Effective Software Delivery using Rational Collaborative Lifecycle Management Solutions

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IBM Software, Rational
I TWEET! FOLLOW ME. @FarizSaracevic

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Agenda

- ALM Challenges
- Effective Application Lifecycle Management (ALM)
- Getting started on your ALM journey
- Questions

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We are a part of a movement that has the potential of being (or perhaps already is) more impactful than the Industrial age…

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Software unleashes our creativity

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Software connects us in ways we never imagined

Apps for Autism: Communicating on the iPad

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Tweet This

More
Share It

MAR
12
2011

Japan Tsunami & Earthquake – Use of Twitter, Facebook, Skype & other Social Networks

1

The tsunami & earthquake that have struck Japan have affected the communication sector. Mobile phone networks have been jammed & people are finding it difficult to communicate. Twitter, Facebook, Skype & local Japanese social networks have come in handy for people to communicate & keep in touch with the loved ones. Social media has been playing a crcial role in times of natural disasters. In Haiti earthquake also, twitter was used to keep in touch with the world. Several people have posted on their FB wall about their experiences during the quake. The japan Tsunami related topics have been trending in Twitter. Several videos have also been posted in Youtube.

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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.

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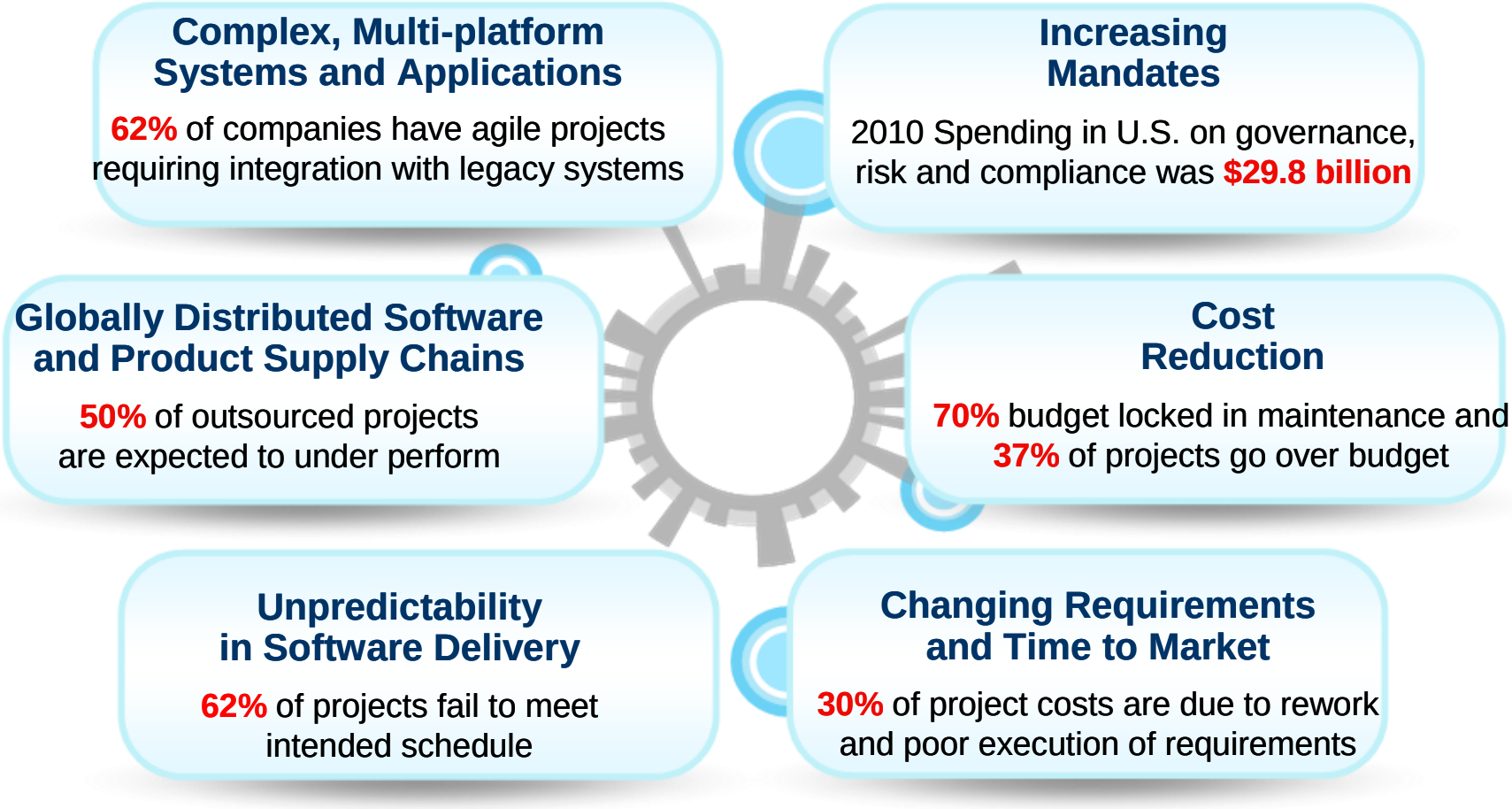
Realities can stall software-driven innovation

Complexities in software delivery compounded by market pressures



Source: Numerous sources, see speaker notes for details

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ALM: Better Software Faster

Stakeholders depend upon the productivity of a multi-disciplinary team to deliver the software they expect…

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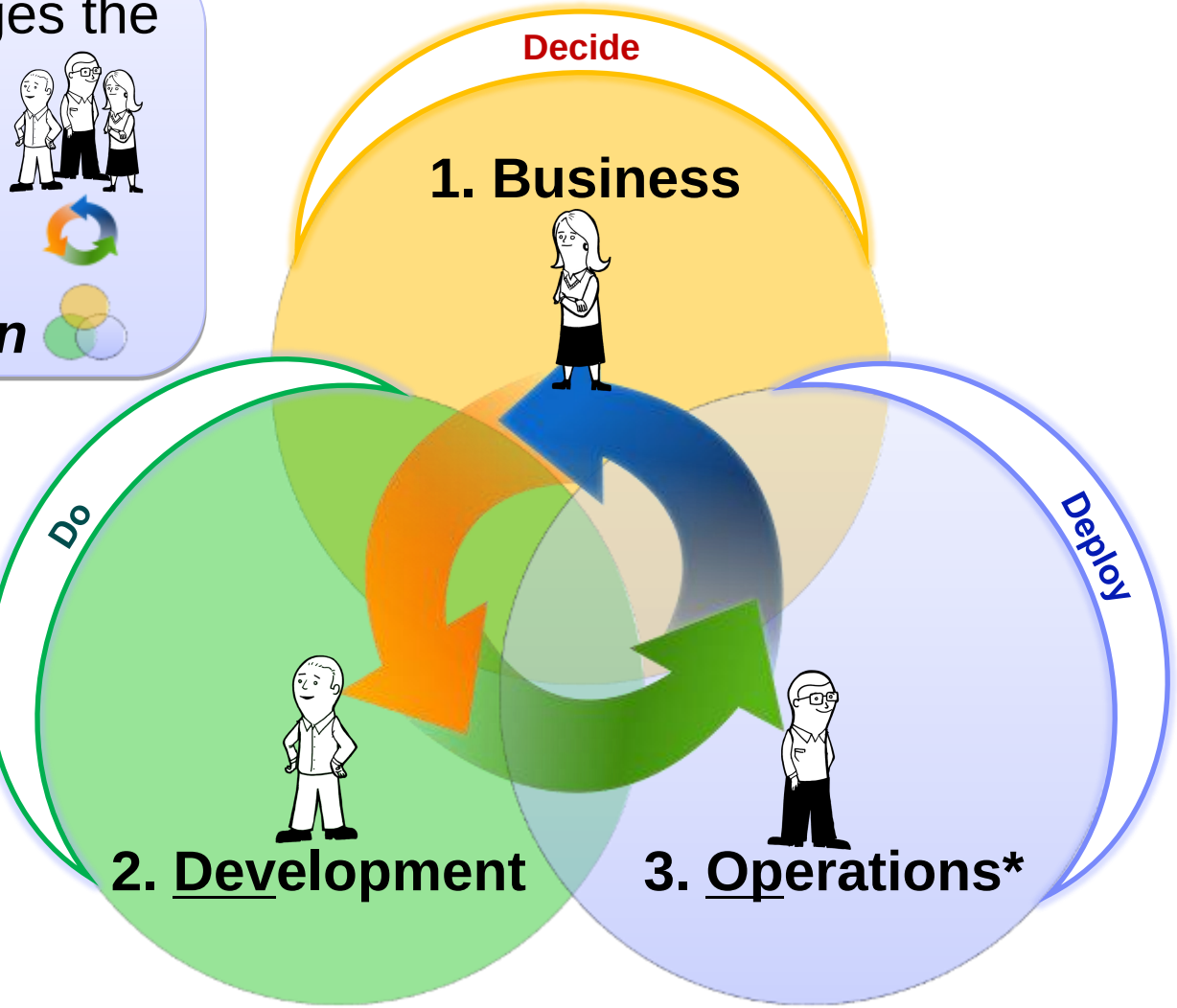
Application Lifecycle Management can help!

ALM manages the flow of:

People

Process

Information



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What do ALM teams do to improve their productivity?

