

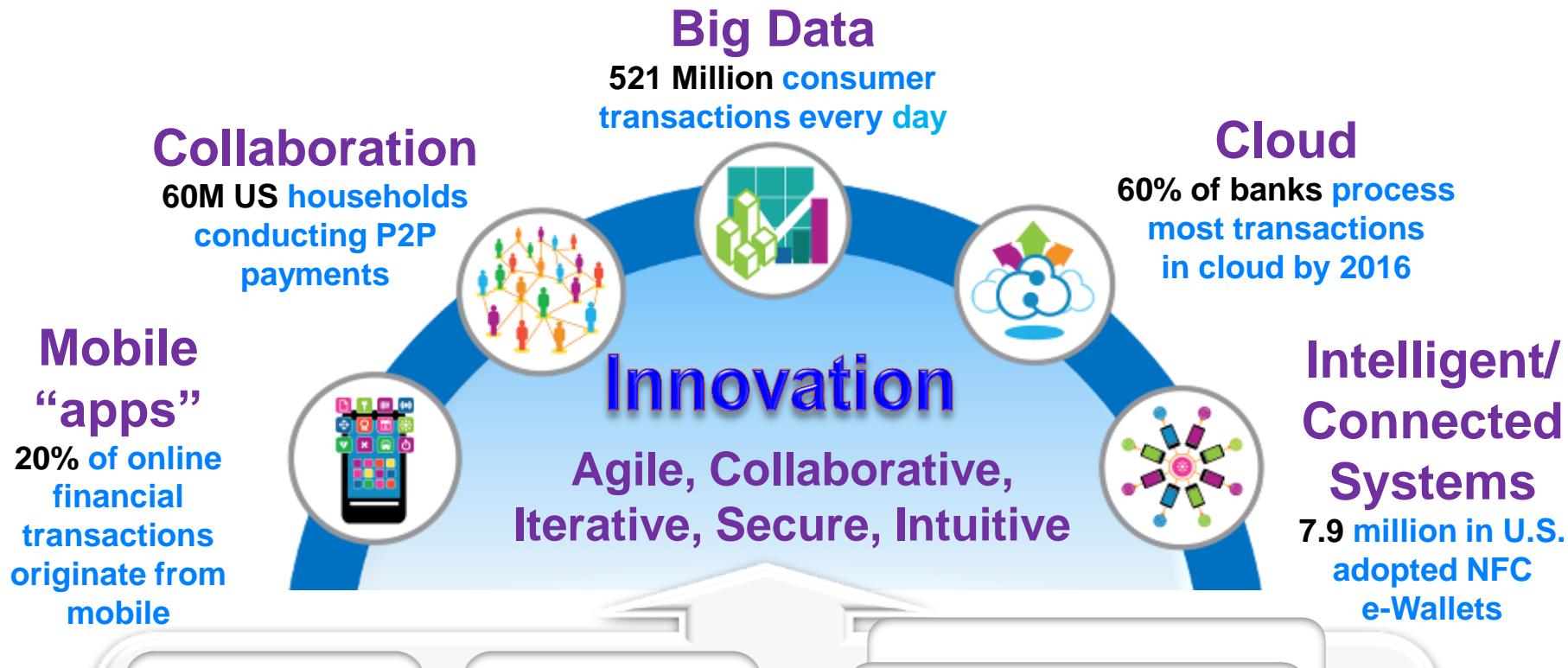
# IBM Middleware

## Collaborative DevOps with CLM V6.0

*Accelerate delivery of the right applications,  
at a reduced cost, with continuous  
collaboration across all stakeholders*



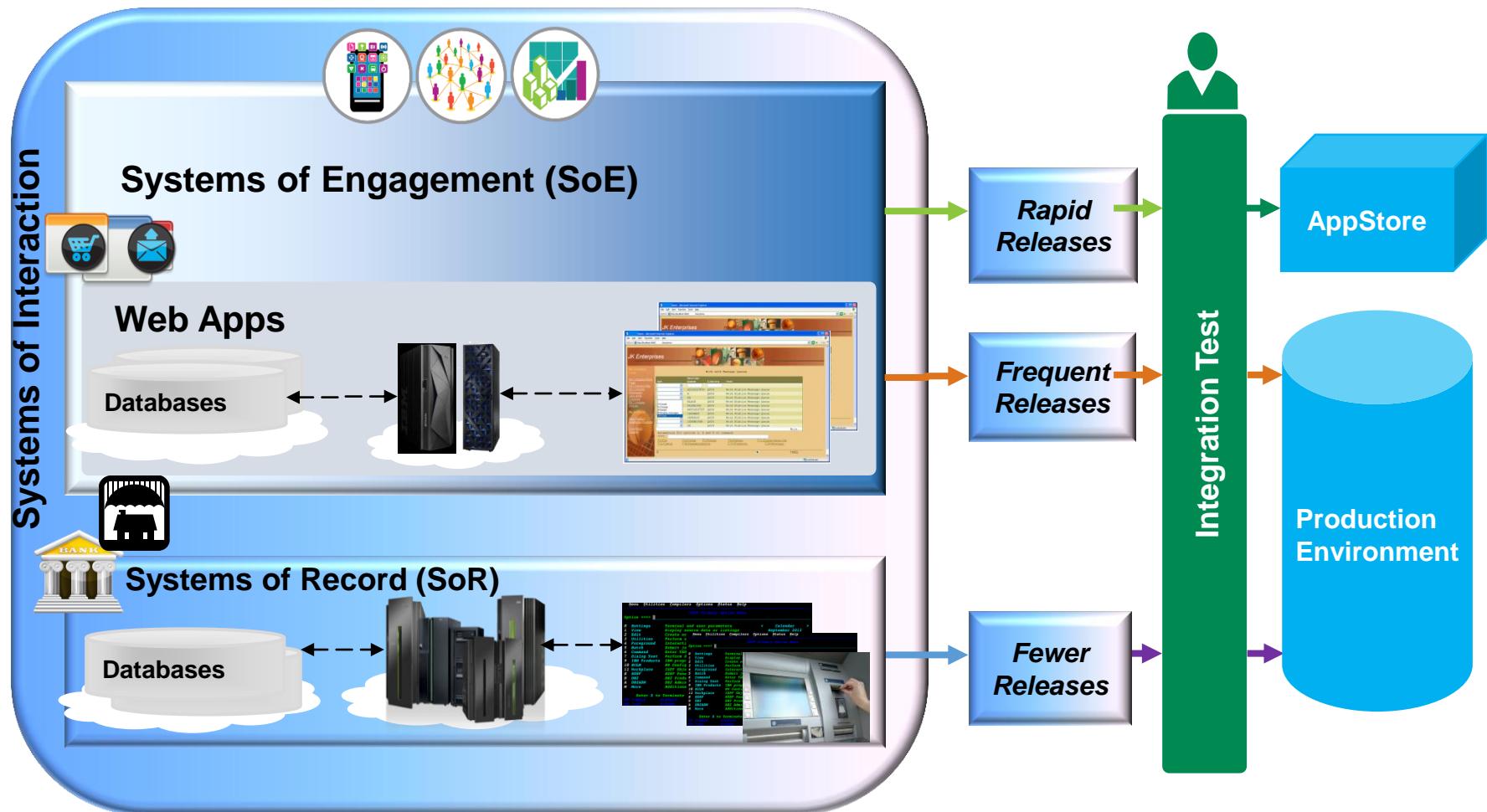
# The market has changed... forcing a different approach to app development



*If you aren't introducing innovations into the customer experience at the same rate at which customers are adopting these new technologies, you are at a considerable disadvantage and risk."*  
– Brett King, Banking 3.0

# The Challenge: Coordinating Multi-speed IT

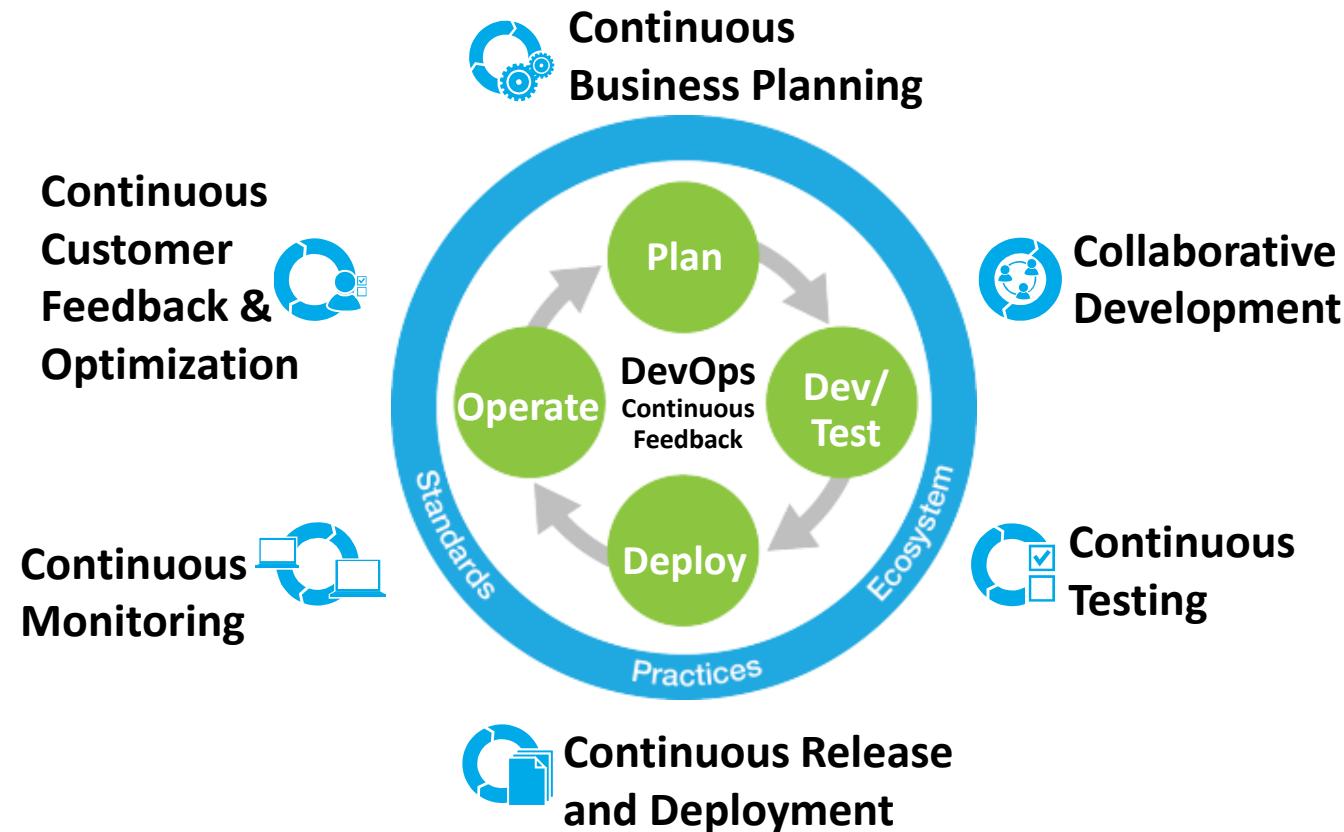
*Spanning mobile to mainframe platforms*



# IBM's Collaborative DevOps to Coordinate Multi-Speed IT

Enterprise capability for continuous software delivery that enables organizations to seize market opportunities and reduce time-to-feedback

- Accelerate software delivery – *for faster time to value*
- Balance speed, cost, quality and risk – *for increased capacity to innovate*
- Reduce time to customer feedback – *for improved customer experience*



# IBM's Collaborative DevOps Leadership



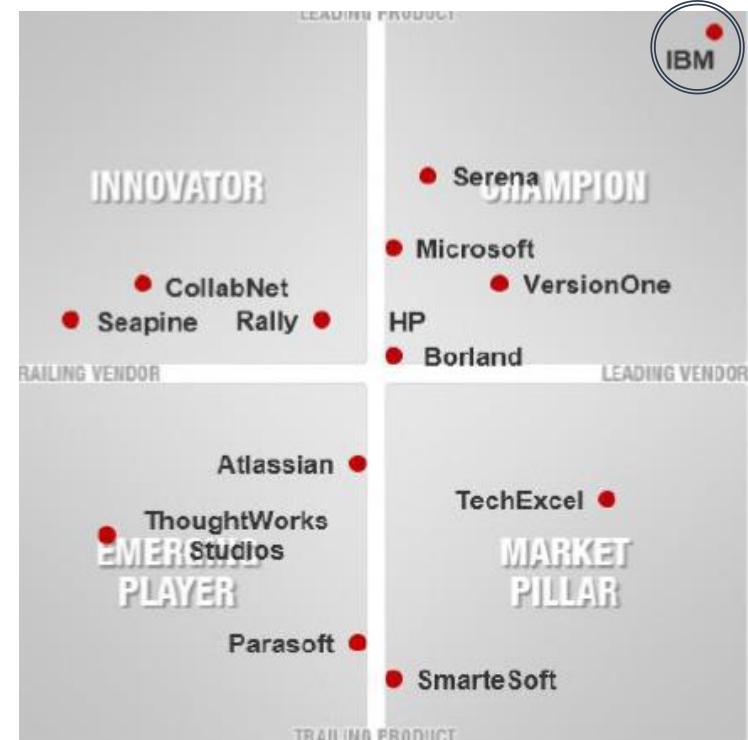
Gartner MQ, Application Development  
Life Cycle Management (Feb 9, 2015)



- > 200,000 members
- ~ 60,000 sandbox views

Open Services for Lifecycle Collaboration (OSLC)

- 90 members, 33 active projects
- Growing participation for Systems/IoT



Info-Tech ALM Vendor Landscape, 2015

# IBM's Collaborative Lifecycle Management solution (CLM) V6.0

## Supporting Full Collaborative DevOps



**Stake Holders**

**Management**

**DEV**

**Operations**

*Middleware/Distributed IT & Mainframe/ Hybrid Cloud*

**Requirements Capture**

**Lifecycle Traceability**

**Planning**

**Build**

**Simple Deployment**

**Test**

**Orchestrated Deployment**

- Full end to end, automated traceability
- Enables orchestration of multi-speed IT
- Dashboards, reporting and compliance
- Enables transition to modern collaborative DevOps practices
- Platform (Distributed/Mainframe), Process (Agile/Iterative/Waterfall) or Languages agnostic

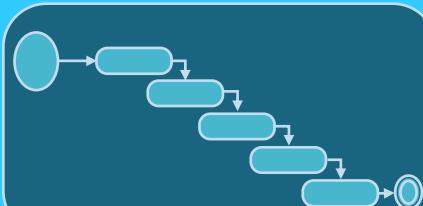
# CLM 6.0 to drive the Effectiveness and Efficiency

*DevOps is all about driving the **Effectiveness** and **Efficiency** required to dramatically reduce cost and risk while accelerating delivery*



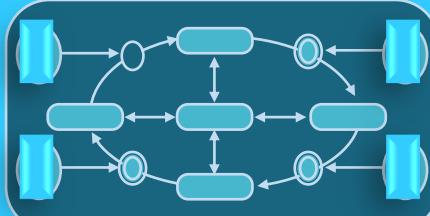
# CLM 6.0 – Gradually Adopting Collaborative DevOps

