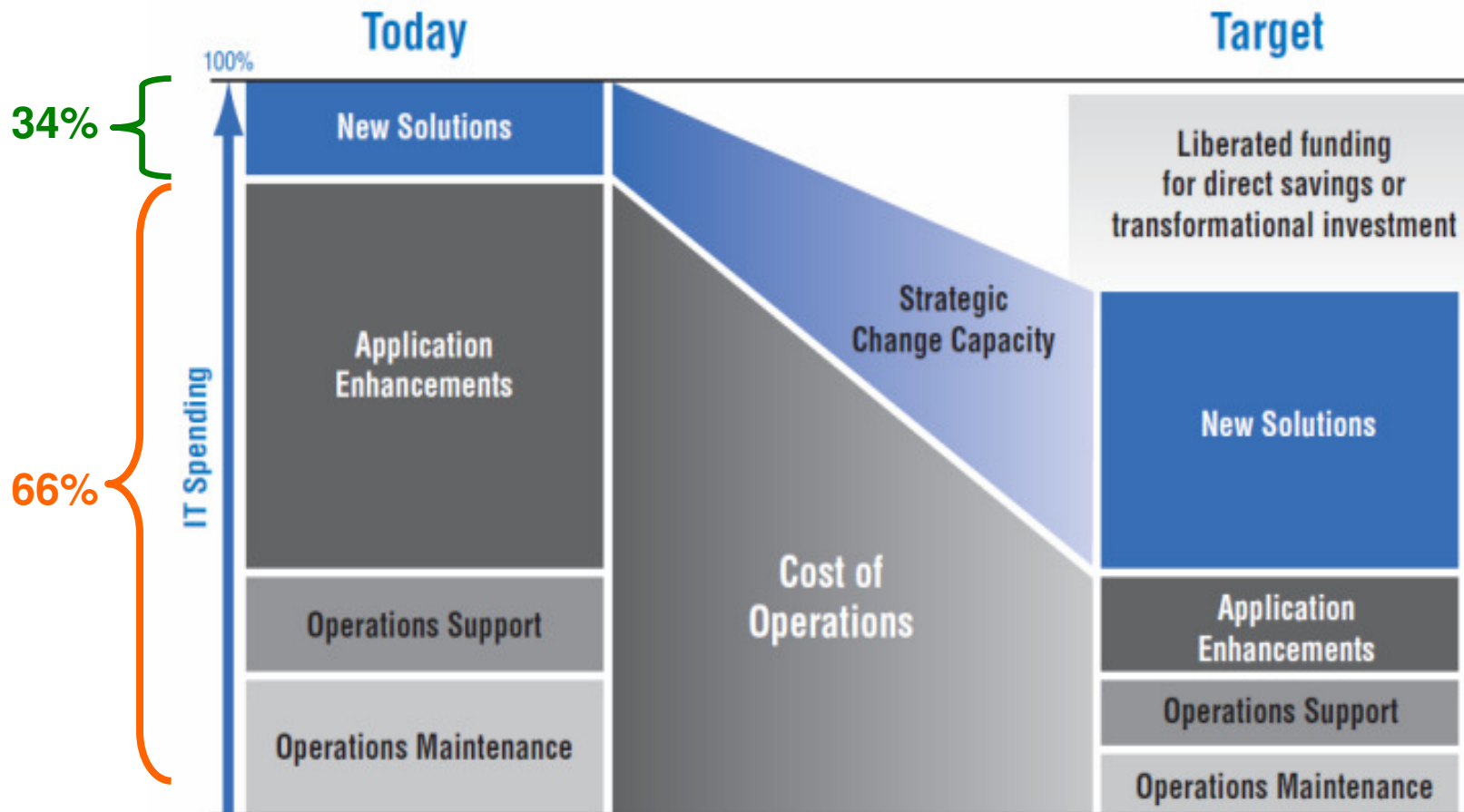IBM

IBM Next Generation ALM Seminar

Kurt Solarte
May 2012

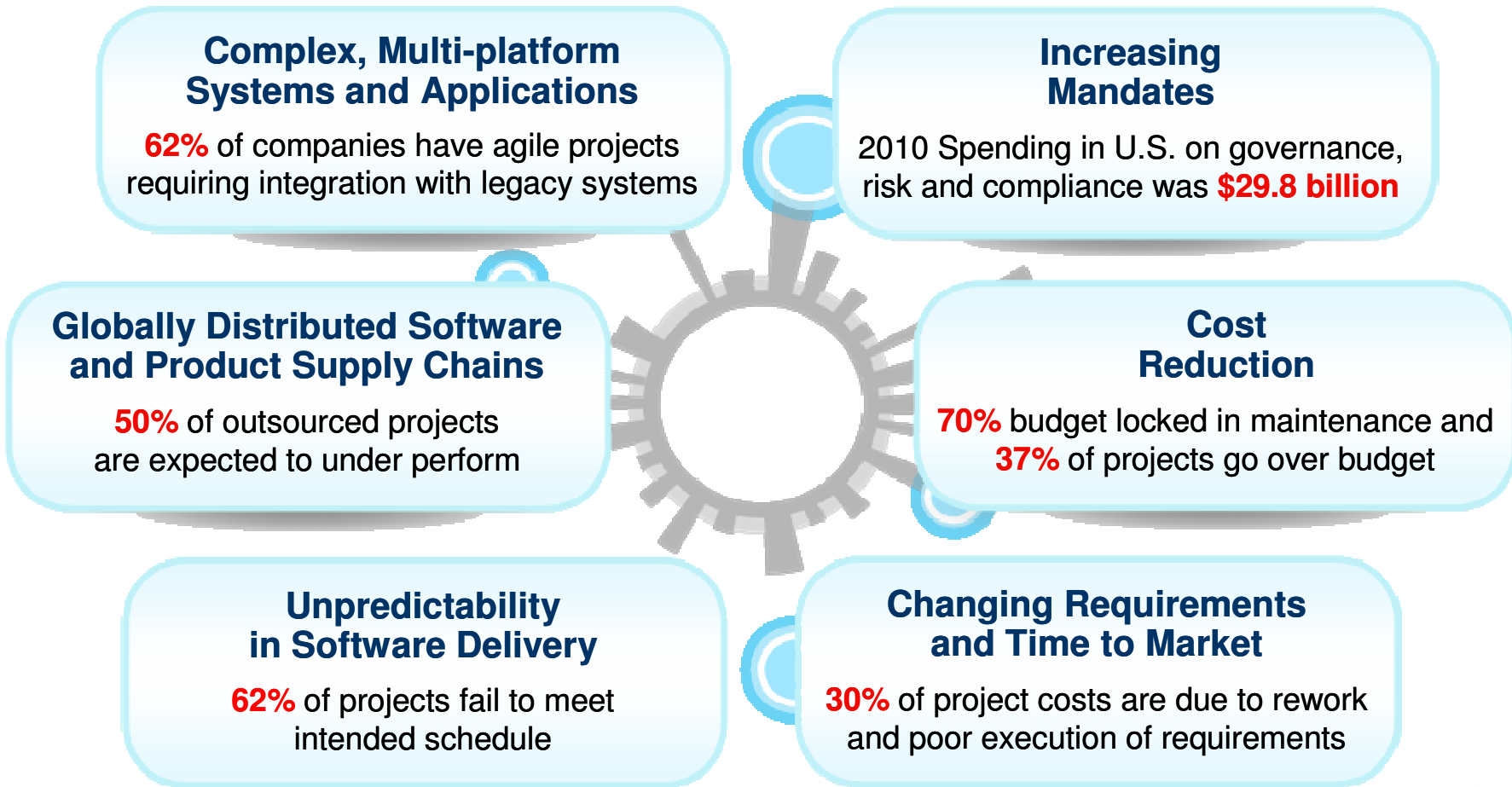# Balancing Resources to Support Business Innovation
Balance IT investments to focus on new solutions.

