

IBM Next Generation ALM Seminar

Jason Leonard & Kurt Solarte
March 2012



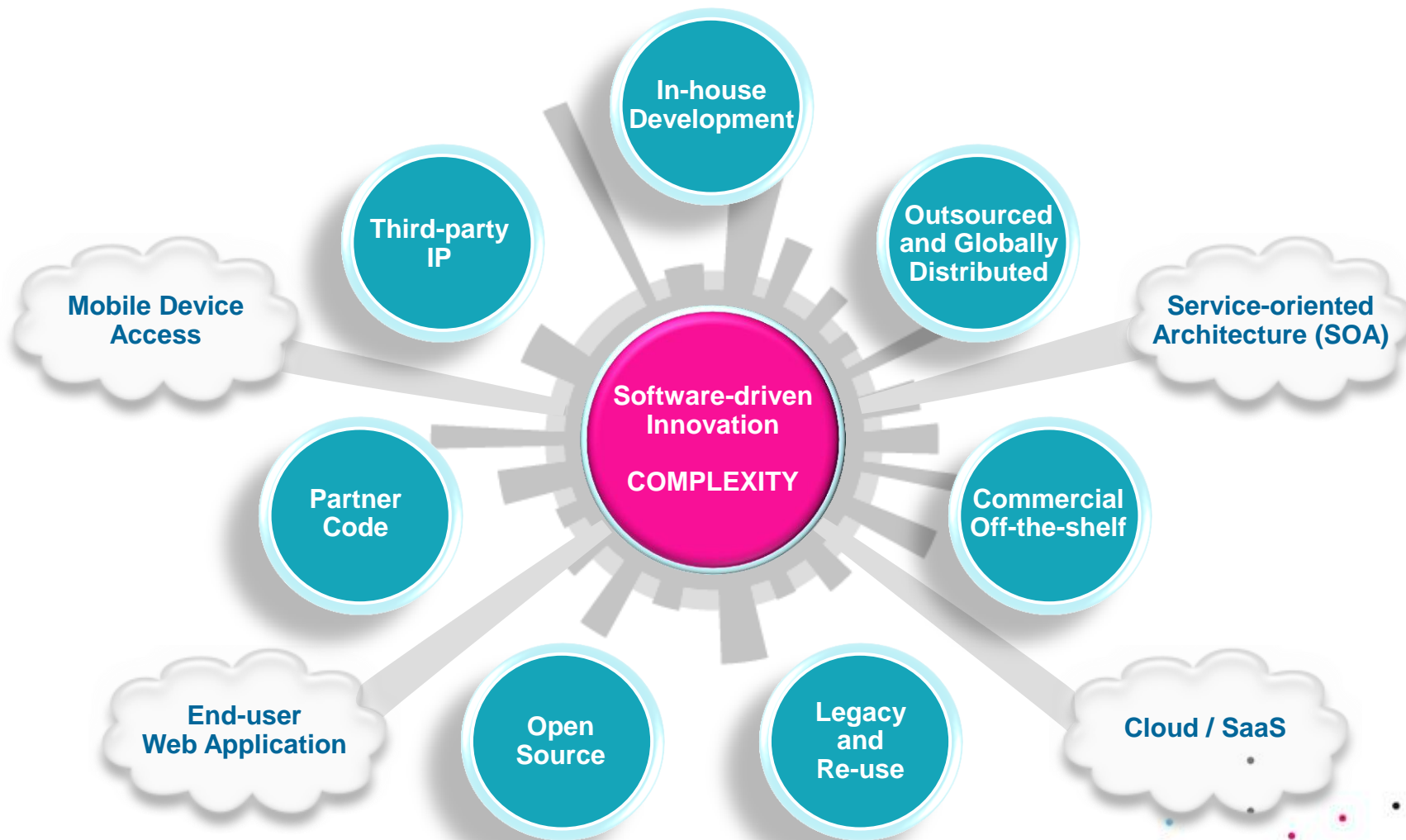
Software drives today's innovation for a smarter planet

Transforming the way we live, work, and play



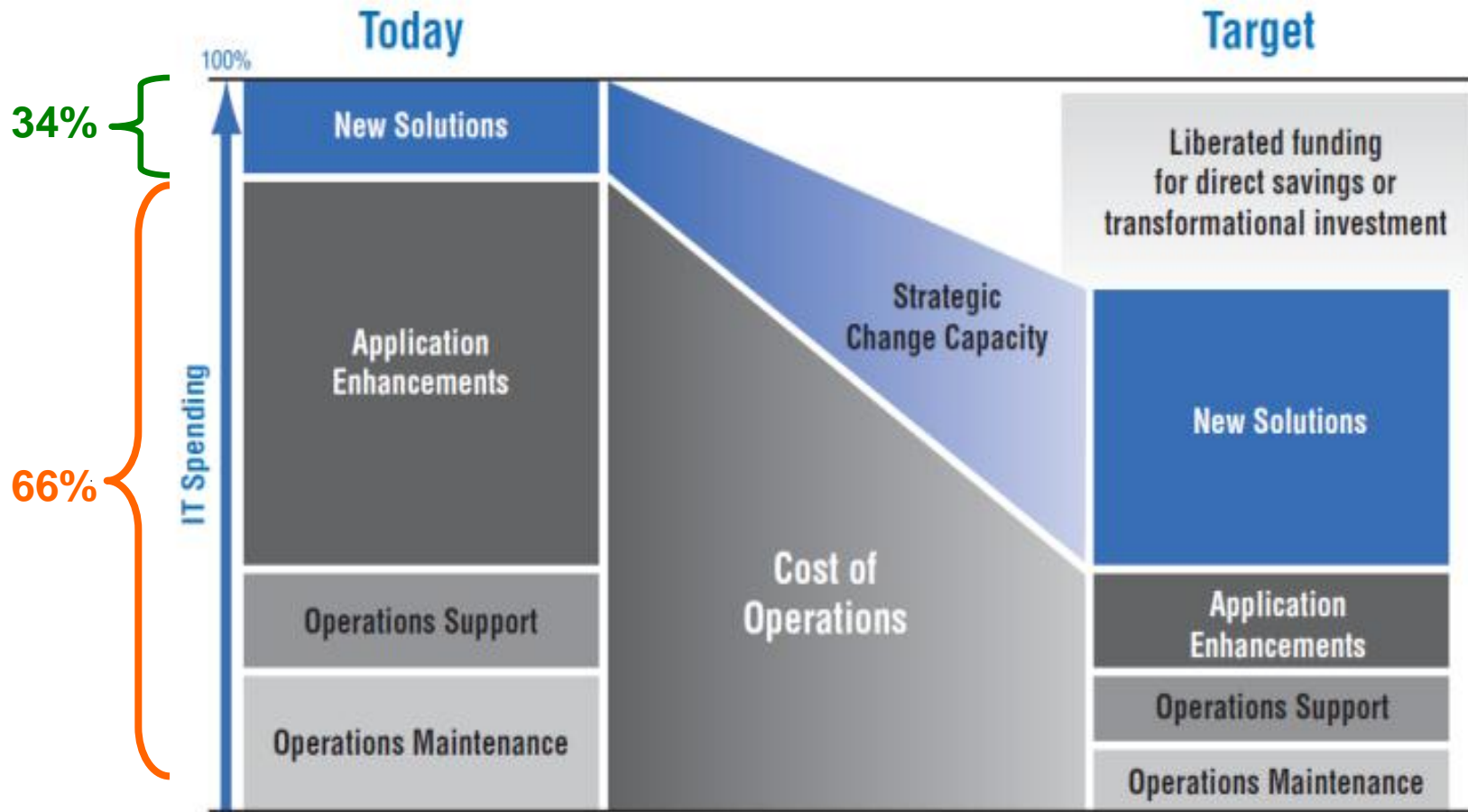
The defining challenge: Managing “systems of systems”

From back-end software to customer facing portals, systems of systems drive your relationships with customers, suppliers and business partners

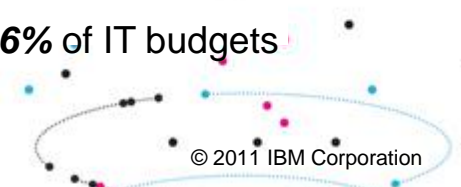


Business and IT Agility: Balancing Resources to Support Business Innovation

Balance IT investments to focus on new solutions.



- Forrester estimates that ongoing operations and maintenance consume **66%** of IT budgets
- While new projects and software initiatives represent only **34%**