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Five Imperatives for Effective Application Lifecycle Management to improve organizational productivity

- Maximize product value with **In-Context Collaboration**
- Accelerate time to delivery with **Real-Time Planning**
- Improve quality with **Lifecycle Traceability**
- Achieve predictability with **Development Intelligence**
- Reduce costs with **Continuous Improvement**

Learn more at ALM Everywhere

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“I used to think collaboration was a hippie word leftover from the 1960’s…

…now I define it as survival”

A speaker at Innovate 2011, Rational User Conference

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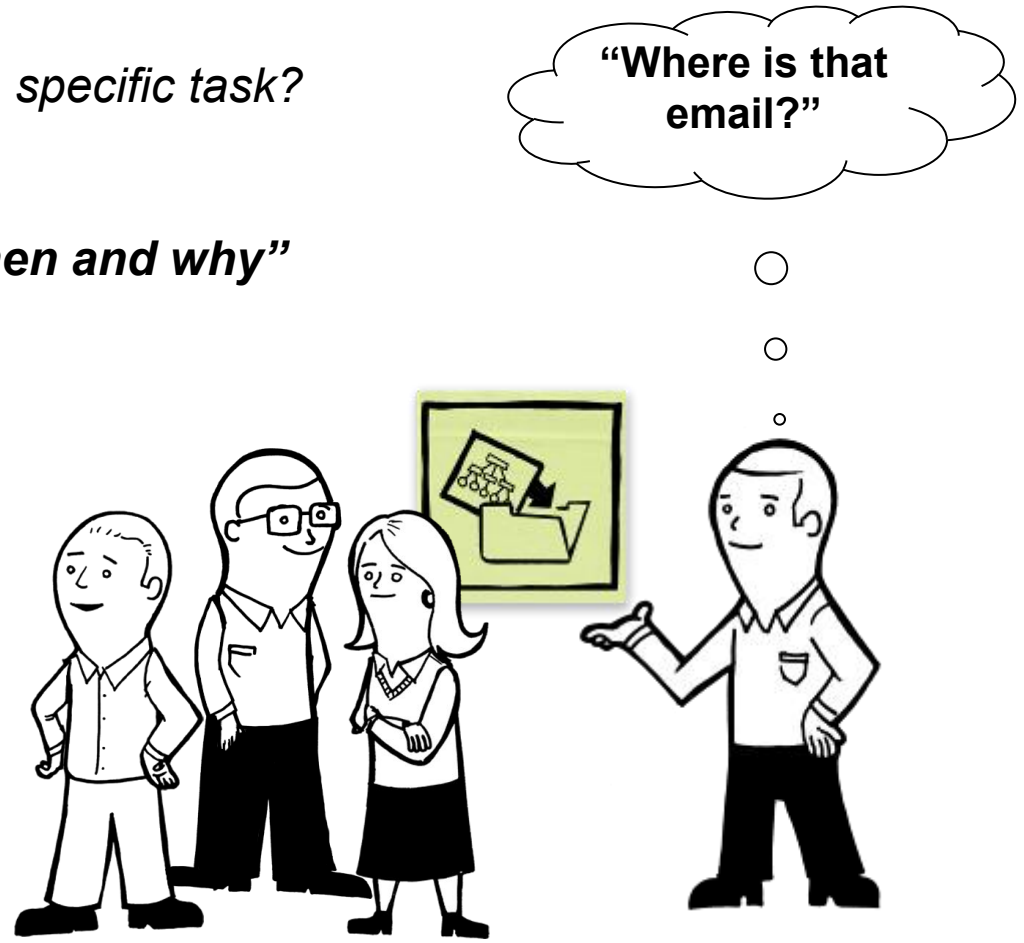
Collaboration challenges

Can your team…

- *…find all the information related to a specific task?*
- *…quickly grasp the **"who, what, when and why"** of team activities?*
- *…bring new team members up-to-speed quickly?*
- *…overcome the barriers of multiple time zones when working with outsourced and distributed team members?*



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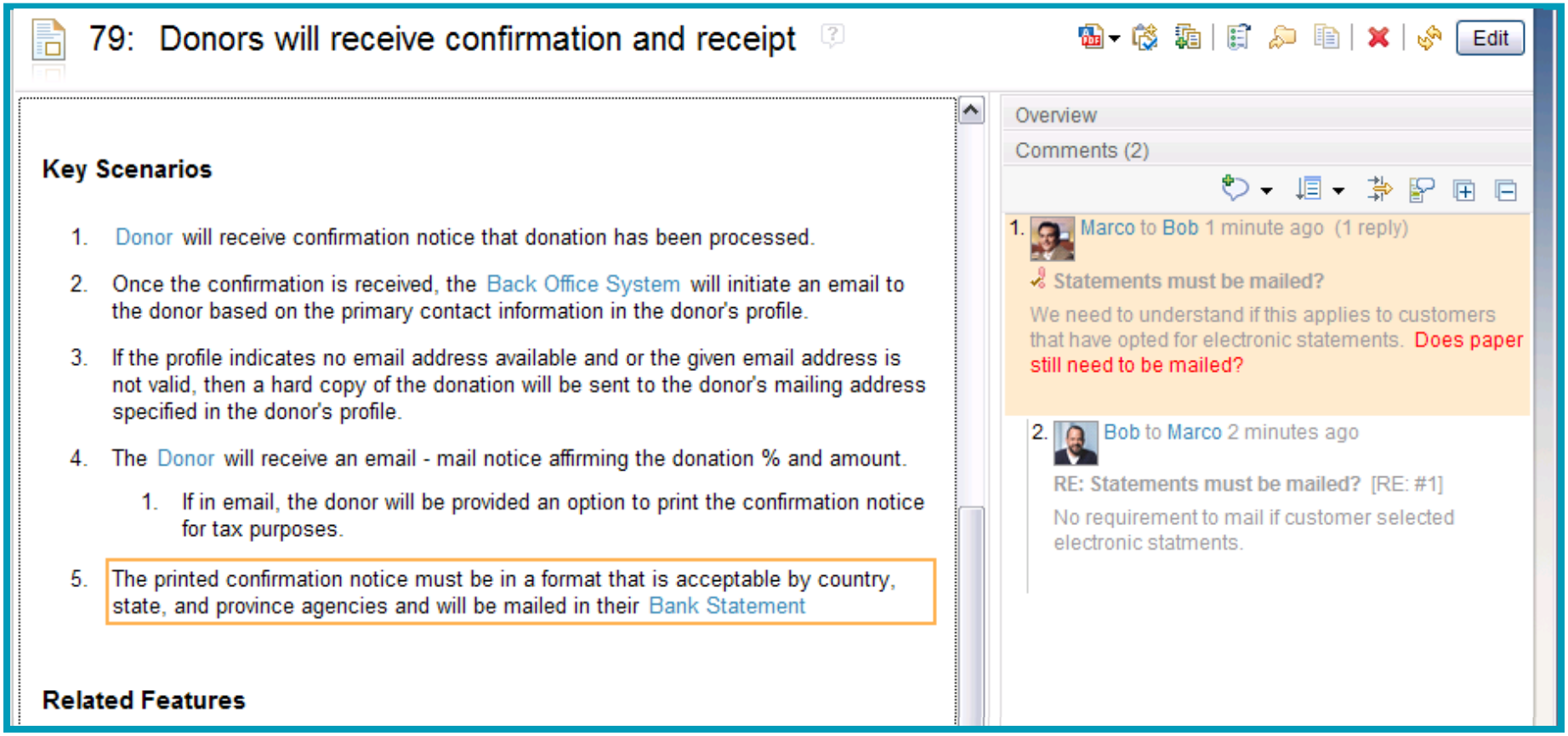
Comments on requirements details are in-context



A click on the comment highlights the text under discussion.

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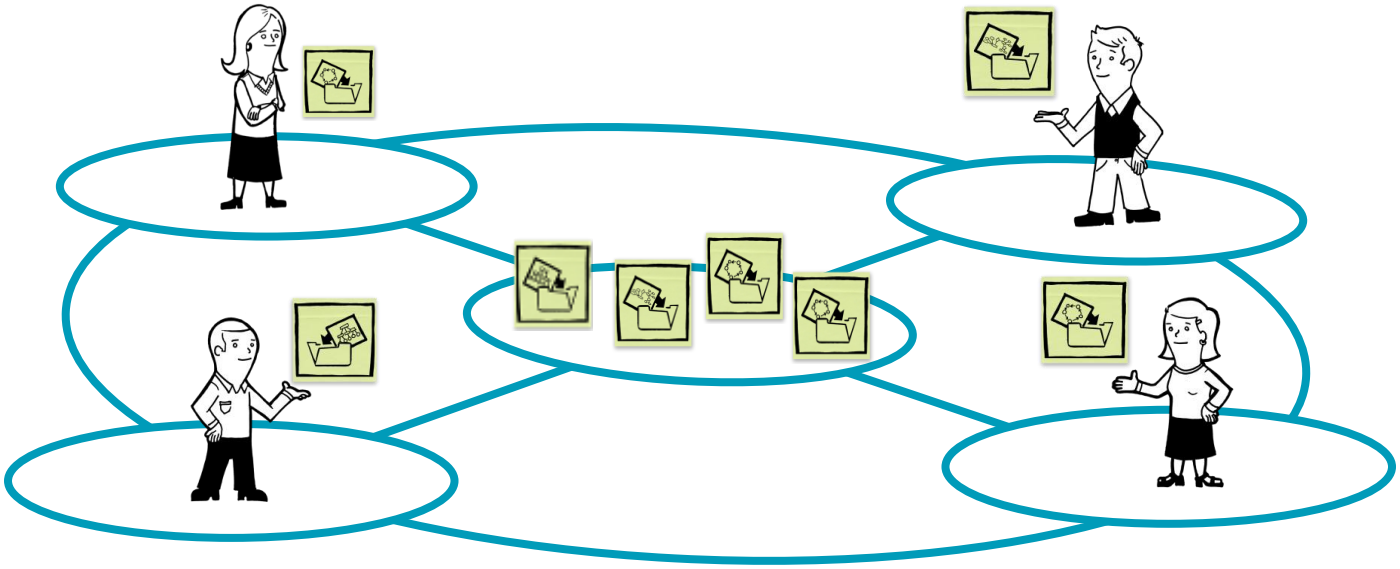
In-Context Collaboration improves product value

- Empower teams to collaborate on and review software development artifacts so they can **incorporate feedback early and often** aligning delivery with stakeholders' vision
- Provide a **single source of truth** hosted in a shared repository so that team members can collaborate effectively around the globe to build a collective intelligence
- Make **information immediately accessible** to all team members in the context of their work



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"Observe always that everything is the result of change, and get used to thinking that there is nothing Nature loves so well as to change existing forms and make new ones of them."

