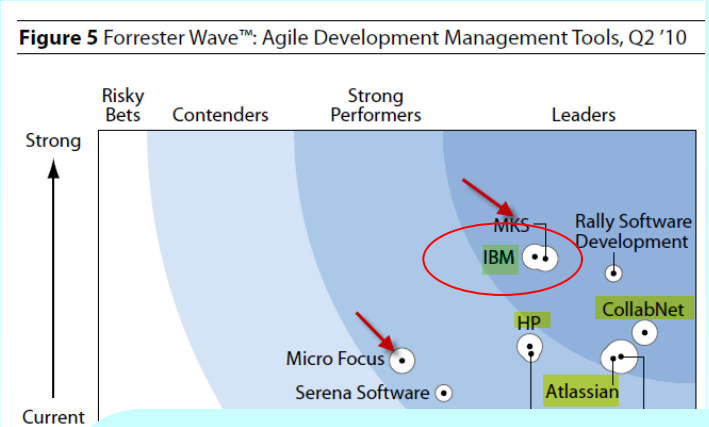
"Each vendor can evolve their tool to exploit the services that are valuable to customers like me!"



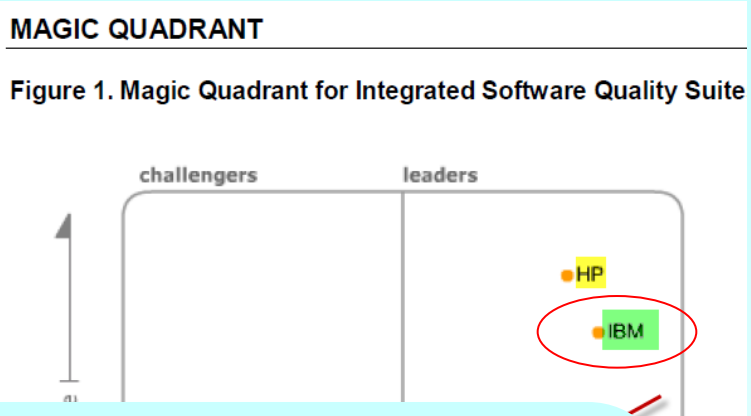
✓ Evolutionary and incremental adoption

IBM Rational dominates marketplace

Forrester: IBM a Market Leader



Gartner: Leader in the Magic Quadrant



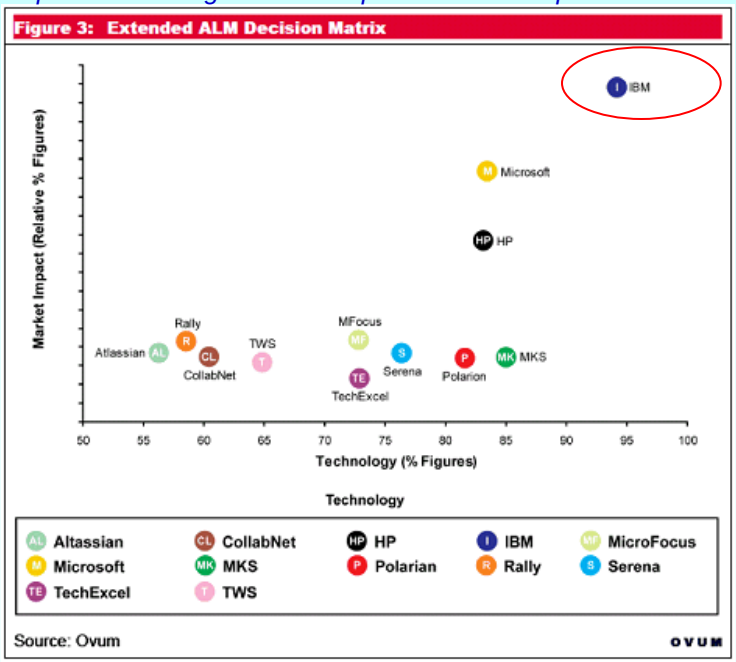
Gartner: IBM earns "Strong Positive" *the highest possible rating*

Figure 1. MarketScope for Application Life Cycle Management

	RATING				
	Strong Negative	Caution	Promising	Positive	Strong Positive
AccuRev			x		
Aldon			x		
Atlassian				x	
CollabNet				x	
Digite			x		
HP				x	
IBM					x
Kovair			x		
Micro Focus			x		
Microsoft				x	
MKS				x	
Parasoft			x		
Polarian Softw are			x		
Rally Softw are				x	
Seapine Softw are			x		
Serena Softw are				x	
SmartBear Softw are			x		
TechExcel			x		
ThoughtWorks			x		
VersionOne				x	

As of 11 November 2010
Source: Gartner (November 2010)

Ovum: "IBM has the broadest and arguably the *deepest portfolio among all vendors profiled in this report*."



