Real Insights. Real Results.

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Today's Discussion

- Rational Strategy Review

- Our Approach to Real Results

- Time to Get Real

- Innovation Today

The evolution of Rational strategy

2006
Strategic Imperative

Accelerating software development evolution

- Empowerment
- Modularity
- Communities

2007
Strategy Announced

Deliver value efficiently and effectively in distributed organizations

- Enabling governance
- Adopting flexible architectures
- Leveraging communities

2008
Strategy In Action

Helping guide you from the cathedral to the bazaar

- Ship early
- Ship often
- Listen to your customers

Rational *strategy in action* over the past year

- CONTINUED DELIVERING on the promise and vision of a flexible Jazz architecture
  - ▸ Shipping early, shipping often with a transparent product development on Jazz.net
  - ▸ Delivering 8 Jazz-built products and 18 Jazz-enabled products

- CONTINUED EXPANDING Rational communities to listen to our customers and partners
  - ▸ Launched Open Services for Lifecycle Collaboration initiative

- CONTINUED INVESTING to evolve current portfolio
  - ▸ New releases of ClearCase and ClearQuest and 73 other C/ALM products in 2008

- EXTENDED REACH into systems engineering by integrating Telelogic
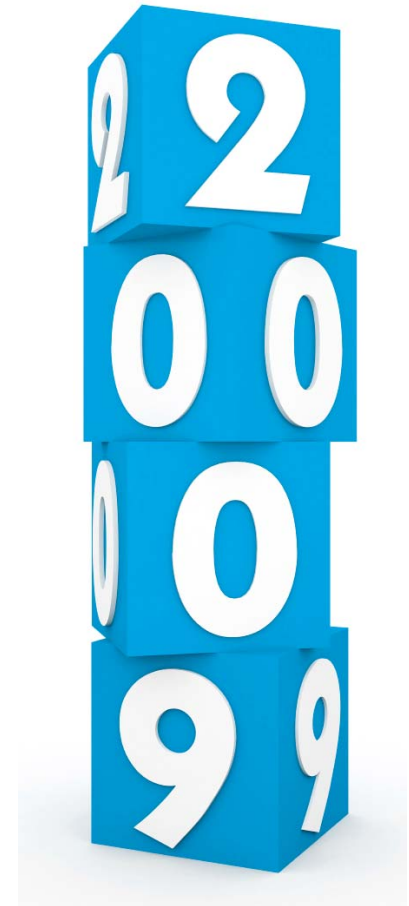
Rational strategy in a broader context:
The world needs to get a whole lot smarter

INSTRUMENTED

INTERCONNECTED

INTELLIGENT

We now have the ability to measure, sense & see the exact condition of everything.

People, systems & objects can communicate & interact with each other in entirely new ways.

We can respond to changes quickly & accurately, & get better results by predicting & optimizing for future events.

A smarter planet will require a significant investment in software and systems

- Imagine the amount of *software* necessary to:

  ▶ Leverage a wealth of information to make more intelligent choices

  ▶ Take action on energy, the environment and sustainability to deliver a greener world

  ▶ Manage an interconnected infrastructure with billions of devices

- Success in building a smarter planet is highly dependent on our ability to *manage effective software and systems delivery*

Let's build a smarter planet

Challenges to effective software delivery remain and expand

Individual Challenges	Team Challenges	Organizational Challenges	Business Challenges
- **Lack of standards** impacts ability to collaborate, automate and report - Frequent asset updates and **complex dependencies**	- **Geographically dispersed teams** - Effective **cross-organizational visibility** and synchronization	- Greater need for **market experimentation** - **Blind adherence** to process insensitive to potential business trade-offs - Need for **agility@scale**	- More granular service functionality and **composite applications** - **Growing number of assets** including custom, outsourced and packaged

Economic conditions add significant pressure to the reality of software and systems delivery

A new approach to IT delivery models and sourcing options is required that allows IT organizations to be more responsive to the needs of the business.