Marcus Aurelius, emperor of Rome (121-180 AD)

"He, who could foresee affairs three days in advance would be rich for thousands of years."

Chinese Proverb

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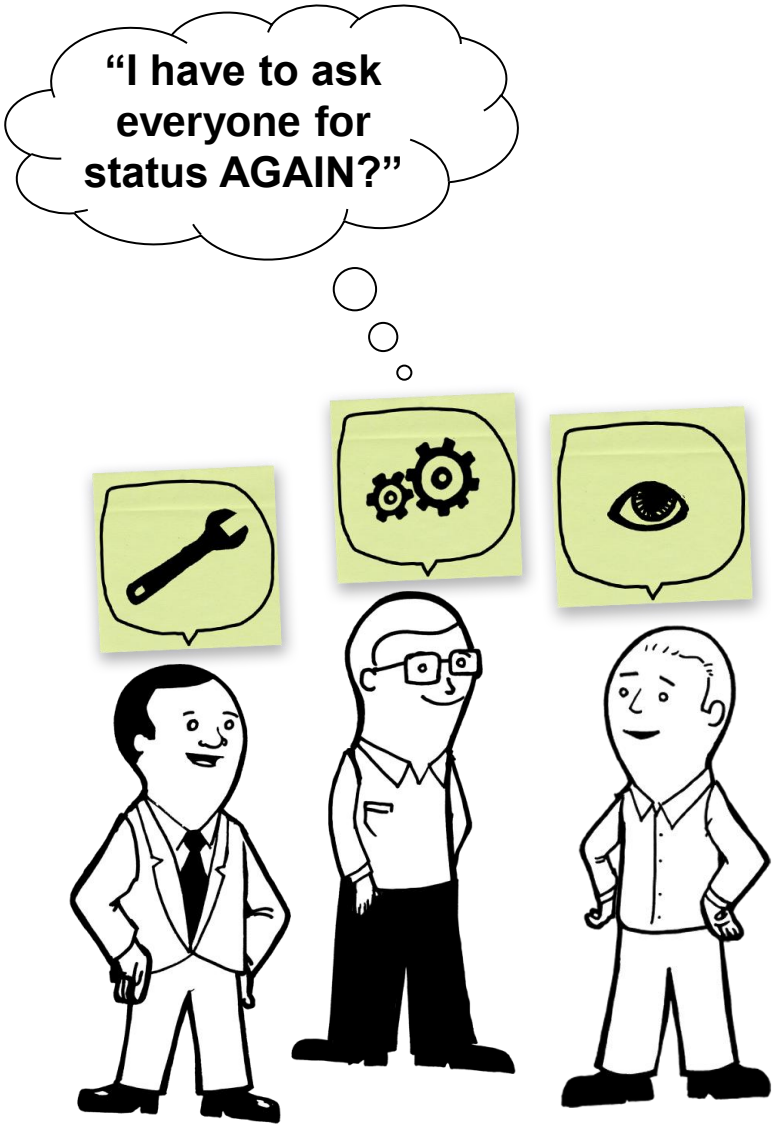
Planning challenges

Does your team…

- *…plan across the entire team?*
- *…manually collect and report status?*
- *…instantly see the impact of a change in project scope or resources?*
- *…**integrate planning with execution?***
- *…plan for waterfall, iterative and agile environments?*



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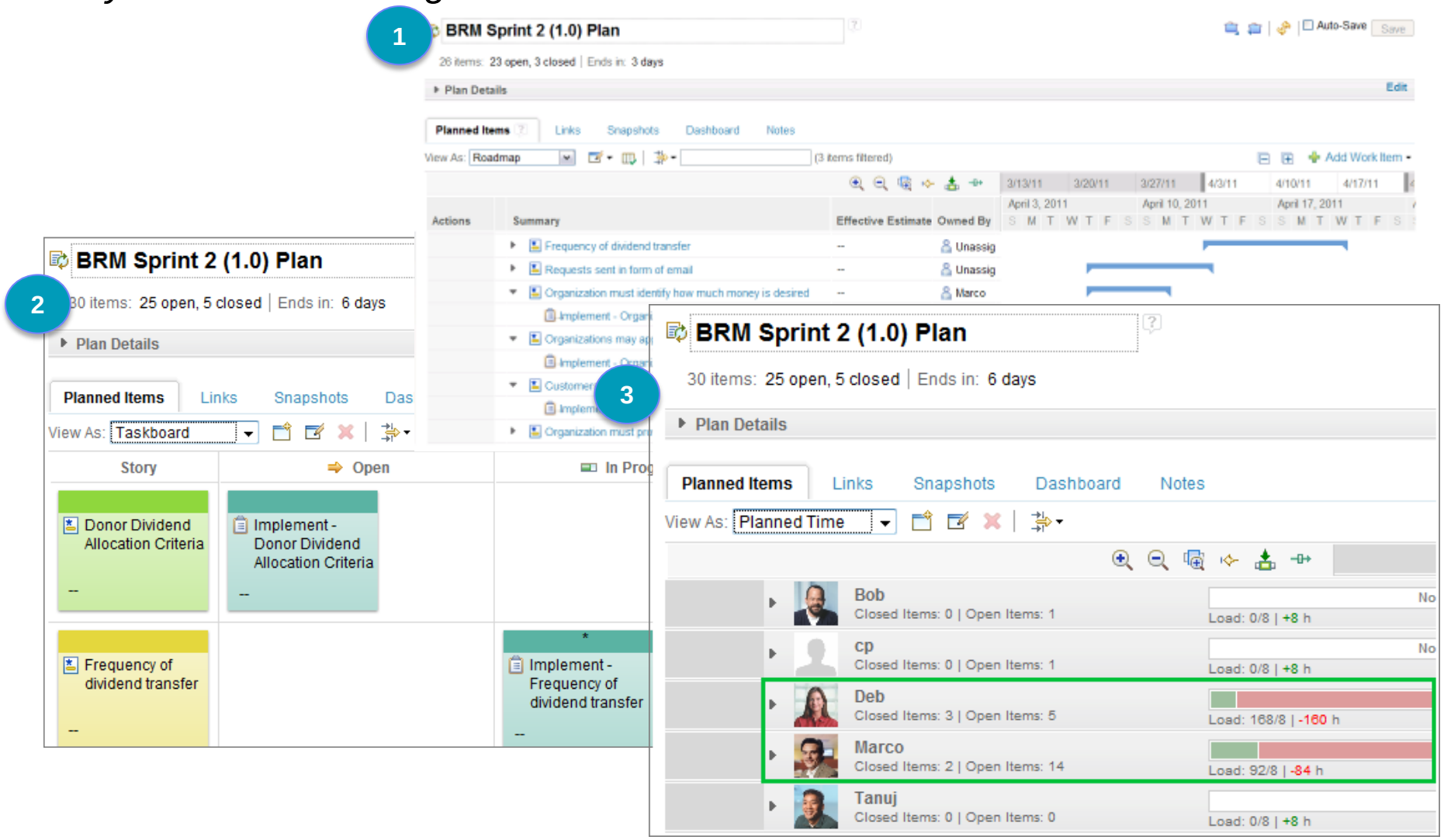
One plan with multiple views

Everyone sees meaningful data in the context of their work



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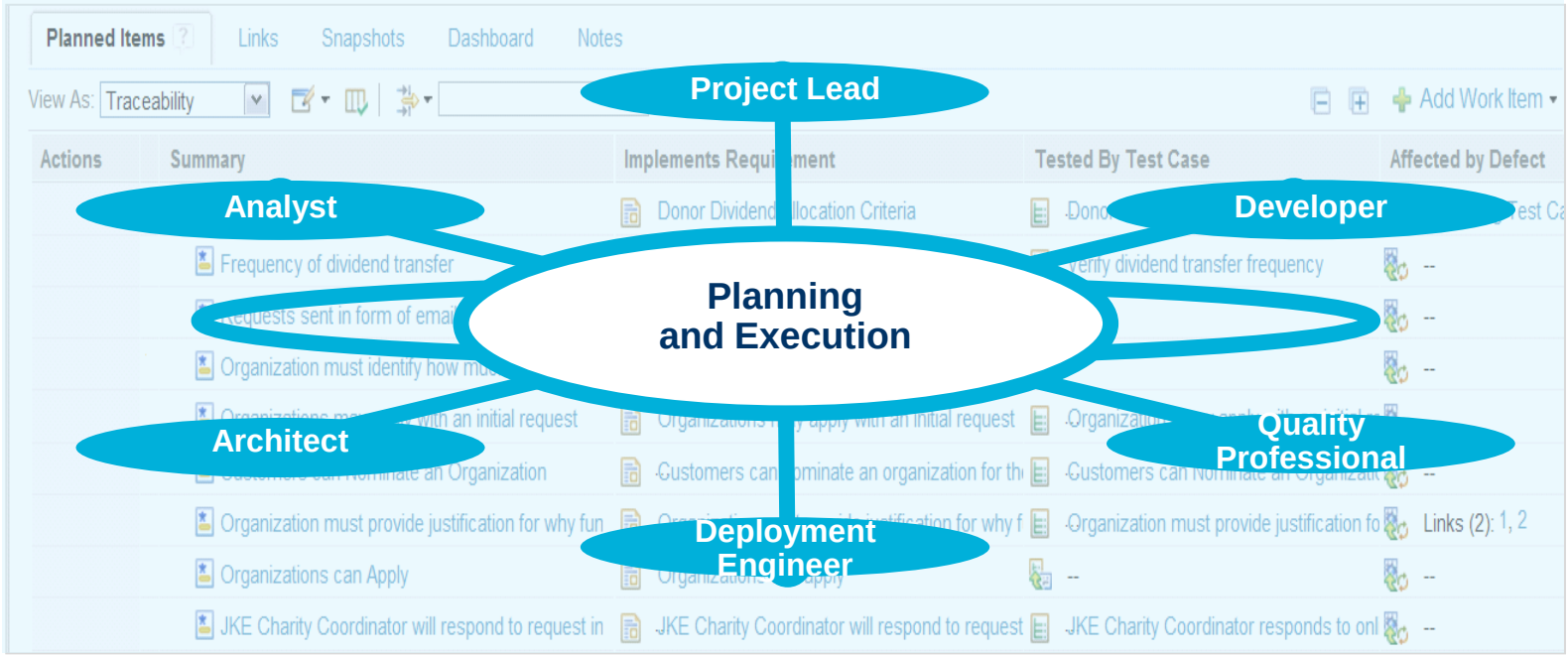
Real-Time Planning accelerates time to delivery