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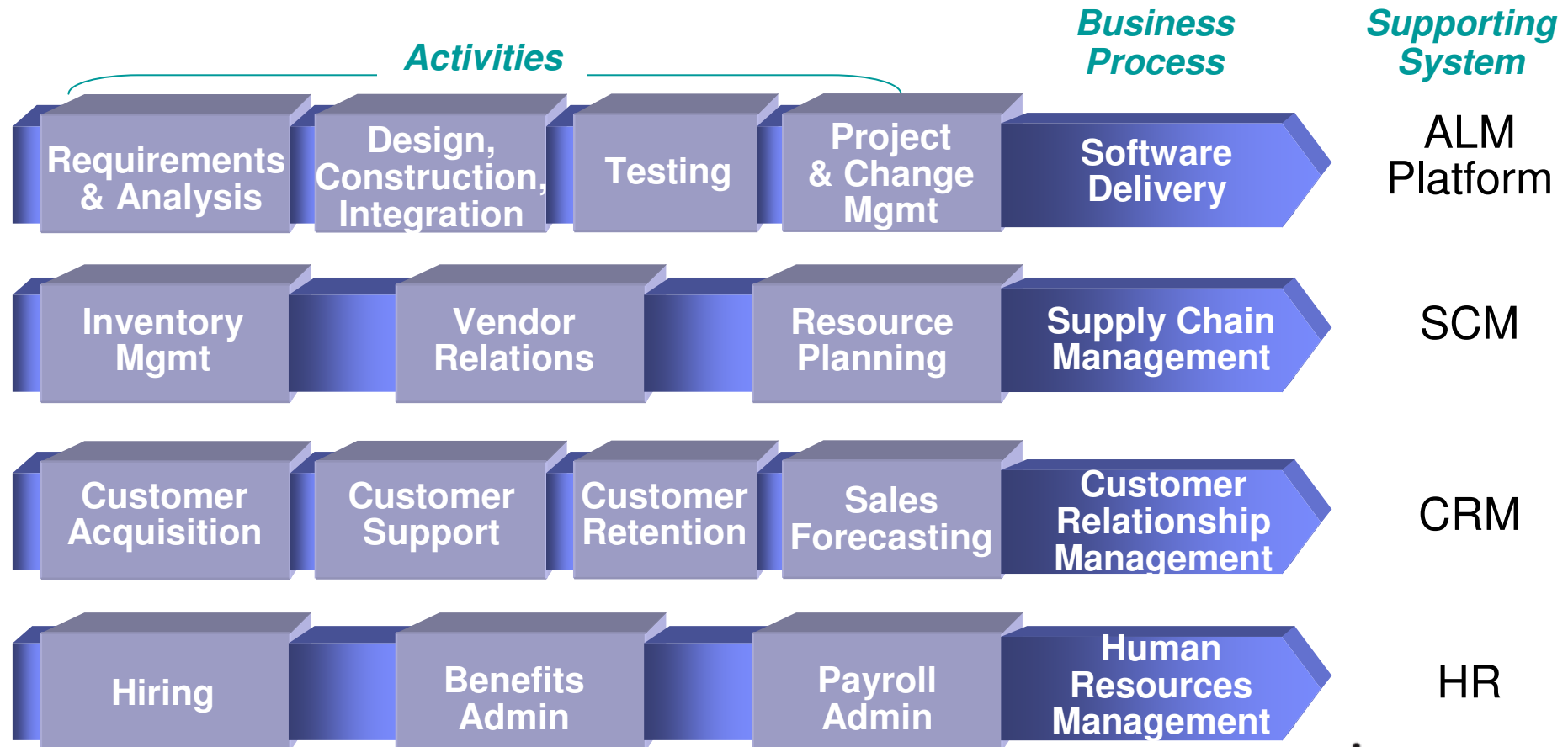- While new projects and software initiatives represent only **34%**

IBM Next Generation ALM Seminar

© 2011 IBM Corporation

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

IBM Next Generation ALM Seminar

Core Business Process

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

Activities				Business Process	Supporting System
Requirements & Analysis	Design, Construction, Integration	Testing	Project & Change Mgmt	Software Delivery	ALM Platform
Inventory Mgmt	Vendor Relations		Resource Planning	Supply Chain Management	SCM
Customer Acquisition	Customer Support	Customer Retention	Sales Forecasting	Customer Relationship Management	CRM
Hiring	Benefits Admin		Payroll Admin	Human Resources Management	HR

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

Investments

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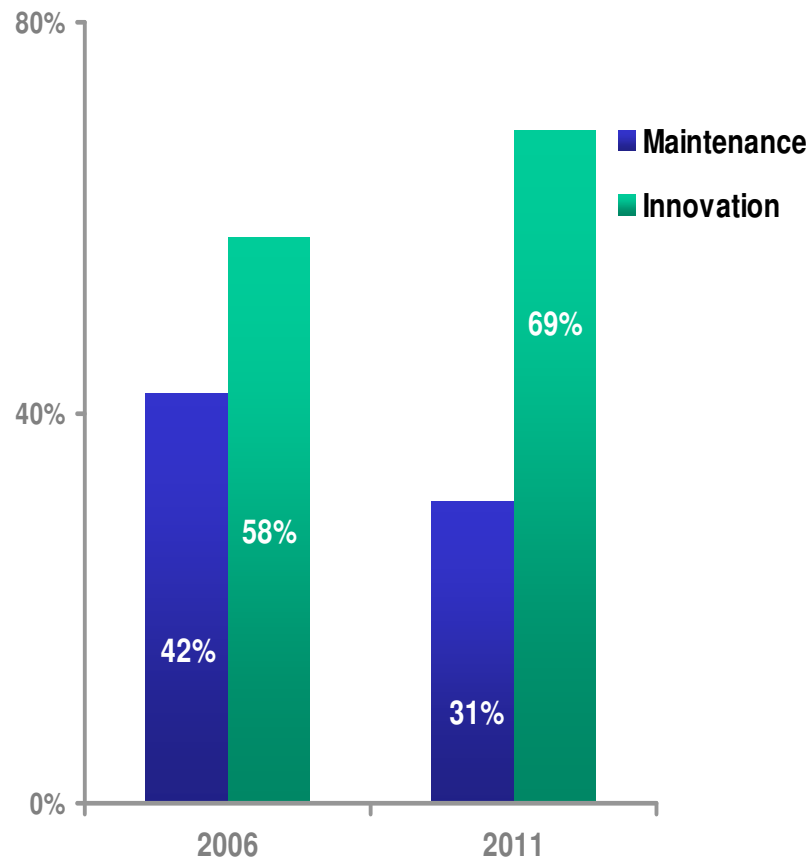
Efficiency Measures	2006 ➡ 2011	
On time delivery	47%	95%
Defect backlog in months	>9	2.7
Beta defects fixed before GA	3%	95%
Agile / iterative projects	5%	85%