Barbara Gomolski, Gartner
October, 2008

Companies successfully addressing the challenges [of delivering product innovation from software] are driving higher profitability.

Michelle Boucher, Aberdeen Group
March, 2009

Transformation and innovation will lead recovery. When we come out the other side of this crisis, companies will look different – technology will have been a catalyst in those changes.
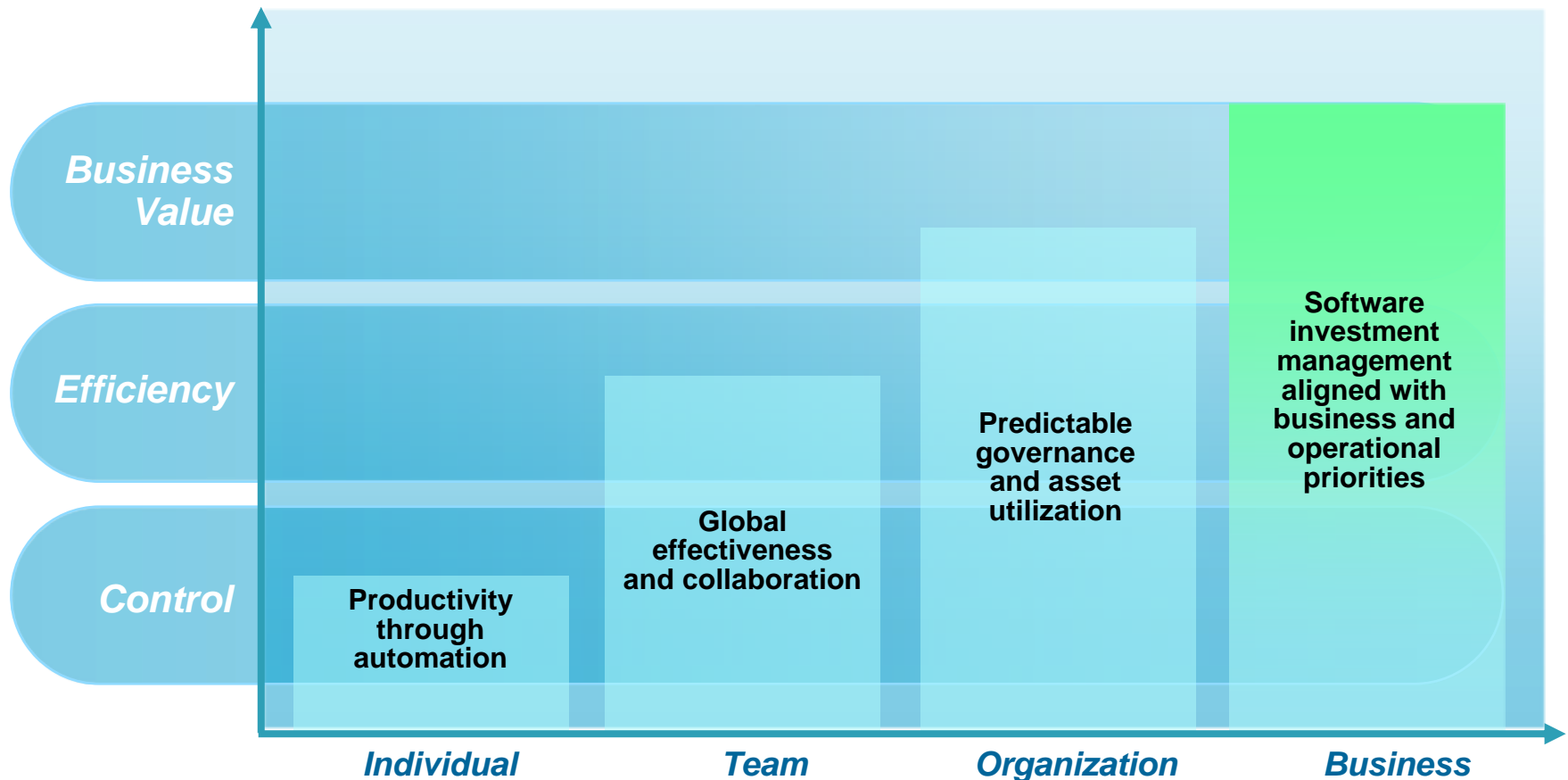
George Colony, Forrester Research,
October, 2008