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



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The head bone's connected to the neck bone…

the neck bone's connected to the backbone…

the backbone's connected to the hip bone…

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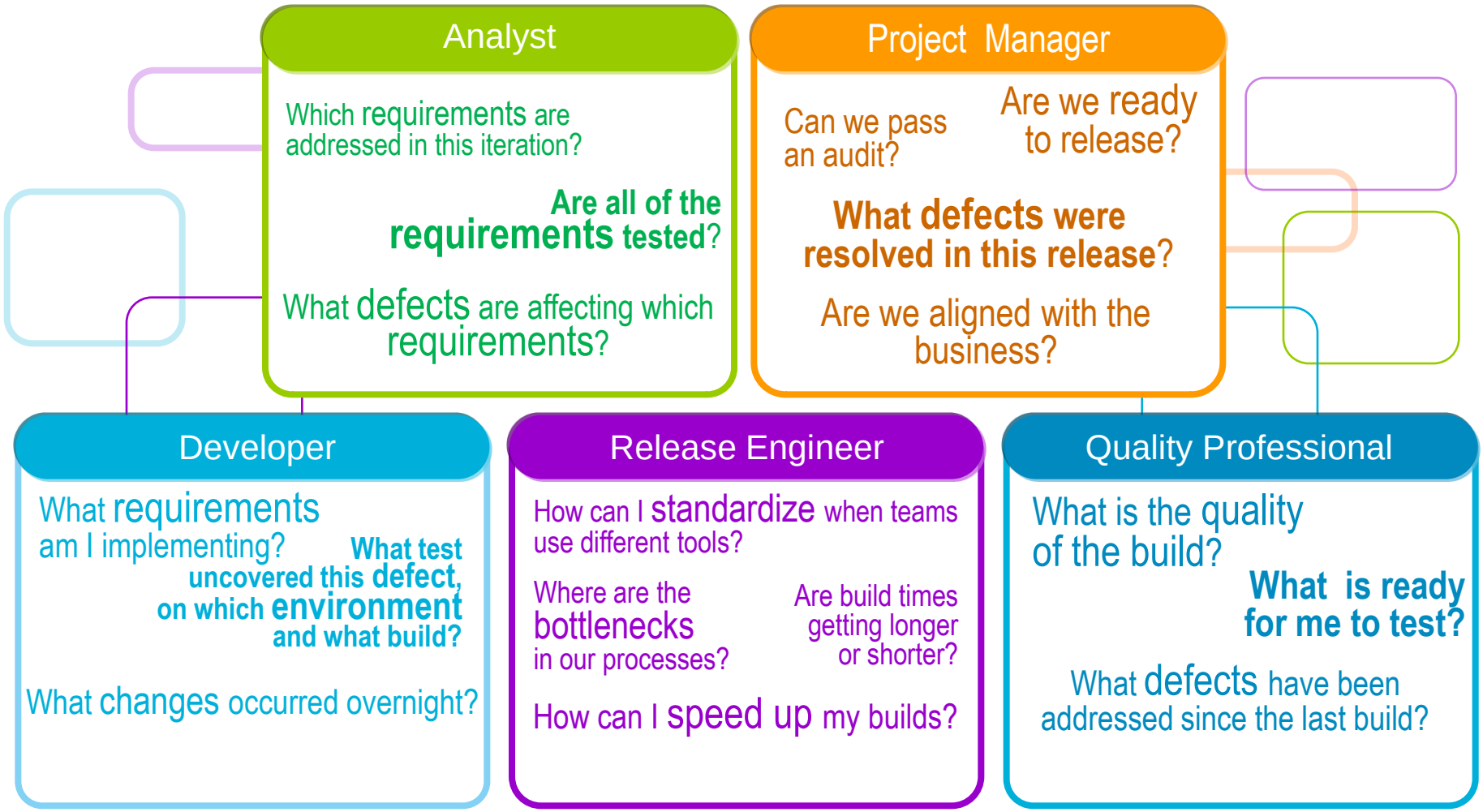
Lifecycle Traceability challenges

Can your team answer…



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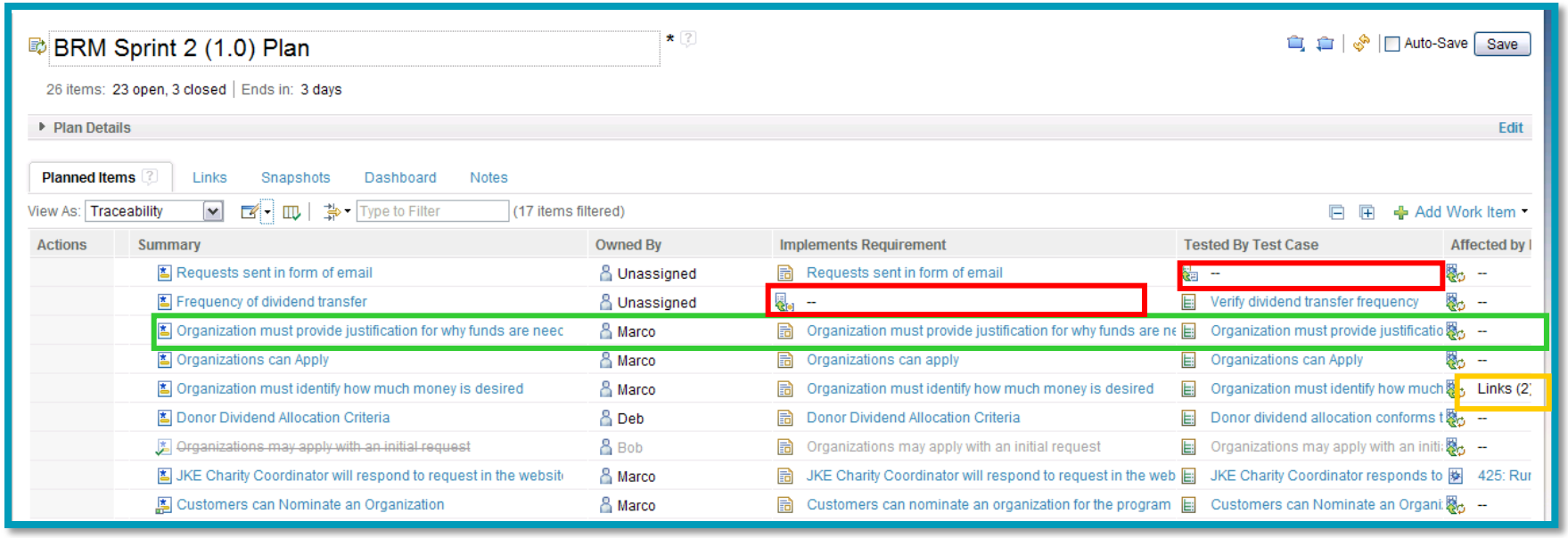
Team leads have visibility into coverage & completeness

- Proactively respond to gaps (in red) as they surface throughout the project
- Issues are quickly highlighted and resolved (in yellow)