## Traditional

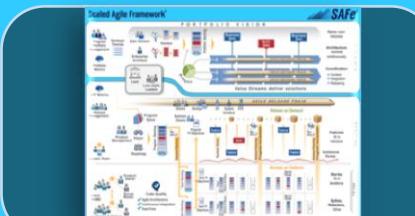


- Different process for different teams
- Industry templates & custom process
- Sharing of best practices across teams

## AGILE



## Scaled Agile (SAFe)



**IBM is a Leader !**

**Gartner Magic Quadrant for Application Development Life Cycle Management (Feb 9, 2015)**

**“Consider IBM when you are looking for a broad portfolio of technology products and services spanning methods, platforms and delivery types, from system engineering to traditional IT applications. With good support of waterfall, iterative and agile methodologies, IBM can be a good choice for bimodal organizations looking for a single ADLM solution for all teams.”**

# Collaborative DevOps: Integrated Capabilities

## Teams and process

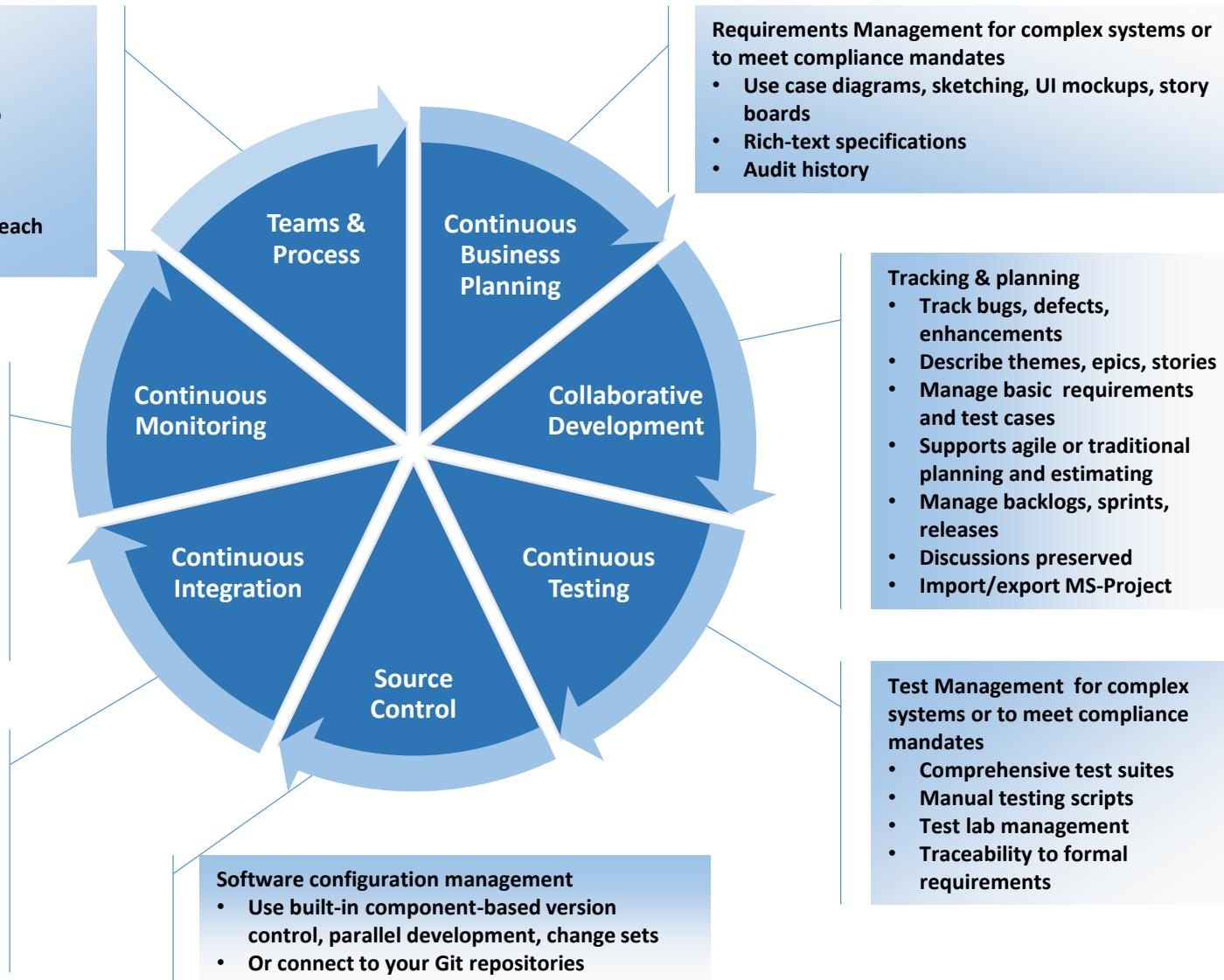
- Know who is on your team
- Presence and chat in context
- Events and feeds keep you in the loop
- Out-of-the box processes for Agile or traditional, help the team follow best practices
- Processes customizable on the fly for each project

## Dashboards and reporting

- Instant status with reporting automatically linked to work being performed
- Hundreds of configurable dashboard widgets, plus external OpenSocial Gadgets, IBM iWidgets
- Data warehouse for trend analysis

## Continuous integration

- Build scheduling
- Rich build reporting linked to tasks and source code
- Compare and reproduce builds
- Use built-in engine or popular engines like Ant, Maven, Hudson/Jenkins, etc...

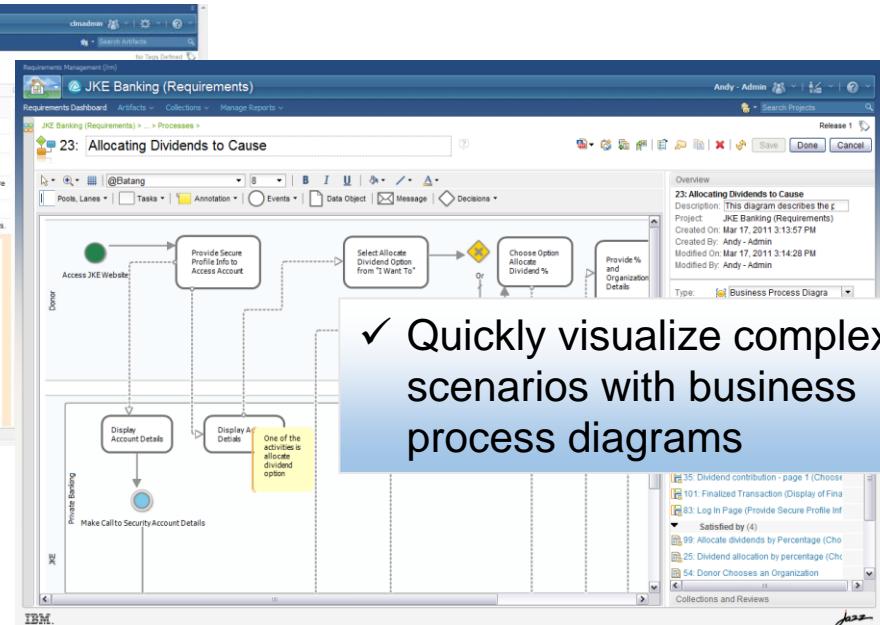


# Continuous Business Planning

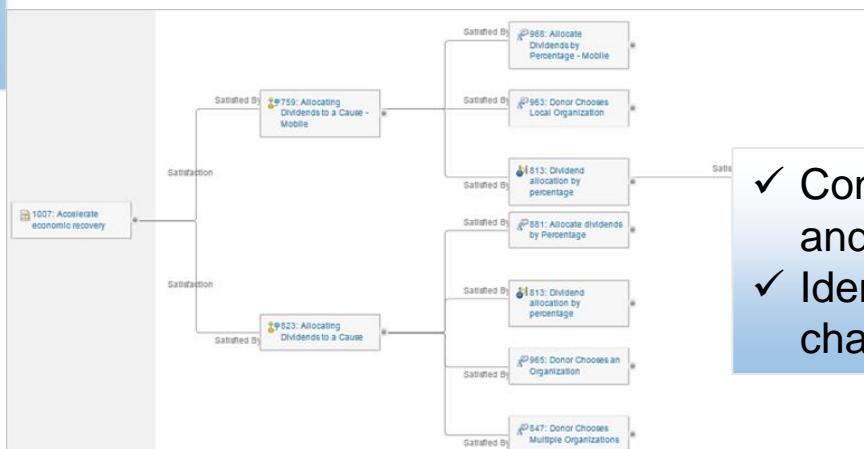
*Managing Requirements where/when documents and spreadsheets are not enough*

The screenshot shows the Requirements Management (RM) interface for the AMR Stakeholder Requirements Specification. It displays a table of requirements with columns for ID, Title, Description, and Status. A use case diagram titled 'Automated Meter Reader System' is shown below the table, illustrating interactions between a 'Meter Reader' and the system.

- ✓ Define and organize detailed requirements with rich text, use case diagrams, UI mockups, story boards



- ✓ Quickly visualize complex scenarios with business process diagrams



- ✓ Connect requirements to tests and development
- ✓ Identify gaps and impact of changes

# Collaborative Development - One plan...multiple views

*Everyone sees meaningful data in the context of their own work*

The image displays three views of a sprint plan, each showing a different perspective on the same underlying data.

**View 1: Plan Details (Radar View)**

This view shows a grid of items with columns for Actions, Summary, Effective Estimate, Owned By, and a Gantt chart. The Gantt chart spans from April 3, 2011, to April 17, 2011, with tasks assigned to Unassig, Marco, and Bob.

Actions	Summary	Effective Estimate	Owned By	Timeline
► Frequency of dividend transfer	--	--	Unassig	[Timeline from April 3 to April 17]
► Requests sent in form of email	--	--	Unassig	[Timeline from April 3 to April 17]
► Organization must identify how much money is desired	--	--	Marco	[Timeline from April 3 to April 17]
► Organizations may a	Implement - Orga	1.5 days	Marco	[Timeline from April 3 to April 17]
► Customers can Nominate a	Implement - Customers	--	--	
► Organization must provide	--	--	--	

**View 2: Taskboard**

This view shows a taskboard with columns for Story, Open, and In Progress. It lists items like "Donor Dividend Allocation Criteria" and "Implement - Frequency of dividend transfer".

Story	Open	In Progress
Donor Dividend Allocation Criteria	Implement - Donor Dividend Allocation Criteria	
Frequency of dividend transfer		Implement - Frequency of dividend transfer

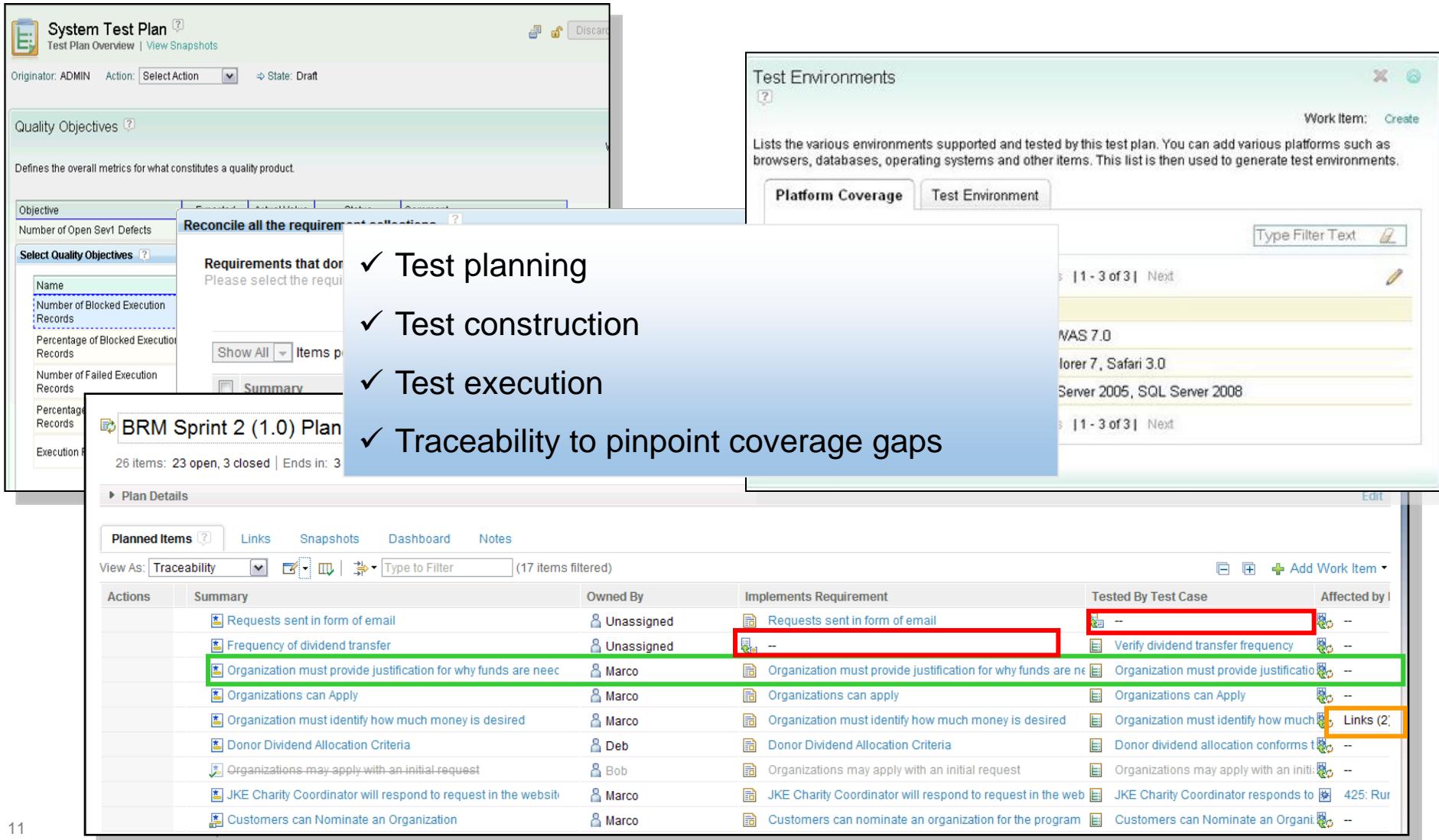
**View 3: Planned Time**

This view shows a list of team members with their load status. Bob, cp, and Marco are overburdened, while Deb and Tanuj have no load.

Member	Closed Items	Open Items	Load Status
Bob	0	1	No load
cp	0	1	No load
Deb	3	5	Overburdened (-160 h)
Marco	2	14	Overburdened (-84 h)
Tanuj	0	0	No load

# Continuous Testing

*Improving Quality requires a shift in focus from ad-hoc Testing to Quality Management*



The screenshot shows the IBM Rational Functional Tester interface. On the left, the 'System Test Plan' window displays 'Quality Objectives' and an 'Objective' section with metrics like 'Number of Open Sev1 Defects'. A modal dialog titled 'Reconcile all the requirements' is open, prompting the user to 'Please select the required requirements'. On the right, the 'Test Environments' window lists supported environments: 'NAS 7.0', 'Internet Explorer 7, Safari 3.0', and 'Server 2005, SQL Server 2008'. Below these windows, a large blue callout box highlights the following four steps:

- ✓ Test planning
- ✓ Test construction
- ✓ Test execution
- ✓ Traceability to pinpoint coverage gaps

At the bottom, the 'BRM Sprint 2 (1.0) Plan' window shows a summary of 26 items: 23 open, 3 closed, and ends in 3 days. The 'Plan Details' tab is selected, displaying a table of 'Planned Items' with columns for Actions, Summary, Owned By, Implements Requirement, Tested By Test Case, and Affected by I.