Realities can stall software-driven innovation

Complexities in software delivery compounded by market pressures

Complex, Multi-platform Systems and Applications

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

Increasing Mandates

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

Globally Distributed Software and Product Supply Chains

50% of outsourced projects are expected to under perform

Cost Reduction

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

Unpredictability in Software Delivery

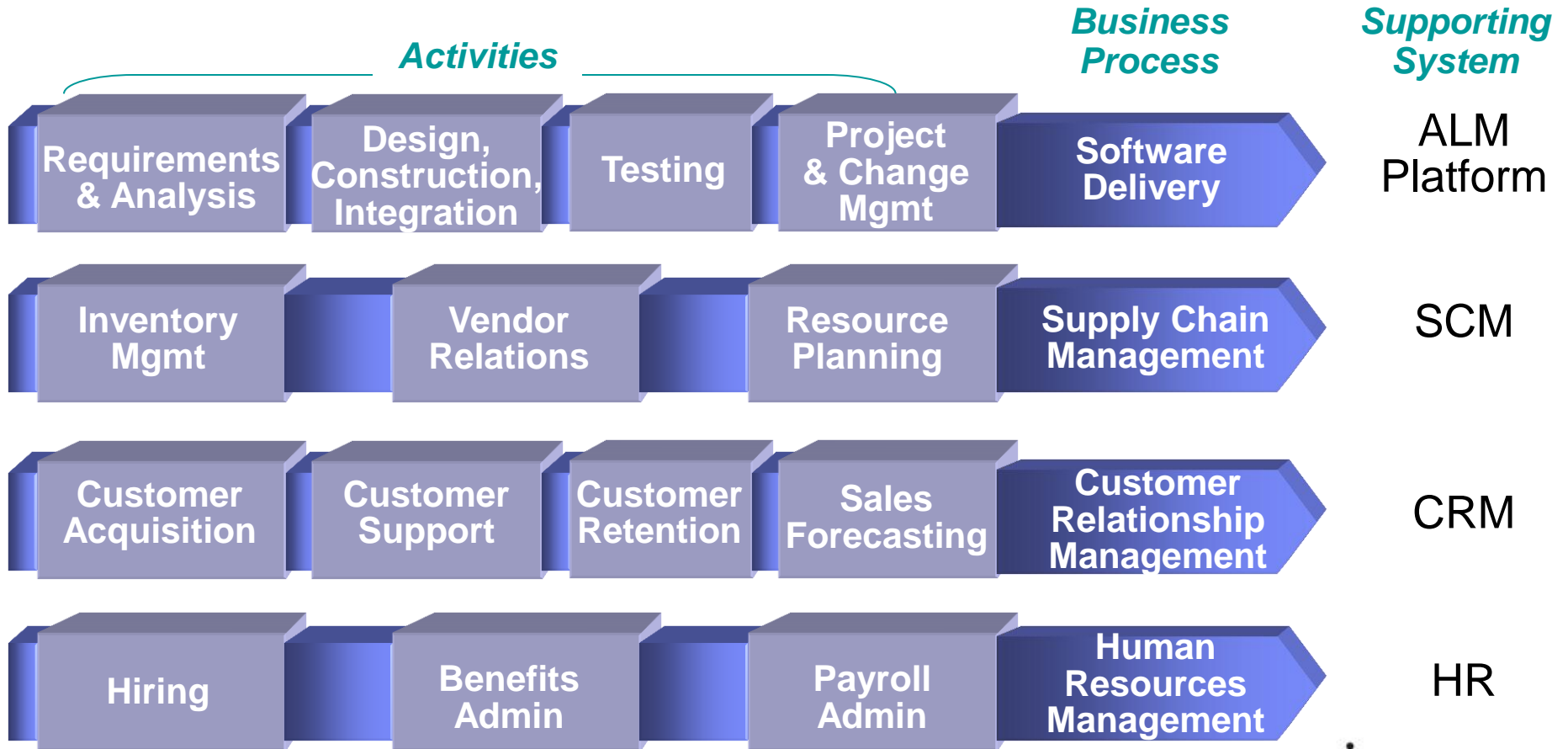
62% of projects fail to meet intended schedule

Changing Requirements and Time to Market

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

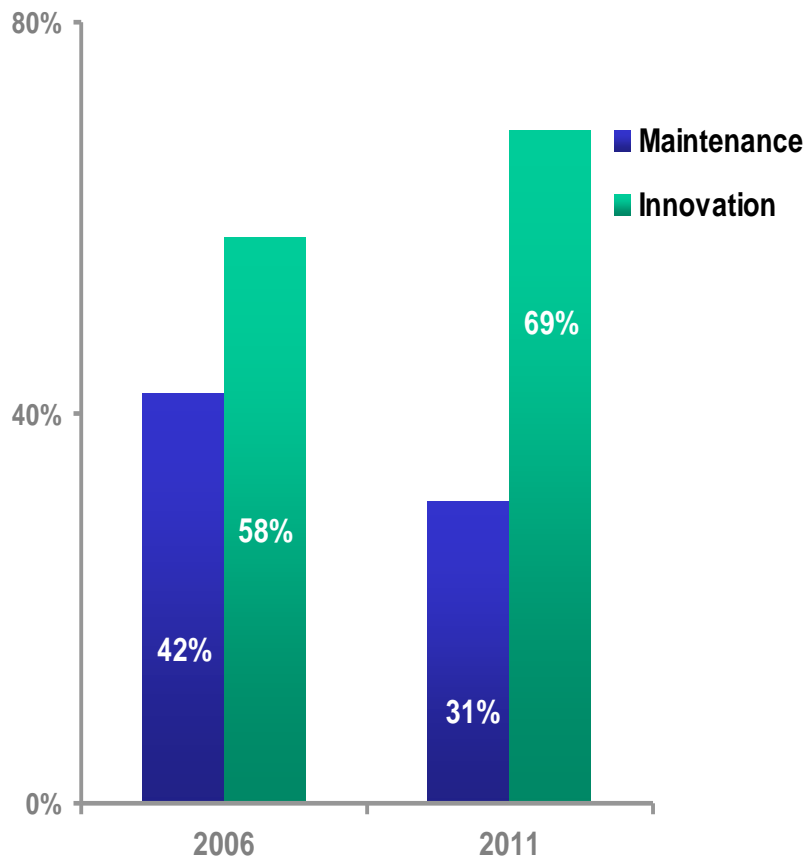
Core Business Process

Software Delivery is now a key business process & not getting any easier!



IBM Rational software delivery and development transformation: Improved Efficiency Means More Innovation

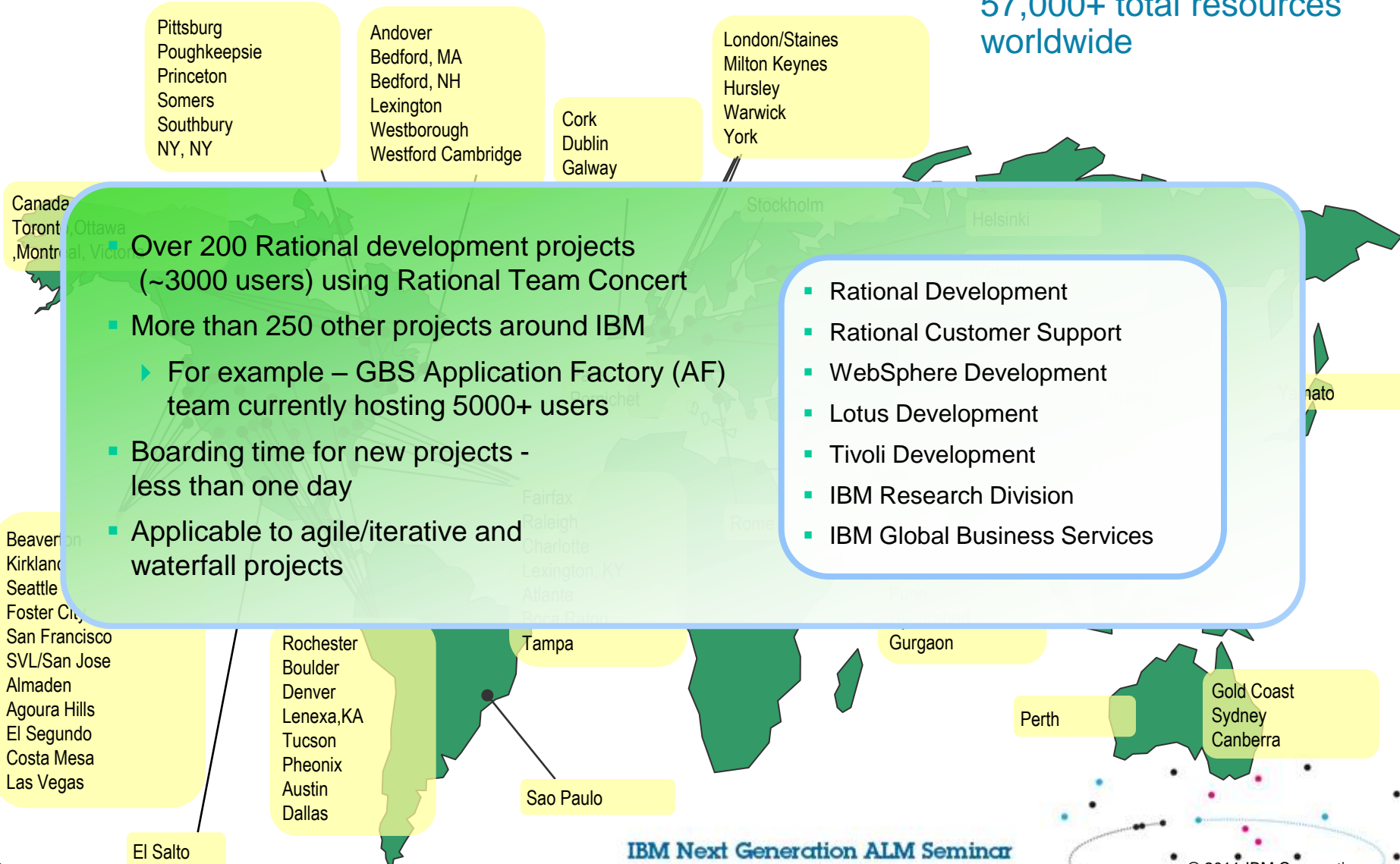
Investments



Efficiency Measures	2006	2011
On time delivery	47%	95%
Defect backlog in months	>9	2.7
Beta defects fixed before GA	3%	95%
Agile / iterative projects	5%	85%