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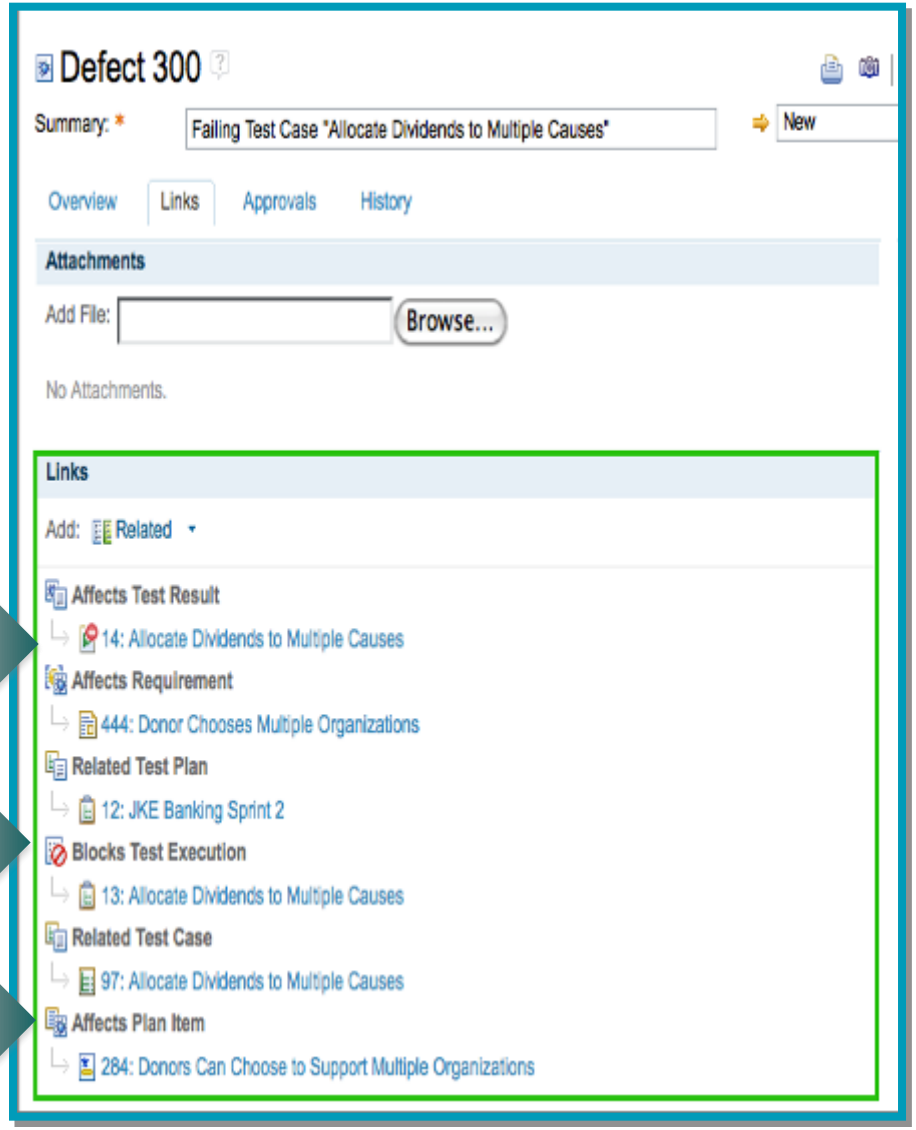
Linked data is visible on all artifacts

- 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: Developer sees the relationships on a defect
- Traceability links on defects are automatically created



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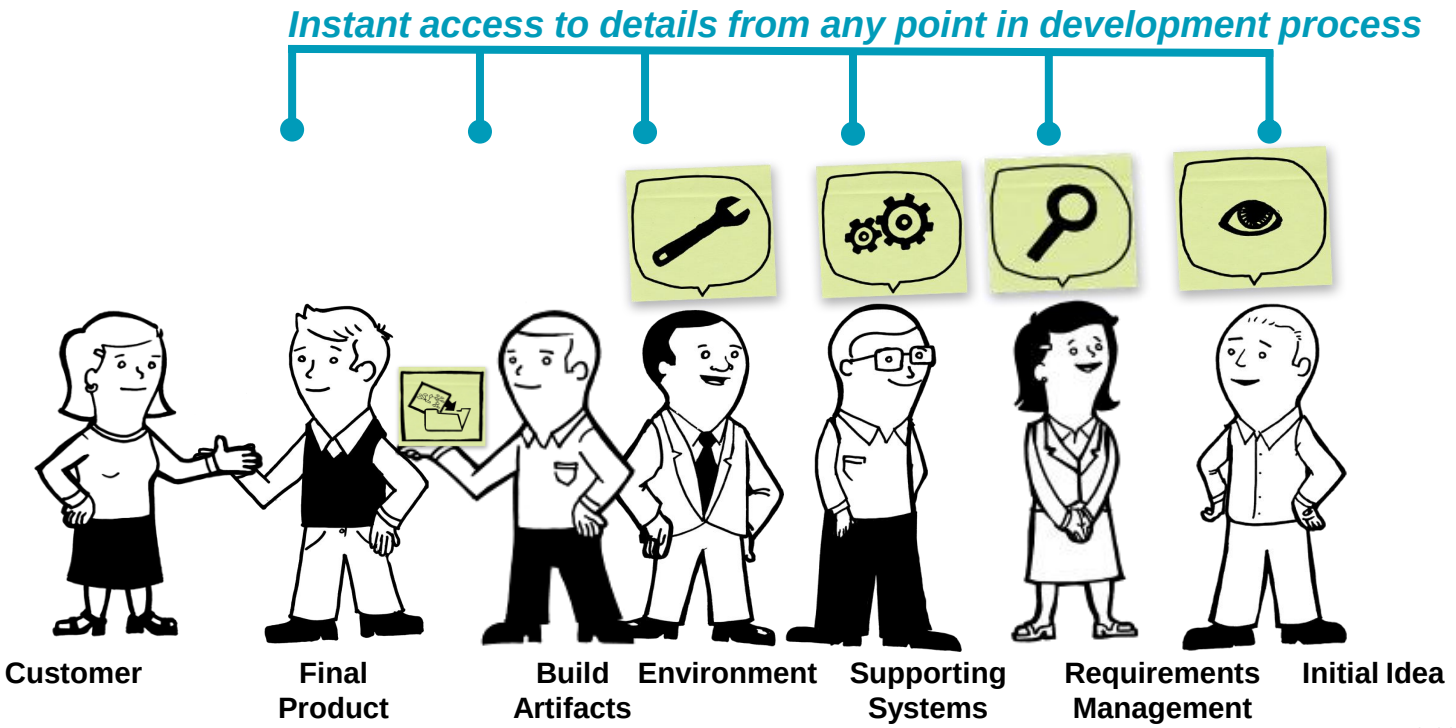
Lifecycle Traceability improves quality

- Establish **relationships between software artifacts**
- **Identify and close 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



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Are we there yet?

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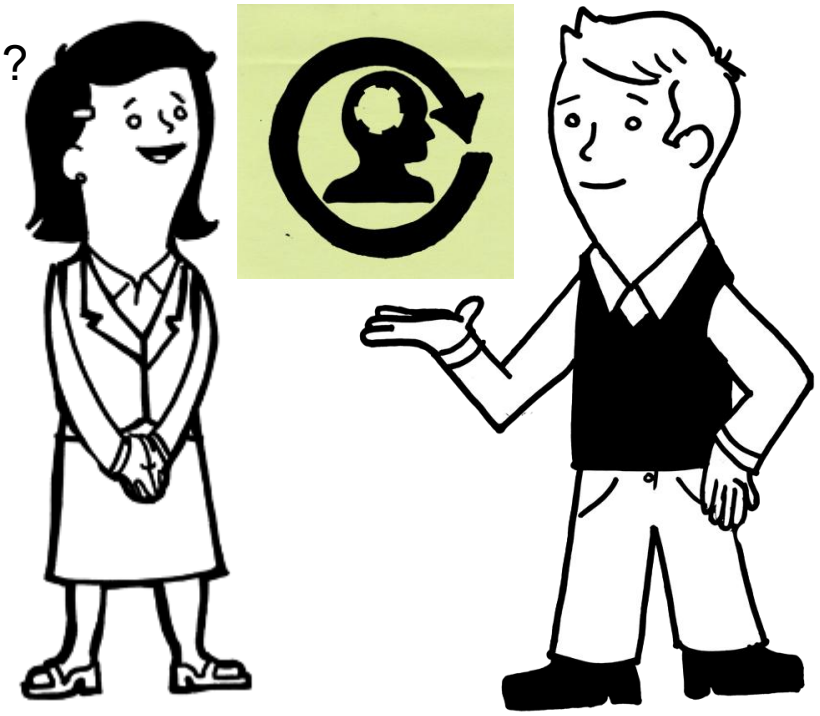
Measuring and steering challenges

Can your team…

- …provide one view of project health at multiple levels?
- …**make steering decisions based on facts rather "guesstimates"?**
- …track desired improvements with metrics?
- …minimize administrative overhead by relying on your environment to capture metrics?



