

# IBM Rational Collaborative Lifecycle Management (CLM) Solution in ACTION

(Money that Matters Scenario Demo)

Shivank Arya ([shivank.arya@in.ibm.com](mailto:shivank.arya@in.ibm.com))  
*Principal Software Engineer – Jazz Foundation*



IBM Software

# Innovate2011

The Premier Event for Software and Systems Innovation




**Software. Everywhere.**

**August 9-11, Bangalore | August 11, Delhi**



# Agenda

- 
- 1 Application Lifecycle Management (ALM)
  - 2 IBM Rational Collaboration Lifecycle Management (CLM)
  - 3 Delivering the 5 ALM imperatives
  - 4 What's new – From CLM 2010 to CLM 2011
  - 5 DEMO

## Agenda



- 1 Application Lifecycle Managment (ALM)**

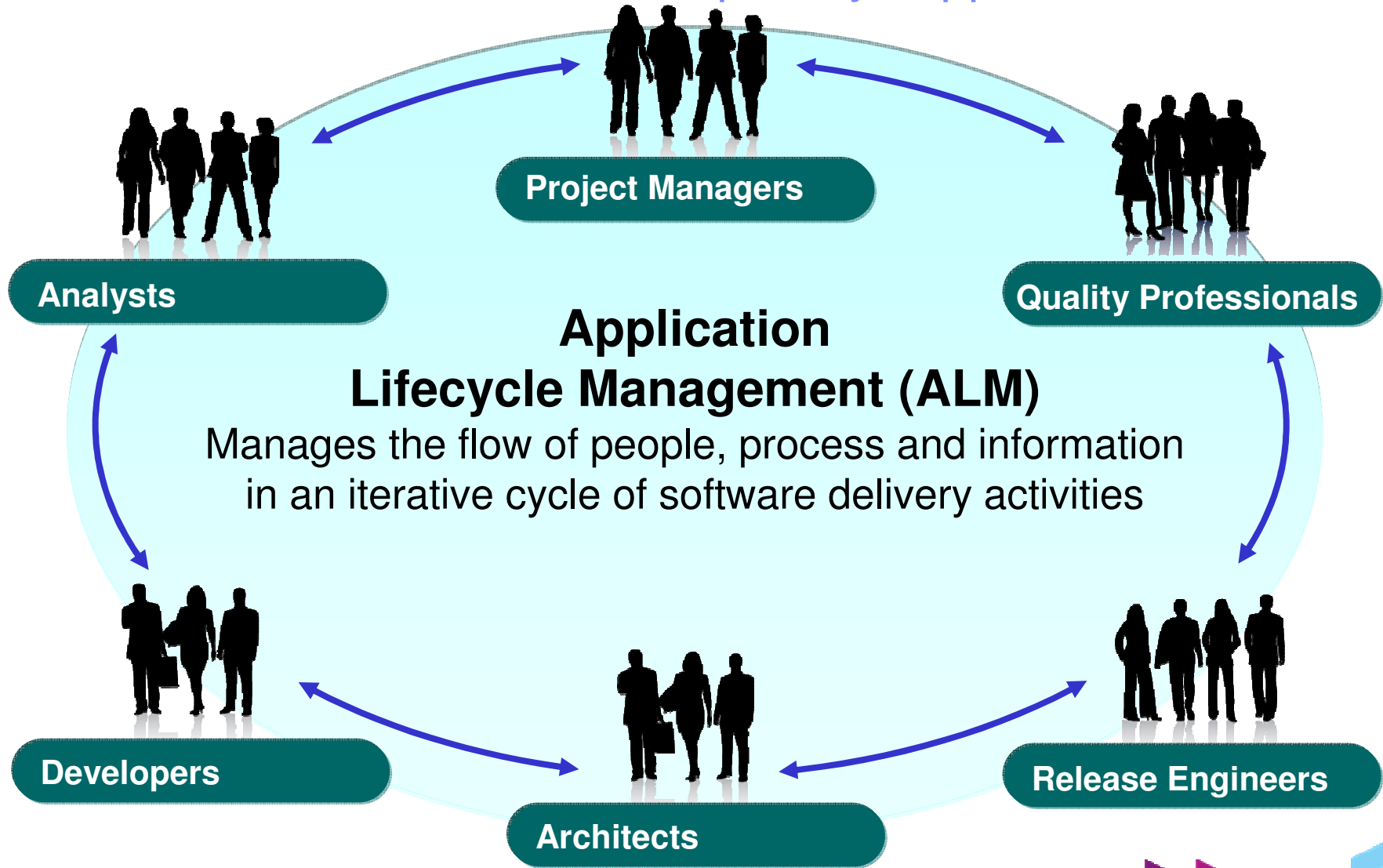
- 2 IBM Rational Collaboration Lifecycle Management (CLM)**

- 3 Delivering the 5 ALM imperatives**

- 4 What's new – From CLM 2010 to CLM 2011**

- 5 DEMO**

# ALM addresses the breadth of capability support needed




## Gartner: Five principal benefits of ALM

### What do you get from ALM implementations?

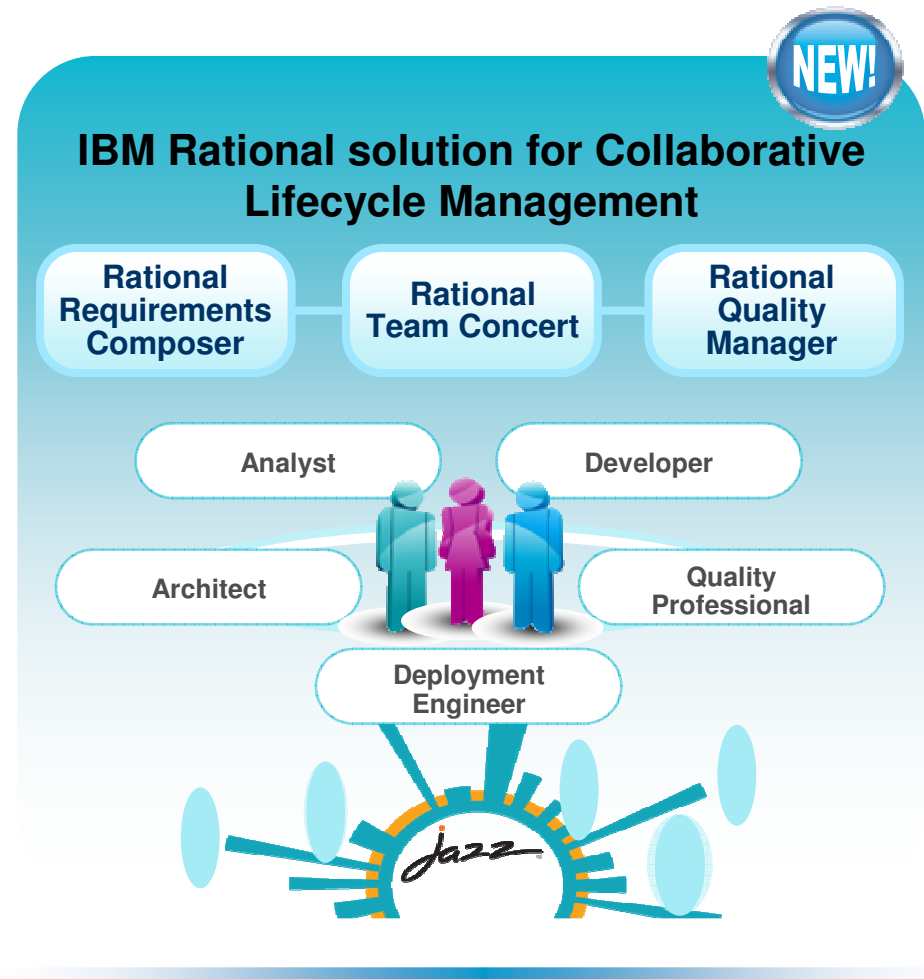
<b>Agility</b>	Through the collaboration and application of “just enough” processes
<b>Predictability</b>	Through better estimation, better communication and more repeatable processes
<b>Auditability</b>	Traceability of work back to a business need,
<b>Quality</b>	Through more-effective management of requirements, design and quality processes
<b>Productivity</b>	Through the continuous improvement of processes and practices, and more effective utilization of resources