Actions	Summary	Owned By	Implements Requirement	Tested By Test Case	Affected by I
Requests sent in form of email	Unassigned	Requests sent in form of email	--	Verify dividend transfer frequency	--
Frequency of dividend transfer	Unassigned	--	--	Organization must provide justification for why funds are needed	--
Organization must provide justification for why funds are needed	Marco	Organization must provide justification for why funds are needed	--	Organization must provide justification for why funds are needed	--
Organizations can Apply	Marco	Organizations can apply	--	Organizations can Apply	--
Organization must identify how much money is desired	Marco	Organization must identify how much money is desired	--	Organization must identify how much money is desired	--
Donor Dividend Allocation Criteria	Deb	Donor Dividend Allocation Criteria	--	Donor dividend allocation conforms to	--
Organizations may apply with an initial request	Bob	Organizations may apply with an initial request	--	Organizations may apply with an initial request	--
JKE Charity Coordinator will respond to request in the website	Marco	JKE Charity Coordinator will respond to request in the website	--	JKE Charity Coordinator responds to	425: Rur
Customers can Nominate an Organization	Marco	Customers can nominate an organization for the program	--	Customers can Nominate an Organizati	--

# Continuous Monitoring with Flexible, Self-Serve Reporting

- ✓ Burn-down and burn-up reports to show trends
- ✓ Time series reports showing information over time
- ✓ Expanded self serve report options for related traced artifacts

IBM Jazz Reporting Service      Explore      Create      Learn     

Chart type

- Simple list
- Grouped table
- Bar graph
- Line graph
- Pie chart
- Bubble chart
- Scatter plot

Scope

- Artifacts
- Links
- Sharing
- Categories
- Tags

Choose the type of chart that you're most interested in. You can add others to your report later.

 Line graph Best for showing data trends over time	 Column graph Best for comparing values	 Bar graph Best for comparing values	 Pie chart Best for dessert
 Simple list Best for showing a list of things with details	 Grouped table Best for showing hierarchies, relationships and summary information	 Tree diagram Best for exploring relationships from a single starting point	 Network diagram Best for exploring relationships among many things

# Continuous Monitoring with Dashboards

*Providing Real time view of project health*

JKE Banking (Change Management) \*

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

### Story Status Current Iteration

Show the status of all stories planned for the current iteration

Status	Count
Testing	3
Implementing	17
Invalid	2
Done	16
Ready to Test	6
New	14
Ready to Implement	1

- 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 TTV testcases and testcase updates to TTV 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
- 155389: [Repository - M14] Performance, quality and robustness enhancements
- 158051: 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

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

Remaining Work  
Planned Work  
Ideal  
Expected Complete

Remaining Work  
Planned Work  
Ideal  
Expected Complete

### Stories Open/Closed/In Progress

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

Open  
In Progress  
Closed

Open  
In Progress  
Closed

✓ At-a-glance, real-time status vs. hours pulling it together & out of date before the meeting

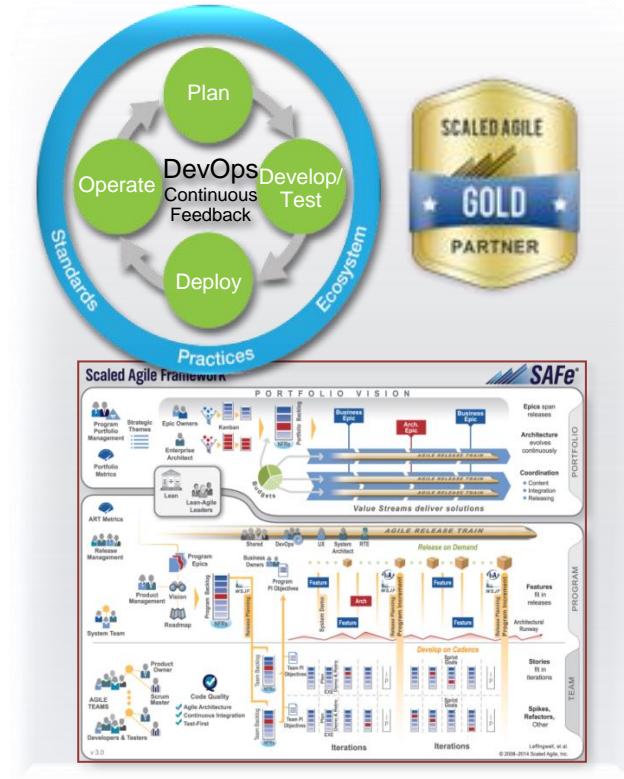
✓ Easily add customizable widgets

# Supporting the Scaled Agile Framework® (SAFe®)

*Bringing together the people, processes, and tools across the enterprise*

*Scale lean and agile principles to the enterprise by establishing a SAFe-based environment with fit-for-purpose dashboards and reports, supporting the team, program and portfolio levels in heterogeneous environments.*

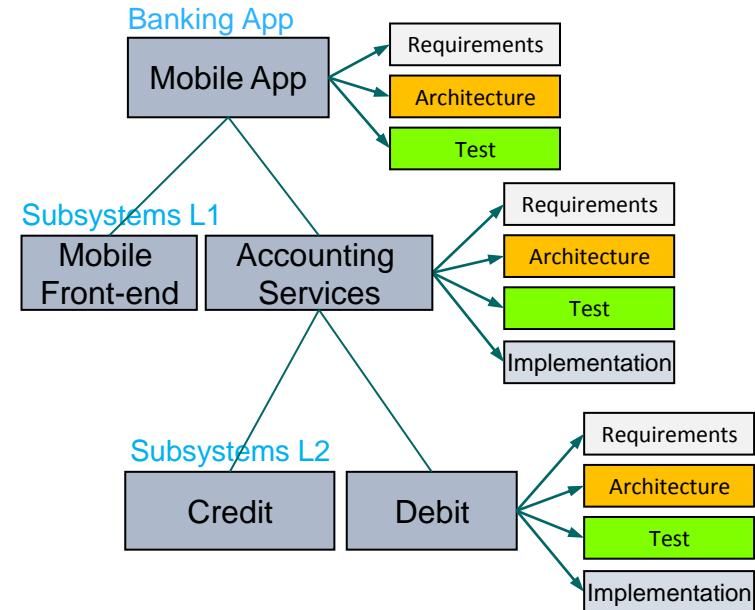
- ✓ Get up and running quickly with out-of-the-box infrastructure to lead a SAFe project
- ✓ Improve agility and predictability with role-based dashboards for visibility to continuously measure progress and adjust planning in real time to meet business goals
- ✓ Simplify change to culture and process with quick and easy access to SAFe best-practices



# Enabling Strategic Reuse

*Speeding up delivery of highly customized innovation*

- Today... No team would undertake any software development project without using an SCM.
- We are extending the same benefits to other engineering roles and the tools they use, so they can work faster, smarter and with less defects.
  - Version and configuration management across CLM disciplines
  - Change management across CLM disciplines
  - Component reuse in multiple products and releases
- Enabling teams to reuse engineering artifacts to speed up delivery of innovation - highly customized (eg. Geography, price points), at a reduced cost and increased quality.



# Partners eco-system for CLM

Just a few examples of the business partner ecosystem for DevOps...



Manage open source compliance



Mobile interface to access RTC



**CLEAR BLADE**  
Mainframe to Mobile™  
To identify quality & security issues early



Connect RTC with HP ALM/Quality Center, Atlassian JIRA, Microsoft TFS, and open source Bugzilla with integrated, bi-directional Adapters.



Automation Pack for RTC:  
Provisioning build machines on-demand



Tool-assisted peer review & consensus enabling compliance



Closed-loop defect testing & crash reporting.

Check here for the latest:  
[jazz.net/extend/integrations/](http://jazz.net/extend/integrations/)



Inspired by the web



Free to use and share

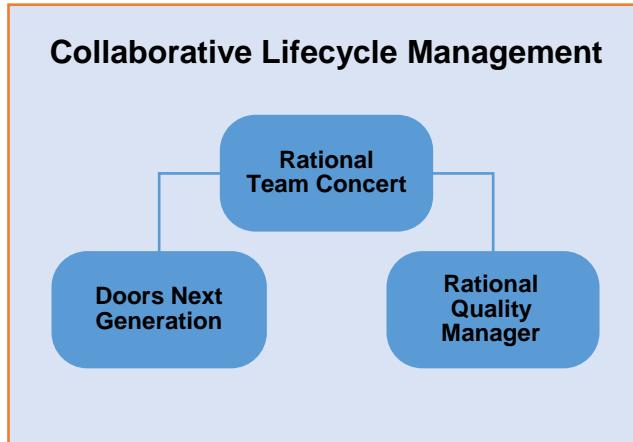


Changing the industry

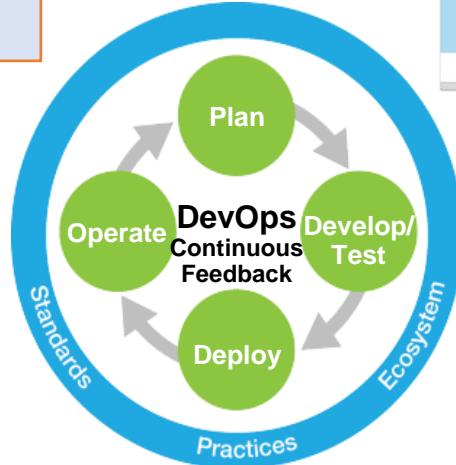
**Open Services for Lifecycle Collaboration (OSLC)**

# Accelerated Delivery of IBM's CLM 6.0 Solution

IBM - Drinking it's Own Champagne!



*Collaborative  
Lifecycle  
Management  
Continuous  
Delivery*



***Improve planning, build,  
and testing with DevOps  
and Continuous Delivery***

**BlueMix DevOps Services**

The screenshot shows the BlueMix DevOps Services interface with various tools and features listed:

- Agile Development**: Rational Team Concert
- Requirements**: Rational DOORS Next Generation
- Quality Testing**: Rational Quality Manager
- Design**: Rational Software Architect
- Lifecycle management for the whole team**: Rational Collaborative Lifecycle Management
- Our products combine seamlessly to improve collaboration across the lifecycle and can integrate with a wide range of industry tools through the Jazz API**
- Check out all the jazz products >**
- Forum**: 40,000+ questions, 84,000+ answers. And counting. Get answers and help others. ▾
- Our DevOps Story**: We're doing continuous delivery. You can, too! Follow our CLM team's adoption of DevOps ▾
- DevOps Services**: From development to deployment, and everything in between. Create a Project ▾

***Deliver value  
to customers  
early and often***

# CLM 6.0 Delivery: Product and Process Improvements

Lifecycle Measurements	2010	2012 – 2014	2015	Total Improvement
Project Initiation	10 days	2 days	8 hours	<b>9 days</b>
Groomed Backlog	45 days	On-going	On-going	<b>44 days</b>
Overall Time To Development	<b>55 days</b>	<b>3 days</b>	<b>1 day</b>	<b>54 days</b>
Builds (per week)	3 builds	5 builds	10 builds	>200%
BVT Availability	18 hours 1 / day	< 1hour 1 / day	< 1hour 4 / day	<b>17 hours</b> <b>4x environments</b>
Pipeline Deployments per week	2 (manual)	50	140	<b>70 x</b>
Build/BVT/Pipeline/Staging (% automated)	0%	50%	100%	<b>100% automated testing</b>
Sprint Test Time	2 days	14 hours	6 hours	<b>42 hours</b>
Total Deployment Time	8 hours	4 hours	20 minutes	<b>4 x</b>
Overall Time To Production	<b>3 days</b>	<b>2 days</b>	<b>2x daily</b>	<b>6 x</b>
Time Between Releases	12 Months	3 Months	Monthly*	<b>11 Months</b>
Innovation / Maintenance	64% / 36%	78% / 22%	83% / 17%	<b>+19% / -19%</b>

# The Total Economic Impact of Rational CLM

- **Analysis by Forrester Research Inc.**
  - Based on customer interviews, across multiple industries and GEOs.
- **Customer reasons for adopting the IBM Rational Solution for CLM:**
  - Increase visibility and traceability throughout all aspects of a project
  - Better manage development at a global level
  - Increase the flexibility of their projects
  - Increase compliance and the ability to respond quickly to audit situations
- **Example (typical) use case:** Multinational manufacturing organization, UK HQ
  - Division A, located in the UK. (Two project managers, 18 Developers, 2 QA Engineers)
  - Division B, located in India (One project manager, several developers, 1 QA Engineer)
  - CLM implemented in two phases:
    - Phase 1: One PM, 3 Developers, 1 QA Engineer, working on 3 projects
    - Phase 2: Remainder of the team, rolled out over 12 months, working on 20-30 projects.