Application Lifecycle Management @ IBM

57,000+ total resources worldwide

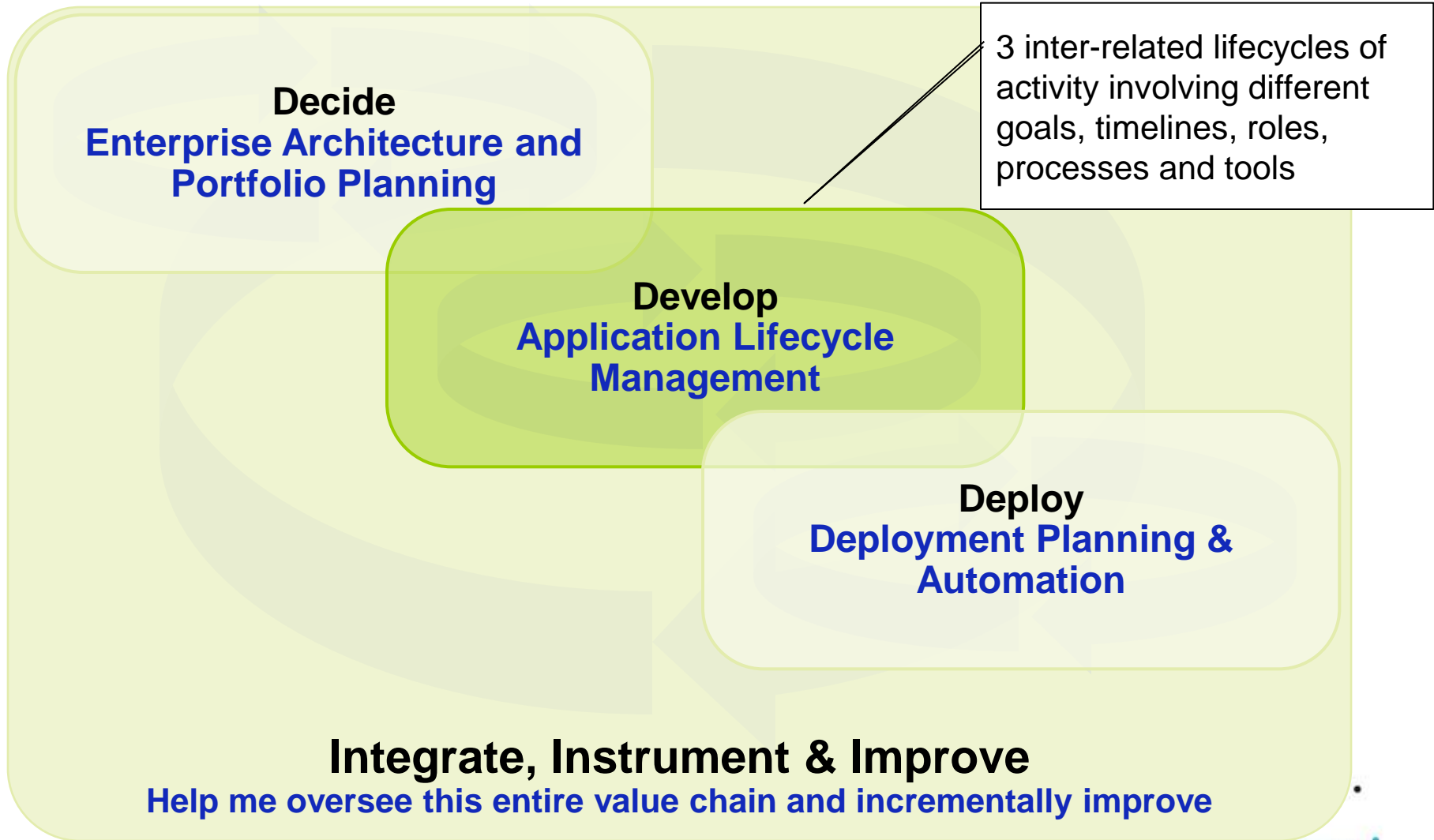


Application Lifecycle Management drives the IBM transformation

Application Lifecycle Management coordinates the flow of people, processes and information in an iterative cycle of software delivery activities

- Custom developed projects
- Off the shelf packaged applications
- Enterprise applications
- Mobile applications

Application Lifecycle Management in context



Three key actions of transforming software and systems delivery

Integrate

**Connecting process
and information**

Software, data, and tools

Collaborate

Unifying teams

Projects, and
organizational cultures

Optimize

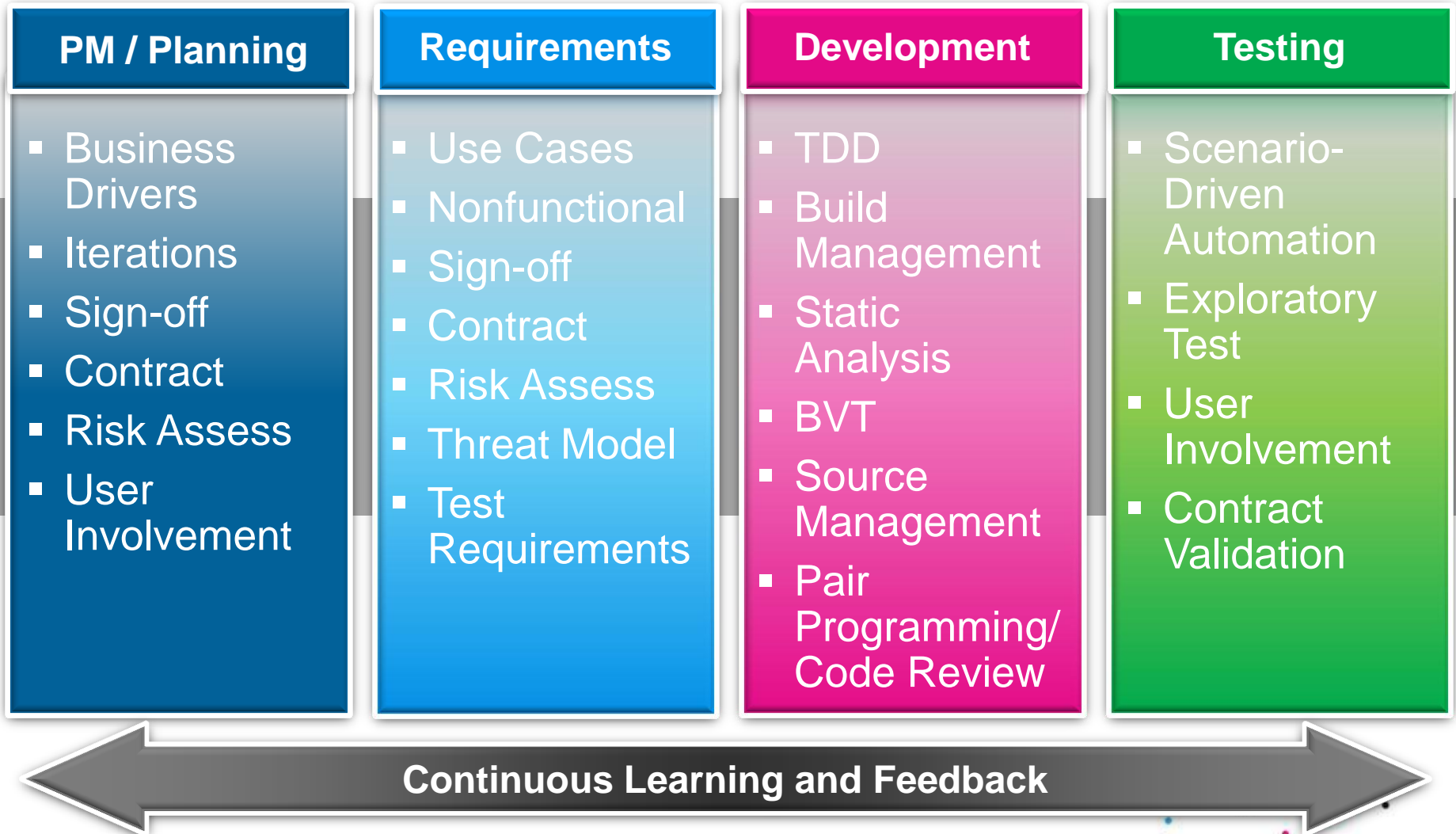
Simplifying governance

Plans, scope,
and measures

Realized benefits:

- Improved quality and time to market
- Reduced risk and cost
- Tighter alignment to business priorities

ALM is about connecting the disciplines



Source: Gartner Application Architecture, Development & Integration Summit Presentation, The Future and Present of AD, Thomas E. Murphy, December 2008

Agenda

- 1 Introduction and current market situation
- 2 Delivering the 5 ALM imperatives**
- 3 IBM Rational Application Lifecycle Management
- 4 Proven results

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



Criteria for effective lifecycle management: 5 ALM imperatives

1. Real-time planning
2. Lifecycle traceability
3. In-Context collaboration
4. Development intelligence
5. Continuous improvement

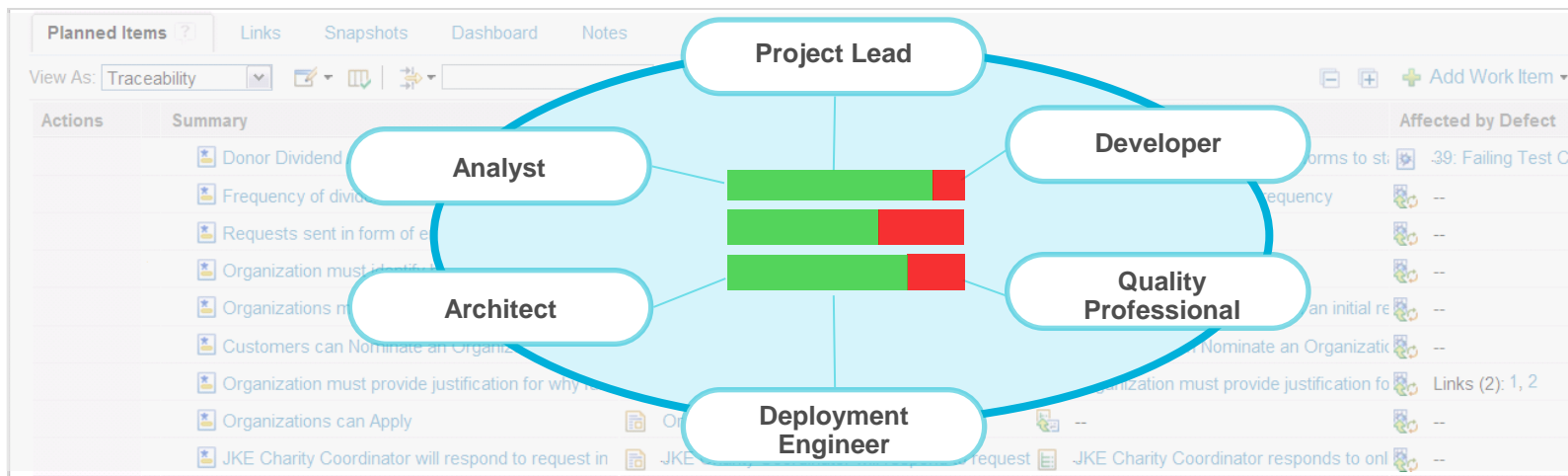
Criteria for effective lifecycle management: 5 ALM imperatives

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
- Allowing **everyone to participate** in keeping the plan current and accurate
- **Integrating planning with execution**, ensuring the entire team understands the true project status
- Helping teams **respond to the unexpected** in a timely manner ensuring the team stays on schedule



Test your real-time planning capabilities

Can your team...