## Agenda

- 
- 1 Application Lifecycle Management (ALM)
  - 2 **IBM Rational Collaboration Lifecycle Management (CLM)**
  - 3 Delivering the 5 ALM imperatives
  - 4 What's new – From CLM 2010 to CLM 2011
  - 5 DEMO

# IBM Rational solution for Collaborative Lifecycle Management

- **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**
- **Support heterogeneous development across multiple platforms and technologies**



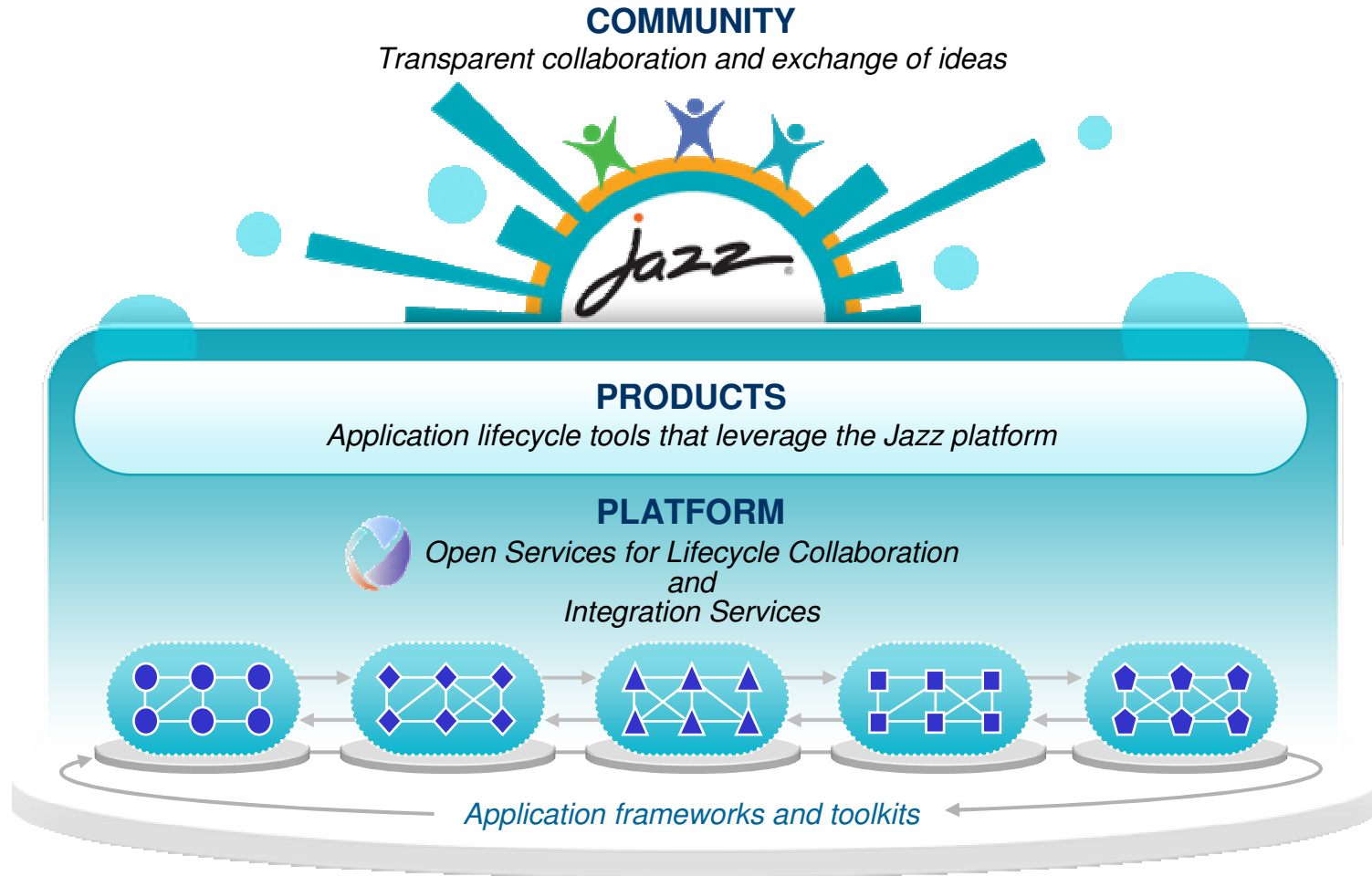
Learn more at: <https://jazz.net/projects/clm/>

## IBM Rational solution for Collaborative Lifecycle Management

- ▶ **My Selling Point - A Practitioner's Perspective**
- ▶ Coordinates the activities of the entire team, across the software disciplines and through out the phases of development all the way from conception to production.