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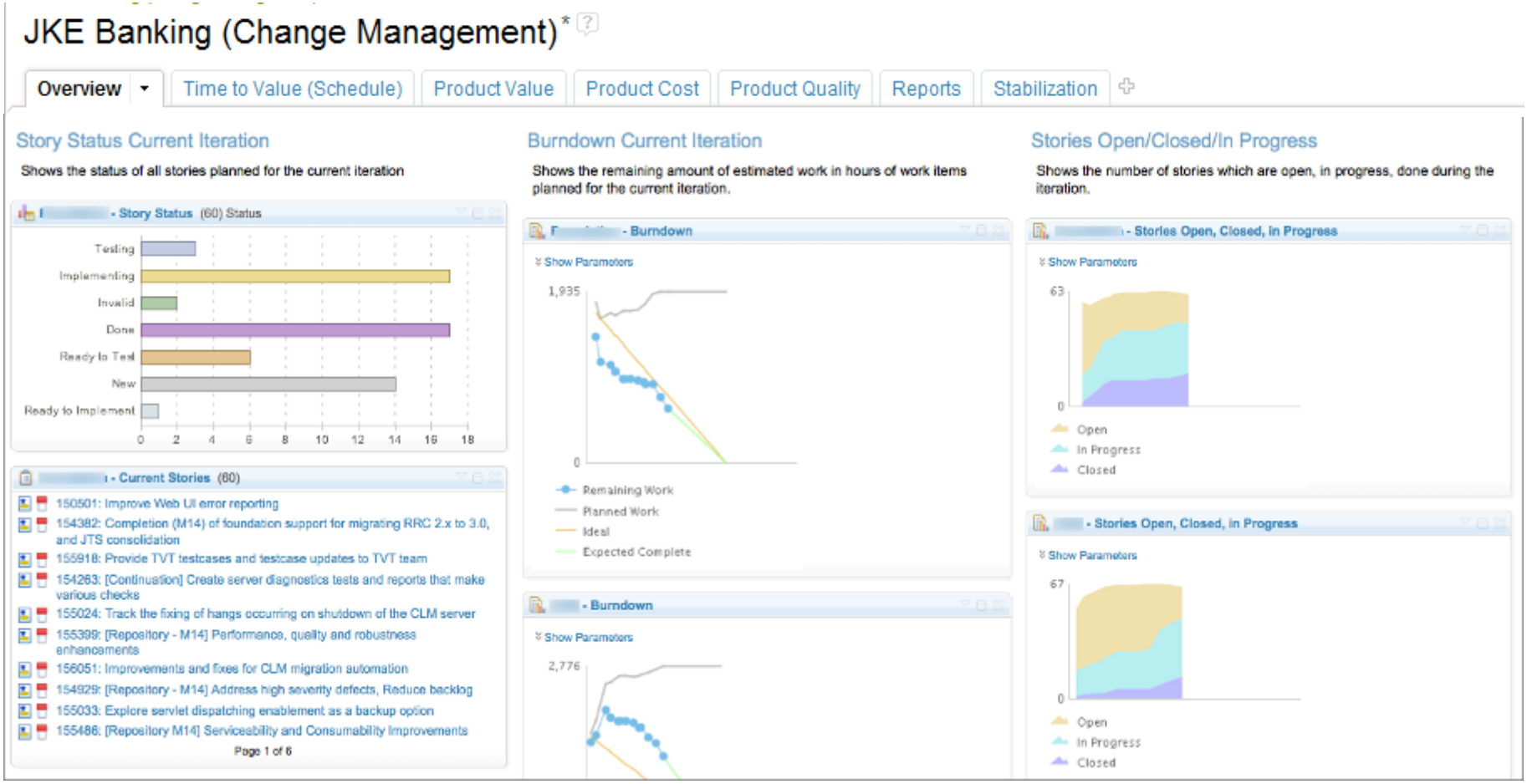
Use dashboards to provide that one view of project health (information radiator)



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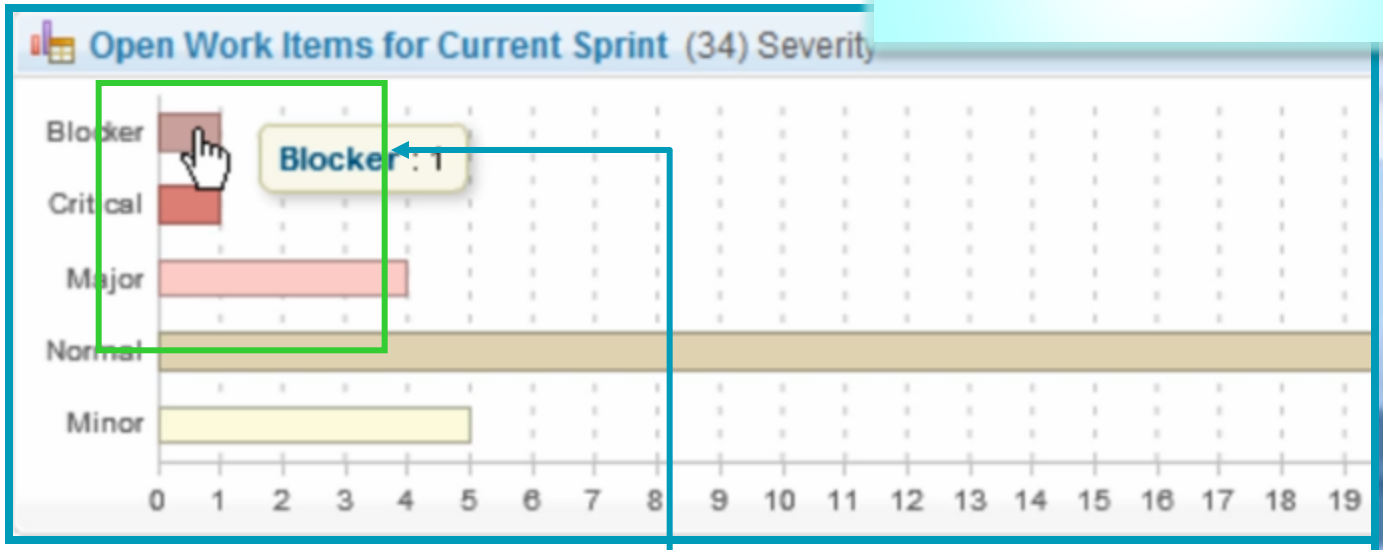
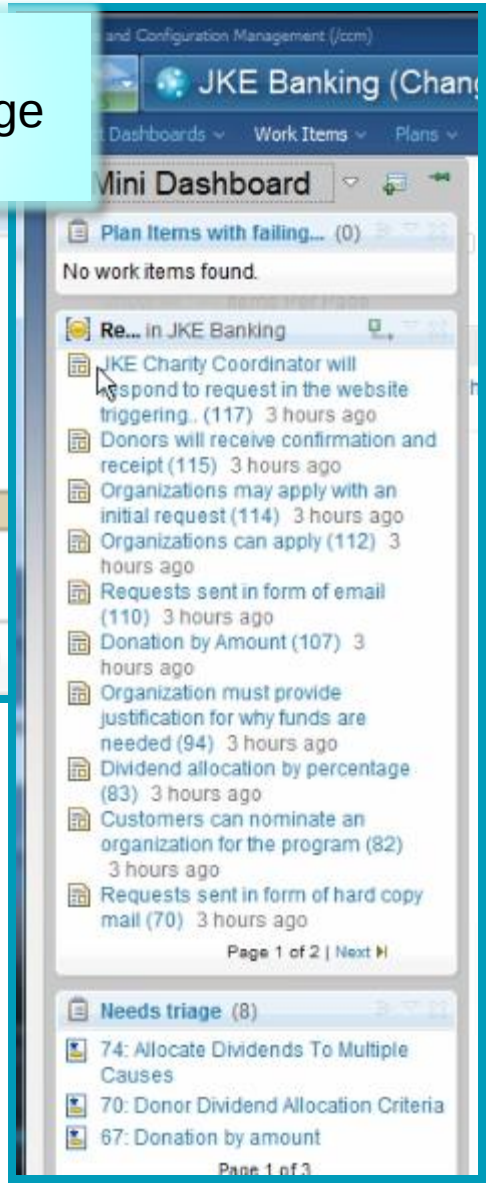
Dashboard details

Easily answer steering questions

- ✓ Mini-dashboards: available on any page





- ✓ Click thru on the viewlet to drill into information

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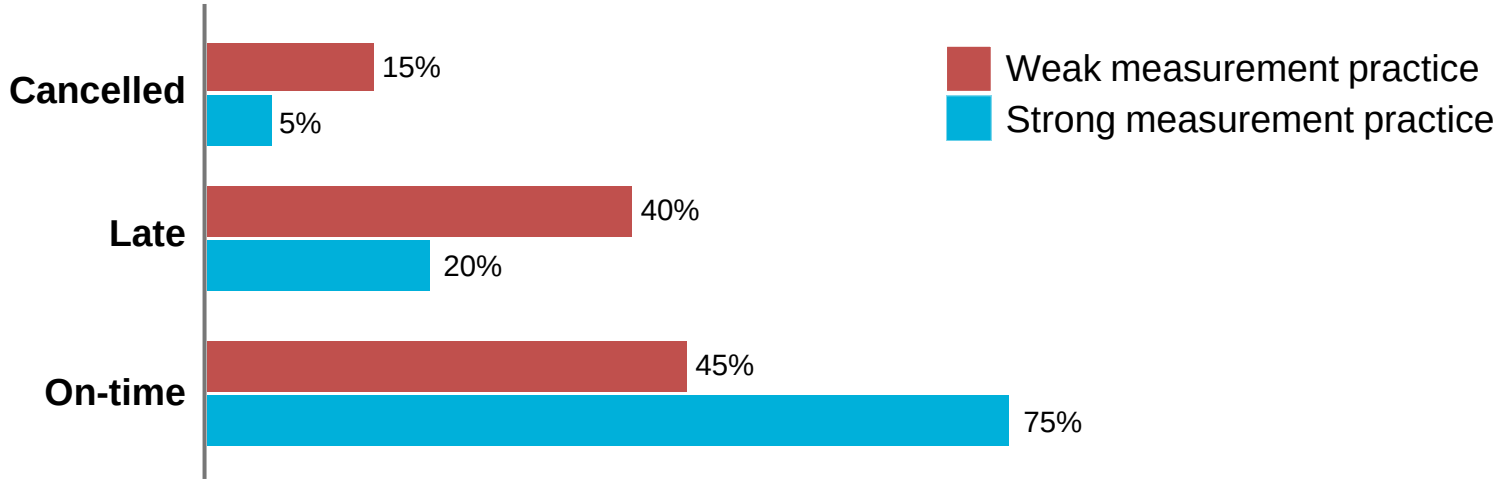
Development Intelligence improves predictability

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

Measurement Practices Impact Project Success



Sources: Capers Jones, Measurement, Metrics and Industry Leadership, Copyright © 2002-2007 by Capers Jones LLC
Capers Jones, Software Engineering Best Practices, Copyright © 2010 McGraw-Hill

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“Failure happens all the time. It happens every day in practice. What makes you better is how you react to it.”