# The Total Economic Impact of Rational CLM

Cash Flow — Risk-Adjusted

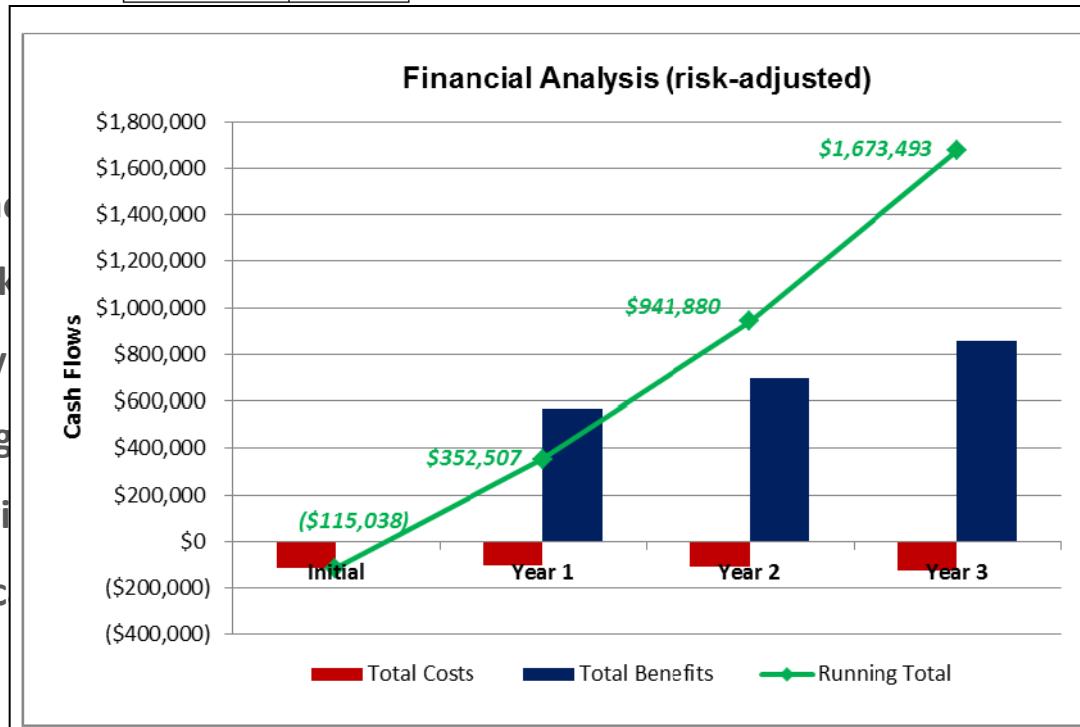
- Expenses:**

- Licensing fees plus S&S
- Internal implementation and maintenance cost (staff)
- Hardware expenses

- Benefits (in this order):**

- Expanded Geographic coverage (more clients)
- Improved team coordination (Work item management)
- Enhanced project delivery capacity
- Improved development and testing efficiency
- Reduced cost of rework and resolving conflicts
- Enhanced reporting and planning capabilities

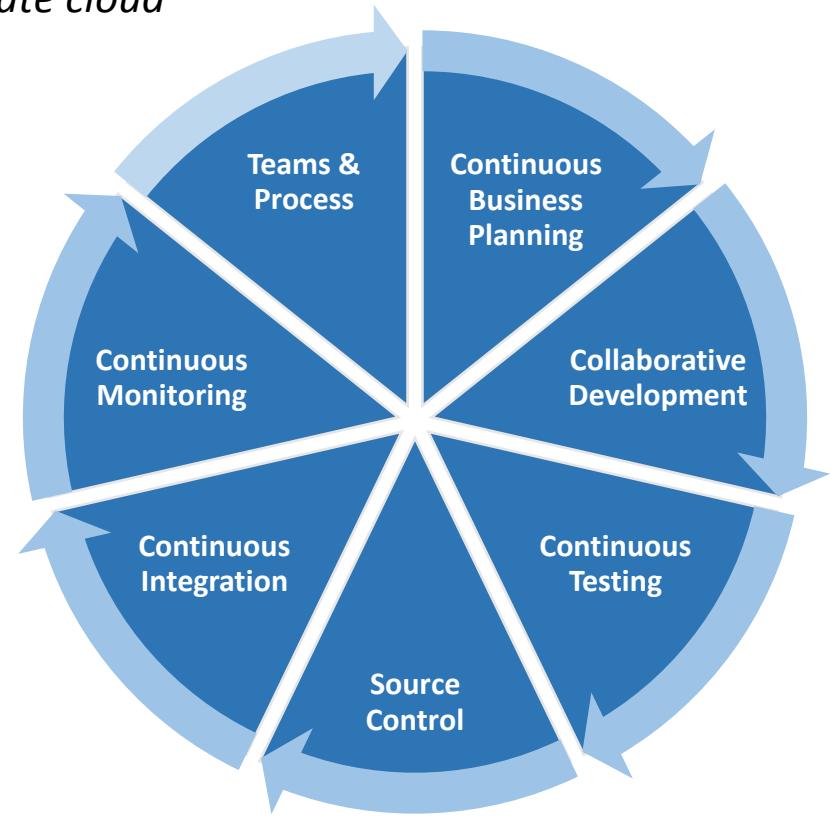
Cash flow — Risk-adjusted estimates						
	Initial	Year 1	Year 2	Year 3	Total	Present value
Costs <sup>2</sup>	(\$115,038)	(\$102,358)	(\$42,353)	(\$48,310)	(\$308,059)	(\$279,390)
Benefits	\$0	\$569,903	\$699,809	\$854,815	\$2,124,527	\$1,738,683
Net benefits	(\$115,038)	\$467,545	\$657,455	\$806,505	\$1,816,468	\$1,459,294
ROI	522%					
Payback period	3 months					



# CLM available on premise ... and as a Managed Service

*Providing the core DevOps solution on a virtual private cloud*

- Reduce operating costs
  - Enabling CLM in minutes and updates as soon as they become available
  - Customized and configured for your unique needs
  - IBM team remotely oversees and supports configuration, implementation, and monitors
  - Scalable, single-tenant, Infrastructure
-  **IBM SoftLayer**
- 99.9% availability (SLO)
  - Scale up and down the number of users monthly
  - 134 Large customers already using... McDonald's, CVS, Marriott and more



## CLM as a Managed Service

*Provides on-going expertise to ensure that your CLM environment is taken care of so that you can focus on your business.*

# Customer success with DevOps

<http://www.ibm.com/ibm/devops/us/en/casestudies>

Computer Services



DevOps approach speeds IBM Watson solutions to market

→ Learn more

[Learn more](#)

Banking

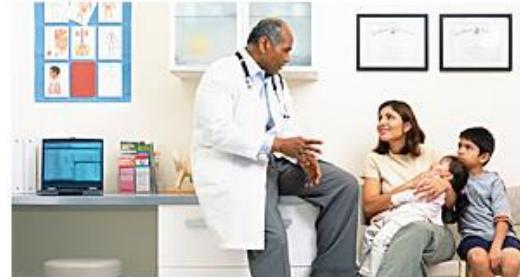


Itaú BBA achieves massive time savings with IBM Rational software

→ Learn more

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Healthcare



Healthcare information provider reduces deployment time from days to minutes

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Computer Services



Capgemini speeds time to market by 25 percent

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Retail, Automotive



Cars.com increases product releases from 40 to 300 per year

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Banking



Rizal Commercial Banking Corp. transforms IT to gain 1.2M customers in one year

→ Learn more

[Learn more](#)

## Summary: Collaborative DevOps with CLM 6.0

- Collaboration across all DevOps stakeholders
- Scaled Agile Framework 3.0 (SAFe)
- Change Management across the lifecycle
- Lifecycle Traceability
- Platform and Process agnostic
- Governance/Audit/Compliance
- Extensive 3rd party eco-system
- Resulting in many customers, as well as IBM Development teams, benefitting from measurable business improvements.



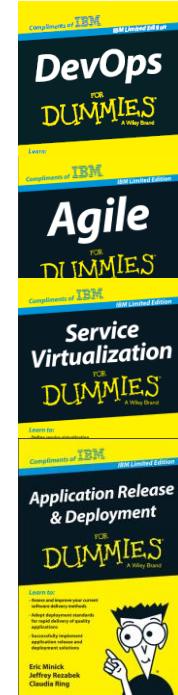
## For more information...



### For team leads, managers

- DevOps: [ibm.com/devops](http://ibm.com/devops)
- Lean and agile development: [ibm.com/rational/agile](http://ibm.com/rational/agile)
- DevOps for Dummies: [ibm.co/devopsfordummies](http://ibm.co/devopsfordummies)
- Agile for Dummies: [ibm.co/agilefordummies](http://ibm.co/agilefordummies)
- Service Virtualization for Dummies: [ibm.co/ServiceVirtualizationForDummies](http://ibm.co/ServiceVirtualizationForDummies)
- Application Release & Deploy for Dummies: [ibm.co/ARDfordummies](http://ibm.co/ARDfordummies)

*It is not a typo....please use .co not .com*



### For developers, testers, architects

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Team  
Concert  
Licenses

- Product info: [jazz.net](http://jazz.net)
- Develop and run on the cloud: [jazzhub.com](http://jazzhub.com)
- Community: [ibm.com/developerworks/devops](http://ibm.com/developerworks/devops)
- 10 free licenses of Rational Team Concert: [jazz.net/downloads/rational-team-concert/latest](http://jazz.net/downloads/rational-team-concert/latest)





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[www.ibm.com/devops](http://www.ibm.com/devops)

## Backup – Slides covering the following sections

- What's new in CLM 6.0 – 1 slide
- State of IT – 1 slide
- Details on SAFe – 6 slides
- Details on Strategic Reuse – 10 slides, including considerations to adopt Strategic Reuse or not.
- Details on Reporting – 2 slides
- More details on RQM, DNG and RTC in CLM 6.0 – 9 slides
- What's new with CLM6.0 – for z customers – 1 slide
- Upgrade scenarios to CLM 6.0 – 2 slides.
- The hidden factory opportunity – 2 slides
- More detailed customer success stories – 6 slides

# Backup – What's New in CLM 6.0

## What's New in CLM 6.0

- Scaled Agile Framework (SAFe), to coordinate multi-speed IT and accelerate software delivery, regardless of teams maturity, processes and environments
- Strategic reuse, to accelerate delivery of highly customized innovation
- Quick Planner for everyone in the team; Mobile and Cloud enabled
- Significant improvements to Jazz Reporting services with new self-serve and OOTB reports
- New HTML-5 based, free form, diagram editor in DNG, to easily capture and communicate Requirements and stories
- Several improvements for z customers
- New SCM component hierarchies in RTC
- Enterprise wide security – Kerberos/SPEGNO (RTC) SSO
- Simplified authentication administration with OpenID Connect SSO

## Backup – Slide on the “state of IT”

- Next slide can be used as part of describing the overall impact of “the problem”.
- It could be used after the slide 4 on “The Challenge: Coordinating Multi-speed IT”.
- It could also be used as the very first slide at “the state of IT”.

## Organizations that effectively leverage software delivery outperform their competitors... yet few are able to deliver it effectively