# Jazz provides open collaboration across the software and systems lifecycle

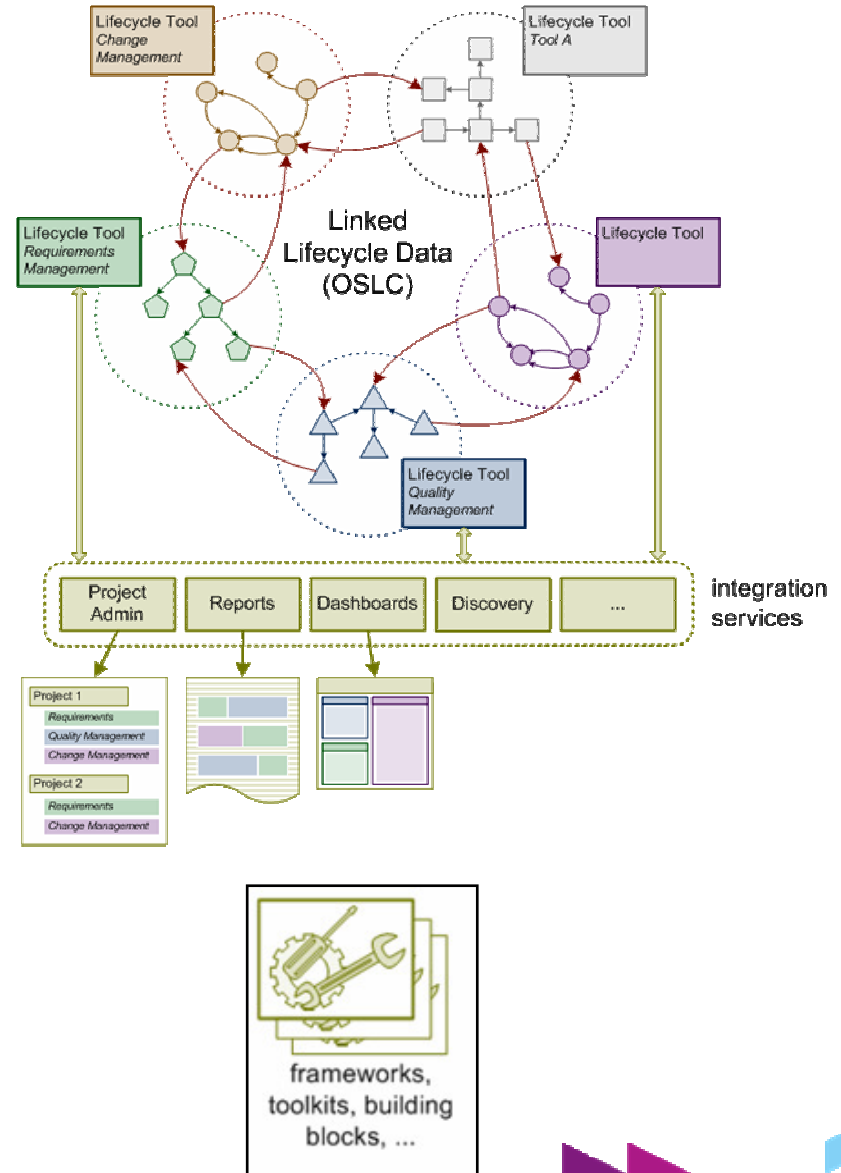


Learn more at: <https://jazz.net/about/>

# The Jazz platform

Jazz architecture

Application frameworks and toolkits



## Open Services for Lifecycle Collaboration (OSLC)

*An initiative aimed at simplifying data linking and tool integration across the lifecycle*



### Open Services for Lifecycle Collaboration

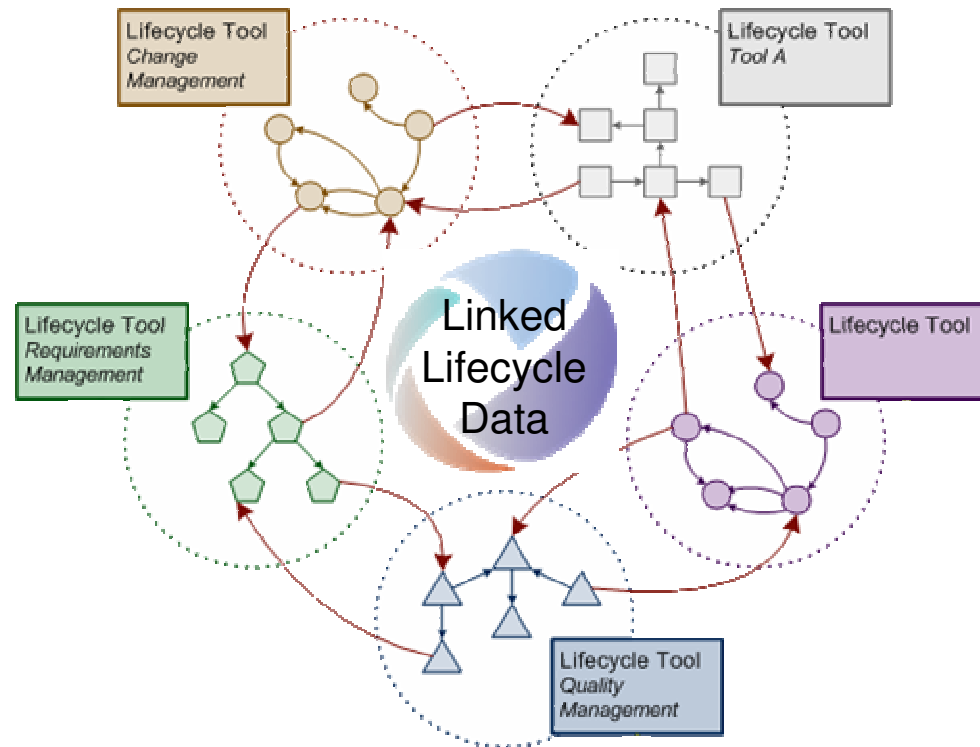
Barriers to sharing resources and assets among tools

- ▶ Multiple vendors, open source projects, and in-house tools
- ▶ Private vocabularies, formats and stores
- ▶ Entanglement of tools with their data

- ▶ Community Driven – specified at **open-services.net**
- ▶ Specifications for ALM, PLM and DevOps Interoperability
- ▶ Inspired by Internet architecture
  - Loosely coupled integration with “just enough” standardization
  - Common resource formats and services
- ▶ A different approach to industry-wide proliferation


Learn more at: <http://open-services.net/>

## Open Services for Lifecycle Collaboration (OSLC)



- OSLC allows lifecycle tools to access and link to resources where the data lives, as opposed to a more classical copy and synchronize approach

## Agenda

- 
- 1 Application Lifecycle Management (ALM)
  - 2 IBM Rational Collaboration Lifecycle Management (CLM)
  - 3 **Delivering the 5 ALM imperatives**
  - 4 What's new – From CLM 2010 to CLM 2011
  - 5 DEMO

What is required to deliver end-to-end visibility across teams, tools and projects?