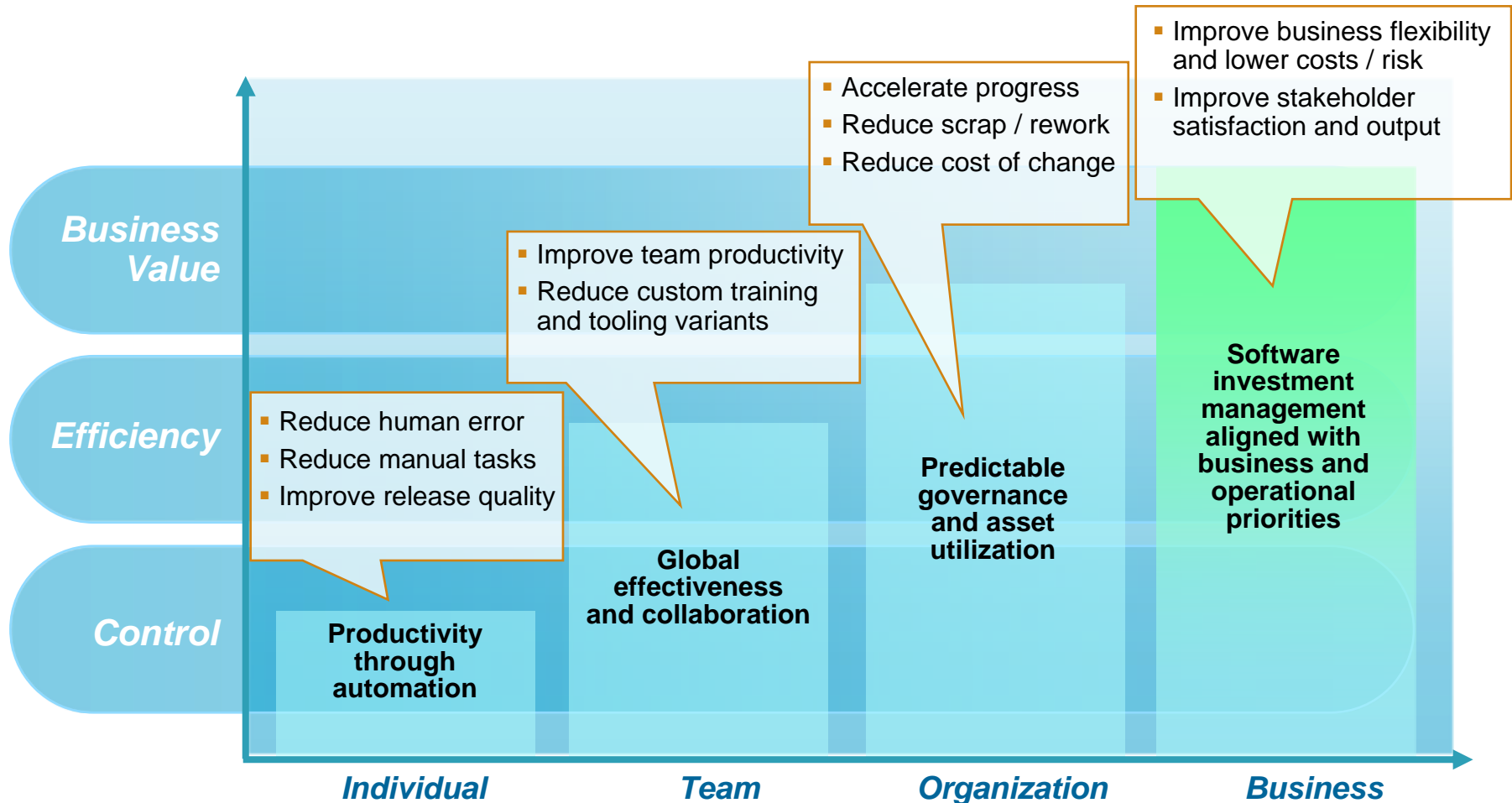# Rational strategy can bring focus in uncertain times