of companies believe software delivery  
is important or critical

*But only...*

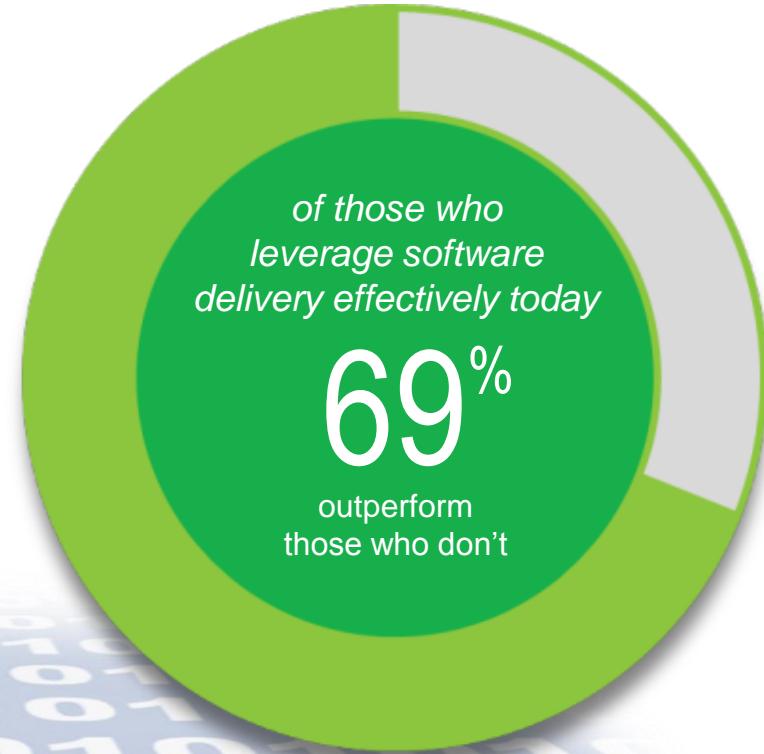


leverage software delivery effectively today

41% experience development delays

34% experience deployment delays

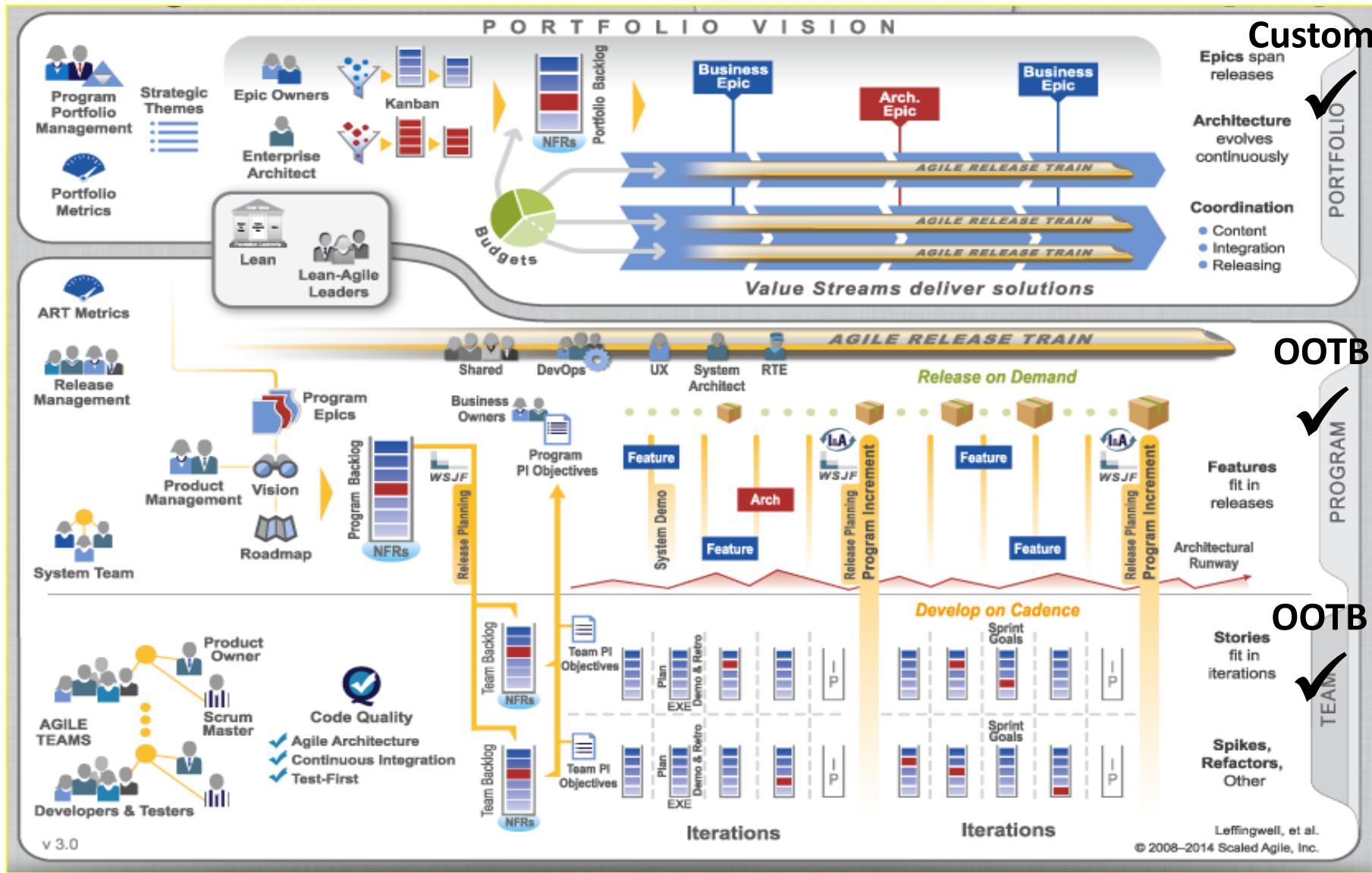
45% experience production delays



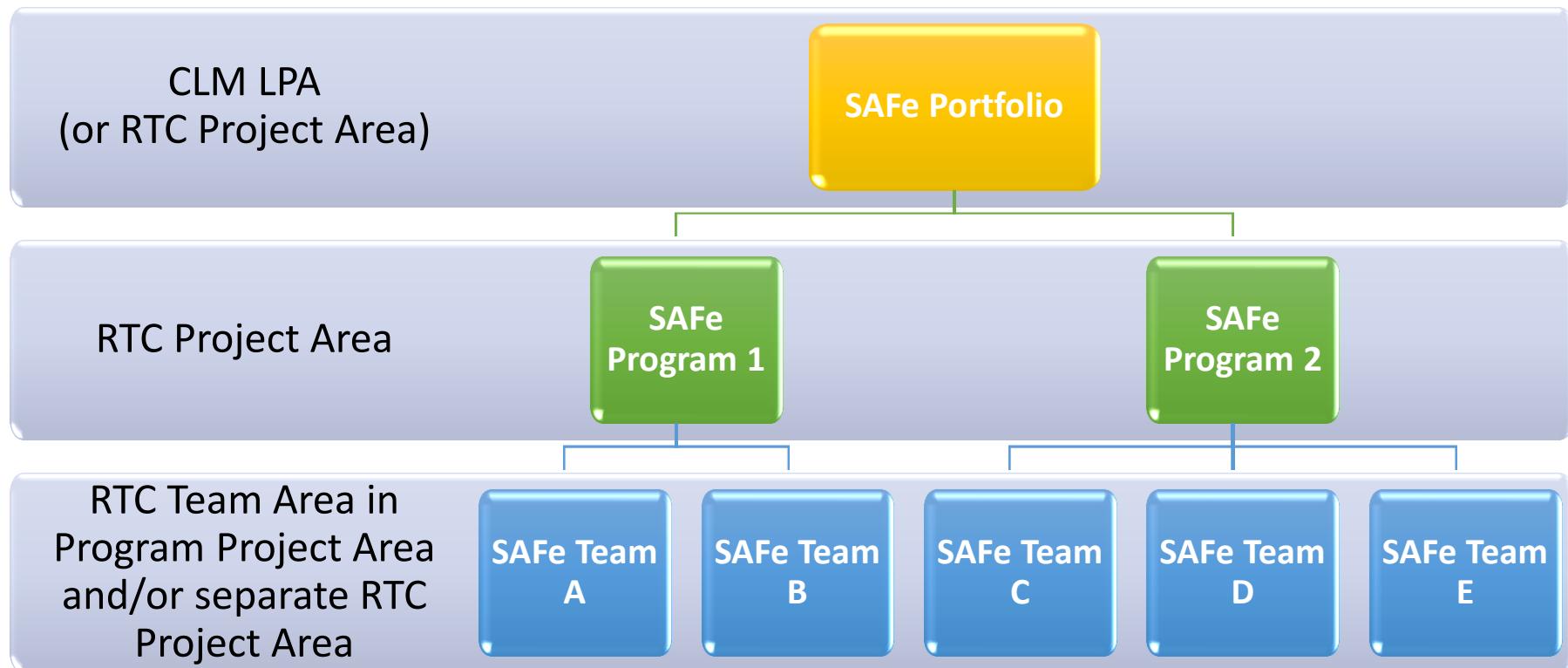
Source: "The Software Edge: How effective software development drives competitive advantage," IBM Institute of Business Value, March 2013

# Backup – More details on SAFe

# SAFe Concepts Supported OOTB in 6.0



# SAFe RTC Infrastructure



For new environments

- ✓ Establish new Program with Teams

For existing environments

- ✓ Establish a new Program that tracks work of existing Teams

# SAFe Support in RTC V6.0

- Project Area Initialization
  - Program/Team Timeline structure
  - Roles & Permissions
  - Artifacts (work item types, work item templates, plans, plan type, plan views)
- Work Item Details
- Planning
  - Program Backlog plan type
  - Kanban, WSJF Ranked List, Roadmap plan views
- Dashboards
- Queries & Reports
- Learn More: [http://bit.ly\(ibmsafesupport](http://bit.ly(ibmsafesupport)

# Project Area Initialization in a matter of minutes

**Program/Team Structure**

**Roles in Project Area Configuration**

**Project Area Overview Page Screenshot**

The screenshot shows the 'SAFe Program' project area configuration. The left sidebar has several sections with red boxes around them:

- Timelines
- Roles
- Permissions
- Categories
- Work Items

The main content area has two tabs:

- Overview**: Shows the 'Team Area Hierarchy' which includes 'SAFe Program', 'Team 1 (rename)', and 'Team 2 (rename)'.
- Process**: Shows the 'SAFe 3.0 Process (Program)' details.

**Defined Roles**

Role
Product Manager
Business Analyst
UX Designer
System Architect
Release Train Engineer
Business Owner
Product Owner
Scrum Master
Team Member

**Role Details**

Identifier: \*  
product-manager  
Name:  
Product Manager  
Cardinality:  
 single  many  
Description:  
SAFe Program Level: The product manager defines and prioritizes the program backlog, develops the vision and roadmap, works with product owners to optimize feature delivery to the customers, and sets PI Objectives. This person has content authority.

# Structured Analysis and Decision Making with Kanban

Plans >

## Program Roadmap

137 items total, 137 loaded items: 23 open, 114 closed | Ends in: --

▶ Plan Details Edit

Planned Items ? Links Snapshots Dashboard Notes

View As Kanban View Filter Exclude (128 items excluded) Type to Filter

Funnel		Analysis <span style="border: 1px solid #ccc; border-radius: 50%; padding: 2px 5px; background-color: #f0f0f0;">0/5</span>			Backlog <span style="border: 1px solid #ccc; border-radius: 50%; padding: 2px 5px; background-color: #f0f0f0;">4/3</span>	
Draft	Reviewed	Analyzing	Ready (for Approval)	Approved	Implementing	Rejected
<p>603</p> <p>Test</p> <p>Unassigned</p> <p>0</p> <p>JKE Banking - Acct Mgmt A</p>				<p>315</p> <p>Support Spanish for all applications</p> <p>Pete</p> <p>8</p> <p>PI 6</p>	<p>312</p> <p>Support Android Mobile Devices</p> <p>Pete</p> <p>15</p> <p>PI 6</p>	
				<p>314</p> <p>Support French for all applications</p> <p>Pete</p>	<p>317</p> <p>Provide a Summer Vacation</p>	

**Kanban System State Groups**

**WIP Limits enforced**

**Program Epics with WSJF**

# Prioritization based on Weighted Shortest Job First

Program Roadmap

137 items total, 137 loaded items: 23 open, 114 closed | Ends in: --

Plan Details

Planned Items | Links | Snapshots | Dashboard | Notes

View As: **WSJF Ranked List** | Exclude (134 items excluded) | Type to Filter

Program Backlog of Features sorted by WSJF

Summary	ID	Status	WSJF	Job Size	User/Business Value	Time Criticality	RROE
Manage bank accounts on Android devices	324	Implementing	26	1	8	5	13
Offer summer vacation loan to mobile users	336	New	17	3	13	20	20
Offer summer vacation loan to online users	337	New	17	3	13	20	20

Program Epic <08:52:40>

Summary: \*

Overview | Links | Approvals | History

Details

Type: Program Epic | Planned For: Unassigned

Filed Against: \* | Epic Type:  Architectural  Business

Progress: No Work | WSJF: 0

Project Area: SAFe Program | Job Size: Unassigned

Team Area: SAFe Program | User/Business Value: Unassigned

Tags: | Time Criticality: Unassigned

Owned By: Unassigned | RROE: Unassigned

**Value Statement**

Forward-Looking Position Statement:

For <customers> who <do something> the <solution> is a <something - the "how"> that <provides this value> Unlike <competitor, current solution, or non-existing solution> our solution <does something better - the "why">

Scope:

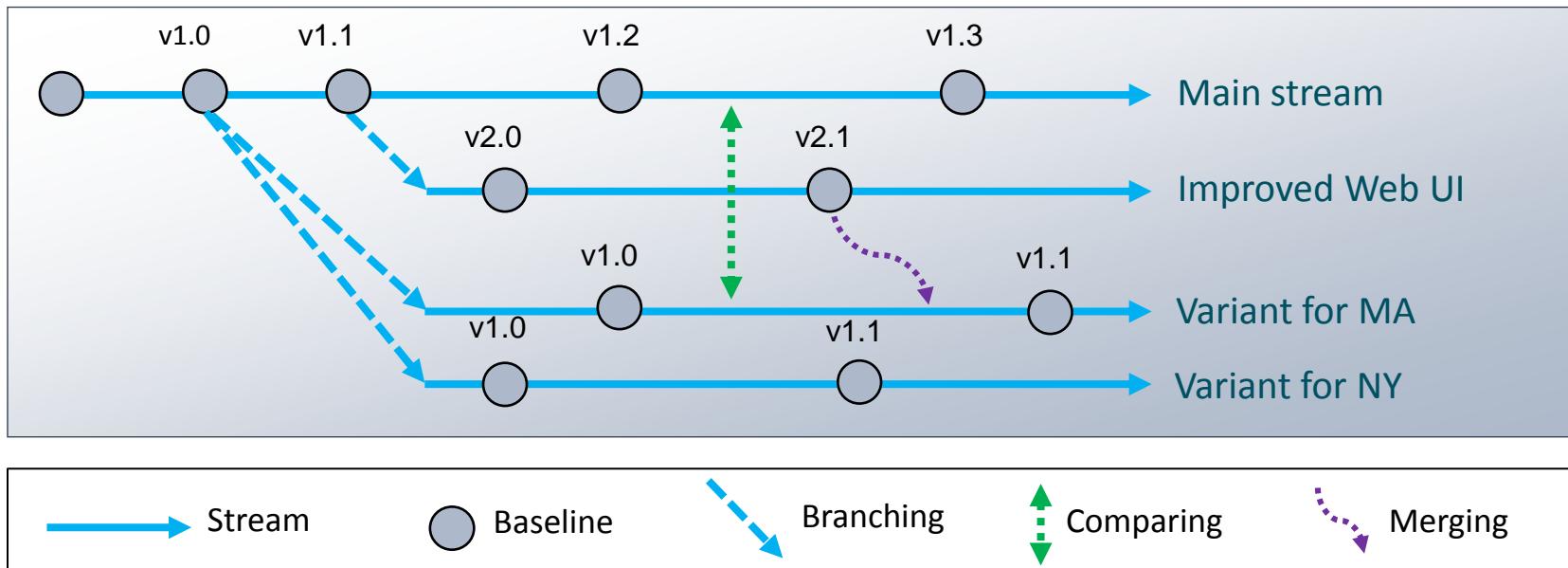
Update WSJF component values, automatically recalculate and resort

# Backup – More details on Strategic Reuse in CLM 6.0

# Strategic Reuse to speed up delivery of highly customized Innovation

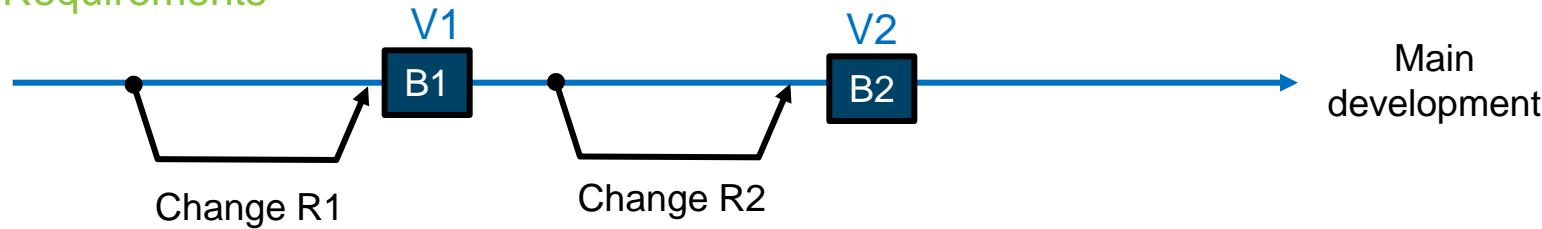
1. Versioning of Requirements within RDNG; Versioning of Test artifacts within RQM
2. Baselines, consisting of reqs, design, implementation and testing artifacts, across a single development stream
3. Baselines across multiple, parallel development streams (reqs & design & implementation & testing artifacts)
4. Branch, Diff (compare) and Merge across product configurations

Assume, as an example, a health care, or a banking application



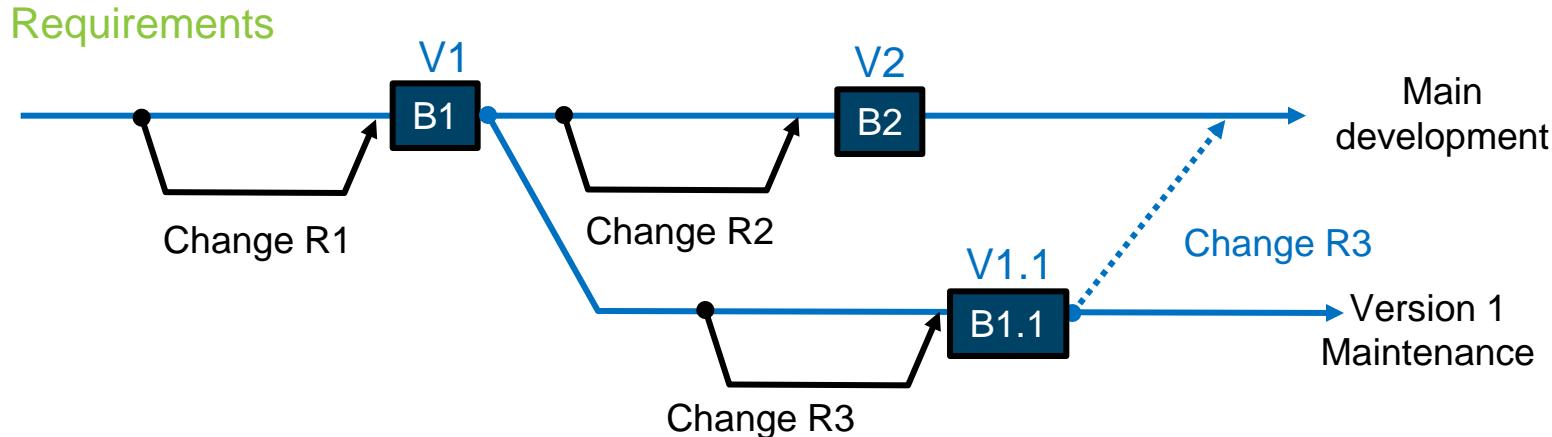
# Configuration Management evolving into Strategic Reuse