## Criteria for effective lifecycle management: ALM imperatives

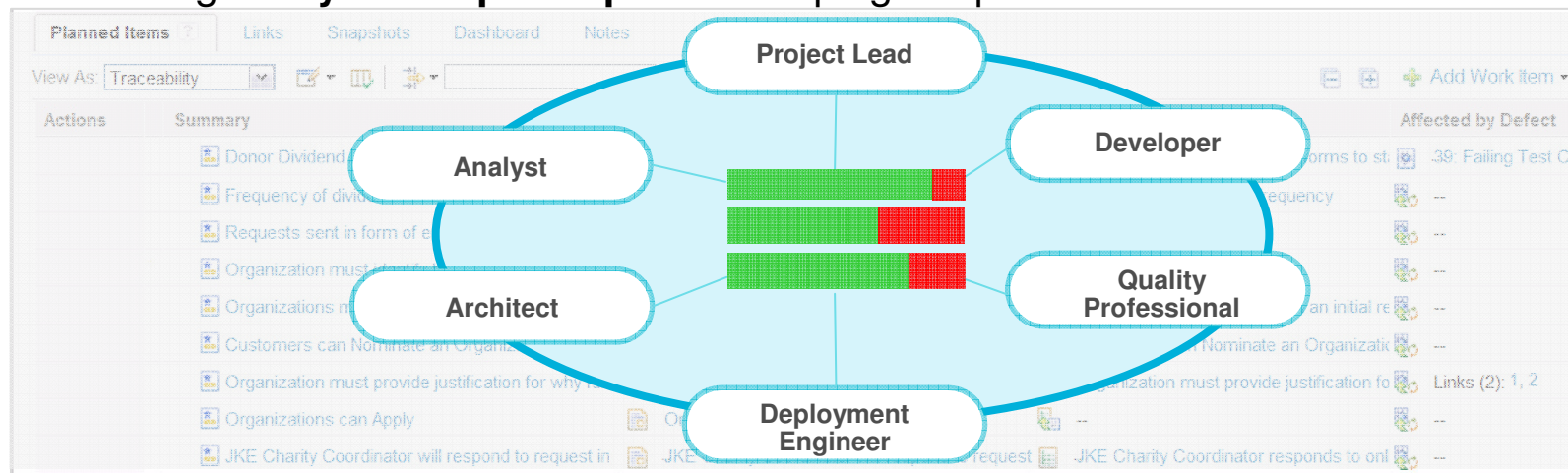
1. Real-time Planning
2. Lifecycle Traceability
3. In-Context Collaboration
4. Development Intelligence
5. Continuous Improvement



# What is Real-time Planning?

## *Real-time Planning improves 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

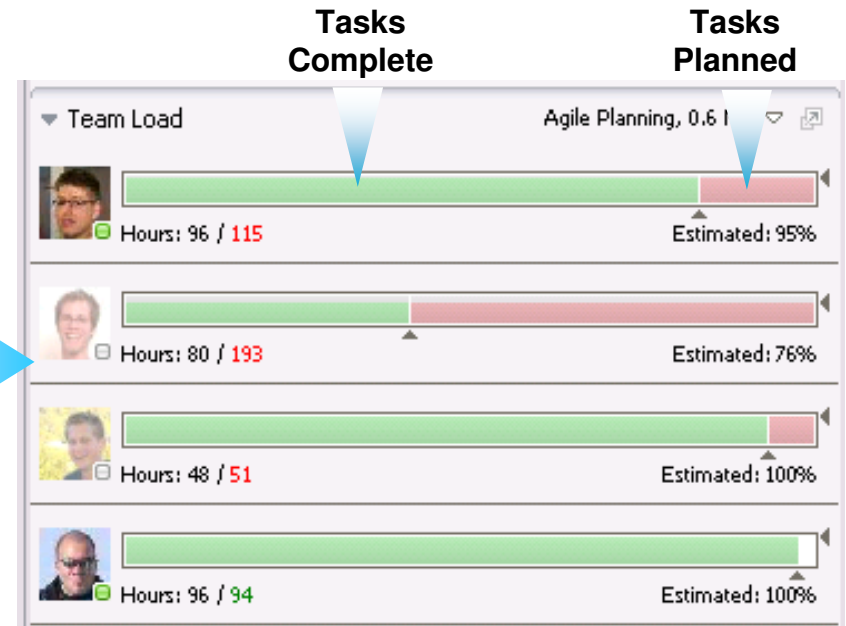


stays



# Imperative 1: Real-time Planning

ID	Start Date	End Date	Status	Title
15	05/20/2009 8:34 AM		Not Started	Build failure - search failed
16	05/20/2009 8:34 AM		Not Started	Build failure - Agents never started
18	05/20/2009 8:34 AM		Not Started	Build failure - AddXMI comments to all public methods in our API
19	05/20/2009 8:34 AM		Not Started	Build failure - Carat at Search
20	05/20/2009 8:34 AM		Not Started	Build failure - get fails repeatedly
21	05/20/2009 8:34 AM		Not Started	Build failure - build break in CI
22	05/20/2009 8:34 AM		Not Started	Build failure - Notification for failed build should partially succeed even
23	05/20/2009 8:34 AM		Not Started	Build failure - Show 'This build might be finished and I'll start another build'
24	05/20/2009 8:34 AM		Not Started	Build failure - Test failed checkin build for get the result on build script
25	05/20/2009 8:34 AM		Not Started	Build failure - Delay in Team build time out when the step is large
26	05/20/2009 8:34 AM		Not Started	Build failure - Build contains a path with spaces fails but no build log output, and the
27	05/20/2009 8:34 AM		Not Started	Build failure - Add build history to build status view
28	05/20/2009 8:34 AM		Not Started	Build failure - Build did not finish build by an initial error 'build not outside the
29	05/20/2009 8:34 AM		Not Started	Build failure - Build Agent & Controller status not shown correctly in Team System
30	05/20/2009 8:34 AM		Not Started	Build failure - Build Details view - Name of build status not appear as System.MMS
31	05/20/2009 8:34 AM		Not Started	Build failure - Error found building the test steps, notification functionality
32	05/20/2009 8:34 AM		Not Started	Build failure - Error found building the status view screen
33	05/20/2009 8:34 AM		Not Started	Build failure - Error found building the news selection screen
34	05/20/2009 8:34 AM		Not Started	Build failure - Error found building the order edit screen
35	05/20/2009 8:34 AM		Not Started	Build failure - Missing Process an error
36	05/20/2009 8:34 AM		Not Started	Build failure - Crash after an failing between tests.
37	05/20/2009 8:34 AM		Not Started	Build failure - No ability to sort fields after saving.
38	05/20/2009 8:34 AM		Not Started	Build failure - Choosing columns dialog is very confusing.
39	05/20/2009 8:34 AM		Not Started	Build failure - Error found building the map view.
40	05/20/2009 8:34 AM		Not Started	Build failure - Tests that use buildReasonsAll on CopyDirectory activity are failing
41	05/20/2009 8:34 AM		Not Started	Build failure - Setting on Item 1111 does not work.
42	05/20/2009 8:34 AM		Not Started	Build failure - Choosing columns dialog is very confusing.
43	05/20/2009 8:34 AM		Not Started	Build failure - Build spaced build fails when build server is stopped while a build is
44	05/20/2009 8:34 AM		Not Started	Build failure - security code failure in build etc.
45	05/20/2009 8:34 AM		Not Started	Build failure - Remove the buildable property from the GetBuild.