IBM Next Generation ALM Seminar

5

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

IBM Next Generation ALM Seminar

Application Lifecycle Management in context

Decide
Enterprise Architecture and Portfolio Planning

3 inter-related lifecycles of activity involving different goals, timelines, roles, processes and tools

Develop
Application Lifecycle Management

Deploy
Deployment Planning & Automation

Integrate, Instrument & Improve
Help me oversee this entire value chain and incrementally improve
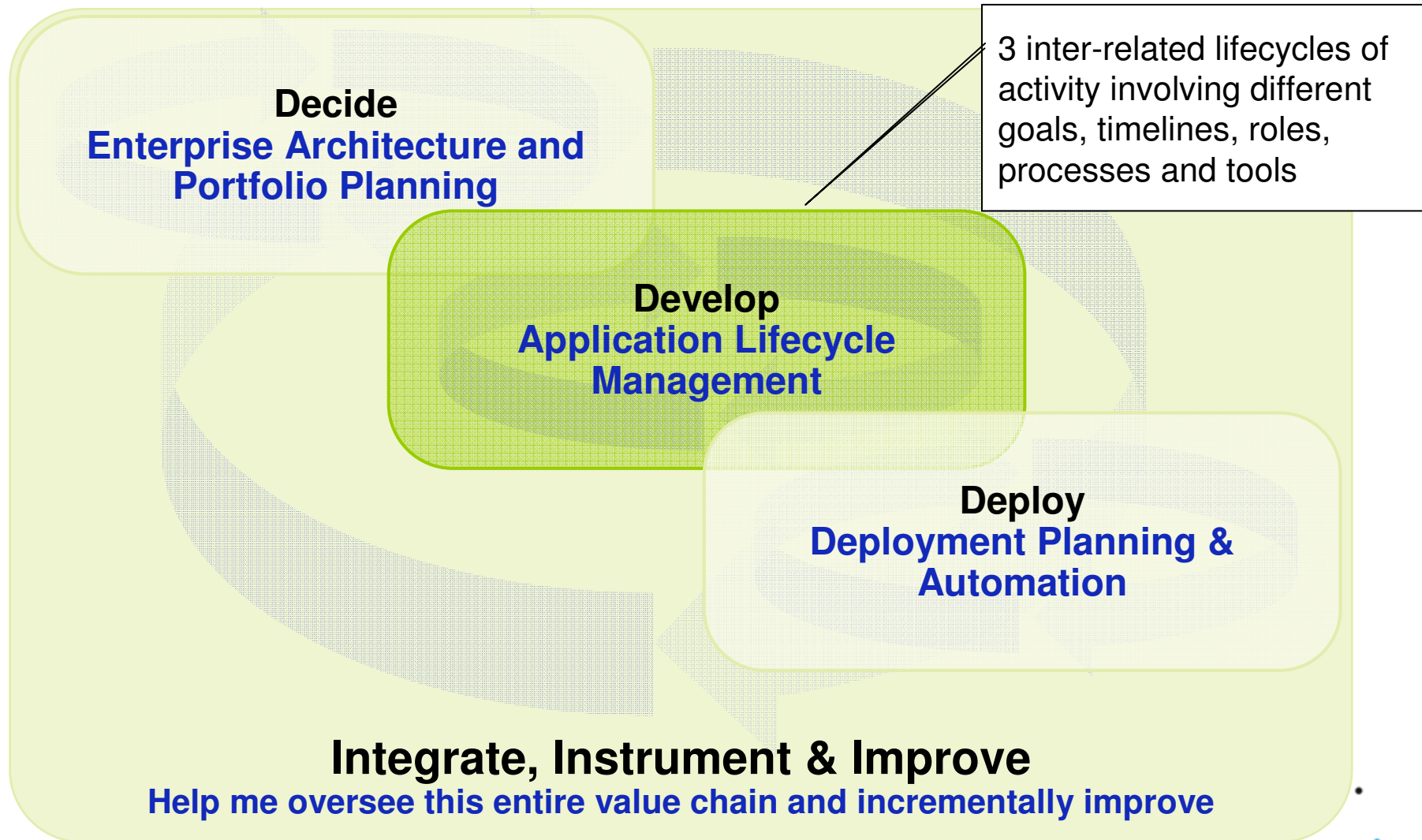
ALM is about connecting the disciplines

PM / Planning	Requirements	Development	Testing
▪ Business Drivers ▪ Iterations ▪ Sign-off ▪ Contract ▪ Risk Assess ▪ User Involvement	▪ Use Cases ▪ Nonfunctional ▪ Sign-off ▪ Contract ▪ Risk Assess ▪ Threat Model ▪ Test Requirements	▪ TDD ▪ Build Management ▪ Static Analysis ▪ BVT ▪ Source Management ▪ Pair Programming/ Code Review	▪ Scenario-Driven Automation ▪ Exploratory Test ▪ User Involvement ▪ Contract Validation