- Provides measured, short-term *Return on Investment*

- Enables longer-term management of *Return on Assets*

- Delivers a platform and processes to make those returns come to life

- Encourages and informs, rather than dictates

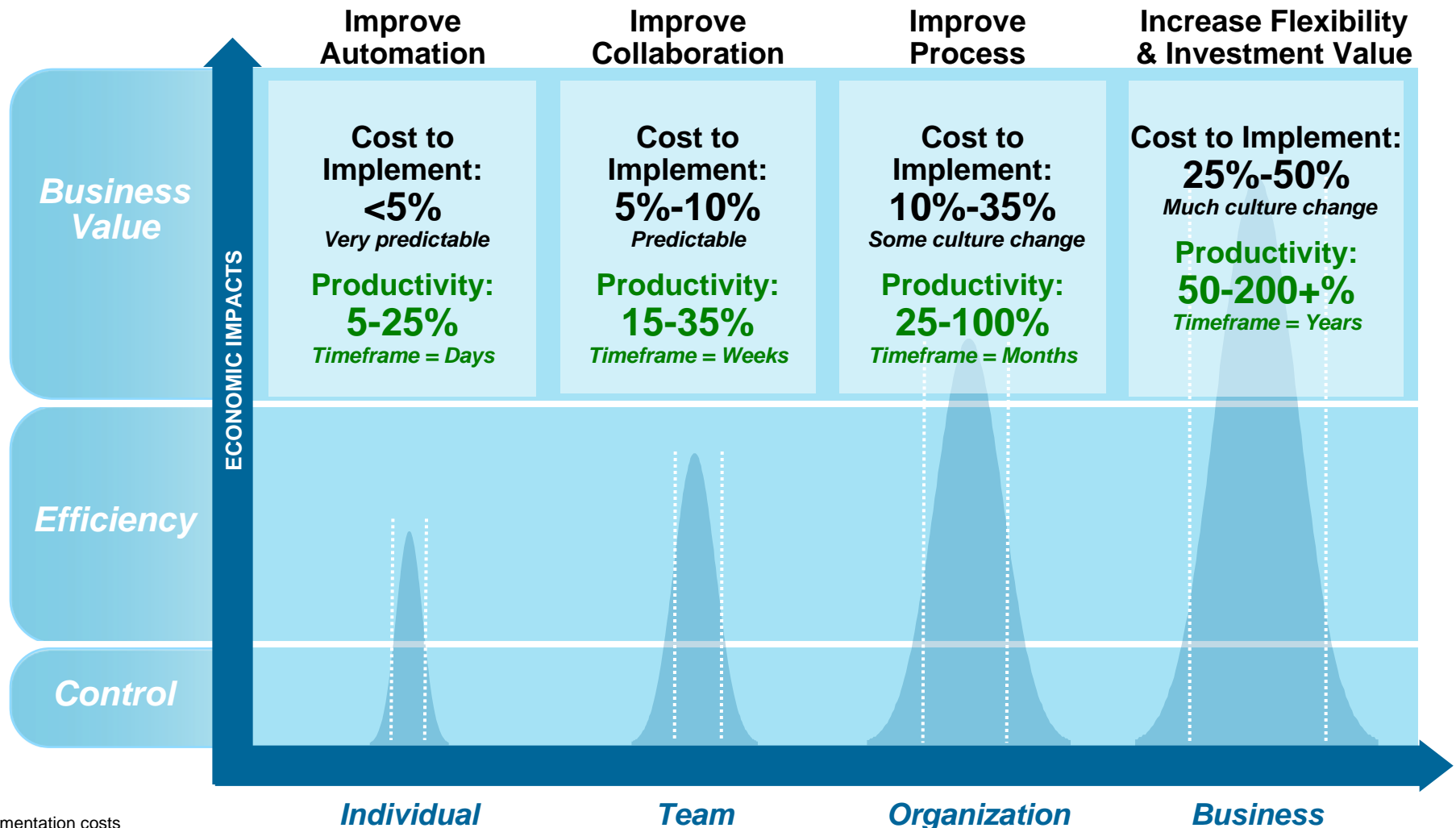- Supports incremental improvement, leading to faster decision making