## ✗ Don't

Have plans that live outside of ALM environment where requirements, development and test plans are disconnected and managed separately, or not at all.

Rely on manual, error-prone updates.

Have plans that are separate from team activities and assignments.

## + Do

Plan across the entire team, not silos, by linking and populating development and test plans from requirements.

Practice continuous planning using lifecycle queries and project dashboards to respond to changing events.

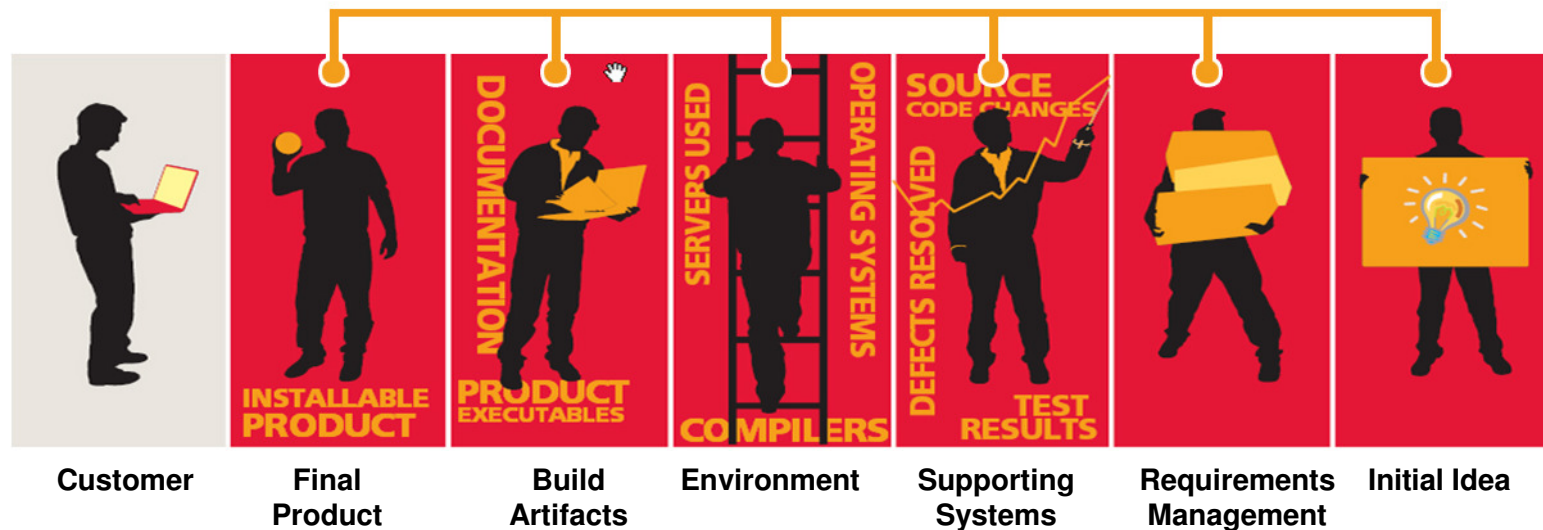
Use plans that are fully integrated with execution where updating time spent directly from the work item makes easy to keep accurate plans.

## What is Lifecycle Traceability?

### *Lifecycle Traceability improves quality by:*

- ▶ Establishing **relationships between software artifacts**
- ▶ Helping you **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

*Instant access to details from any point in the development process*



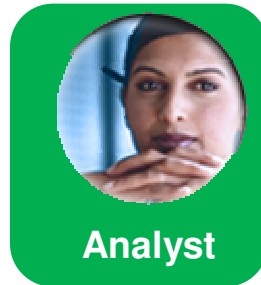
## Imperative # 2: Lifecycle traceability

Which requirements are addressed in this iteration?

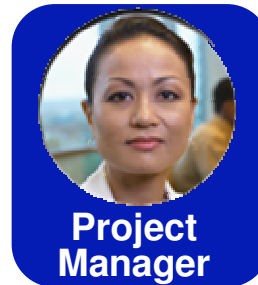
Are all of the requirements tested?

What's the quality of the high priority requirements?

What defects are reported against which requirements?



Can we pass an audit?



Are we ready to release?

What defects were resolved in this release?

What tradeoffs can we make to release on time?

What requirements am I implementing?

How can I recreate the last version to do a patch?



What is the quality of the build?

What has changed that I need to test?

What defects have been addressed since the last build?

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

What changes occurred overnight?

How can I standardize when teams use different tools?

Are build times getting longer or shorter?

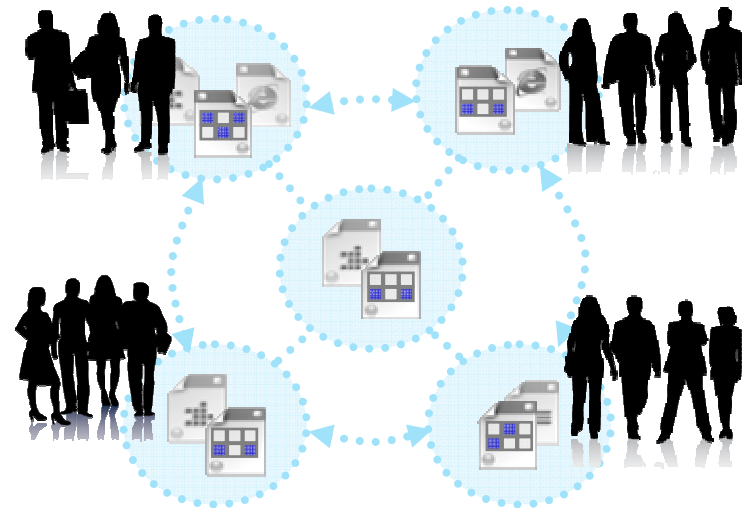
Where are the bottlenecks in our processes?

How can I speed up my builds?