Continuous Learning and Feedback

IBM Next Generation ALM Seminar

Agenda

1 Introduction and current market situation

2 **Delivering the 5 ALM imperatives**

3 IBM Rational Application Lifecycle Management

4 Proven results

IBM Next Generation ALM Seminar

© 2011 IBM Corporation

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

IBM Next Generation ALM Seminar
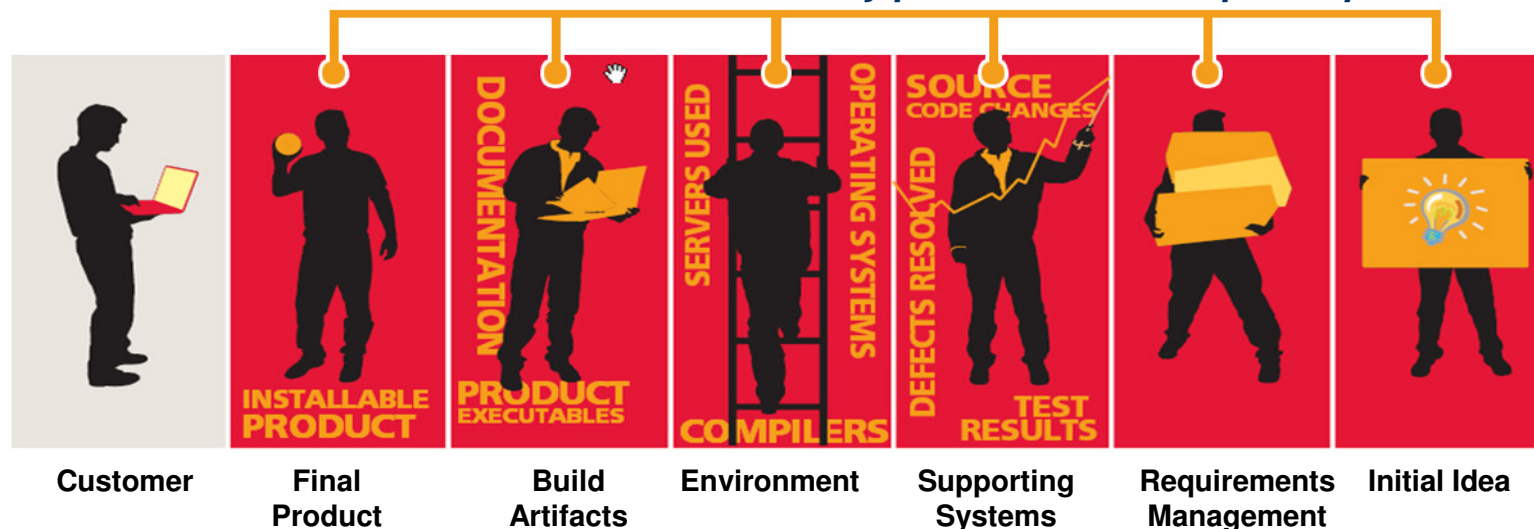
Criteria for effective lifecycle management: 5 ALM imperatives

1. **Real-time planning**

2. Lifecycle traceability

3. In-Context collaboration

4. Development intelligence

5. Continuous improvement

IBM Next Generation ALM Seminar

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

IBM Next Generation ALM Seminar
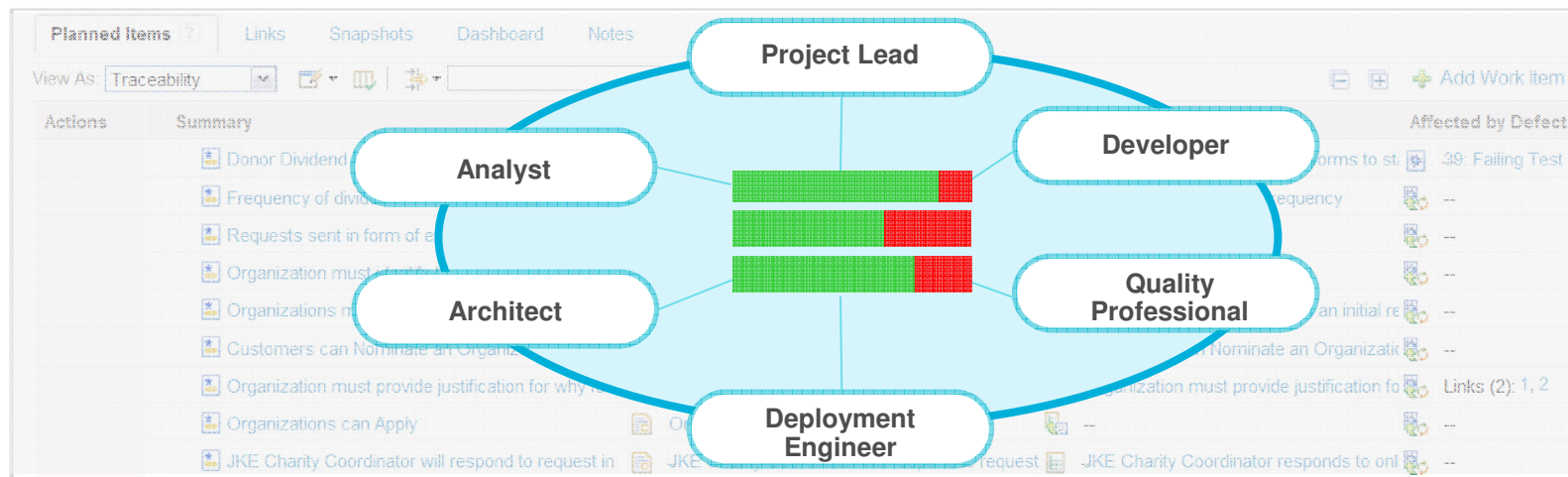
Test your real-time planning capabilities
Can your team…

- Plan across the entire team?

- Plan for waterfall, iterative and agile environments?

- Integrate planning with execution?

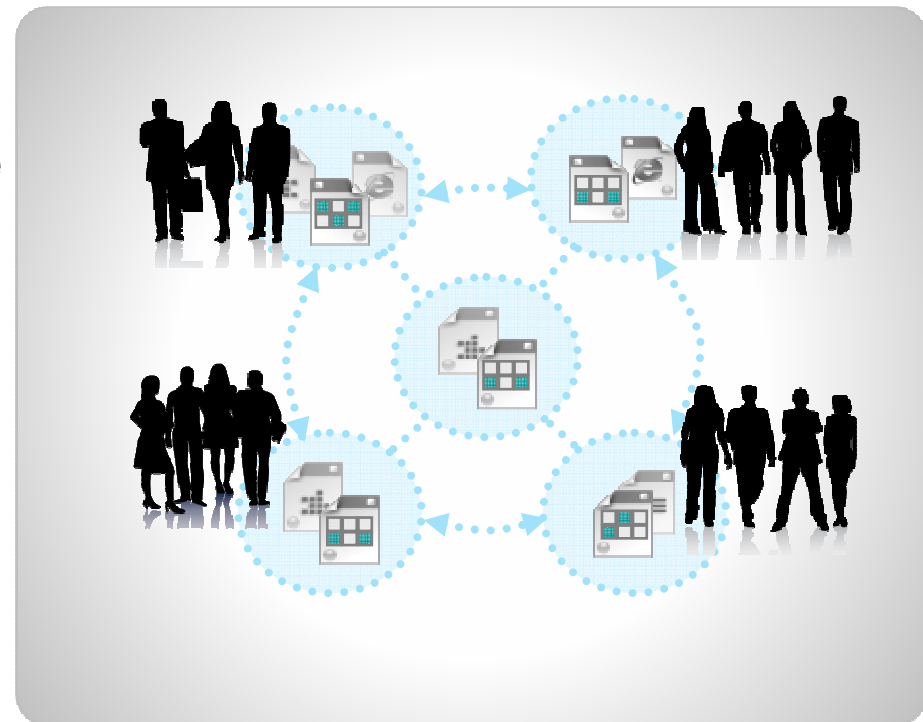- Instantly see the impact of a change in project scope or resources?