- Plan across the entire team?
- Plan for waterfall, iterative and agile environments?
- Integrate planning with execution?
- Instantly see the impact of a change in project scope or resources?



Criteria for effective lifecycle management: 5 ALM imperatives

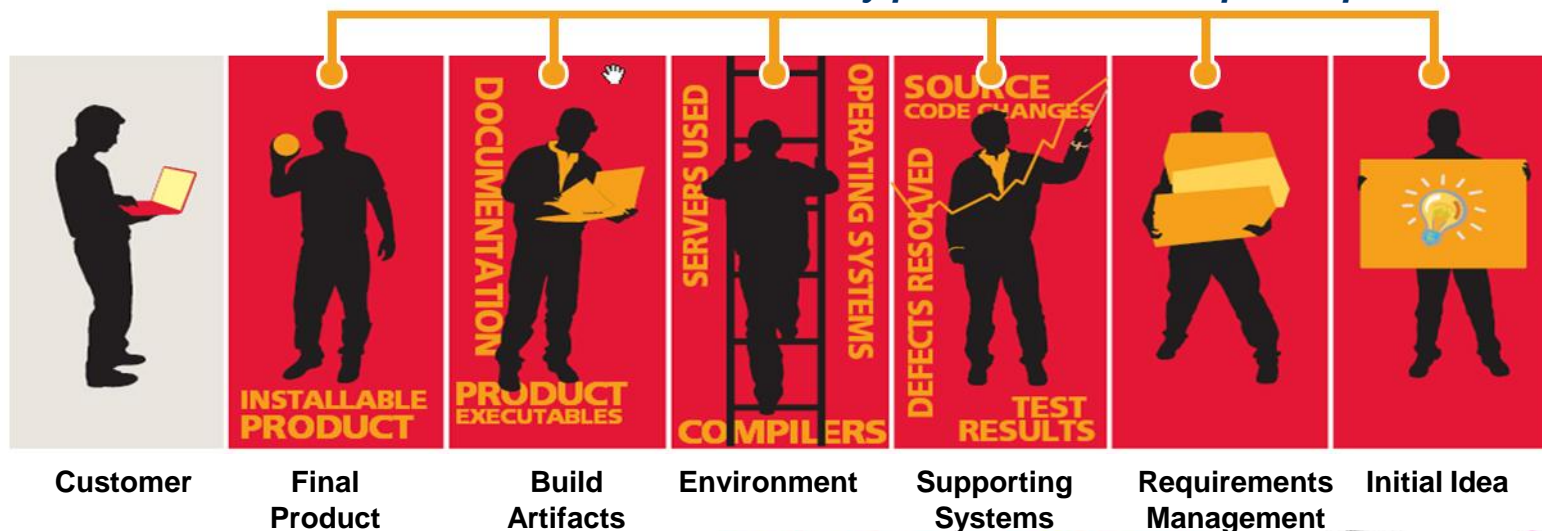
1. Real-time planning
- 2. Lifecycle traceability**
3. In-Context collaboration
4. Development intelligence
5. Continuous improvement

What is Lifecycle Traceability?

Lifecycle Traceability improves quality by:

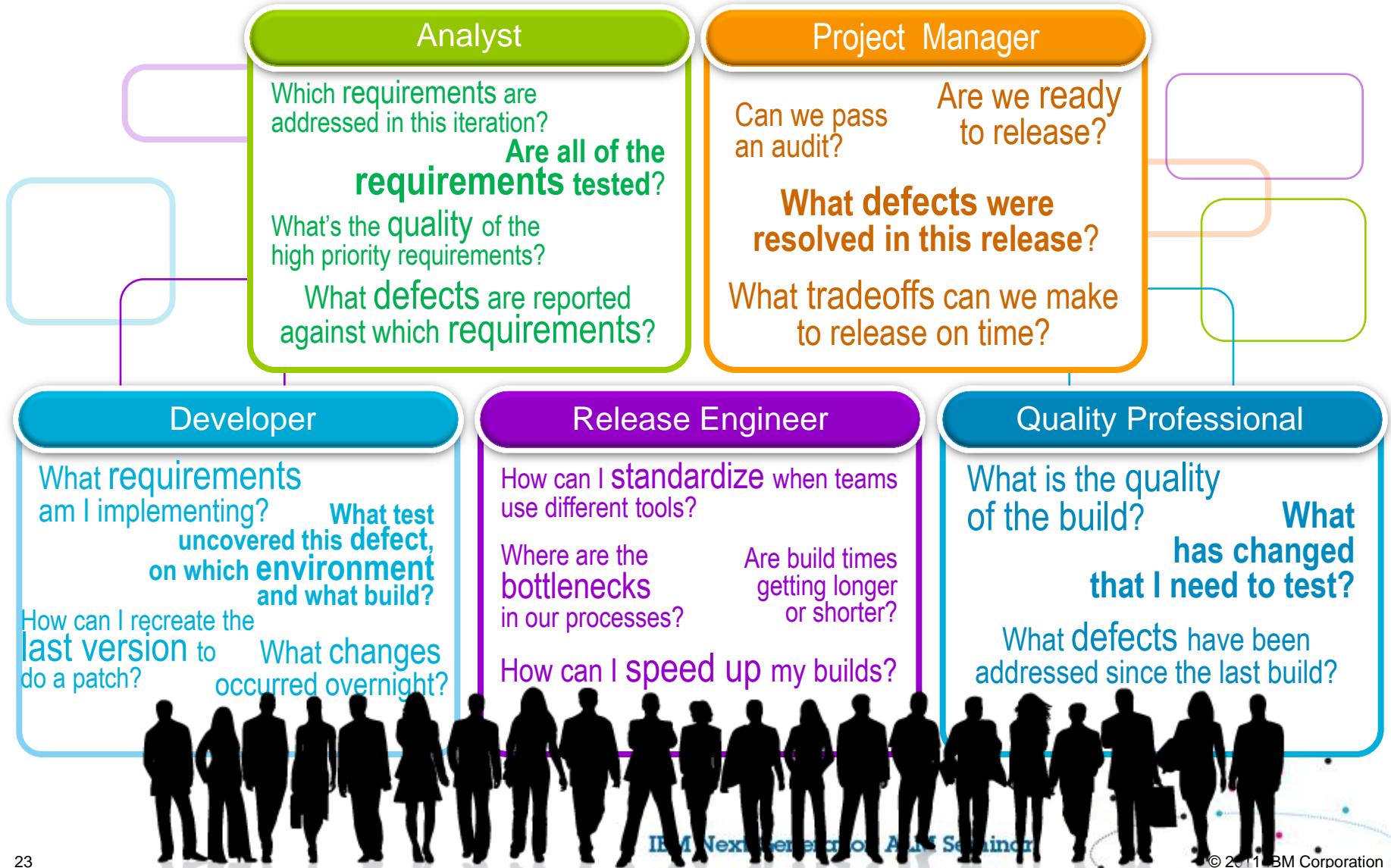
- Establishing **relationships between software artifacts**
- Helping you **identify and close artifact gaps**, ensuring **coverage** across disciplines
- Provides visibility into the **completeness** of planned items by inspecting all related artifacts
- Provides easy **access to related artifacts** 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



Test your lifecycle traceability capabilities

Can your team answer these questions...



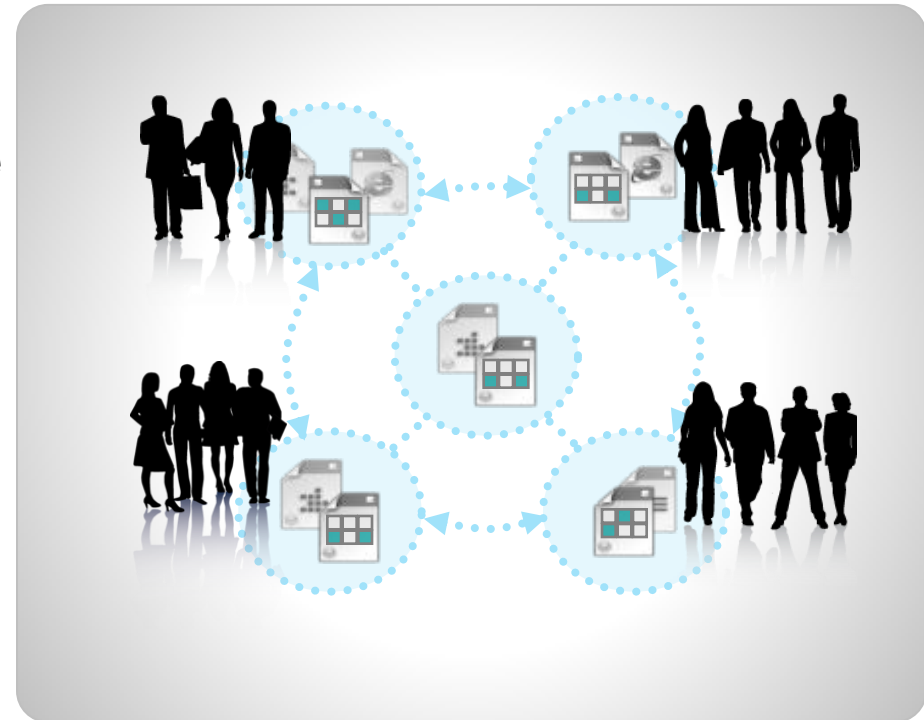
Criteria for effective lifecycle management: 5 ALM imperatives

1. Real-time planning
2. Lifecycle traceability
3. **In-Context collaboration**
4. Development intelligence
5. Continuous improvement

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



Test your In-Context Collaboration capabilities

Can your team...