A maturing approach to software and systems delivery based on *measurement*

	Individual	Team	Organization	Business
Business Value				
Efficiency				Software investment management aligned with business and operational priorities
			Predictable governance and asset utilization	
Control	Productivity through automation	Global effectiveness and collaboration		

Realized by continuous improvement on *business* objectives

Invest to manage risks and optimize measured *outcomes*

	Improve Automation	Improve Collaboration	Improve Process	Increase Flexibility & Investment Value
Business Value	**Cost to Implement:** **<5%** *Very predictable* **Productivity:** **5-25%** *Timeframe = Days*	**Cost to Implement:** **5%-10%** *Predictable* **Productivity:** **15-35%** *Timeframe = Weeks*	**Cost to Implement:** **10%-35%** *Some culture change* **Productivity:** **25-100%** *Timeframe = Months*	**Cost to Implement:** **25%-50%** *Much culture change* **Productivity:** **50-200+%** *Timeframe = Years*
Efficiency				
Control				
	Individual	*Team*	*Organization*	*Business*

ECONOMIC IMPACTS

Implementation costs are per person per year

13

Pragmatic steps we took to mature our own software delivery

1   Established business and operational objectives

2   Prioritized practices and defined implementation roadmap

3   Accelerated practice adoption with Rational products and programs – "Tools, Not Rules"

4   Reported, analyzed, and regularly acted on our results

Established business and operational objectives

Business Objectives

- Improve market share
- Achieve profit margin
- Reduce time-to-value

Operational Objectives

- Heighten responsiveness and increase linkage to customers
- Innovate to differentiate and capture new value
- Increase quality
- Shorten project development cycle times
- Improve schedule predictability

Prioritized practices and defined implementation roadmap

Change and Release Management
- **Team Change Management**
- Formal Change Management

Initial Rational Focus Area

Requirements Management
- **Shared Vision**
- **Use-Case-Driven Development**
- Requirements Management
- Business Process Sketching

Quality Management
- **Concurrent Testing**
- **Test Management**
- Independent Testing
- Performance Testing
- Application Vulnerability Assessment

Agile Core
- **Iterative Development**
- **Two-Level Project Planning**
- **Whole Team**
- **Continuous Integration**
- **Test-Driven Development**

Governance and Compliance
- Risk-Value Lifecycle
- Practice Authoring and Tailoring
- **Performance Measurement**

Architecture Management
- **Evolutionary Architecture**
- Evolutionary Design
- Component Based Software Architecture
- Design Driven Implementation

Accelerated practice adoption with Rational products
Leveraged Agile Core practices to improve cycle times and predictability

- *Required* adoption of agility@scale
  - ▸ 2,000+ developers, testers, managers
  - ▸ Varying team sizes
  - ▸ Geographically distributed locales
  - ▸ Diverse development contexts
    - ▪ from mature products to Web 2.0 apps

- *Embraced* Rational Team Concert
  - ▸ In past year, RTC:
    - ▪ Projects grew by 291%
    - ▪ Number of users grew by 321%