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

IBM Next Generation ALM Seminar

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

| Customer | Final Product | Build Artifacts | Environment | Supporting Systems | Requirements Management | Initial Idea |

IBM Next Generation ALM Seminar

Test your lifecycle traceability capabilities
Can your team answer these questions…

Analyst

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?

Project Manager

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?

Developer

What requirements am I implementing?

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

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

What changes occurred overnight?

Release Engineer

How can I standardize when teams use different tools?

Where are the bottlenecks in our processes?

Are build times getting longer or shorter?

How can I speed up my builds?

Quality Professional

What is the quality of the build?

What has changed that I need to test?

What defects have been addressed since the last build?
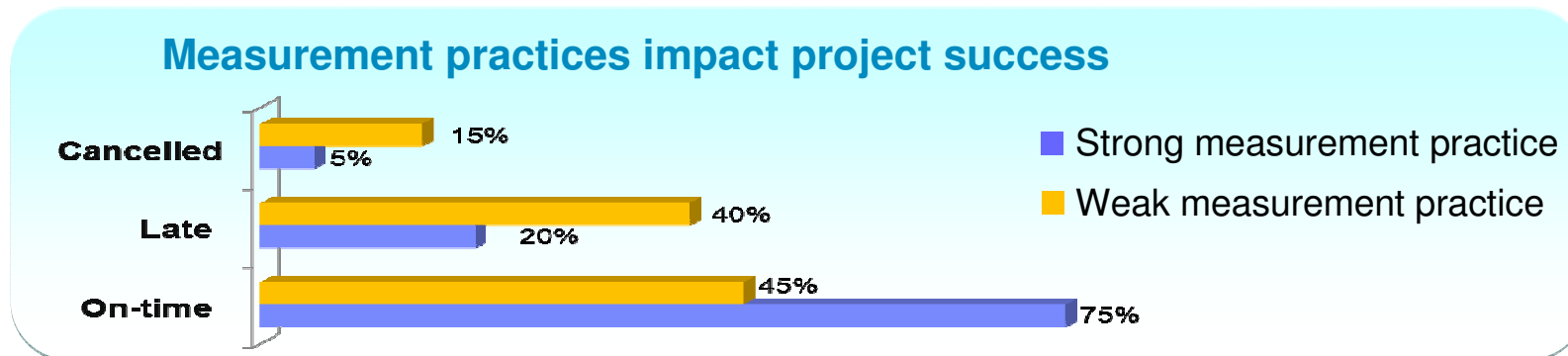
Criteria for effective lifecycle management: 5 ALM imperatives

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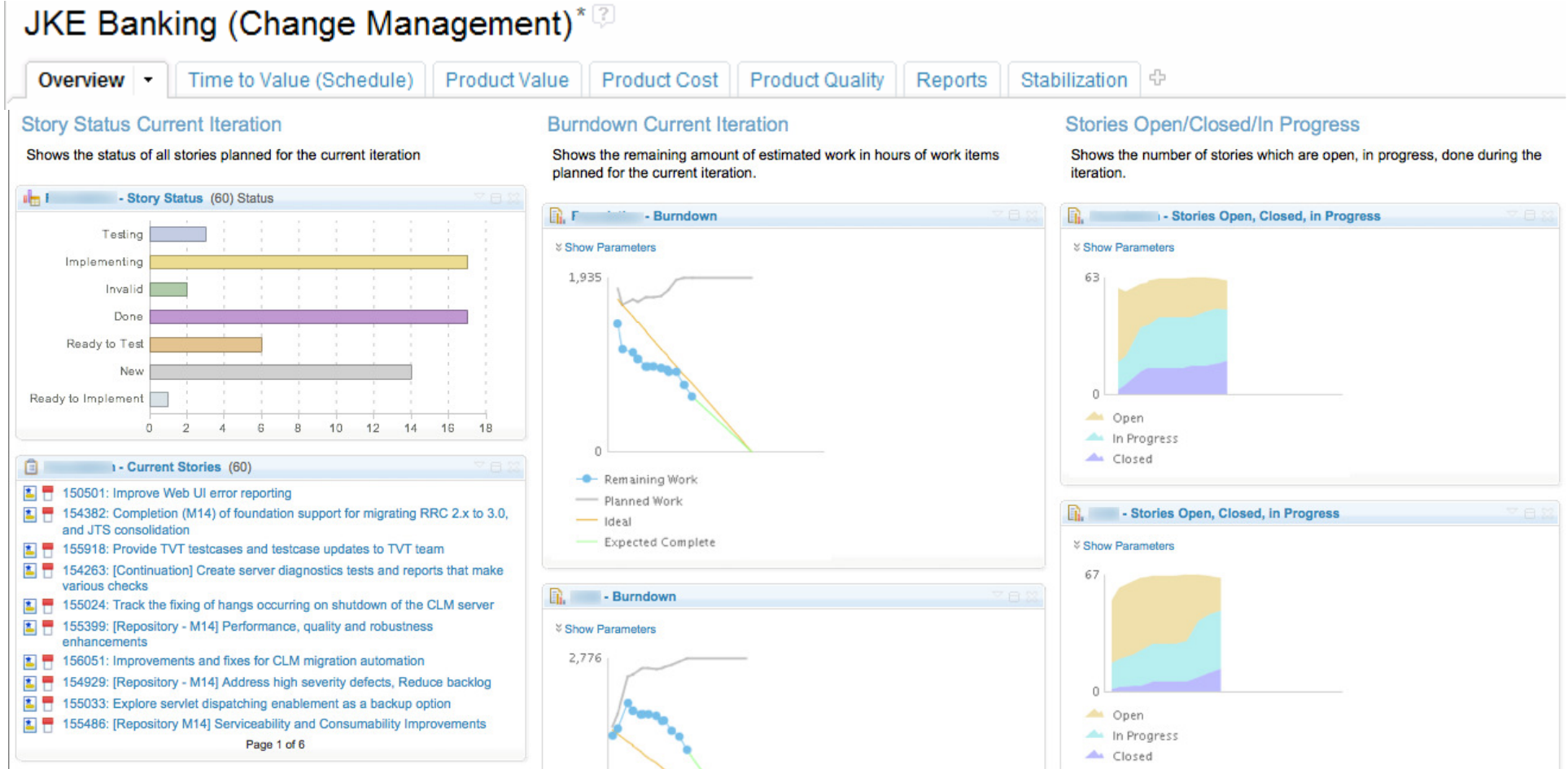4. Development intelligence
5. Continuous improvement