- Easily access the “single source of the truth” through linked artifacts?
- 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?



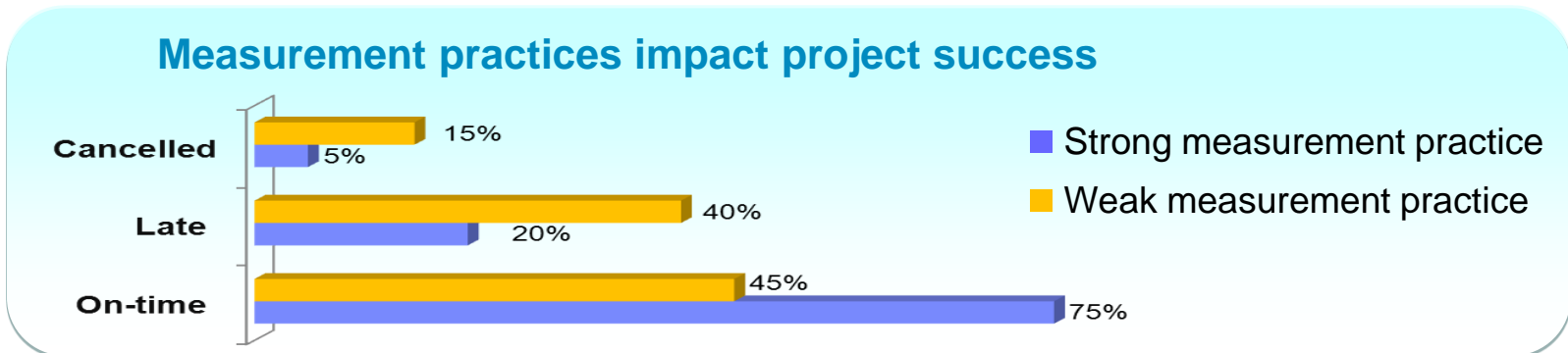
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What is Development Intelligence?

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



Source: Capers Jones, Measurement, Metrics and Industry Leadership, 2009 and [Software Engineering Best Practices](#), McGraw Hill, 2010.

From In Process (Team) To Executive Value

Appropriate Metrics for Each Management level

Dimensions	Team (In Process)	Middle Management (Development Mgmt.)	Development Executive (VP Development)
Time-to-Value (Schedule)	User Story Points / Use Case Points		
	Iteration Burndown, Blocking Work Item		
		Release Burndown	
Product Value	Iteration Velocity		
	Stakeholder Feedback, # of Enhancement Request, Age of Enhancement Request		
		Tested and Delivered Requirements, Business Value Velocity, Customer Satisfaction	
Product Cost	Effort (Man-hours)		
		Cost / Unit of work	
			Development / Maintenance Costs
Product Quality	Technical Debt (Defect trend, defect density)		
	Test Status, Test Coverage of Requirement, Test Execution Status		
		Quality at Ship	
Predictability	User Story Points / Use Case Points		
		Planned/Actual Cost and Velocity	
		Trend Variance. Likelihood of on-time delivery	

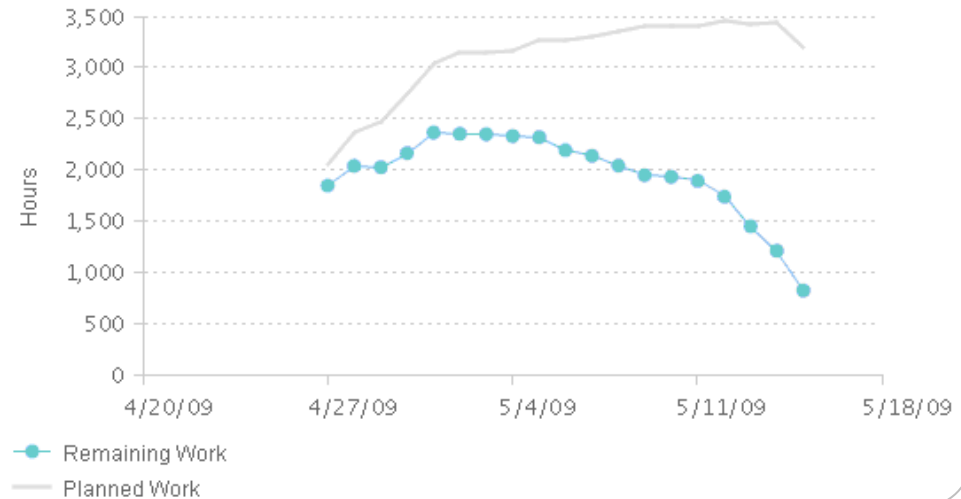
Note: **Bold** indicates that there is Out-Of-The-Box report supported by Rational tools.

Measuring Time-to-Value (Schedule)

Iteration Burndown

Showing how much work is left to do in an iteration. It enables the team to adjust scope or resources to finish the iteration successfully.

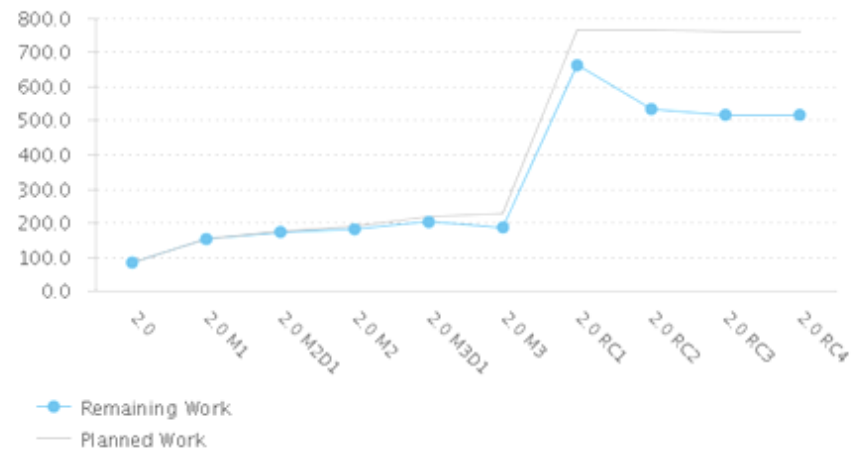
Burndown



Release Burndown

Shows the estimated functionality remaining to complete the current release.

Release burndown

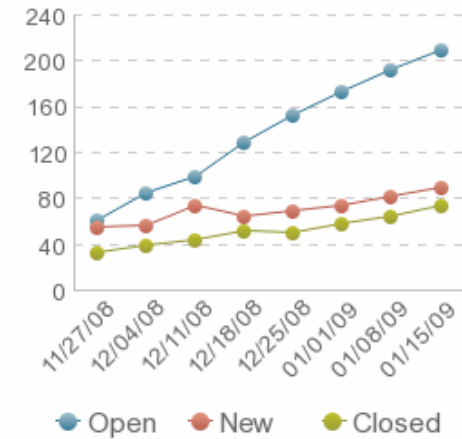


Measuring Product Quality

Defect Trends

Shows defect arrival and closure rates, determines the remaining defect backlog, projects the future defect arrival/close rate up to and post-ship

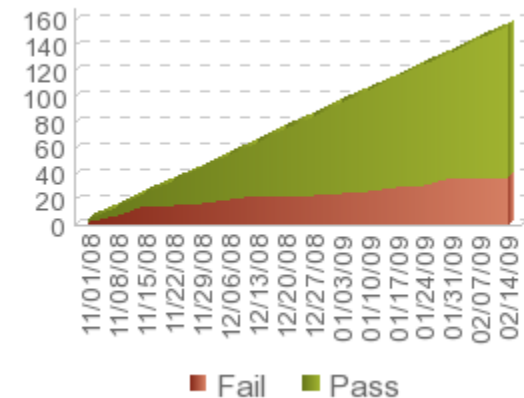
Number of Defects



Test Execution Status

Monitors test completion and success

Number of Executed Tests



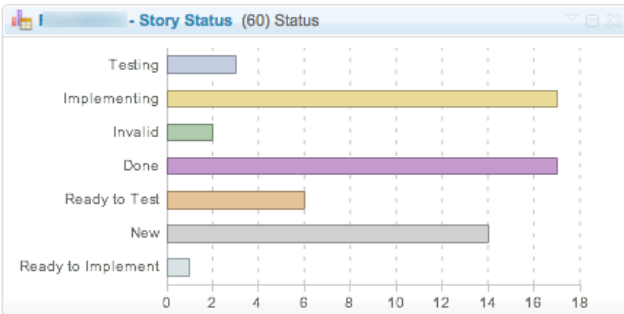
Use dashboards to provide that 1 view of project health

JKE Banking (Change Management)* ?