Where to find more information…

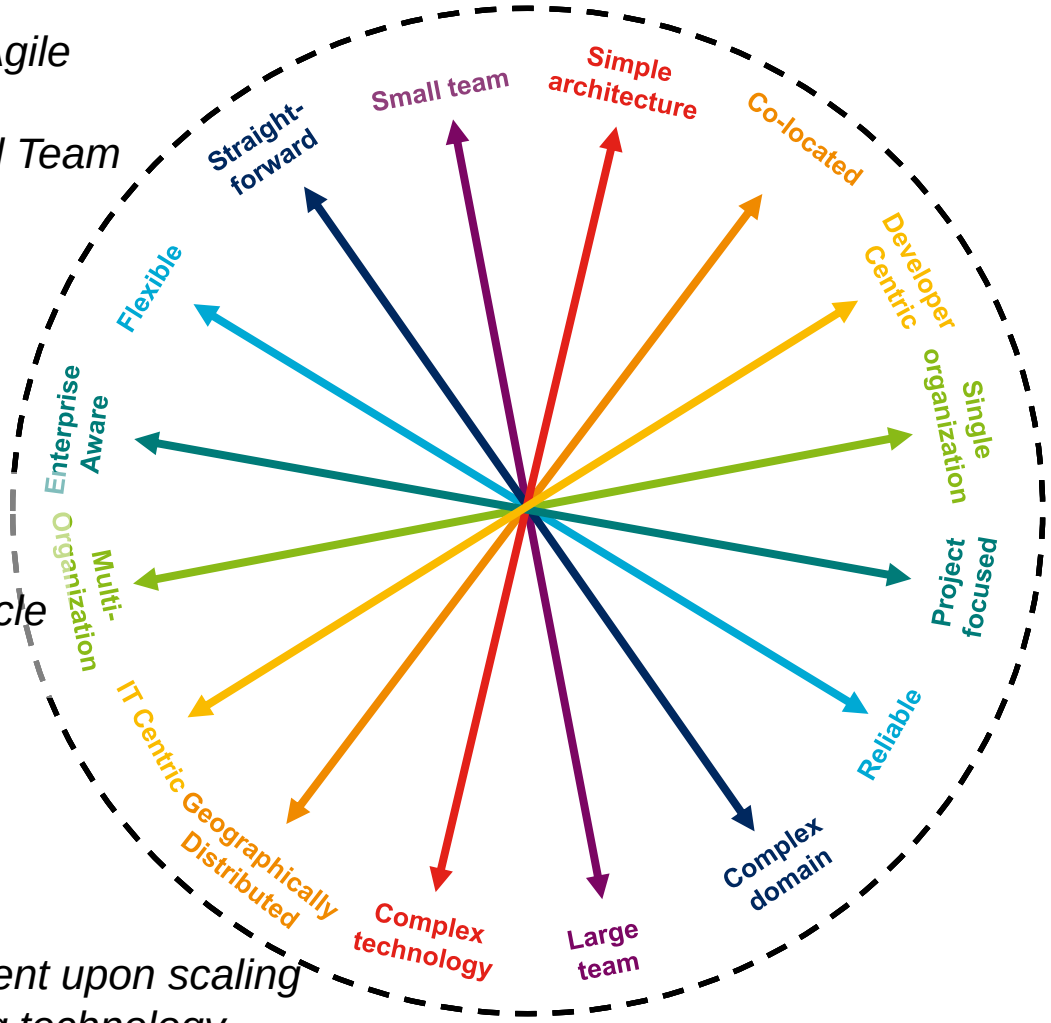
jazz.net

www.ibm.com/software/rational

The Agile ALM compass

Core Agile/Scrum
Use Rational Team Concert

Disciplined Agile Delivery
Use Rational Team Concert



Scaled IT agility
Use Rational Collaborative Lifecycle Management

agility@scale
Solution dependent upon scaling factors & existing technology

CLM is a Journey: Entry Points and Adoption paths

Common Entry Points

Requirements Definition
Improve capacity to deliver value by effectively capturing, prioritizing, managing and monitoring requirements throughout the lifecycle
Rational Requirements Composer (RRC)

Quality Management
Improve quality and reduce and cost by automating the testing process
Rational Quality Manager (RQM)

Collaboration, Planning, Change, Configuration and Build Management
Collaborate across diverse engineering disciplines and development teams
Rational Team Concert (RTC)

NEW

Rational solution for Collaborative Lifecycle Management (CLM)
Align Requirements, Development and test teams to reduce cost and improve predictability, value, quality and time to delivery

Supporting Service Offering

- RRC Quick Start
- RQM Quick Start
- RTC Quick Start
- Disciplined Agile Delivery with RTC Quick Start*
- Planning and Governance with RTC Quick Start
- Agile Jump Start Deployment Package
- Introducing RTC into CCM Legacy Environment Assessment**
- CLM Quick Start

Continued Adoption

How do I ensure development implements the business needs?
Adopt RRC & RTC

How do I validate quality with the business?
Adopt RRC & RQM

How do I ensure development is tested by independent test?
Adopt RTC & RQM