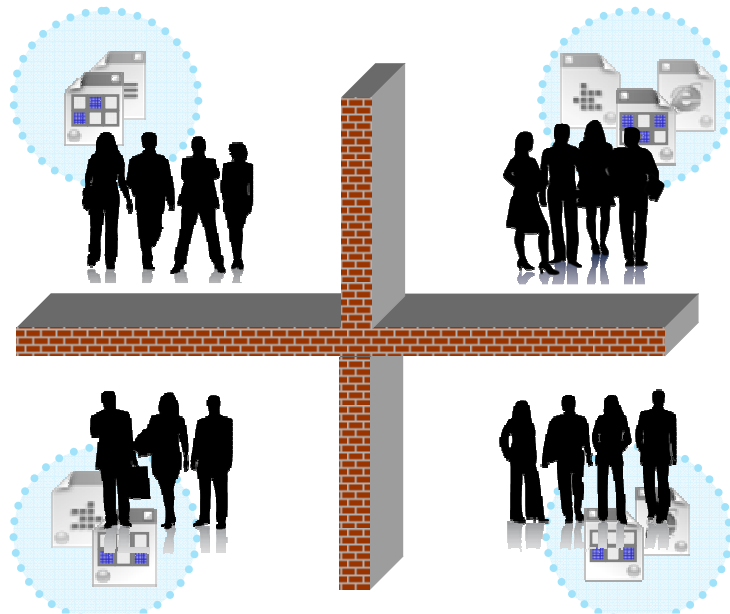
## What is In-Context Collaboration?

*In-Context Collaboration improves product value by:*

- ▶ Making **information immediately 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



## Imperative 3: In-Context Collaboration

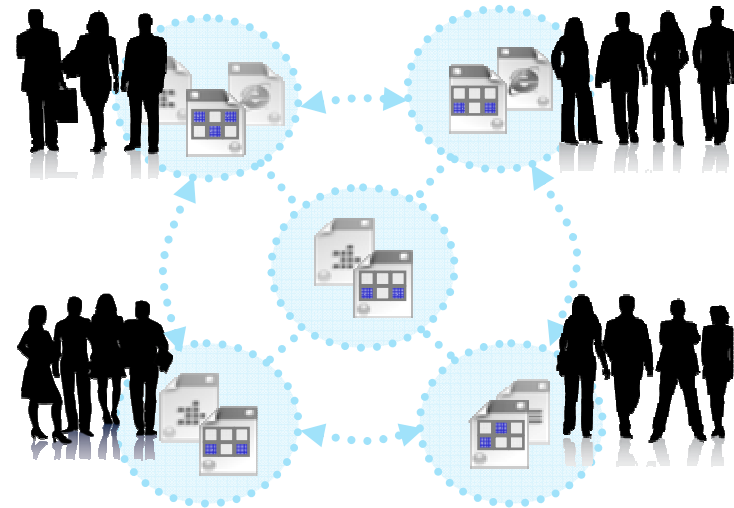


### ✗ Don't

Create an environment of silo'd teams and disconnected data

Manually collect status reports or wait for status meetings to take action

Rely on email discussions.



### + Do

Unified teams share linked data providing visibility into each others work.

Collaboration is also about knowing what is going on without having to ask. Dashboards and traceability views provide real-time status of the team's progress.

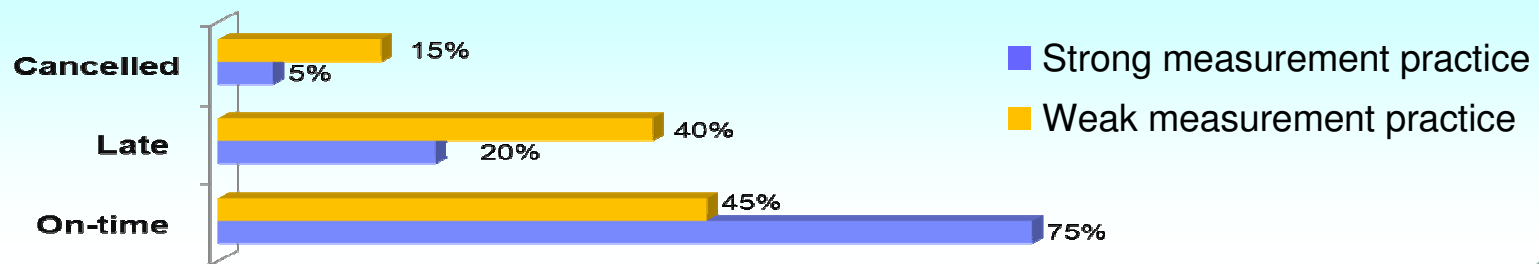
All discussions in work items integrated on the plan. Use lifecycle queries to answer more meaningful questions such as "Which requirements are affected by defects?"

## What is Development Intelligence?

### *Development Intelligence improves predictability by:*

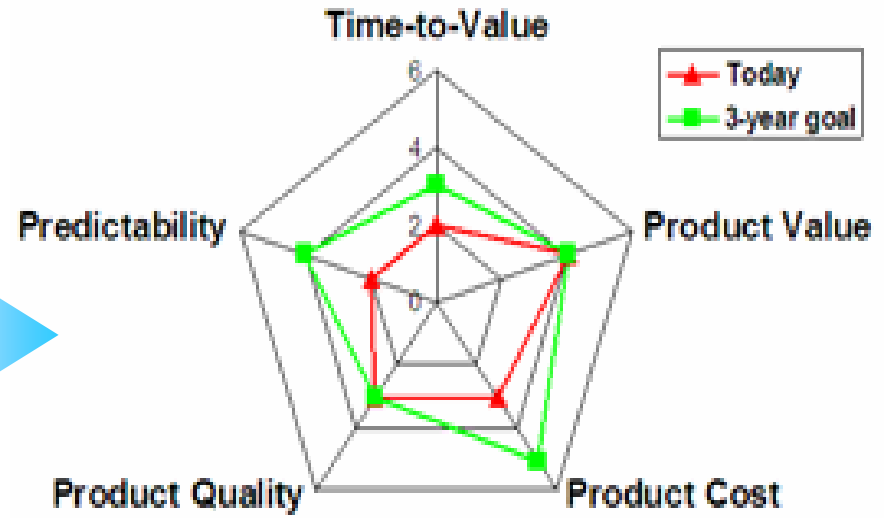
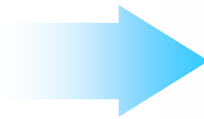
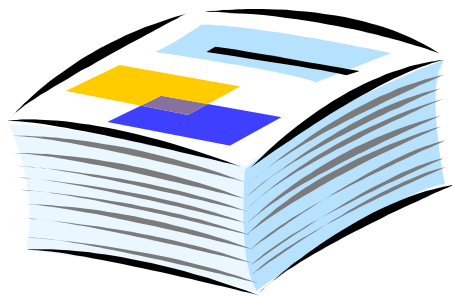
- ▶ Applying **Business Intelligence techniques** to software and systems development
- ▶ Enabling **fact-based decision making** (to communicate status, monitor progress, diagnose problems, identify corrective actions)
- ▶ **Steering projects and programs** to deliver on-time

#### Measurement practices impact project success



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

# Imperative 4: Development Intelligence



## ✗ Don't

Manually collect data by hounding the team for status reports.

Take a 'big bang' approach to instituting measures

Expect to get it right the first time.