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

Story Status Current Iteration

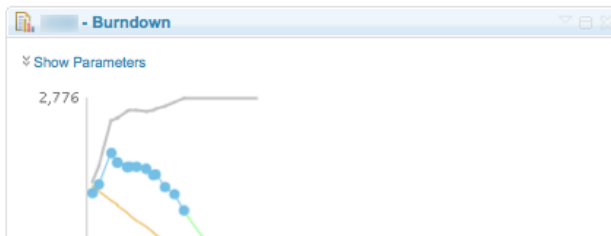
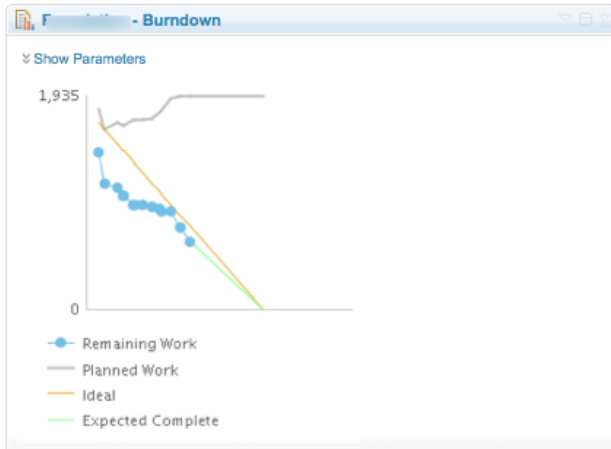
Shows the status of all stories planned for the current iteration



- #### 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 TVT testcases and testcase updates to TVT team
 - 154263: [Continuation] Create server diagnostics tests and reports that make various checks
 - 155024: Track the fixing of hangs occurring on shutdown of the CLM server
 - 155399: [Repository - M14] Performance, quality and robustness enhancements
 - 156051: Improvements and fixes for CLM migration automation
 - 154929: [Repository - M14] Address high severity defects, Reduce backlog
 - 155033: Explore servlet dispatching enablement as a backup option
 - 155486: [Repository M14] Serviceability and Consumability Improvements
- Page 1 of 6

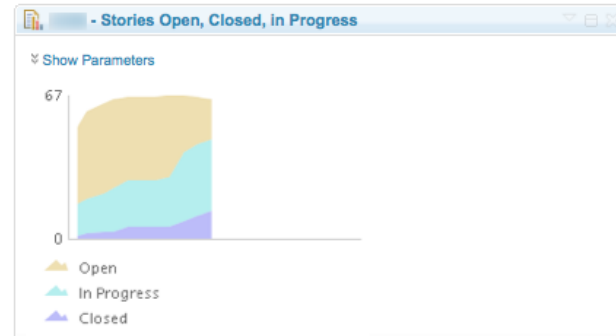
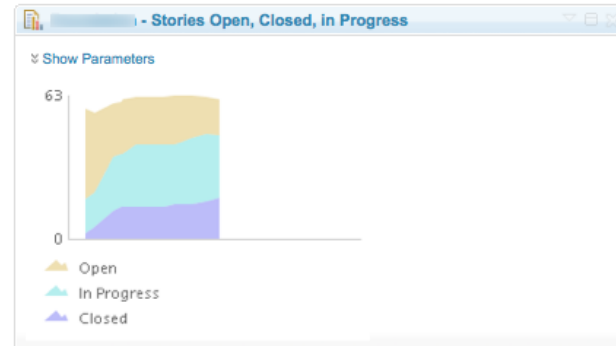
Burndown Current Iteration

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



Stories Open/Closed/In Progress

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



Test your lifecycle intelligence

Can your team...

- **Time-to-Value**

- Produce the right capabilities according to the committed schedule?

- **Product Value**

- Deliver a valuable product?

- **Product Cost**

- Measure what we spending to deliver the system?

- **Product Quality**

- Build a high quality system?

- **Predictability**

- Manage the risk and uncertainty?



Criteria for effective lifecycle management: 5 ALM imperatives

1. Real-time planning
2. Lifecycle traceability
3. In-Context collaboration
4. Development intelligence
5. **Continuous improvement**

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.

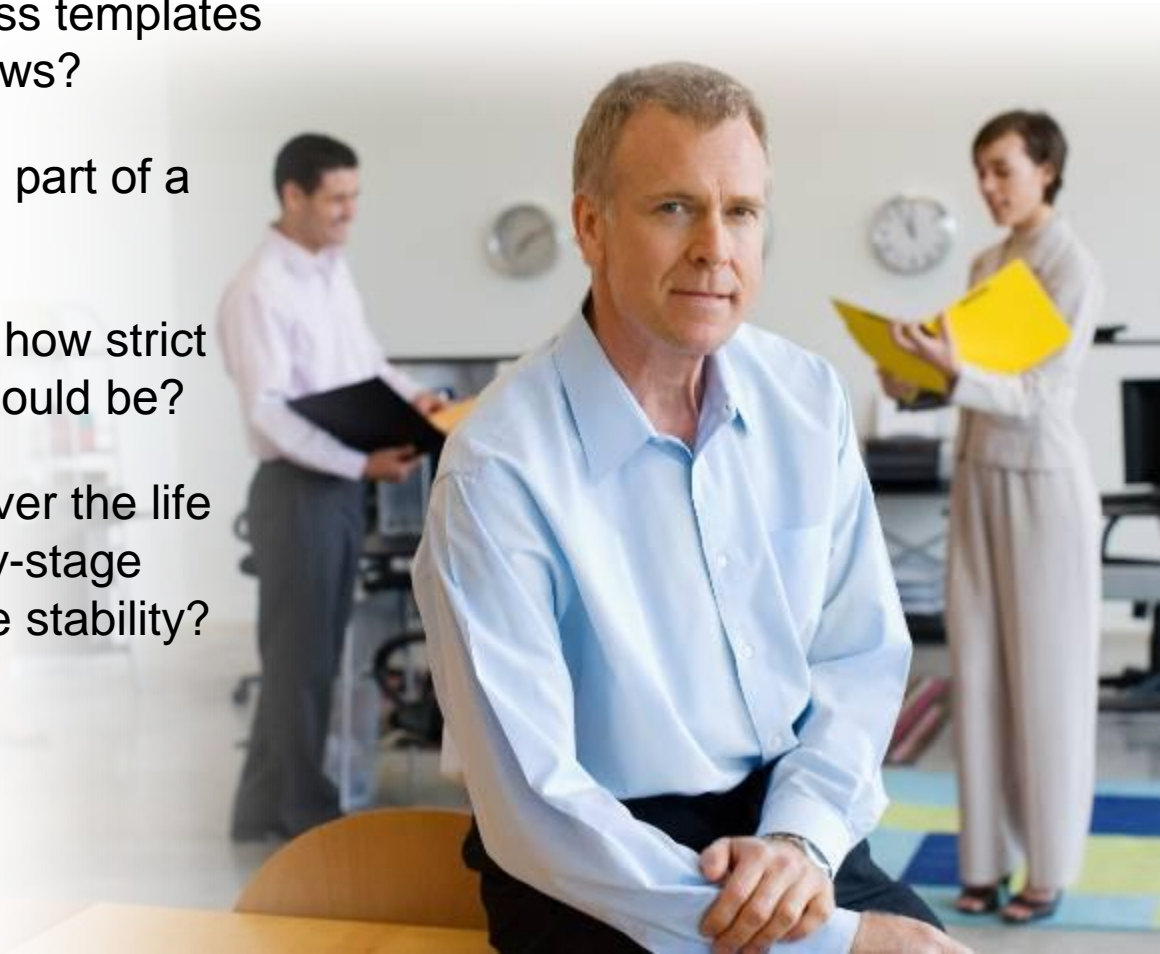
“Successful analytics requires taking it beyond software and reporting, and into the realm of management practices and operations improvement”

Information Management Online, February 23, 2011

Test your Continuous Improvement capabilities

Can your team...

- Leverage out-of-the-box process templates for 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?



Criteria for effective lifecycle management: ALM imperatives

1. Accelerate **time to delivery** with **Real-time Planning**
2. Improve **quality** with **Lifecycle Traceability**
3. Maximise **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 Introduction and current market situation
- 2 Delivering the 5 ALM imperatives
- 3 IBM Rational Application Lifecycle Management**
- 4 Proven results

Reminder: 3 key actions of transforming software and systems delivery

Integrate

**Connecting process
and information**

Software, data, and tools

Collaborate

Unifying teams

Projects, and
organizational cultures

Optimize

Simplifying governance

Plans, scope,
and measures

Realized benefits:

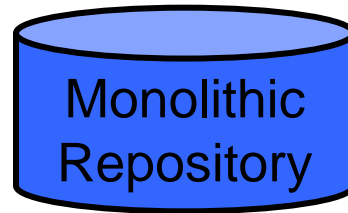
- Improved quality and time to market
- Reduced risk and cost
- Tighter alignment to business priorities

Traditional Approaches To ALM Integration Have Fallen Short

Limited choice and coverage

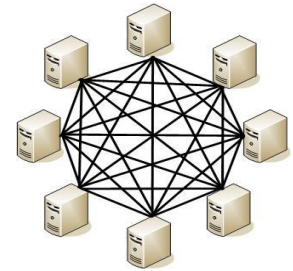
Single repository

- Hard to add existing (legacy) tools
- Difficult to evolve tools individually
- Limited to a single vendor's tools or affiliates



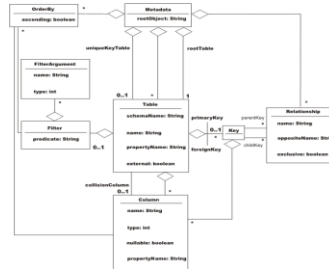
Point-to-point integrations

- Limited coverage: there are too many tools to cover more than a small fraction of possibilities
- Tight dependencies between tools require lockstep upgrades
- Proprietary APIs create vendor lock-in



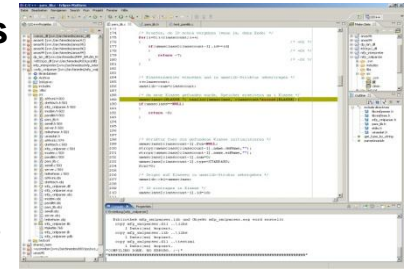
Universal metadata standard

- Too slow to complete to keep pace with the market
- Hostage to vendor in-fighting
- Difficult to migrate existing project data and assets



Standard implementations

- Requires "forklift" rip and replace of existing tools
- Hard to get widespread vendor support
- Insufficiently flexible to address different user approaches



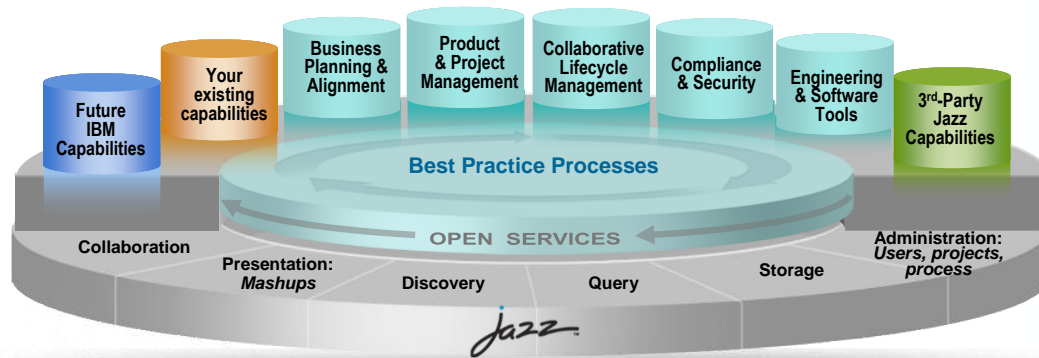
Slow to emerge and disruptive to adopt

Jazz is a platform for transforming software delivery

Rational Offerings

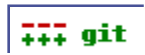
Third party Offerings

Business Partner Offerings



Jazz is...