Requirements



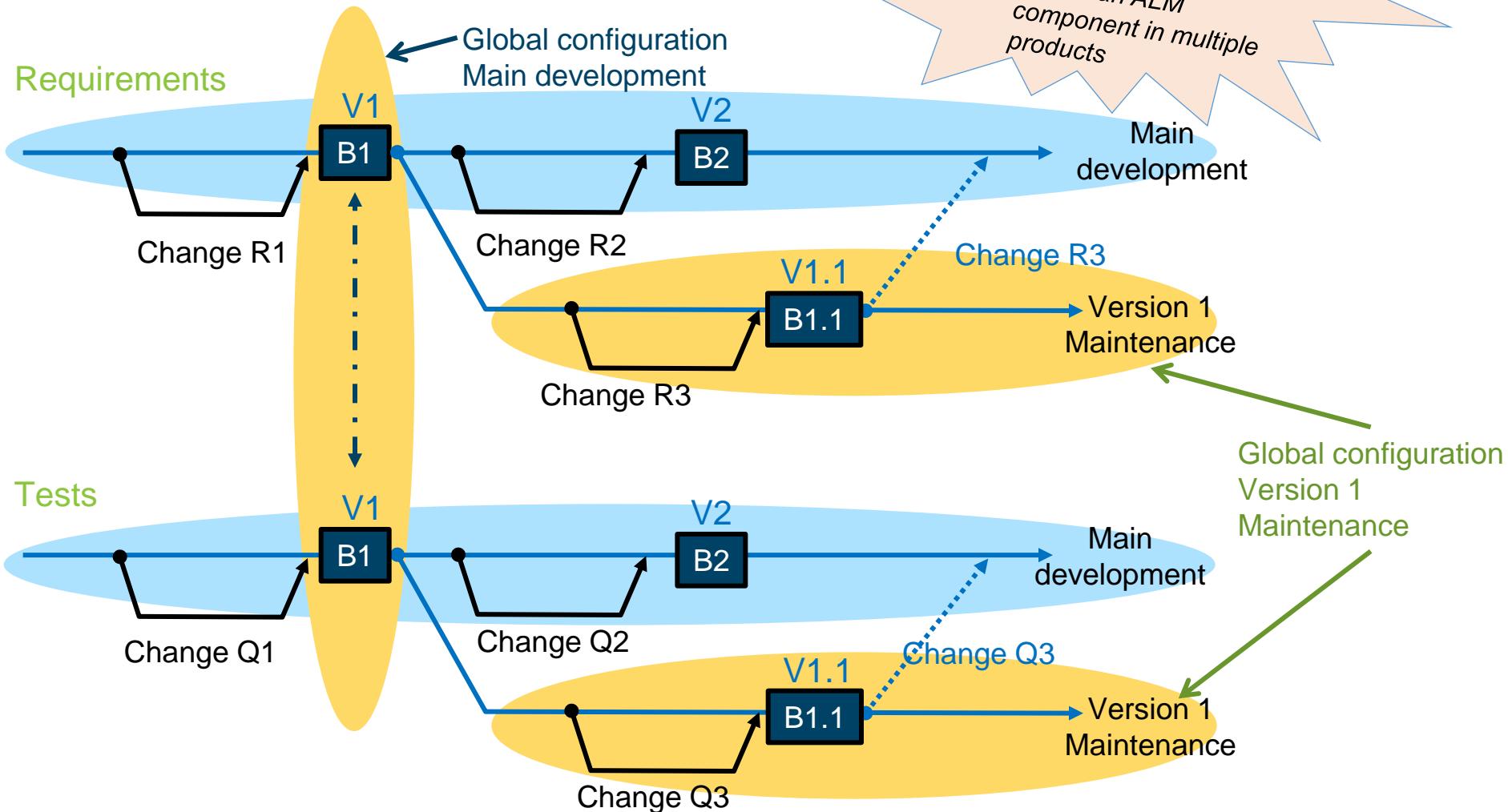
- Control change
- Use specific versions of your requirements (without copying!)

# Configuration Management evolving into Strategic Reuse



- Work in parallel on multiple releases with requirements and their relationships
- Recreate engineering environment for fixpack

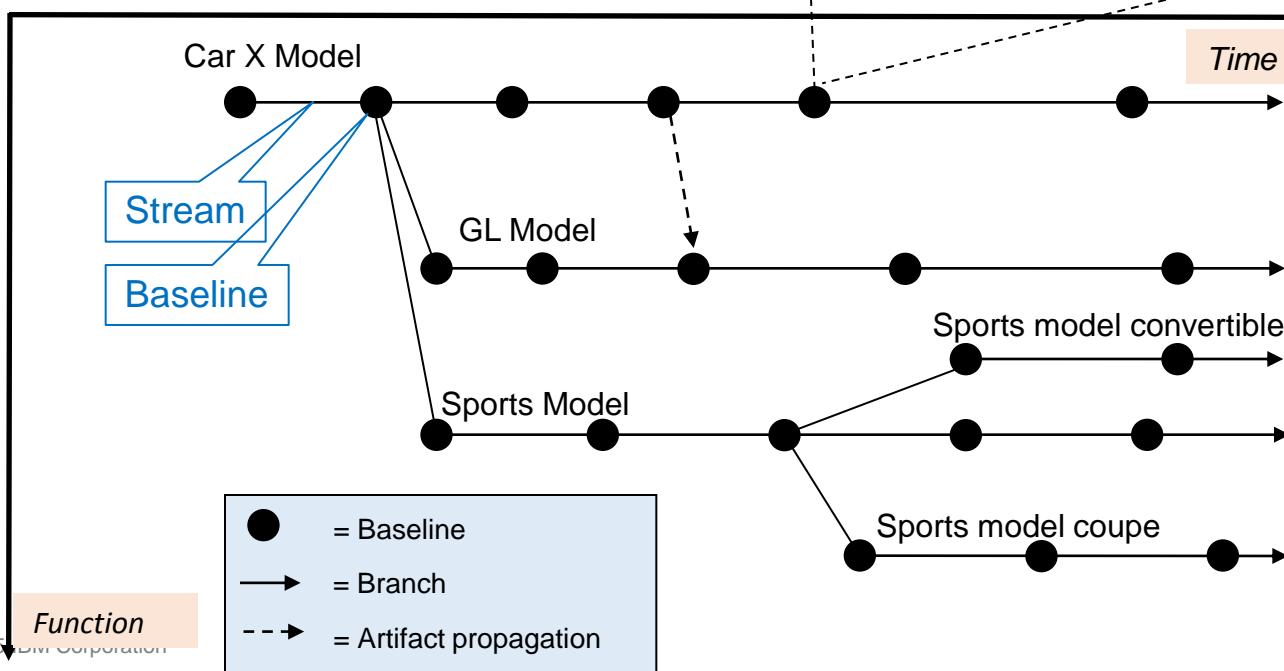
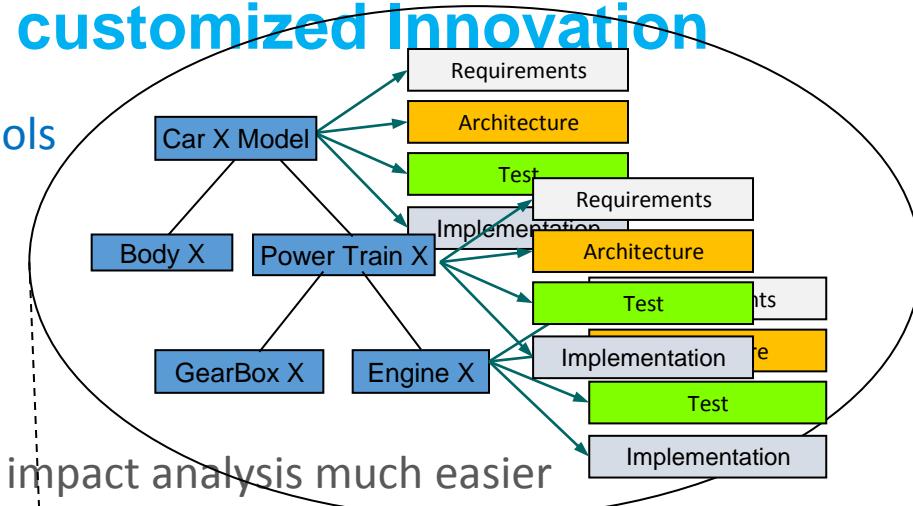
# Configuration Management evolving



*Not just about RM and QM but also Models (DM) and Implementation*

# Putting it all together: Speeding up delivery of highly customized Innovation

- Work in a development **stream** that spans tools
- **Baseline** across tools
- **Branch** to create new variants or releases
- **Compare** across configs
- **Control delivery** of changes across configs
- **Reuse** without copying, making updates and impact analysis much easier



# RQM 6.0 Example - Work in parallel on multiple versions

The screenshot displays two parallel sessions of the RQM 6.0 interface, both titled "JKE Banking (Quality Management)".

**Top Session:** The title bar shows "v1.0 Maintenance". A red box highlights this title bar. The configuration context dropdown on the left also shows "v1.0 Maintenance".

**Bottom Session:** The title bar shows "v1.0 Maintenance". A red box highlights this title bar. The configuration context dropdown on the left shows "v1.0 Maintenance".

**Configuration Context (Left Panel):**

- Global Configuration: None
- Quality Management:
  - Project Area Configuration: v1.0 Maintenance (highlighted by a red box)

**Project Area Configuration (Center Panel):**

- Switch
- Global Configuration
- Compare Configuration...
- Merge Configuration...

**Test Artifact Dialog (Right Panel):**

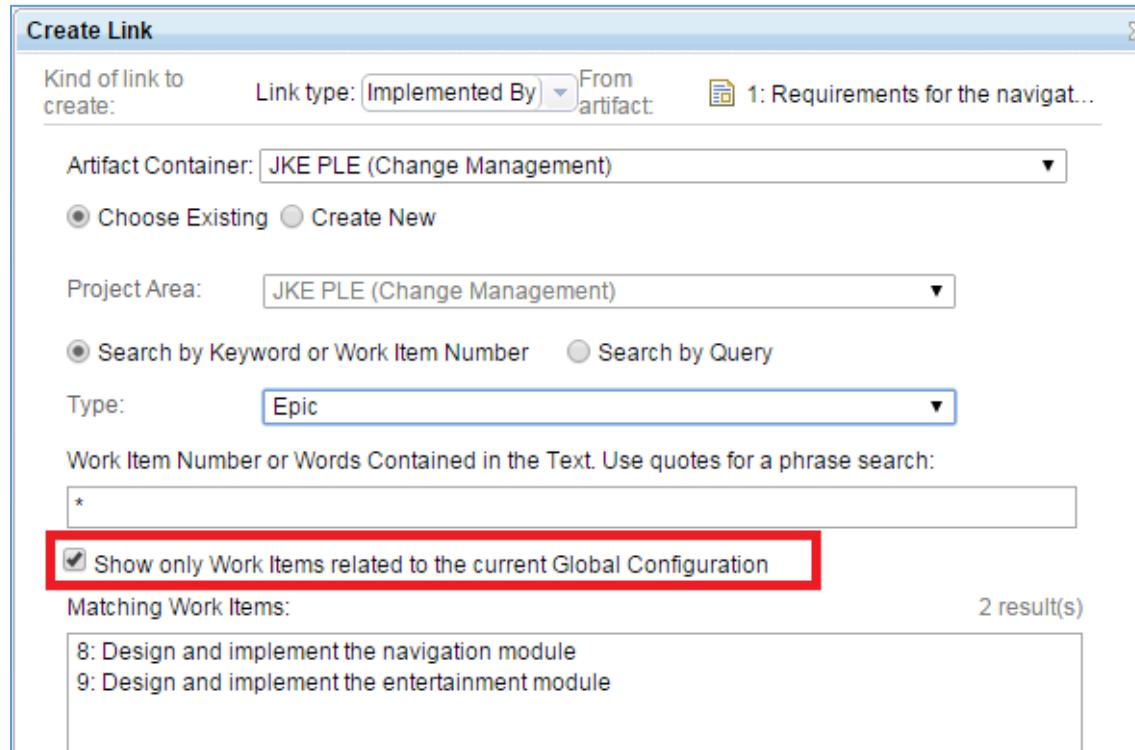
Fields shown in the dialog:

- Project\*: JKE Banking (Quality Manager) (highlighted by a red box)
- Configuration: Use Current Configuration (highlighted by a red box)
- Artifact Type\*
- Query\*
- Display Settings
- Test Plan
- No Filters
- ID, Name
- Items Per Page\*: 10

Note: The dialog message at the bottom says "No test artifacts to display Select test artifact query".

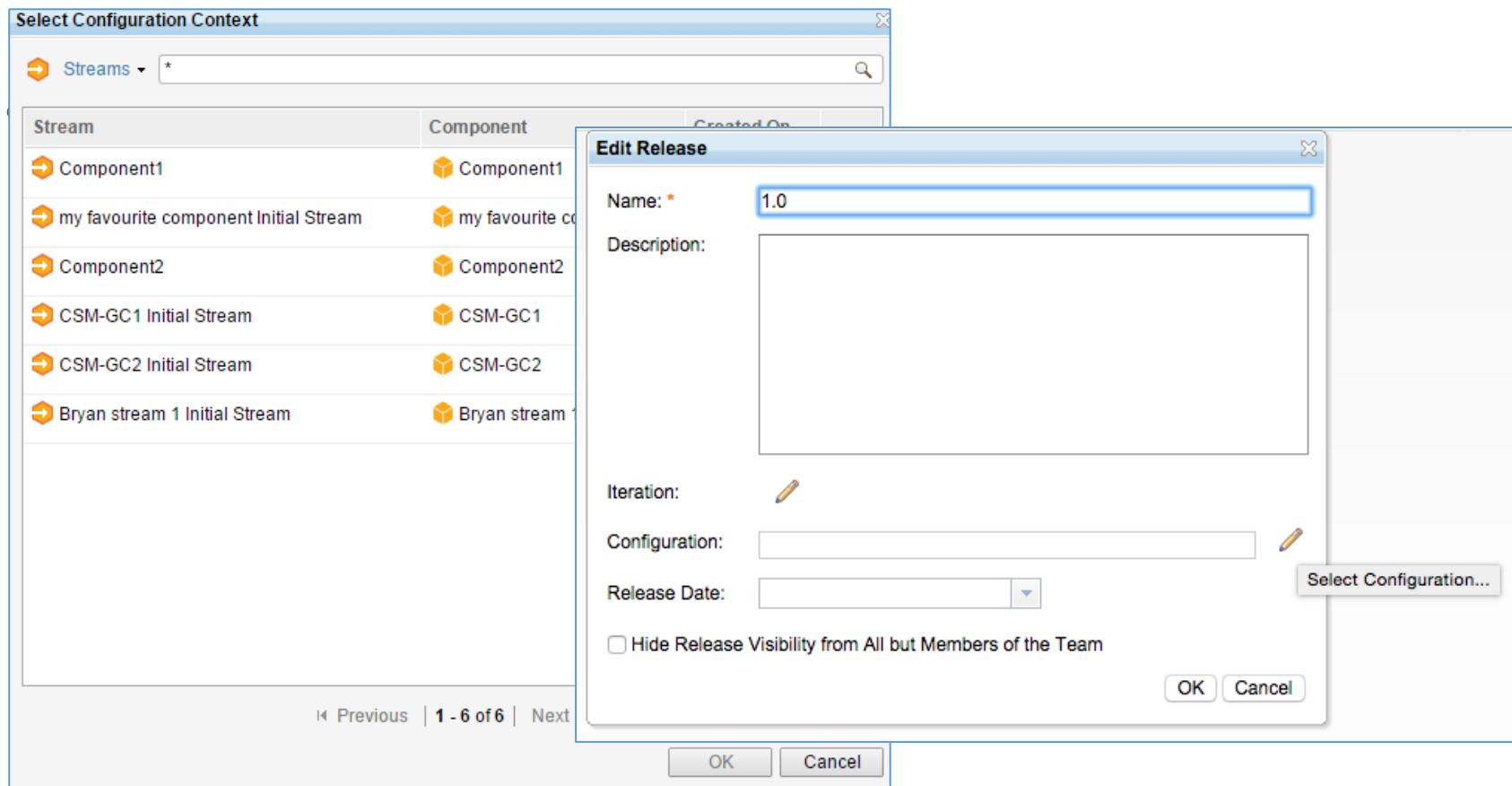
## RTC 6.0 Work Item Linking to Versioned RM & QM Data

- Link to versioned RM or QM data
  - [\[CCM\] Tracking and planning integration with versioned CLM resources \(272412\)](#)



## Associating a Global Configuration to a Release

- Ability to associate a configuration with a Release
  - [CCM] Tracking and planning integration with versioned CLM resources (272412)



# The Total Economic impact for Strategic Reuse

Impact of Reuse for a moderate system, reusing requirements, design, code and test cases:

Reuse %age	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Staff	67	60	53	47	40	33	27	20	13	7	4
Effort (Person Months)	2654	2290	1942	1611	1298	1006	736	492	279	106	48
Schedule (Cal. Months)	39.81	38.17	36.41	34.52	32.45	30.17	27.59	24.6	20.91	15.85	12
Productivity (FP/Mon.)	3.77	4.37	5.15	6.21	7.7	9.94	13.59	20.33	35.86	94.64	208.33
Defect Insertion rate	63096	55602	48273	41126	34181	27464	21012	14878	9146	3981	577
Defect Removal Efficiency	0.8	0.83	0.87	0.9	0.93	0.95	0.97	0.98	0.985	0.99	0.995
Defects Delivered	12619	9452	6276	4113	2393	1373	630	298	137	40	3

Source: Best Practices for Software Reusability, Capers Jones, 2012

- As an average...