Rational Results

Release Cycle Times *(in months)*
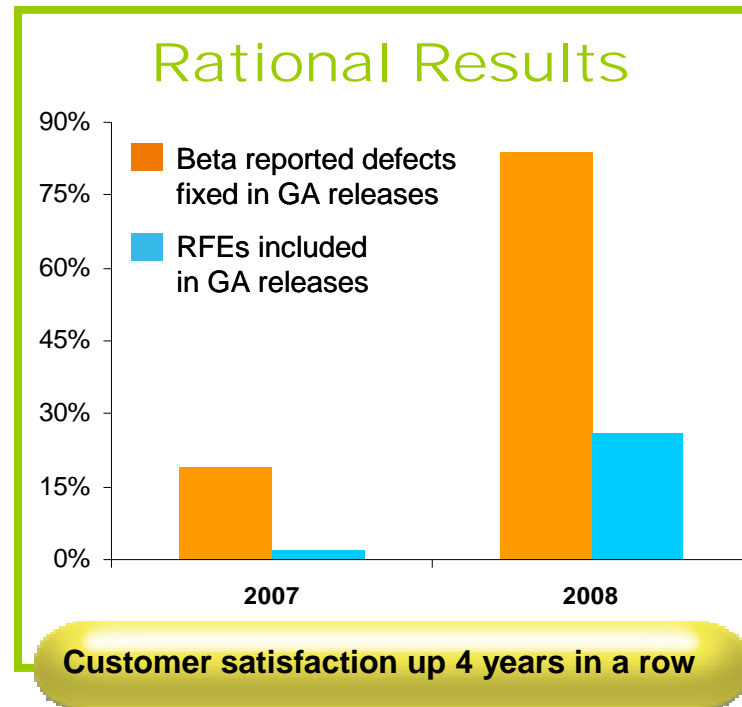
On-time Delivery

Projected
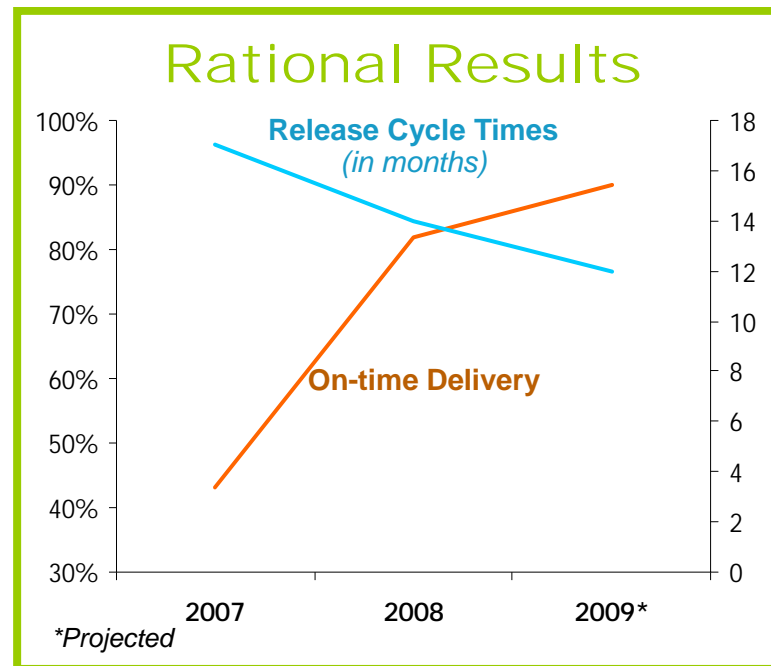
Accelerated practice adoption with Rational programs
Leveraged Requirements and Change & Release Management practices