IBM Next Generation ALM Seminar

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?
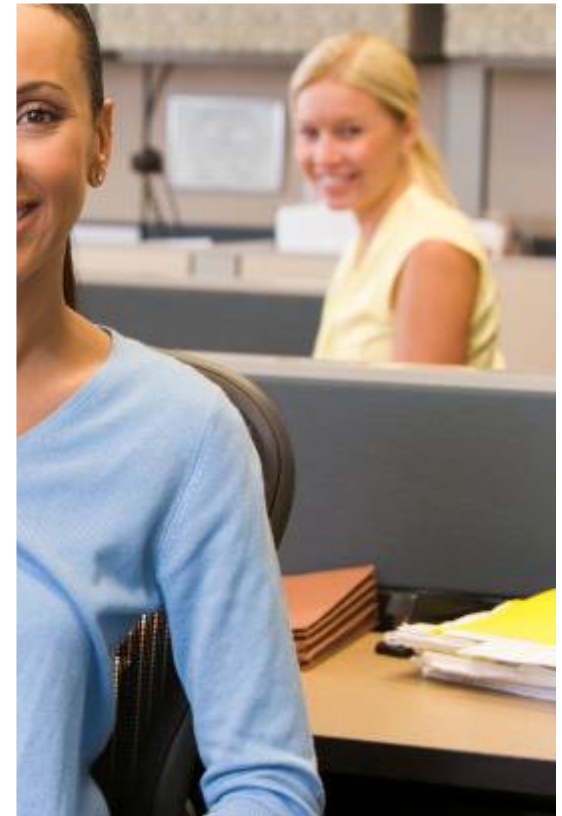
Criteria for effective lifecycle management: 5 ALM imperatives

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

IBM Next Generation ALM Seminar

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

	Strong measurement practice	Weak measurement practice
Cancelled	5%	15%
Late	20%	40%
On-time	75%	45%

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

IBM Next Generation ALM Seminar

© 2011 IBM Corporation

Use dashboards to provide that 1 view of project health

IBM Next Generation ALM Seminar

© 2011 IBM Corporation

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**

IBM Next Generation ALM Seminar

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

IBM Next Generation ALM Seminar

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?

Agenda

1 Introduction and current market situation

2 Delivering the 5 ALM imperatives

3 **IBM Rational Application Lifecycle Management**

4 Proven results

IBM Next Generation ALM Seminar

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

Monolithic Repository

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
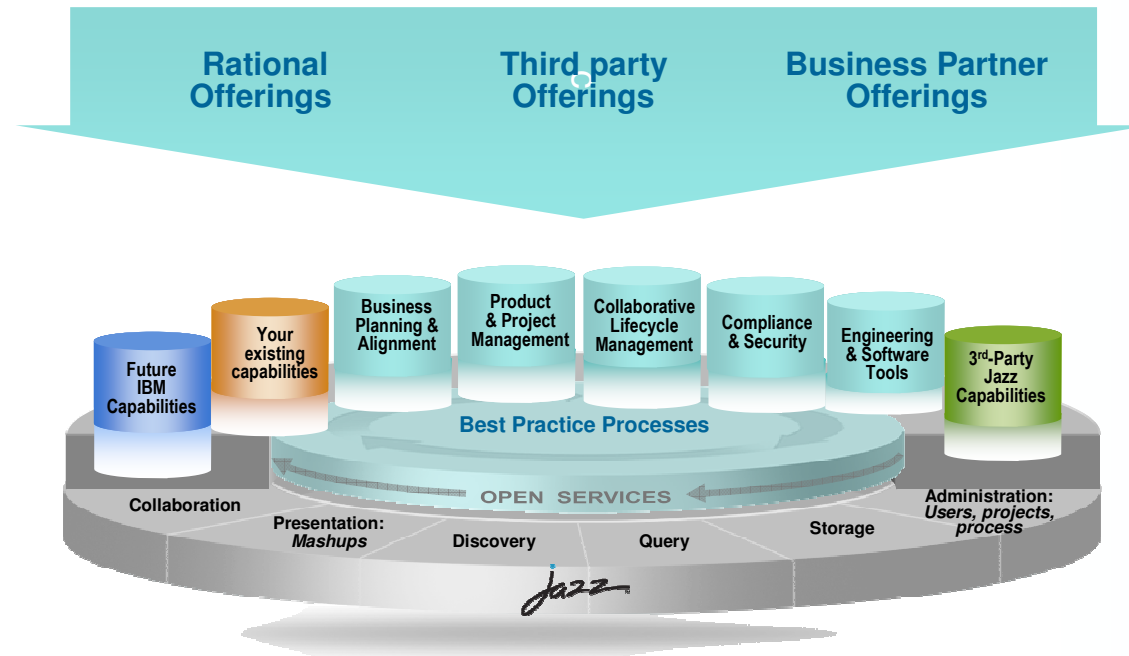
Jazz is…

- 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
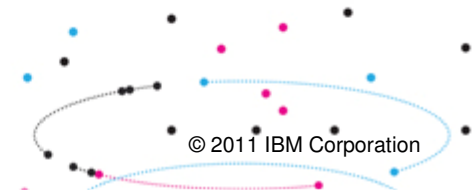
Rational Next Generation Application Lifecycle Management

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
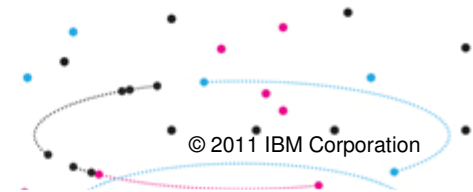
Open Services for Lifecycle Collaboration (OSLC)
An initiative aimed at simplifying data linking and tool integration across the lifecycle

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/

IBM Next Generation ALM Seminar

© 2011 IBM Corporation

Achieve break through benefits with IBM's ALM platform

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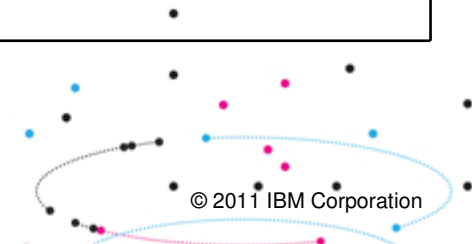
Agenda

1 Introduction and current market situation

2 Delivering the 5 ALM imperatives

3 IBM Rational Application Lifecycle Management

4 **Proven results**

IBM Next Generation ALM Seminar

Application Lifecycle Management @ IBM

57,000+ total resources worldwide

Pittsburg
Poughkeepsie
Princeton
Somers
Southbury
NY, NY

Andover
Bedford, MA
Bedford, NH
Lexington
Westborough
Westford Cambridge

Cork
Dublin
Galway

London/Staines
Milton Keynes
Hursley
Warwick
York

Canada
Toronto
,Montreal

- Over 200 Rational development projects
  (~3000 users) using Rational Team Concert

- More than 250 other projects around IBM

  ▸ For example – GBS Application Factory (AF)
    team currently hosting 5000+ users

- Boarding time for new projects -
  less than one day

- Applicable to agile/iterative and
  waterfall projects

- Rational Development
- Rational Customer Support
- WebSphere Development
- Lotus Development
- Tivoli Development
- IBM Research Division
- IBM Global Business Services