It is reasonable to assume that ~85% of most applications is common and generic.

## CLM 6.0 Configuration Management – To Use or not to Use?

- New 6.0 Configuration management capabilities come with some trade-offs, and by default – they are turned off.
- Customers must be aware of the trade-offs and carefully consider whether to enable configuration management for each project area or set of linked project areas
  - Trade-offs are described on [self-serve page on jazz.net](#)
    - <https://jazz.net/products/clm/cm/get-key>
    - After reviewing the above link, call Support to get an activation key
    - Discuss the trade-offs with Support or other IBM SMEs, especially before deploying CLM 6.0 configuration management into production
    - You may want to consider using Configuration management on a pilot project before deploying into production.
- **Because once you enable configuration management for a project area, you cannot disable it!**

# Backup – More details on Reporting in CLM 6.0

# Jazz Reporting Service 6.0 Release Overview

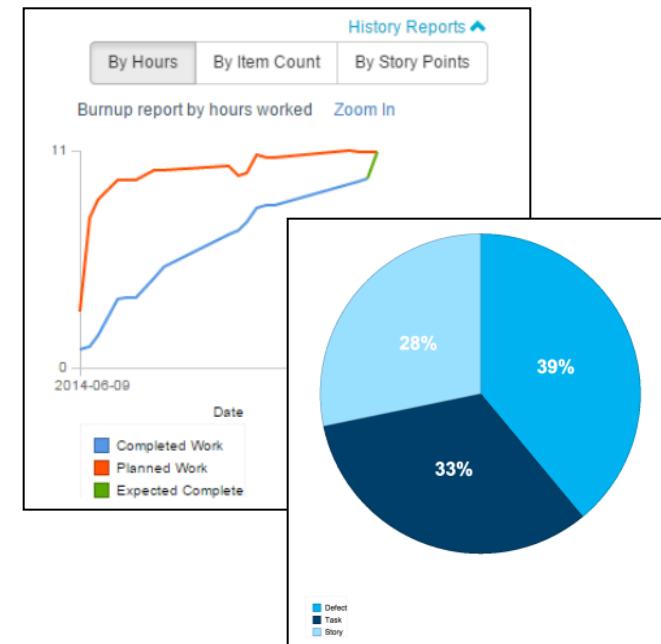
## JRS 6.0 Highlights

- Operational burn up/down reports
- Integrated reporting for Tracking/planning in RTC Quick Planner
- Interactive runtime filters (in dashboard)
- Reusable OOTB reports
- Calculated Roll-up & Report drill-through
- Tech Preview: Configuration aware reporting (Streams or Baselines)
- CLM Installation alignment (single package, install and easier configuration)



Project managers can easily create graphical and Traceability reports  
Across Projects/Teams

*"Self Service" Reporting*



**NOTE:** In CLM 6.0 release RRD1 as a package is no longer offered as a bundle in lieu of JRS 6.0. JRS 6.0 is now provided as part of the CLM release Out of the Box. Customers using RRD1 4.x/5.x will have jazz.net access to separate Cognos/JRS components. Pre-existing RRD1 reports can be migrated/imported to Cognos BI integrated to JRS.

# Export Reports to Rational Publishing Engine

- Export metric reports directly to Rational Publishing Engine

The screenshot shows the IBM Jazz Reporting Service interface. At the top, there are navigation links: Jazz Dashboard, Q&R, Admin, Data Sources, and Test 6.0 M8 (150111). Below the header, there's a sidebar with icons for USE and BUILD. The main content area displays a hierarchical report structure: Story => Child => Test Case => Test Plan (LQE config). On the right side of the report table, there are 'Duplicate' and 'Edit' buttons. A context menu is open over the 'Test Plan' column, with options 'Export the report to Microsoft Excel' and 'Export the report to Rational Publishing Engine'.

## Story => Child => Test Case => Test Plan (LQE config)

Story Id	Story	Child Id	Child	Child Type	Test Case Id	Test Case	Test Case Priority	Test Case State	Test Plan Id	Test Plan	Test Plan Priority	Test Plan State
74	<a href="#">Support Dividend Processing via Mobile Devices</a>	73	<a href="#">Implement – Support Dividend Processing via Mobile Devices</a>	Task	15	<a href="#">Organizations can Apply</a>	High	Approved	1	<a href="#">Development Test</a>	High	Approved
74	<a href="#">Support Dividend Processing via Mobile Devices</a>	73	<a href="#">Implement – Support Dividend Processing via Mobile Devices</a>	Task	15	<a href="#">Organizations can Apply</a>	High	Approved	2	<a href="#">System Verification</a>	High	Approved
74	<a href="#">Support Dividend Processing via Mobile Devices</a>	73	<a href="#">Implement – Support Dividend Processing via Mobile Devices</a>	Task	28	<a href="#">Donor can modify mobile settings</a>	High	Approved	1	<a href="#">Development Test</a>	High	Approved

# Backup – More details on RQM, DNG and RTC in 6.0

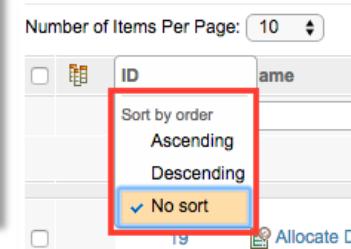
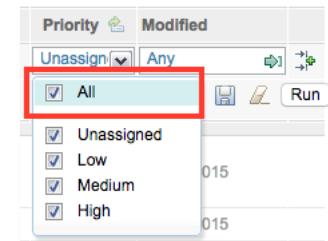
## Other cool features in RQM 6.0

- New Live Test Statistics dashboard widget to show the results of any saved test artifact query in a graphical format, such as in bar charts, pie charts, column charts, and tables, with aggregated data.



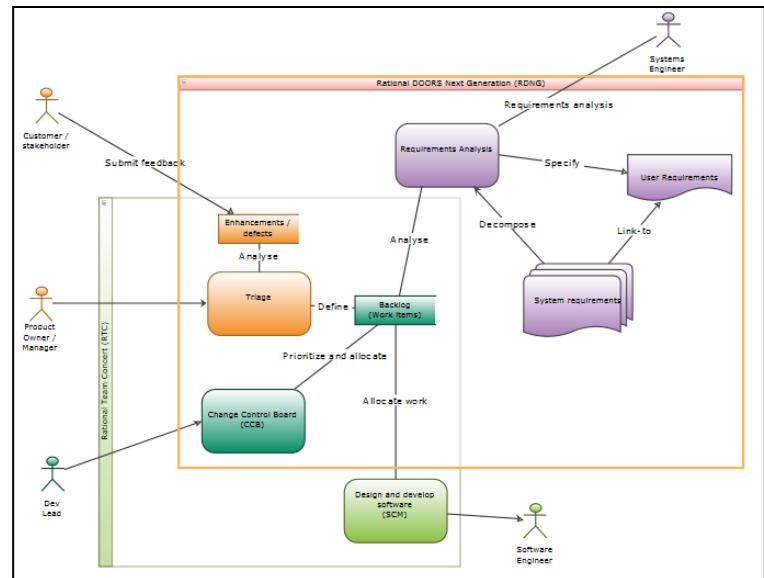
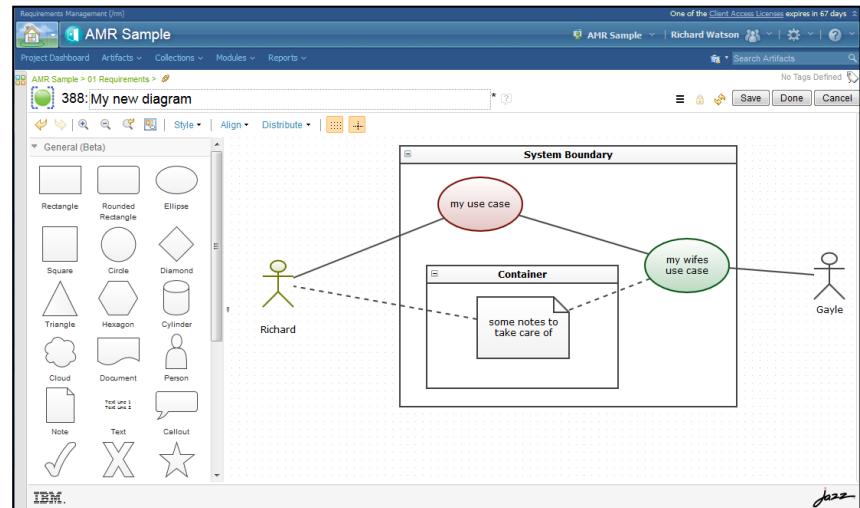
ID	Name	Last Result
87	Mobile_donor_can_contribute_IOS51_S1	Green
86	Mobile_donor_can_contribute_Android40_S1	Green
85	Donor_can_modify_mobile_settings_IOS51_S1	Green
84	Donor_can_modify_mobile_settings_Android40_S1	Green
82	Consistent_display_of_currency_Firefox_DB2_Tomcat_Windows...	Green
81	Dividend_Allocation_by_Percentage_Firefox_DB2_Tomcat_Wind...	Green
80	JKE_Charity_Coordinator_responds_to_online_request_Firefox...	Green
79	Donor_dividend_allocation_conforms_to_stated_criteria_Firefo...	Orange
78	Organizations_can_Apply_Firefox_DB2_Tomcat_Windows_S1	Green
77	Donors_will_receive_confirmation_and_receipt_Firefox_DB2_To...	Red

- Overlapping save support for test plans, cases, and suites via merge UI
- Synchronizing back links for deleted and duplicated test plans and test cases
- When you generate TCERs, the test plan is saved automatically
- Querying all values for filters
- Specifying the default sort order for table columns



# Other cool features in DNG: New freeform diagram editor

- New diagram editor (Visio style)
- No plug-in required
  - Full HTML 5
- Free form diagrams
  - No formal semantics
- Extensive shape palette
  - e.g BPMN, UML, Context diagrams, Use case, sequence diagrams
- Supporting large diagrams
  - > 5K objects
- Traceability to shapes and connectors



## Other cool features in RTC 6.0

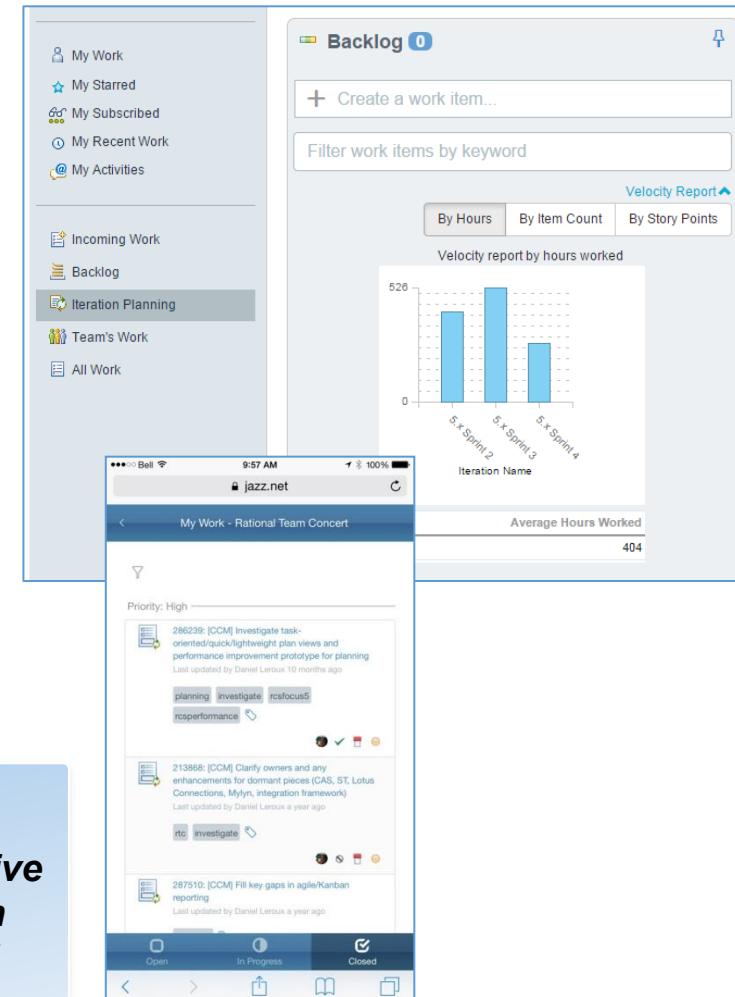
In addition to SAFe and Strategic Reuse...