Increased customer involvement, building on "Whole Team" agile practice

- Design Partner Program growth of 352% since 2006
- Transparent, iterative development on Jazz.net
  - 5 products available today
  - Over 17,000 participants in Jazz forums
- VoiCE sessions expanded to India and China
- Lab Advocacy program has grown 567% since 2005
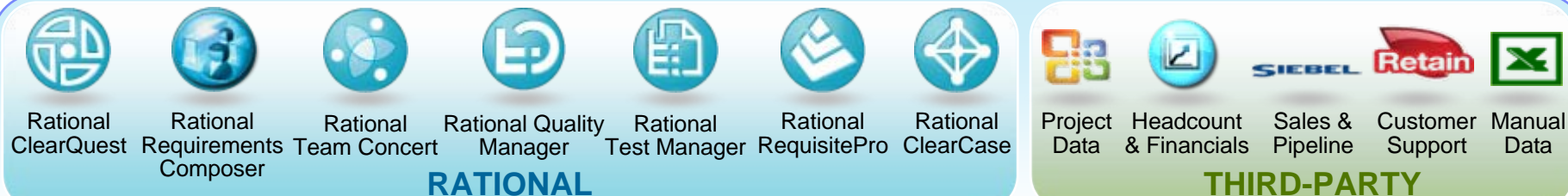- Beta programs doubled in 2008 to 35
  - 12x growth in open beta downloads

Rational Results

Legend:
- Beta reported defects fixed in GA releases
- RFEs included in GA releases

Chart axis: 0%, 15%, 30%, 45%, 60%, 75%, 90%

Categories: 2007, 2008

Customer satisfaction up 4 years in a row

Reported, analyzed, and regularly acted on our results

Aggregated data from multiple sources to provide new insight

Executive and Operational Dashboards

Jazz Integration Architecture: *Using REST Open Services / ODBC / XML*

Rational ClearQuest

Rational Requirements Composer

Rational Team Concert

Rational Quality Manager

Rational Test Manager

Rational RequisitePro

Rational ClearCase

RATIONAL

Project Data

Headcount & Financials

Sales & Pipeline

Customer Support

Manual Data

THIRD-PARTY

Data Sources: *Quantitative and Qualitative*

Obtain a single view of project health across Rational
Quickly identify delivery issues that need immediate attention
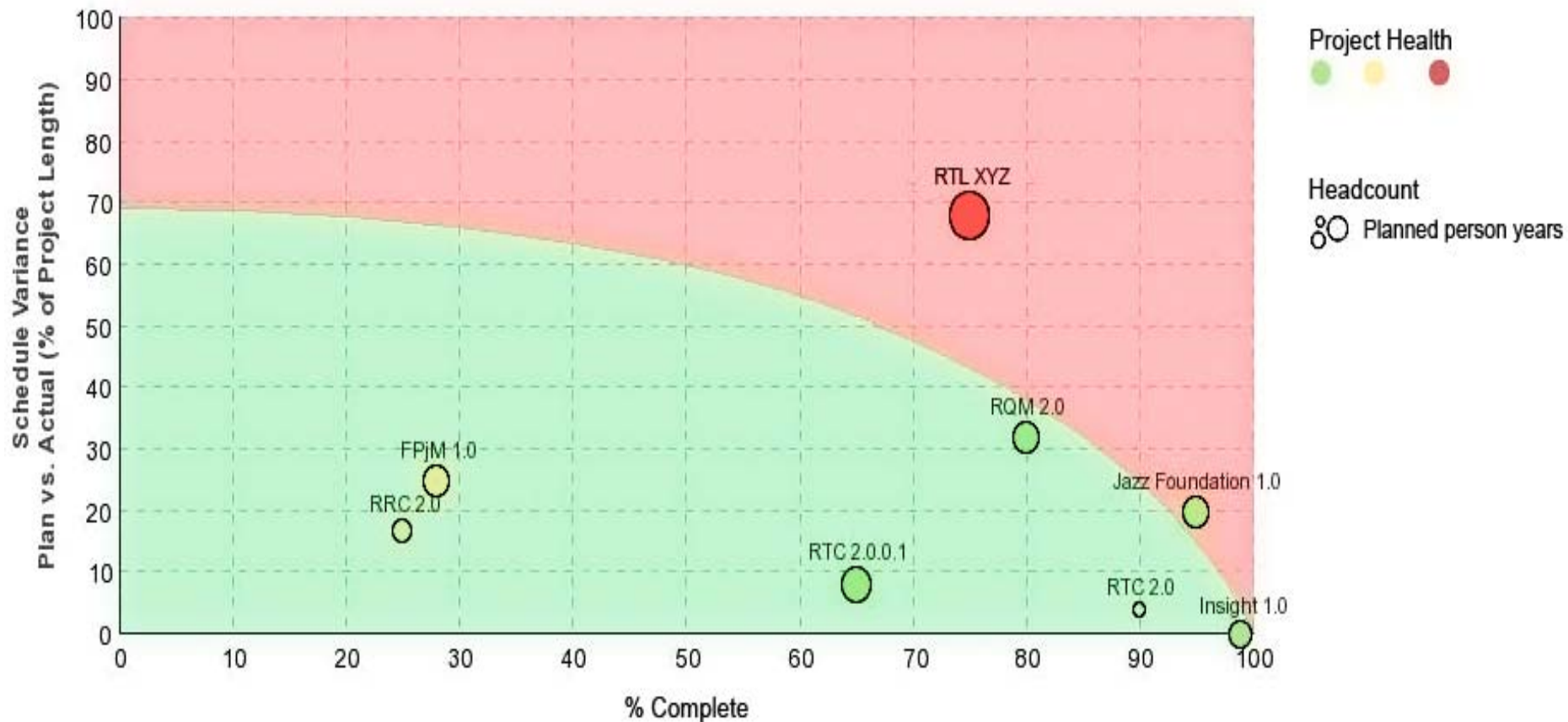
Align business and operational measures
Drill down into real-time data from disparate source repositories