Beaver
Kirkland
Seattle
Foster City
San Francisco
SVL/San Jose
Almaden
Agoura Hills
El Segundo
Costa Mesa
Las Vegas

Rochester
Boulder
Denver
Lenexa,KA
Tucson
Pheonix
Austin
Dallas

Tampa

Gurgaon

nato

Perth

Gold Coast
Sydney
Canberra

Sao Paulo

El Salto

IBM Next Generation ALM Seminar

34

© 2011 IBM Corporation

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*

IBM Next Generation ALM Seminar

2. Improve quality with Lifecycle Traceability

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

AUDIT CHECKLIST

☑ Audit Satisfactory

Nonconformances Found

Observations Made

IBM Next Generation ALM Seminar

3. Maximise product value with In-Context Collaboration

- *A medium sized insurance company in Australia reduced headcount while tripling complexity and doubling productivity*
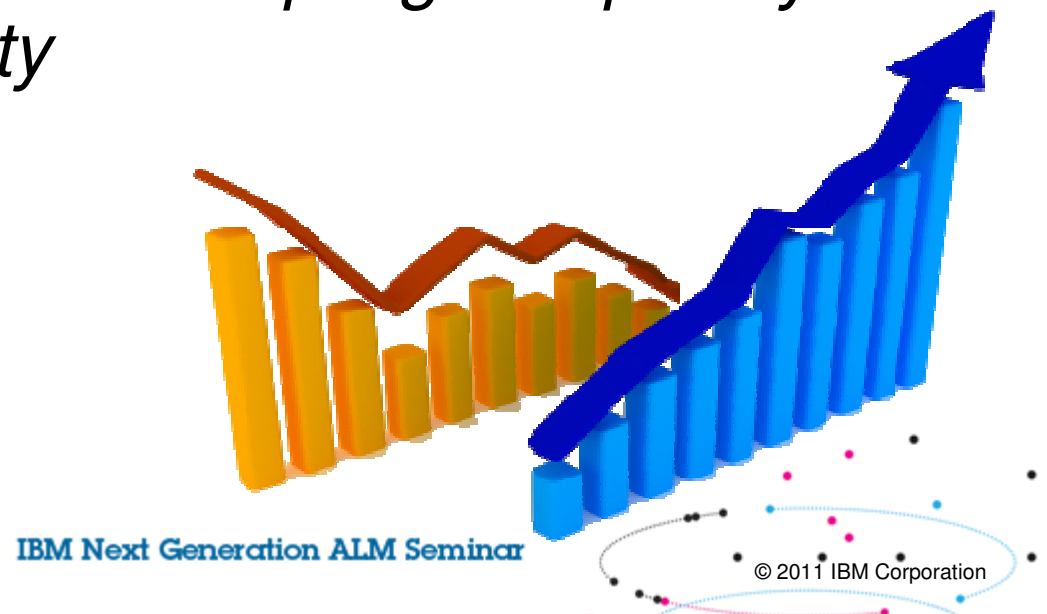
IBM Next Generation ALM Seminar

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%*

Danske Bank

"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

IBM Next Generation ALM Seminar

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*

IBM Next Generation ALM Seminar

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		
Polarion 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

IBM Next Generation ALM Seminar

Ensure Success with IBM Rational Application Lifecycle Management

Measured improvement

Instructor-led Agile workshops

Deployment services

Online training courses

Product Adoption Quick starts

Rational Training and Certification courses

Process tailoring

Software support

Agile practices

Accelerated Value Program

| Best Practices and methodology | Technical Services | Training and Mentoring | World-class Support |

IBM Next Generation ALM Seminar
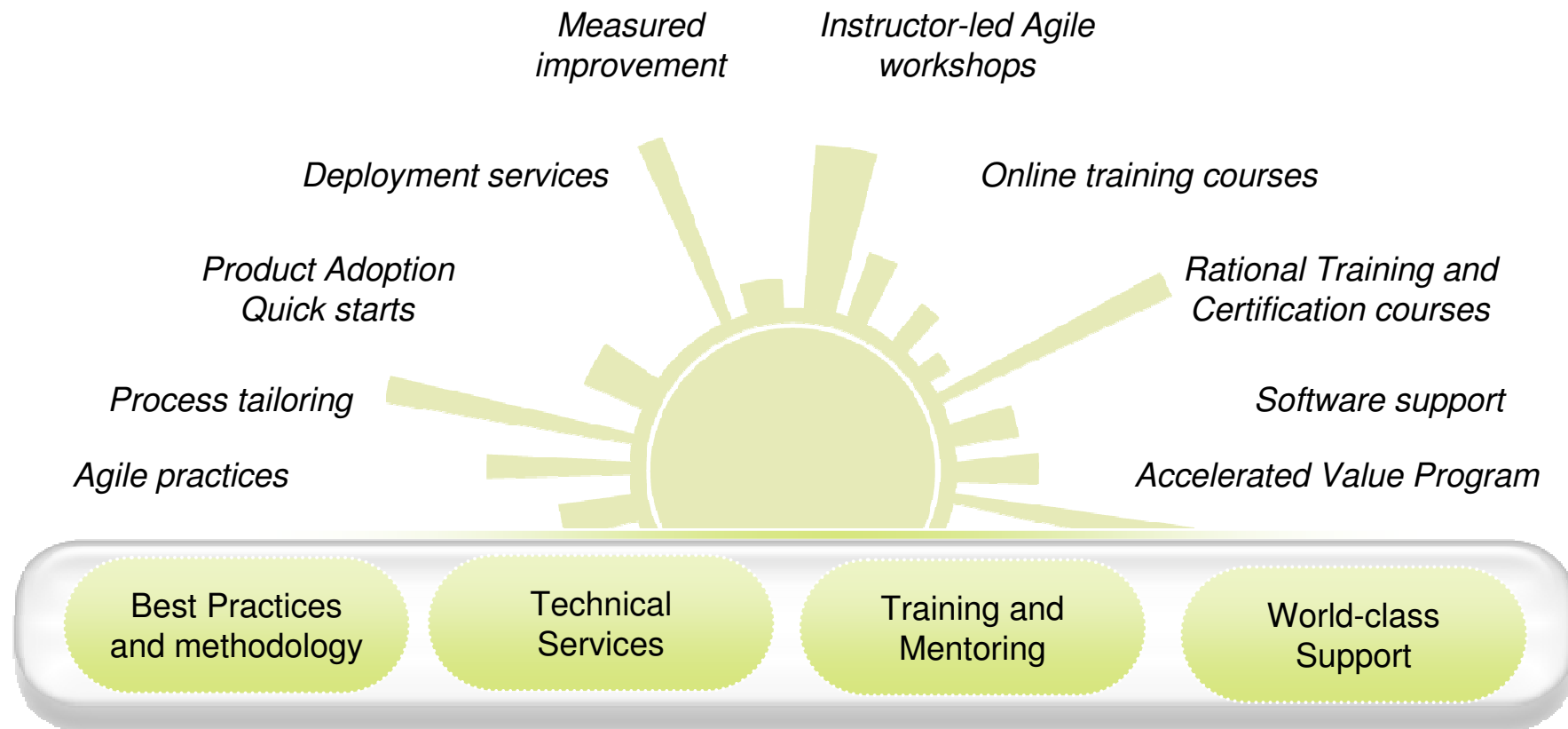
IBM Next Generation ALM Seminar