- Agile ease of use and tablet/mobile access with RTC QP
  - Now everyone can use RTC Quick Planner
- RTC has Advanced SCM beyond what OSS provides
  - Work with OSS
  - New SCM Component Hierarchies – Differentiator from OSS
- Enterprise Wide Security – Kerberos/SPEGNO (RTC) SSO

# IBM Rational Team Concert 6.0: Quick Planner

**Now everyone can use Quick Planner - Not just agile teams**

- **Fast Creation and location of Custom Work Items**
  - **Custom required attributes** – supported by fast create
  - **Find any task easily** - Show all work filed against any custom attribute – by release, category, #story points
  - **Powerful logical operators** – AND/OR/NOT
- **Content Assist and Auto Complete**
- **Team Burndown/Burnup and Velocity:**
  - See real time progress of the team, burndown, burnup, velocity without leaving QP
- **Mobile and cloud enabled:**
  - **Take it with you anywhere** – mobile, tablet, Mac, PC
  - **One UI** - Same UI for on-premise, cloud or hybrid cloud

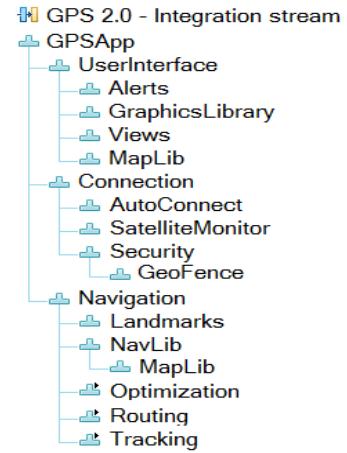
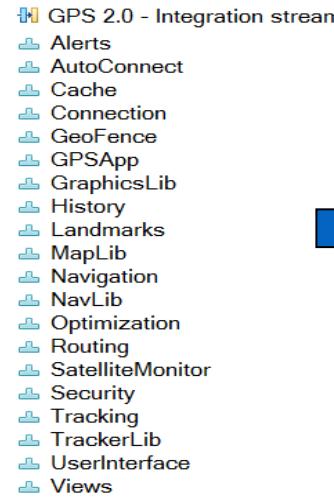


## What's new

**IBM Rational Team Concert's Quick Planner task based, intuitive approach makes planning easy for developers. Runs on your mobile device or tablet! Powerful filters and reports!**

# Benefits of RTC 6.0 component hierarchies

- RTC SCM already has components  
*... however, components are shown and used in a flat list.*



- Drivers for supporting component hierarchies:

- **Scalability (usability at scale):**

Consider an organization whose application includes 1000 components.  
Each user needs to search through a flat list of 1000 components,  
rather than each team looking at and operating on just the level they care about.

- **File system structure:**

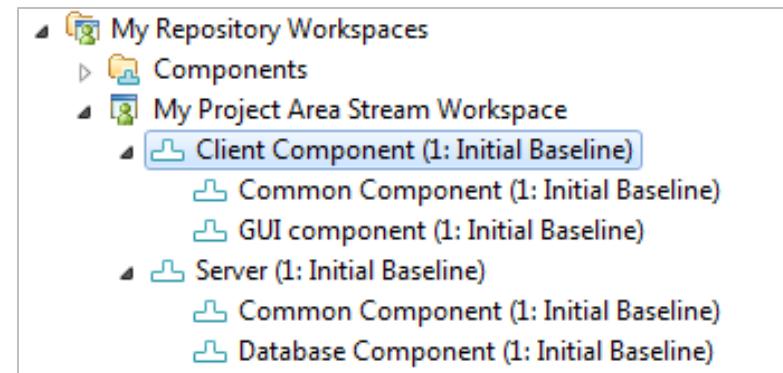
Build tools often require the file system to be organized in a tree structure  
with dependencies in subdirectories.

- **Dependency or containment relationships:**

There is no way to model (or show) dependency  
or containment relationships between components.

## RTC 6.0 – component hierarchy support – Facilitates Re-use

- Full functionality in the Eclipse client and CLI
  - Visual Studio client works, but doesn't provide full functionality yet... coming soon
- Off by default on the server
  - Teams who have developers using the Eclipse and Visual Studio clients on the same code will probably not want to start using this feature until Visual Studio has full functionality
  - Enable in the Admin interface



Property	Current Value	Default Value
Allow trailing spaces in file names	false ▾	true
Default size of era in change history	20	20
Enable Distributed SCM	true ▾	false
Enable Hierarchical Components	true ▾	false
Enable Lowest Common Ancestor	false ▾	false
Enable SCM service logging	true ▾	false
Enable change history validation per transaction	true ▾	true



# RTC 6.0: Enterprise Security – Kerberos SPNEGO

## Rational Team Concert 6.0 and Kerberos/SPNEGO

Rational Team Concert now supports Kerberos/SPNEGO-based authentication. These Rational Team Concert clients can authenticate with a server that is configured for Kerberos/SPNEGO-based authentication:

- Rational Team Concert Eclipse client
- Rational Team Concert client for Microsoft Visual Studio IDE
- Rational Team Concert browser-based clients
- Windows Explorer integration
- Command-line interface
- Jazz build engine

For more information about getting started, see [Getting started with Kerberos/SPNEGO for CLM 6.0 M10.](#)

- <https://jazz.net/wiki/bin/view/Main/KerberosSpnegoAndCLM>

## CLM 6.0: Single Sign-On (SSO)

- New SSO architecture based on **OpenID Connect**
- Simplified authentication administration
- An **alternative** to the existing Websphere and Tomcat single sign-on capabilities
- Requires the installation of a new server:  
**Jazz Authorization Server**
- Only that server must be configured for authentication, for example to use an LDAP user registry
- For migration and set-up details see  
[Setting up the Rational solution for Collaborative Lifecycle Management with Jazz Security Architecture single sign-on.](#)
  - <https://jazz.net/wiki/bin/view/Main/ClmSetupWithJsaSso>

# Backup – What's new with CLM 6.0 – for z customers

# What's new with CLM 6.0 – for z customers

## Lots of new capabilities to make your life easier

- New component history, change history and history views, change history view
- New search command - now you can look for a string on the project with the search in native ISPF
- Couldn't share before – now you can share the new members with other developers
- Added repository compare – so you can compare local files and what's in your sandbox with what is in the repository
- z use dependency based build – Identifies the dependencies in the application – so then only those need to be rebuilt – “only build what is needed”
- Improved management of build and promotion.
- Easier to use
- For embedded software customers who are heavily regulated – interested in version control, security and traceability. Added authentication to RTC version identifiers
- Upgraded integration with UC – RTC for z customers – includes basic deployment – now it can generate deployment packages for UC

# Backup – Upgrade scenarios to CLM 6.0

## Upgrade scenarios to CLM 6.0

- 1. I only use RTC and so I move ahead to RTC 6.0 just like any other release.**
  - This is a very likely use case for many.
  - If you need hierarchical components, it must be turned on (easy to do)
    - Visual Studio and Eclipse mixed team projects might wait
  - Remember that the Eclipse planning client is deprecated so some Eclipse planning users may have to re-adjust to using the web UI for planning – or RTC Quick Planner
- 2. I have CLM but I really want the RTC v6 features; I'll wait on RQM and RDNG**
  - JFS + RTC to V6.0 – keep RQM and RDNG at 5.x

## Upgrade scenarios to CLM 6.0

### 3. I have RTC and RQM or RDNG and want to go to CLM 6.0

- I need to consider if I am going to turn on configuration management in RM and/or QM
- No need to do this for RTC

### 4. I turned on configuration management for RDNG v6 and/or RQM v6

- **JTS+RQM+DNG v6 configuration management REQUIRES RTC V6**
  - Because RTC v5 cannot follow v6 version links in RM/TM

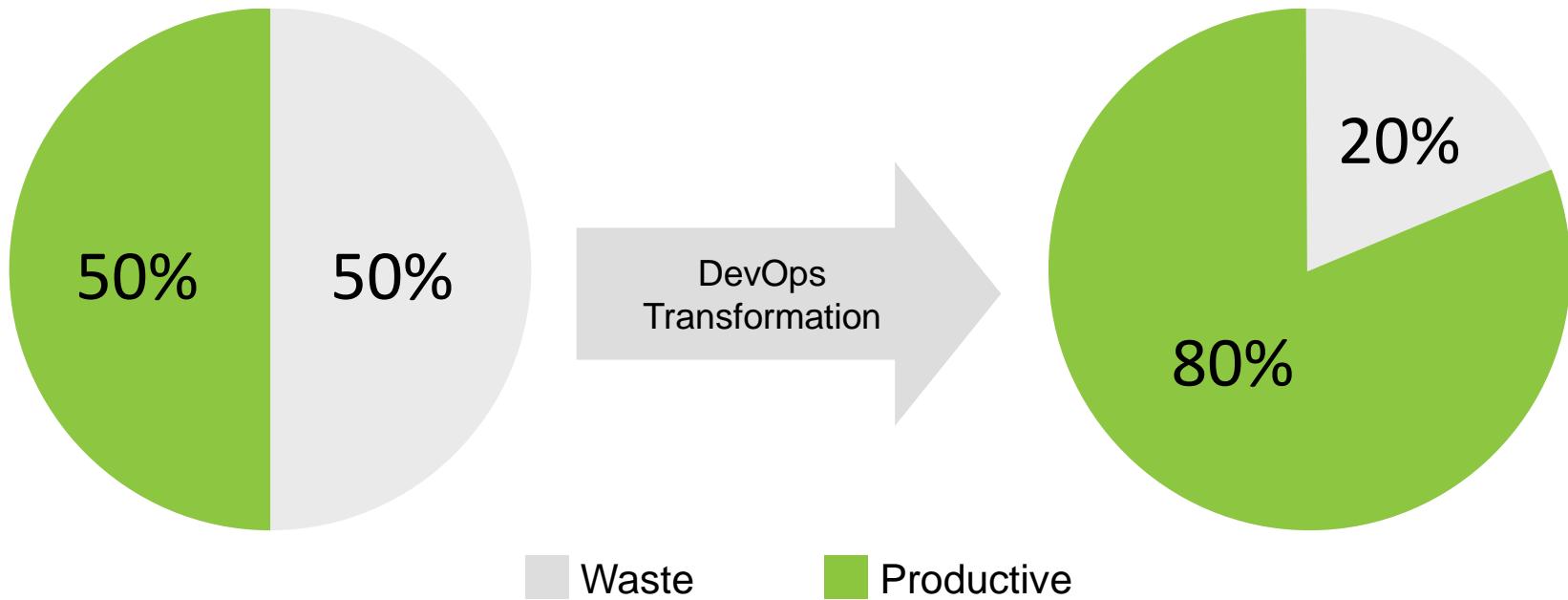
### 5. I do not use configuration management for RDNG v6 and/or RQM v6

- **JTS+RQM+DNG CM turned off; RECOMMENDED RTC V6**
  - Because migration to RTC v6 is easy and would yield optimal performance

# Backup – The Hidden Factory Opportunity – 2 slides

# The Critical Measure of DevOps Success

*The Hidden Factory Opportunity*



Hidden Factory = additional value you could create if you eliminated waste and redirected those resources to innovation

# The Big Sources of Wasted Efforts: The Hidden Factory

Forrester Research finds an average 3x project capacity after implementing DevOps

## Forrester Consulting: Total Economic Impact of IBM DevOps

The study analyzed several development teams and found that the group, on average, went from delivering 10 projects in Year 1 before implementing IBM DevOps, to 20 projects in Year 2, to 30 projects in Year 3 — all without having to add additional developer headcount.

And the developers were happier, less stressed, and had a greater feeling of accomplishment.

Type of Waste	Create Feature	Deliver Feature
Unnecessary Overhead	Communicating ideas/knowledge Supporting Artifacts	Communicating between development and operations
Unnecessary Rework	Tasks assigned back to developers from testing and usage	Tasks assigned back to developers from production rollbacks
Over-production	Unnecessary functionality produced	Unnecessary hardware, data center, personnel

## Backup – Customer success stories – 6 slides

# Middleware – Banking Customer Case

*Australia and New Zealand Banking Group achieves ROI of 4.27 million dollars through efficiency improvements*

**ROI of AUD4.27 million**

within the first year

**50% improvement**

in deployment cycles

**30% increase**

in productivity with no increase in costs

## Solution core components

- IBM WebSphere Application Server®
- IBM WebSphere MQ™
- IBM Rational Team Concert™
- IBM Rational Build Forge®
- IBM® Rational® Asset Manager



*“Our costs are flat, even though our demand has increased by about 30 to 35 percent. We’re doing more with the same amount of resources.”*

*—Frank Fabian, head of testing environments, delivery services, ANZ technology, ANZ*

## Published case study

# Nationwide embraces DevOps to drive continuous delivery across platforms and improve speed to market

50% increase  
in software quality over  
the last three years

90% on-time delivery  
vs. 60% previously

70% decrease  
in user downtime

58% of developers moved to  
industry top quartile in  
productivity measures



*"We're more agile as a business and more responsive to our customers. Collaboration has become an expected part of our culture."*

— Steve Farley, Vice President,  
Application Development Center, Nationwide

## DevOps approach speeds IBM Watson solutions to market

Reduced delivery cycles  
from nine weeks to three weeks

Compact releases  
better matched to customer  
expectations

Zero maintenance window  
downtime through continuous  
availability

*“DevOps helps us achieve continuous delivery and deliver continuous value.”*

— Carl Kraenzel, Director of the Watson Managed services group, IBM Distinguished Engineer, IBM



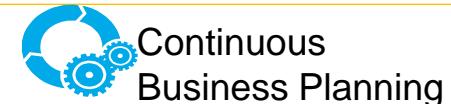
# Laminar Medica stays ahead of its competitors with product offerings and customer relationships

Reduced by 25 percent  
new product development time  
and associated costs

Won 10% more  
competitive tenders

Increased value  
for customers

Achieved complete ROI  
in less than 12 months



An advertisement for Laminar Medica. It features the company's name "MORE THAN JUST A BOX" in large blue letters at the top. Below this is a photograph of five men in suits holding certificates. To the right of the photo is the Laminar Medica logo with the text "laminarmedica insulated shipping systems" and the website "www.laminarmedica.com". On the far right, there is a cartoon illustration of a young boy wearing goggles and a blue shirt, sitting inside a cardboard box and holding a white ball.

*"The company has already reduced its new product development time and associated costs by over 25 percent, and simultaneously increased the actual value generated for its customers and internally."*

— Mark Cooper - Laminar Medica,  
Market Intelligence Coordinator

# Large North American government organization Manages change quickly, efficiently and more cost effectively for both SAP and non-SAP solutions

40% Reduction  
in overall testing costs

80% Improvement  
in productivity

90% Increased efficiency  
of an upgrade or change

## Solution components

### Software

- IBM® Rational® Quality Manager
- IBM Rational Team Concert
- IBM Rational Requirements Composer



*“So what used to take days, if not months, is now almost instantaneous. If we want to make a change to one of our policies, we know almost instantly how many processes are going to be impacted by that change.”*

- Centralized platform that provides a single source of truth for all data and development processes.
- Manages change quickly, efficiently and more cost effectively for both SAP and non-SAP solutions
- Collaborative ALM solution that provides end to end traceability between business and IT requirements, changes and quality management

# Additional client success with IBM DevOps and CLM

Case Study	Result
 <u>ISW Development</u> Pty. Ltd	<ul style="list-style-type: none"><li>“Our developers can now rapidly build, test and deploy the product features our clients want to see.”</li><li>15-20% productivity gain with <b>CLM Planning &amp; Tracking</b></li><li>0 hours of developer time required during deployment.</li></ul>
 <u>ANADOLU HAYAT</u> EMEKLİLİK <u>Link</u>	<ul style="list-style-type: none"><li>“Prior to this project we [spent] 65 percent of my team efforts fixing bugs.”</li><li>25% improved productivity, reduced defects, with <b>CLM Requirements Management and Quality Management</b>.</li></ul>
 <u>Nationwide Mutual</u> Insurance	<ul style="list-style-type: none"><li>“Collaboration has become an expected part of our culture.”</li><li><b>50% improvement in code quality</b></li><li>Move from waterfall to agile, applied lean principles to transform the software delivery lifecycle.</li></ul>