- Our vision of the future of systems and software delivery
- A scalable, extensible team collaboration platform
- An integration architecture enabling mashups and non-Jazz products to participate
- A community at Jazz.net where Jazz products are built
- An evolution of our portfolio over time



Rational Next Generation Application Lifecycle Management

Rational Offerings

Third party Offerings

Business Partner Offerings



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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

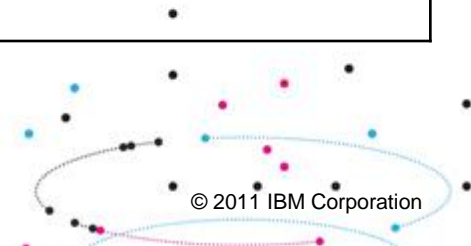
- ▶ Community Driven – specified at **open-services.net**
- ▶ Specifications for ALM, PLM and DevOps Interoperability
- ▶ Inspired by Internet architecture
 - Loosely coupled integration with “just enough” standardization
 - Common resource formats and services
- ▶ A different approach to industry-wide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

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

Achieve break through benefits with IBM's ALM platform

Advantages over other approaches

<p>OpenSource and point vendors</p>	<p>IBM provides an integrated lifecycle solution that enables cross-vendor integration unlike the vendors in this category</p>
<p>Vendors that integrate aspects of design, development & deployment, but not the whole lifecycle</p>	<p>IBM enables the integration and transparency needed across the full lifecycle unlike other vendors in this category</p>
<p>Vendors promoting comprehensive application and systems lifecycle solutions</p>	<p>IBM offers an open, standards-based platform unlike vendors in this category. IBM also enables business planning and alignment</p>

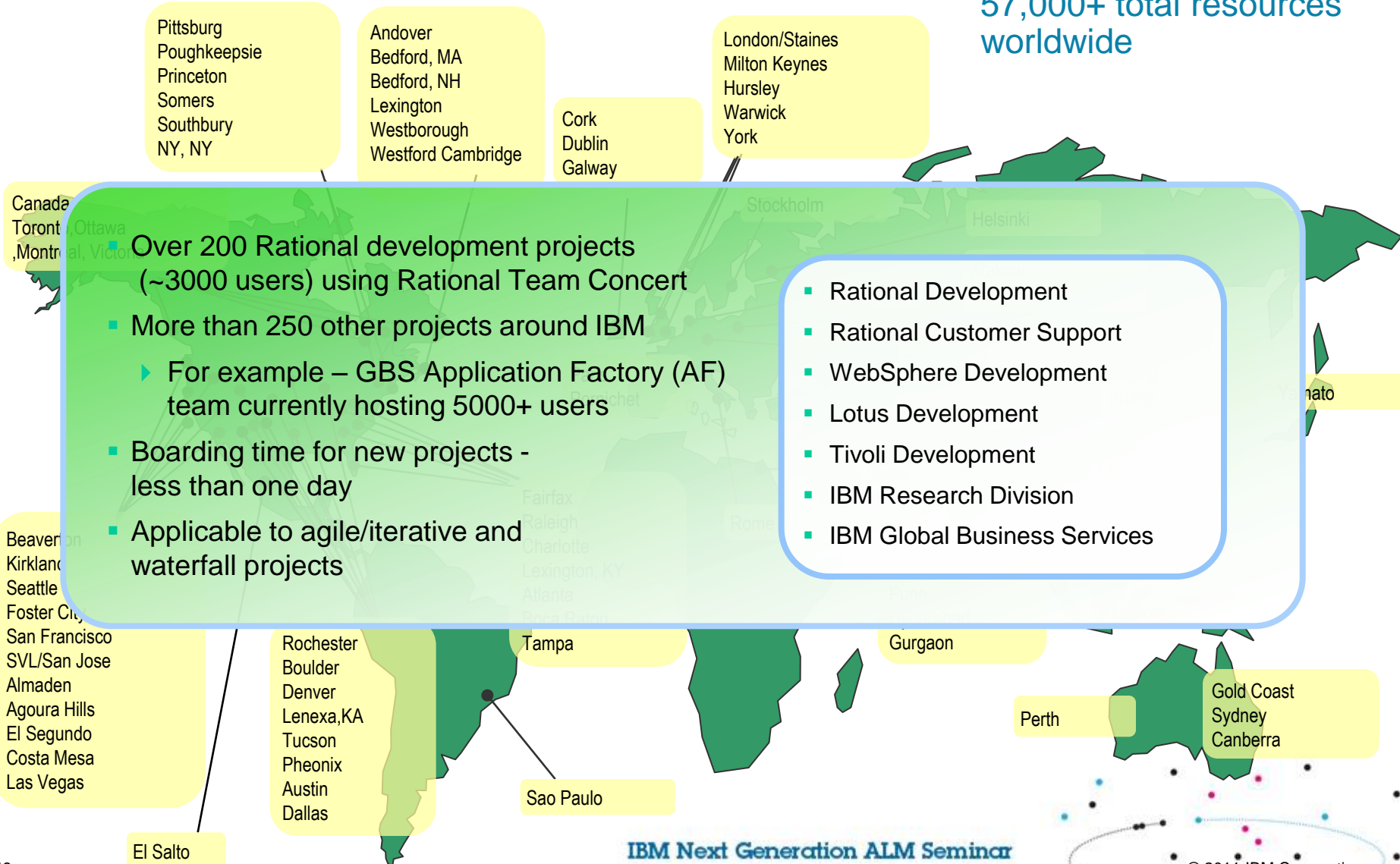


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Application Lifecycle Management @ IBM

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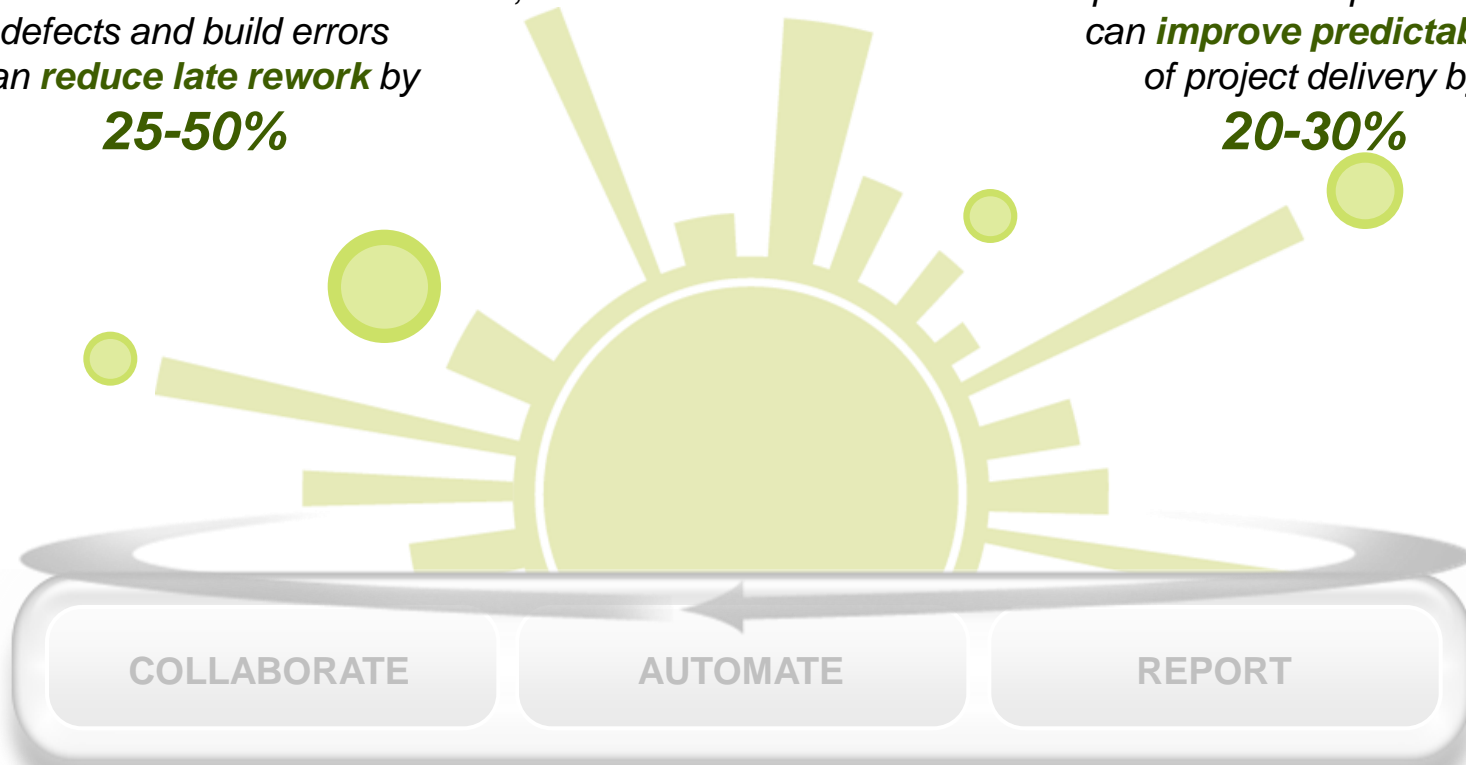


Business results

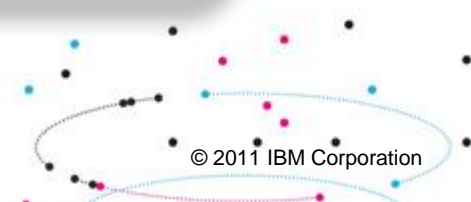
Automated status reporting
derived from evolving engineering artifacts
can **improve productivity** by
5-10%

Being able to collaborate on work items,
defects and build errors
can **reduce late rework** by
25-50%

Best practices in scope management
can **improve predictability**
of project delivery by
20-30%



Source: IBM analysis based on services research.