## ✚ Do

Use live dashboards that provide transparency of information and dashboard reports based on data coming from the team's activity.

Identify a weak spot or a current pain point or bottleneck.

Develop measures you use, eliminate ones you don't

## What is Continuous Improvement?

### *Continuous Improvement reduces cost by:*

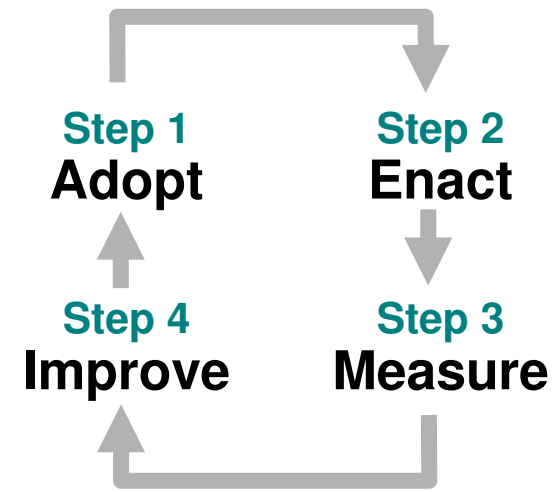
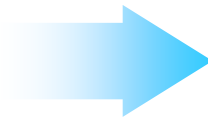
- ▶ Improving software delivery through the ongoing **adoption of best practices and automation** to reduce manual, non-creative and error prone tasks
- ▶ Promoting **incremental improvement of a project** when needed
- ▶ Enabling breakthrough improvement by **capturing best practices and reusing** across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

*“Successful analytics requires taking it beyond software and reporting, and into the realm of management practices and operations improvement”*

Information Management Online, February 23, 2011



## Imperative 5: Continuous Improvement



### Don't

Define a process and place it on a shelf

Ignore process altogether or treat it like an unnecessary burden.

Institute process police

### Do

Use a tool that can 'enact' your process definition and guide the team toward the desired result.

Learn from what other teams have done and leverage their results across other teams when appropriate. Ignore process altogether or treat it like an unnecessary burden.


Let the tool govern behavior and refine it over time. Add peer reviews to encourage knowledge sharing and collaboration.

## Criteria for effective lifecycle management: ALM imperatives

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

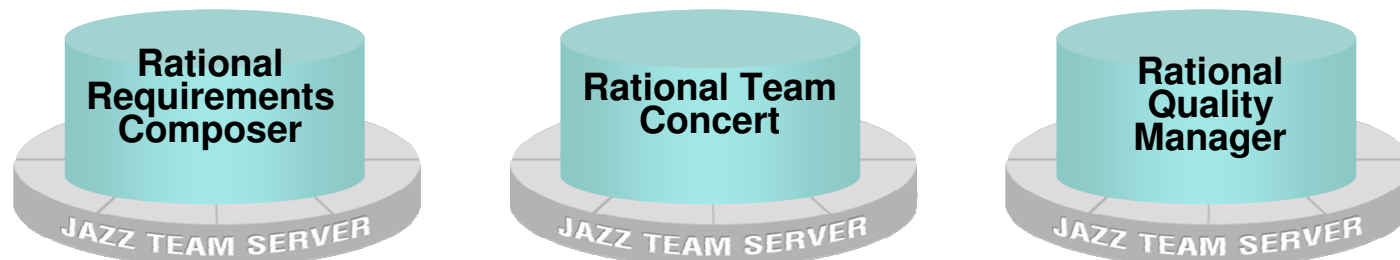
Learn more at: <https://jazz.net/library/article/637>

## Agenda

- 
- 1 Application Lifecycle Management (ALM)
  - 2 IBM Rational Collaboration Lifecycle Management (CLM)
  - 3 Delivering the 5 ALM imperatives
  - 4 **What's new – From CLM 2010 to CLM 2011**
  - 5 DEMO

## Feedback on our 2.x CLM products

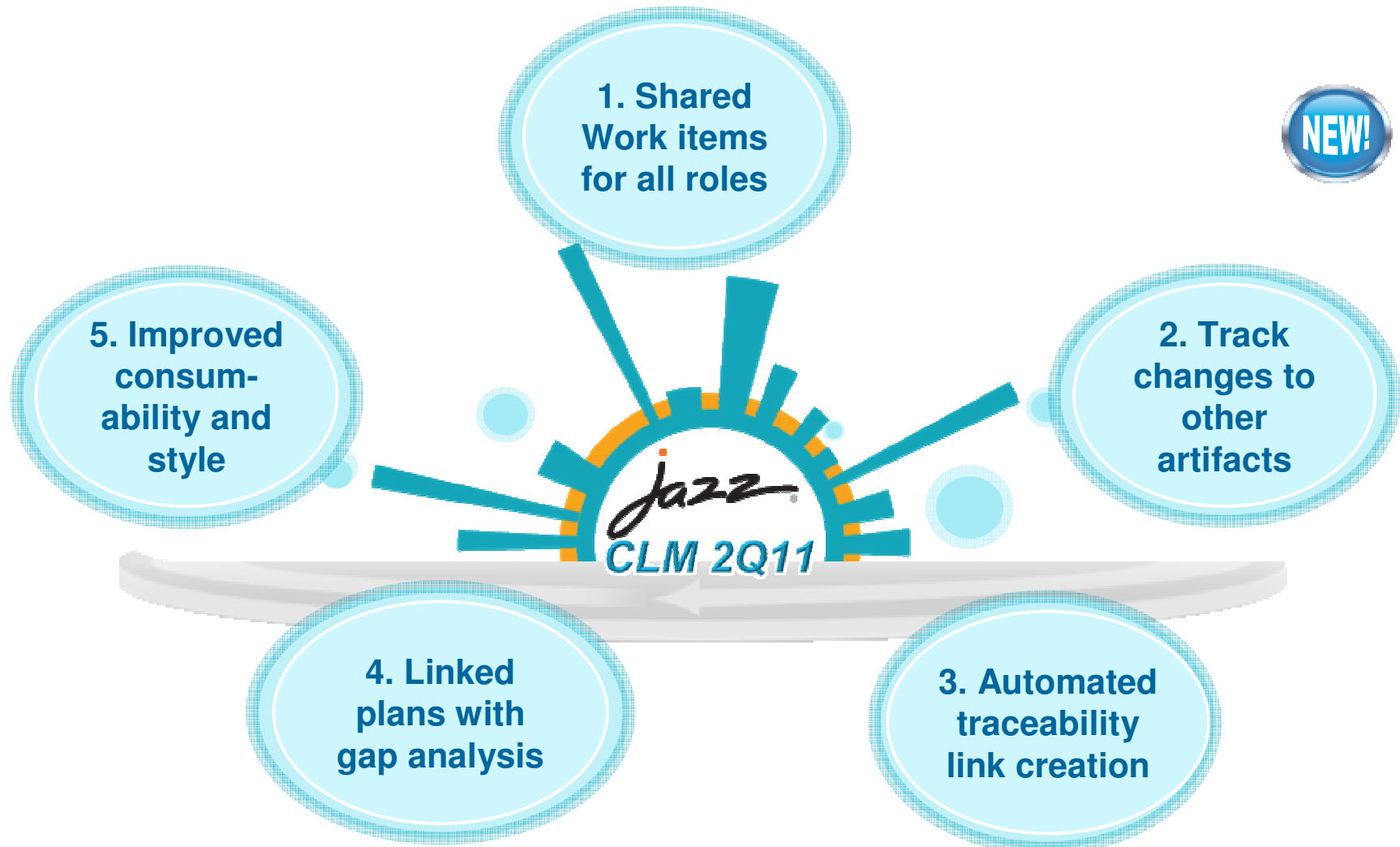
- By 2010, we had shipped three major new Jazz-based products to coordinate the software development activities across requirements, development, build and test.
- Feedback from our customers regarding using these products together:
  1. *Simplify the packaging and licensing*
  2. *Simplify installation of multiple products*
  3. *Provide flexible deployment options*
  4. *Harmonize platform and language support*
  5. *Provide unified administration across the products*
  6. *Strengthen the scenario-based integrations*