Mia Hamm, first female FIFA World Player of the Year

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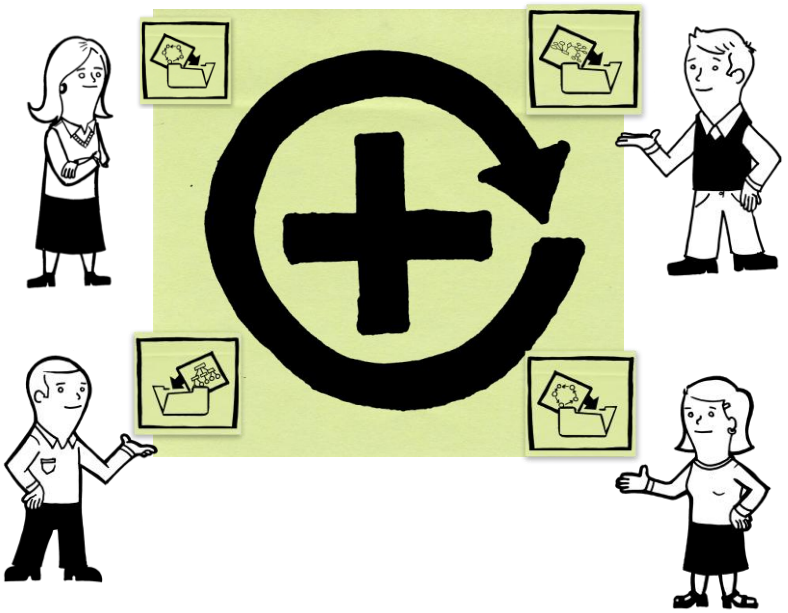
Continuous improvement challenges

Can your team…

- …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?



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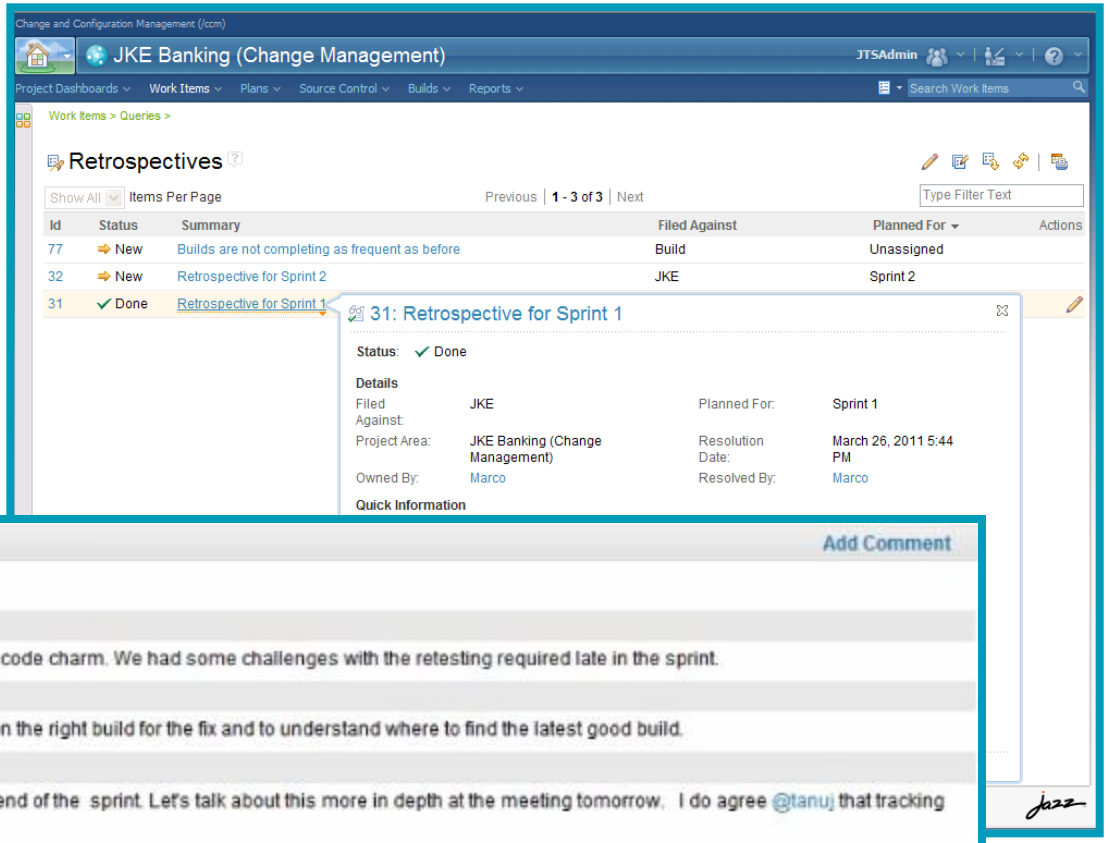
Team retrospectives help identify areas of improvement

- Tracking Retrospectives help team members to collaborate on improvements
  - Ranking of process improvements help to focus on where the team feels the biggest pain



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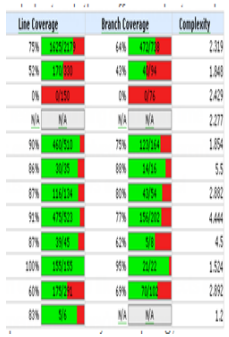
Beyond milestones…

Continuous Integration testing for builds

"Green" builds have passed **meaningful** integration tests

Compile

Unit Test



Install & Configure

Integration Test Environment

GREENHAT
GH Server

Run Tests

Rational Quality Manager

Publish Results

Nightly build is not **published** until integration tests run.

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Continuous Improvement reduces cost

- Improve software delivery through the ongoing **adoption of best practices and automation** to reduce manual, non-creative and error prone tasks
- Promote **incremental improvement of a project** when needed
- Enable breakthrough improvement by **capturing best practices and reusing** across teams
- Allow **everyone to participate** with easy to adopt best practices at your fingertips.

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Five Imperatives for Effective Application Lifecycle Management to improve organizational productivity

- Maximize product value with **In-Context Collaboration**
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- Reduce costs with **Continuous Improvement**

Learn more at ALM Everywhere

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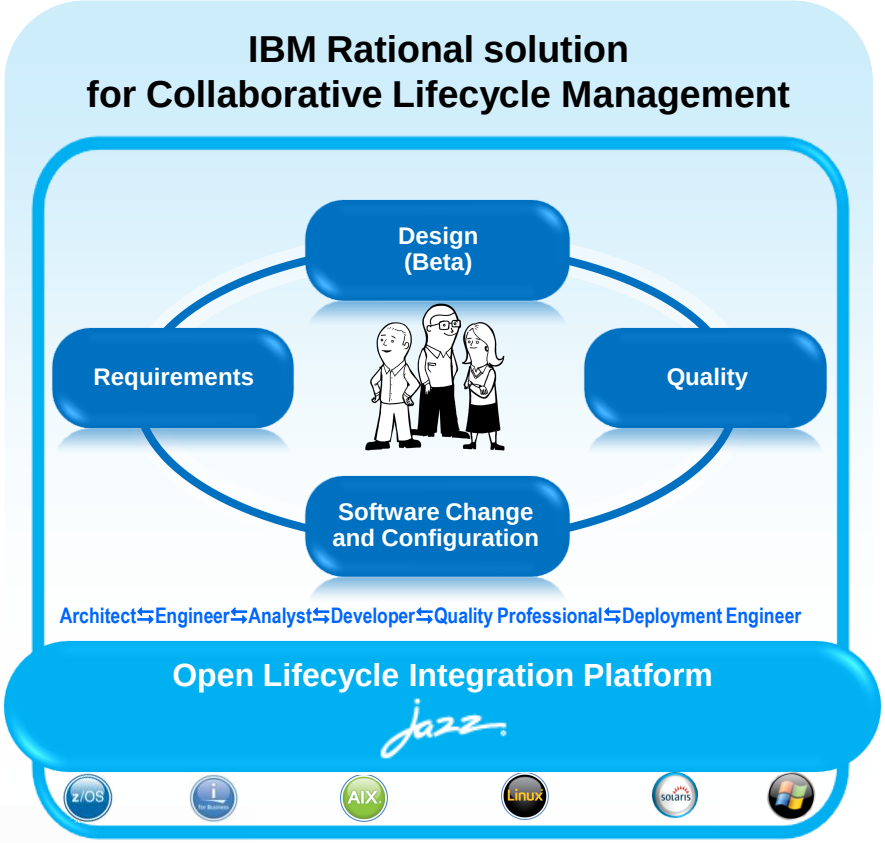
Integrated and effective Application Lifecycle Management

Enhanced and expanded for broader focus on the five imperatives for effective ALM

- Centralized administration, evaluation and roll-out capabilities for faster, easier, incremental deployments
- Incremental, flexible upgrade allows each role
  on a team to upgrade at their own pace
- Integrated software design for broader collaboration and traceability
- Optimized support for Mobile, SAP and IBM WebSphere Application Server



"Once fully implemented, we expect to reduce friction, provide value to customers in each delivery stream, reduce rework by improving end-to-end collaboration and planning consistency, and reduce compliance efforts by automating key process tasks and deliverables."

– Stephan Pauletto, Engagement Manager, IMS Health

NEW

- IBM Solution for Collaborative Lifecycle Management
  - Comprised of Rational Requirements Composer v4.0, Rational Team Concert v4.0, and Rational Quality Manager v4.0
  - New Rational Software Architect integration through Rational Software Architect Design Manager (Beta)

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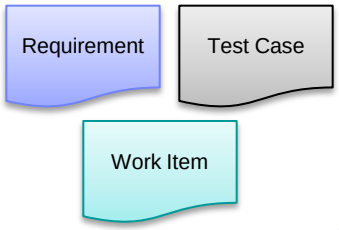
Jazz Architecture Overcomes Past Limitations

OPEN CHOICE AND RICH INTEGRATION

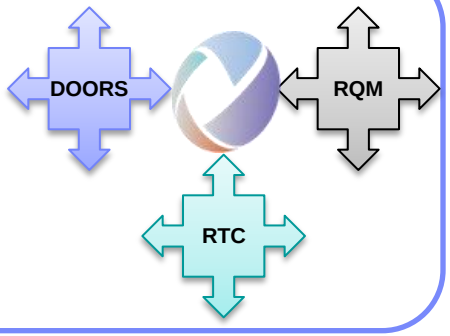
Everything is a resource!