Realised Customer results – 5 ALM imperatives

From our region and across the globe

1. Accelerate time to delivery with Real-time Planning

- *GM reduced time to market, delivering new model cars to market in only 29 months*



Realised Customer results – 5 ALM imperatives

From our region and across the globe



2. Improve quality with Lifecycle Traceability

- *Nationwide is delivering innovative services in 1/3 the time and cost*

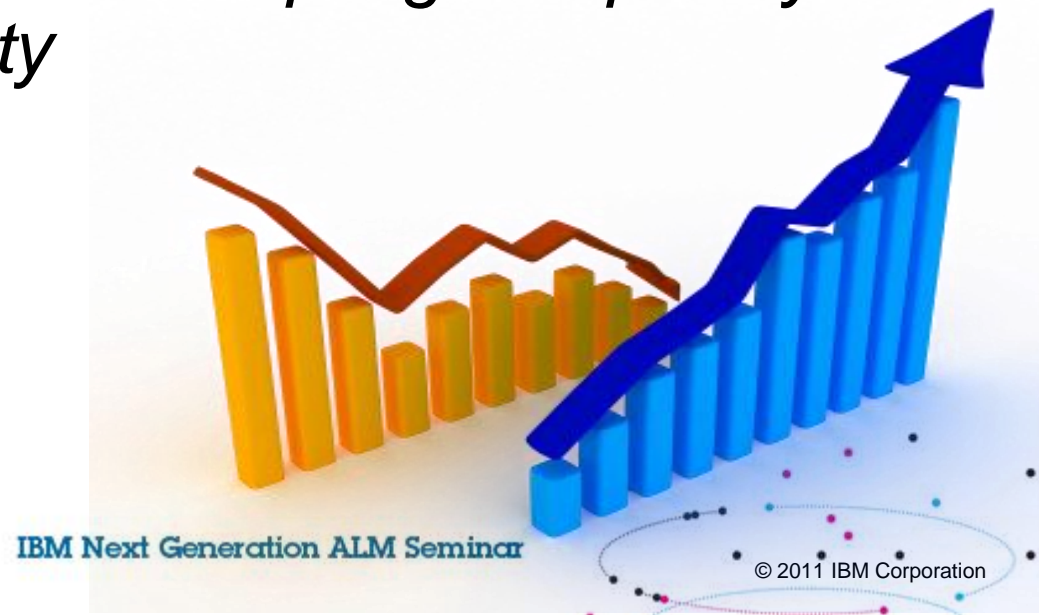


Realised Customer results – 5 ALM imperatives

From our region and across the globe

3. Maximise product value with In-Context Collaboration

- *A medium sized insurance company in Australia reduced headcount while tripling complexity and doubling productivity*



Realised Customer results – 5 ALM imperatives continued..
From our region and across the globe

4. Refine predictability with Development Intelligence

- *Danske Bank cuts time to market by 50%*

The logo for Danske Bank, featuring the word "Danske" in white text on a dark blue rectangular background, followed by the word "Bank" in dark blue text on a white rectangular background with a thin dark border.

“Rational Team Concert software is the backbone of Danske Bank’s agile development process and is adjusted to the special needs of the bank. Besides, we expect that Rational Team Concert will also support the waterfall methods in the longer term,” Peter Rasmussen, senior vice president, IT development processes and tools, Danske Bank Group

Realised Customer results – 5 ALM imperatives continued..
From our region and across the globe

5. Reduce costs with Continuous Improvement

- *ANZ Bank is reducing test cycles by 30% and deployment cycles by 50%*
- *Saving millions each year*



Gartner MarketScope for Application Life Cycle Management

IBM Rational earns “Strong Positive” – the highest possible rating

MarketScope for Application Life Cycle Management

Gartner

Gartner RAS Core Research Note G00208572, Jim Duggan, Thomas E. Murphy, 11 November 2010

Rational software

Efficient coordination and automation of the delivery process **requires new, collaborative approaches** to the planning, measurement, execution, control and reporting of activities.

These **new approaches are what differentiate current application life cycle management (ALM)** tools, and what make ALM processes vital to leading-edge development activities.

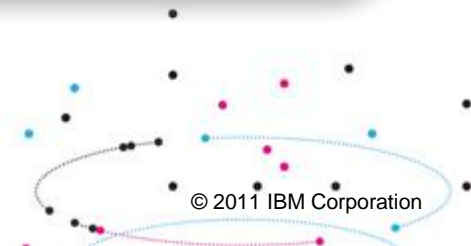
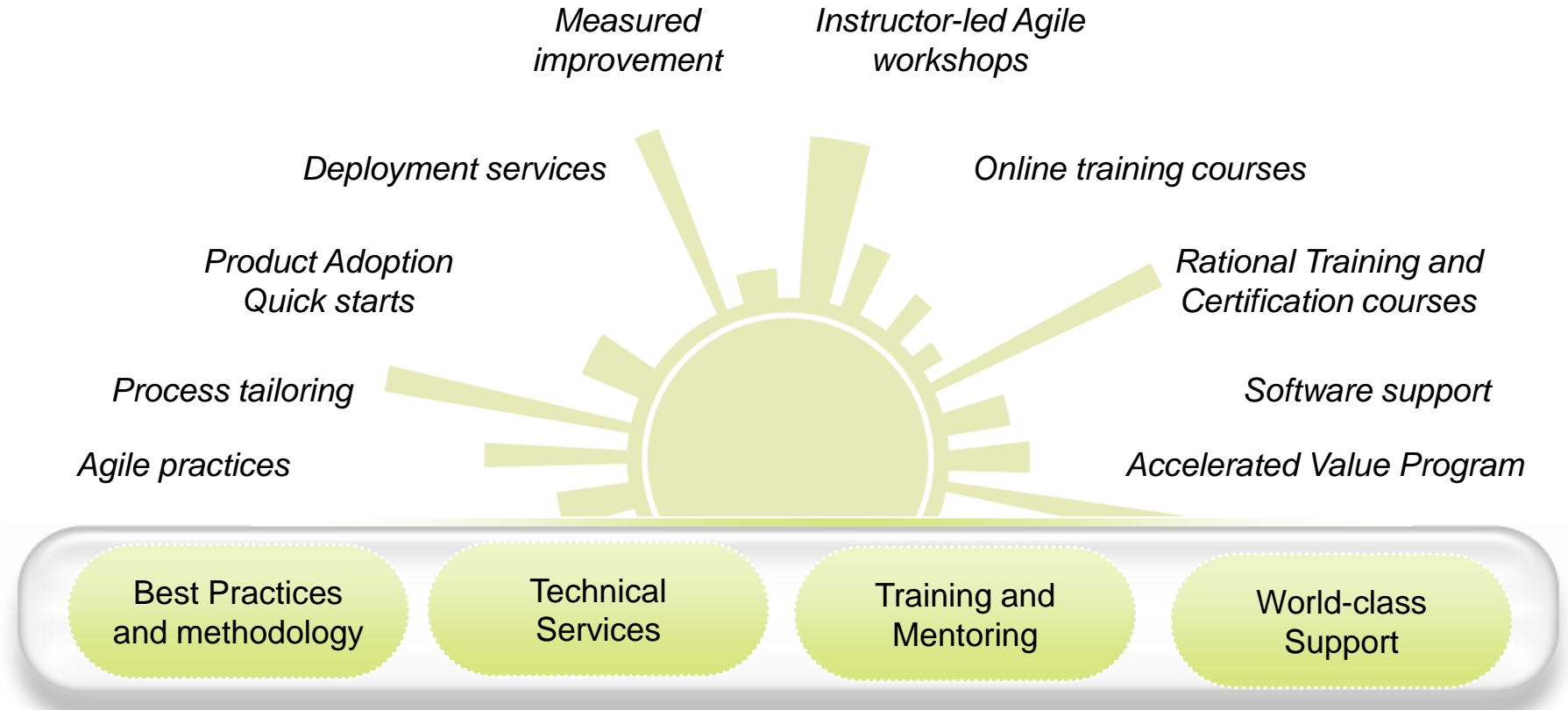
ALM is what **enables sustainable agile practices**. ALM creates a management framework providing consistent, auditable records of the decisions and activities of agile teams.

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

As of 11 November 2010

The MarketScope is copyrighted November 11, 2010 by Gartner, Inc. and is reused with permission. The MarketScope is an evaluation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the MarketScope, and does not advise technology users to select only those vendors with the highest rating. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose. The MarketScope graphic was published by Gartner, Inc. as part of a larger research note and should be evaluated in the context of the entire report. The Gartner report is available upon request from IBM.

Ensure Success with IBM Rational Application Lifecycle Management





www.ibm.com/software/rational

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