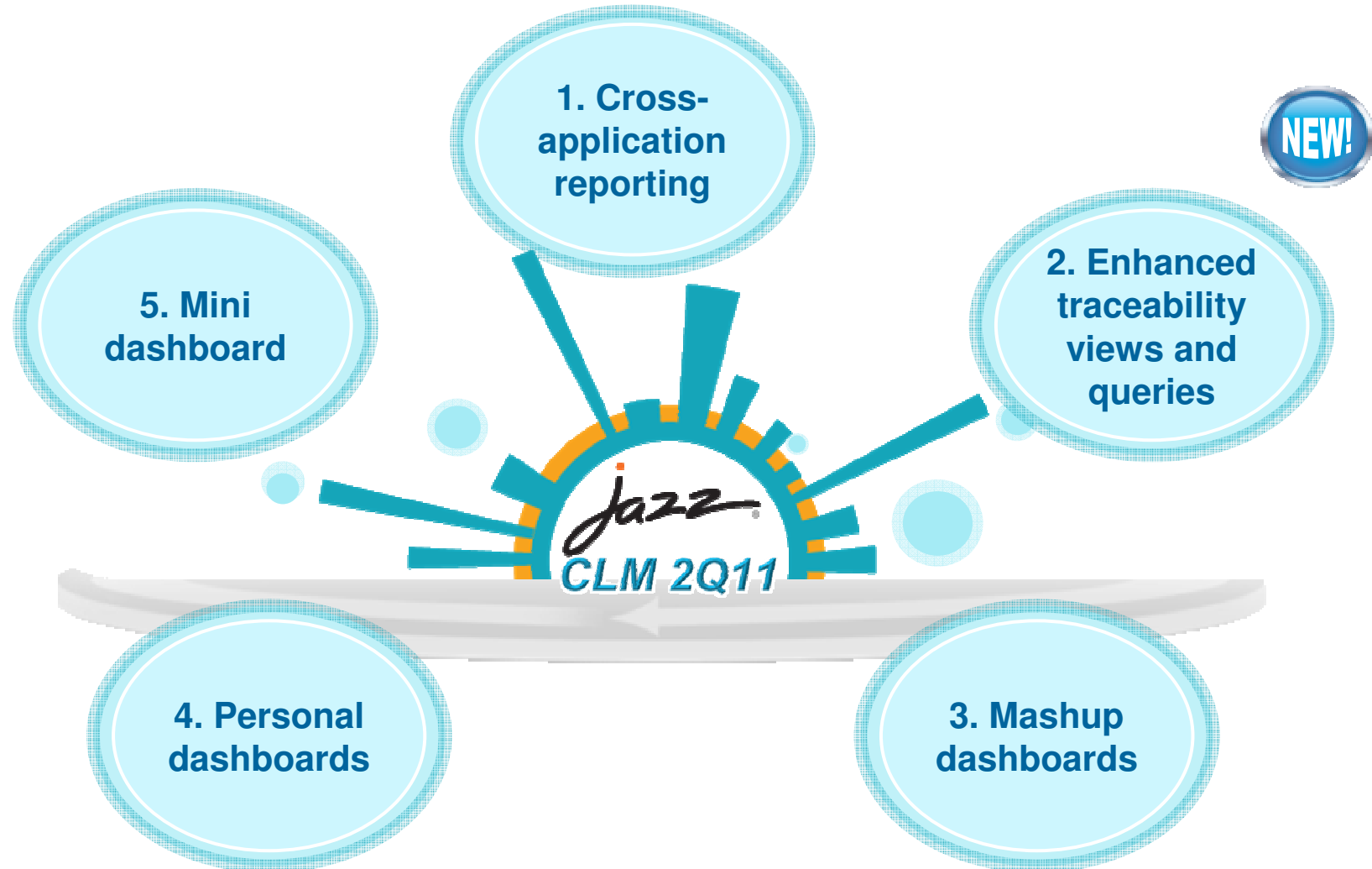
## Reducing the cost of ownership and administration



## Strengthening Scenario based integrations

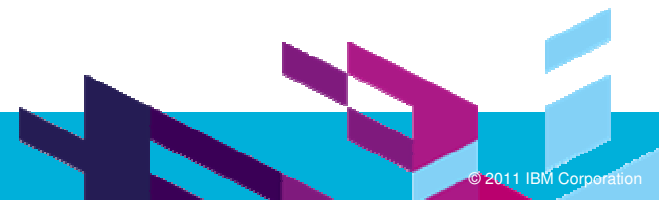


## Improving cross-application visibility and reports





[www.ibm.com/software/rational](http://www.ibm.com/software/rational)

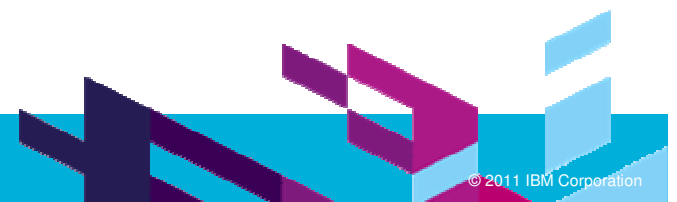




# QUESTIONS



[www.ibm/software/rational](http://www.ibm/software/rational)





[www.ibm/software/rational](http://www.ibm/software/rational)

© Copyright IBM Corporation 2011. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, Rational, the Rational logo, Telelogic, the Telelogic logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.