Please take a few minutes to complete the evaluation form and return it at the registration table to receive your **complimentary gift**
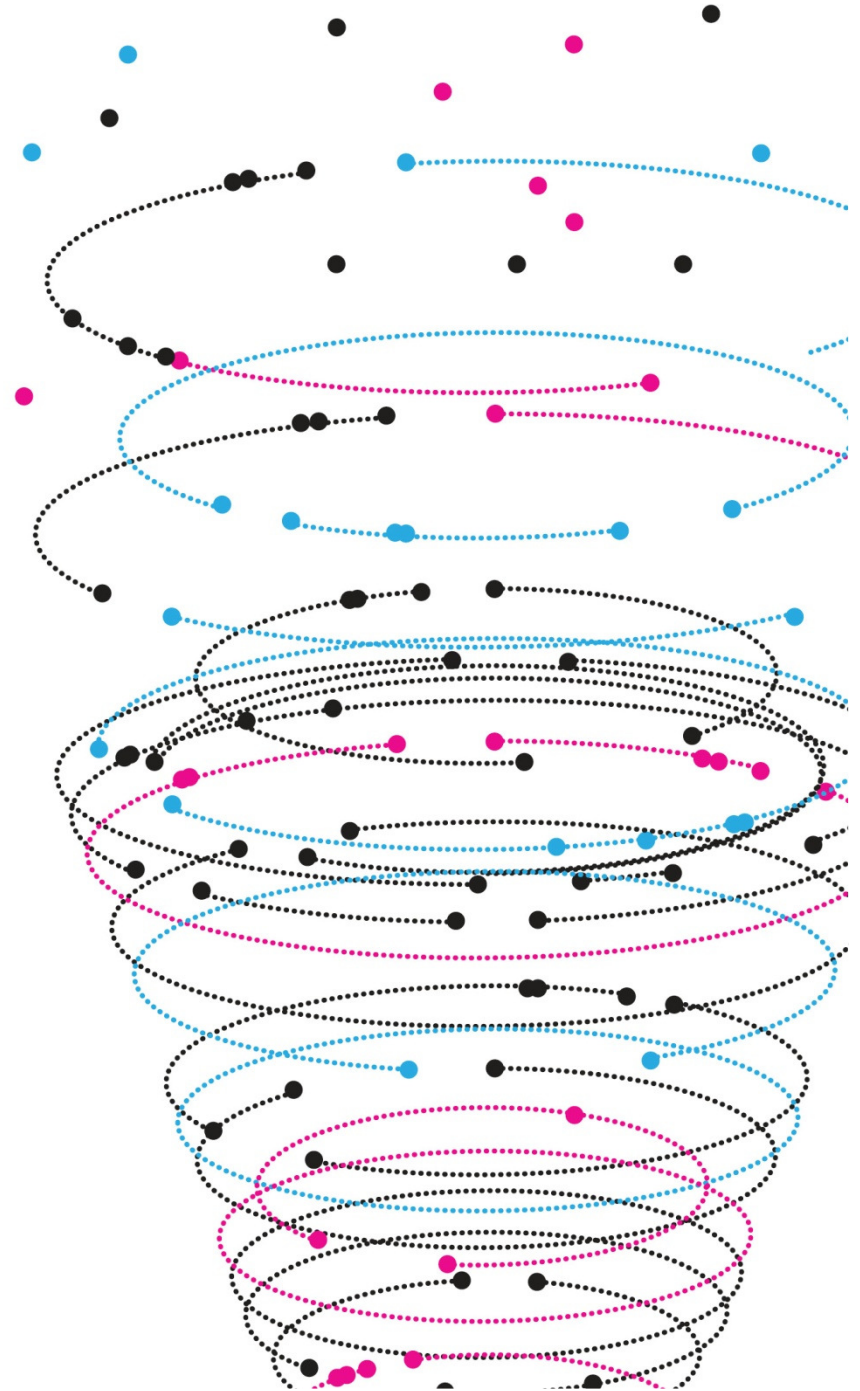
Smarter software for a smarter planet:

Take the fast track to better software delivery

Join us for a hands-on ALM workshop led by IBM's expert technical team

Don't miss this opportunity to test drive the next generation of IBM's Application Lifecycle Management (ALM) solutions. During this complimentary hands-on workshop, IBM's expert technical team will demonstrate the features and functionality of the IBM® Rational® suite.

Perth

Wednesday, 30 May 2012
Cliftons
191 St Georges Terrace
Perth WA 6000
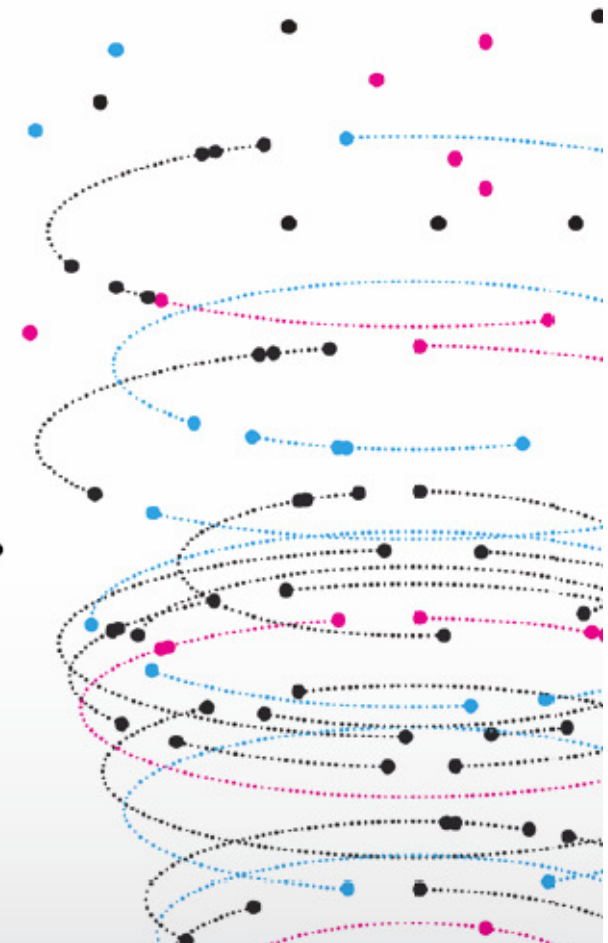
www.ibm.com/software/rational

IBM Next Generation ALM Seminar

© 2011 IBM Corporation