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



Standard interfaces

"Each tool can evolve independently without breaking integrations!"

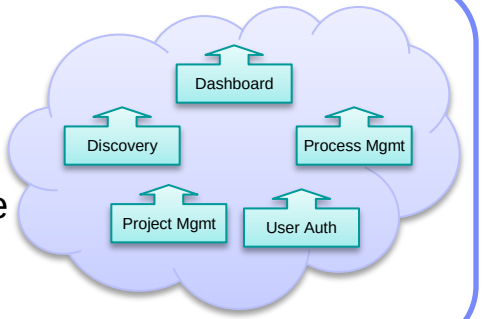


Domain specific standards for the lifecycle

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

Vendor agnostic

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



EVOLUTIONARY AND INCREMENTAL ADOPTION

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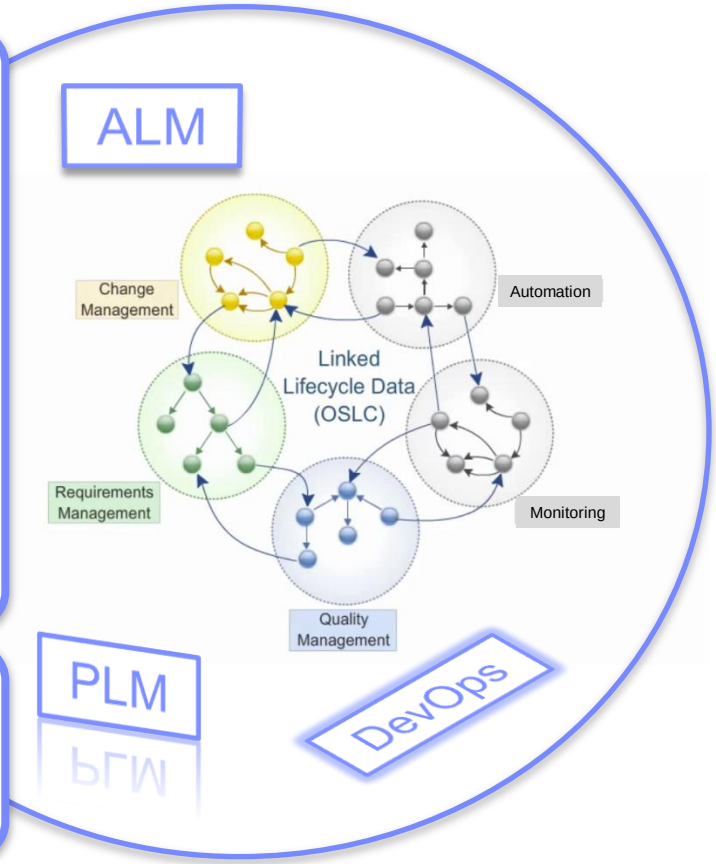
Open Services for Lifecycle Collaboration (OSLC)

Working to standardize the way software lifecycle tools share data

Open Services for Lifecycle Collaboration
Lifecycle integration inspired by the web

- Community Driven @ open-services.net
  - 400+ registered community members
  - Workgroup members from 34+ organizations
- Wide range of interests, expertise, & participation
- Open specifications for numerous disciplines
- Defined by scenarios – solution oriented
- Implementations from IBM, BPs, and Others
- Based on W3C® Linked Data



Inspired by the web **Free to use and share** **Changing the industry**

GET INVOLVED AND CONTRIBUTE!

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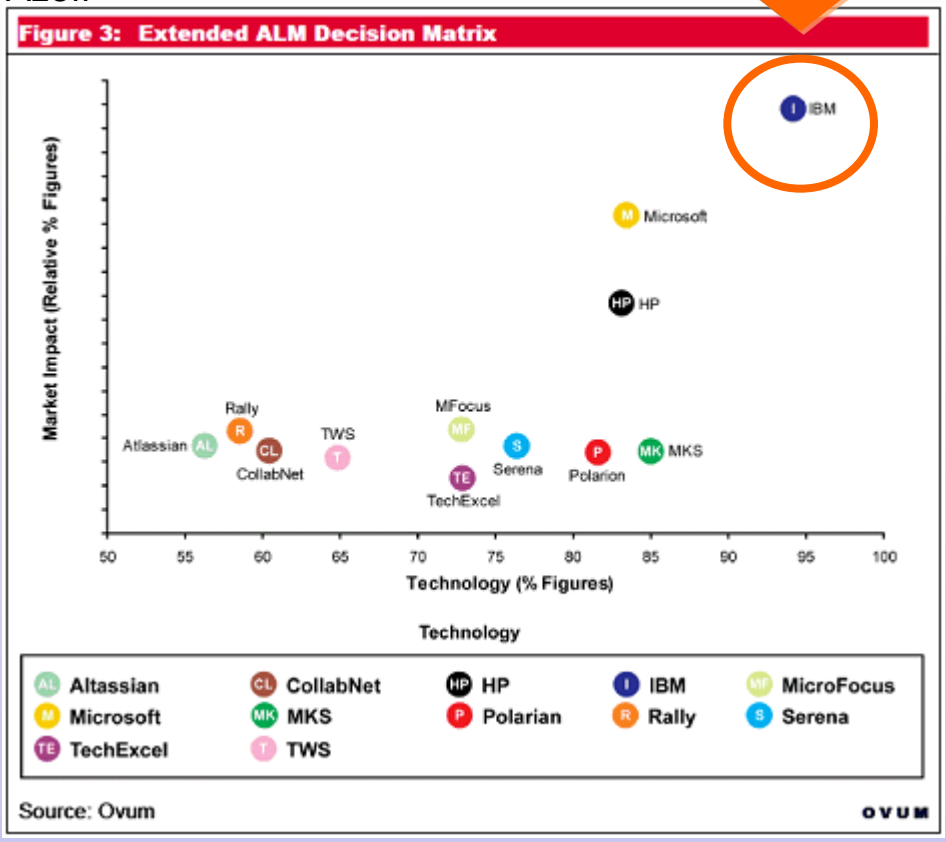
IBM Rational is a recognized leader in ALM

Ovum Decision Matrix: Selecting an ALM Vendor

Reference Code: OI00068-002 Publication Date: March 2011
Authors: Chandranshu Singh, Tony Baer, Michael Azoff

Report Highlights

- "IBM has the broadest and arguably the ***deepest portfolio among all vendors profiled in this report***."
- IBM's Technology Score: **94.3%**
- IBM's Market Impact score: **10/10**
  - The highest score!
  - All other vendors were ranked relative to IBM
- "Furthermore, the vendor has ensured that it stays ahead of the pack by having a ***good grasp of market demand and meeting it through tool support***."



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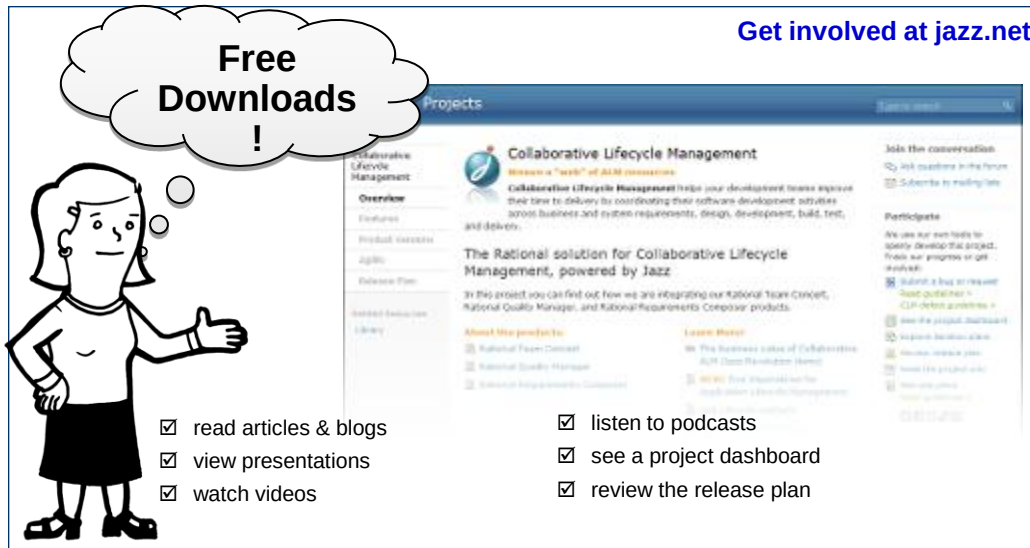
Get Started! Collaborative Lifecycle Management

Get involved at jazz.net!



- ☑ read articles & blogs
- ☑ view presentations
- ☑ watch videos
- ☑ listen to podcasts
- ☑ see a project dashboard
- ☑ review the release plan

Try it out at jazz.net!

1 Download RTC, RRC or RQM for CLM
https://jazz.net/downloads/rational-team-concert/

Sample scenarios for CLM
http://bit.ly/MTM_Lifecycle_Welcome

Track our progress at jazz.net!

We openly develop our software with our own tools!
https://jazz.net/projects/clm/

Interactive White Board

Short, simple way to share the *5 ALM imperatives*
ibm.co/alm-everywhere

Role-based Demo

VP of Development, a Business Analyst or Project Owner, Agile Team Lead, Developer and Test Lead.
bit.ly/jazzCLMdemo

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www.ibm.com/software/rational

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