Segment	Product	Revenue Year-To-Date (M)	Revenue % of Plan	Pipeline (M)	Release	eGA Plan	eGA Outlook	eGA Plan-Outlook	Headcount (PY)	Project Health	Overall Profit Margin	Overall Market Share
Application Lifecycle Management (ALM)	Jazz Foundation	75.7 ▼	96% ▼	87.9 ▼	Jazz Foundation 1.0	May 28, 2009	Jun 12, 2009	15 days	52 ◇	71% ◇	◇	▲
					RTL XYZ	Mar 31, 2009	Jul 7, 2009	98 days	118 ▼	50% ▼	▼	▼
	RTC	115.2 ▲	99% ◇	109.6 ◇	RTC 2.0	Jun 15, 2009	Jun 19, 2009	4 days	12 ◇	90% ◇	◇	▲
					RTC 2.0.0.1	Sep 22, 2009	Sep 30, 2009	8 days	72 ▼	86% ◇	◇	◇
Governance Solution	Focal Point for Project Management	29.1 ◇	93% ◇	84.2 ▲	FPjM 1.0	Oct 15, 2009	Nov 17, 2009	33 days	60 ◇	74% ▲	◇	◇
	Rational Insight	108.7 ▼	98% ▼	162.7 ▼	Insight 1.0	May 26, 2009	May 26, 2009	0 days	40 ◇	83% ▼	▼	◇
Quality Management (QM) Solution	RQM	35.2 ▲	112% ▲	79.6 ▲	RQM 2.0	Jun 15, 2009	Jul 31, 2009	46 days	56 ◇	89% ▲	◇	▲
	RRC	28.1 ◇	83% ▲	45.1 ▼	RRC 2.0	Nov 4, 2009	Nov 24, 2009	20 days	32 ▲	85% ◇	◇	▼

Pragmatic steps we took to mature our own software delivery

1 Established business and operational objectives

2 Prioritized practices and defined implementation roadmap

3 Accelerated practice adoption with Rational products and programs – "Tools, Not Rules"

4 Reported, analyzed, and regularly acted on our results

Started next incremental improvement

Rational's next incremental improvement
Focus on Quality and Requirements Management practices

- Extend transparent development on Jazz.net
  - ▶ Further improve products and enhance the way we engage with you
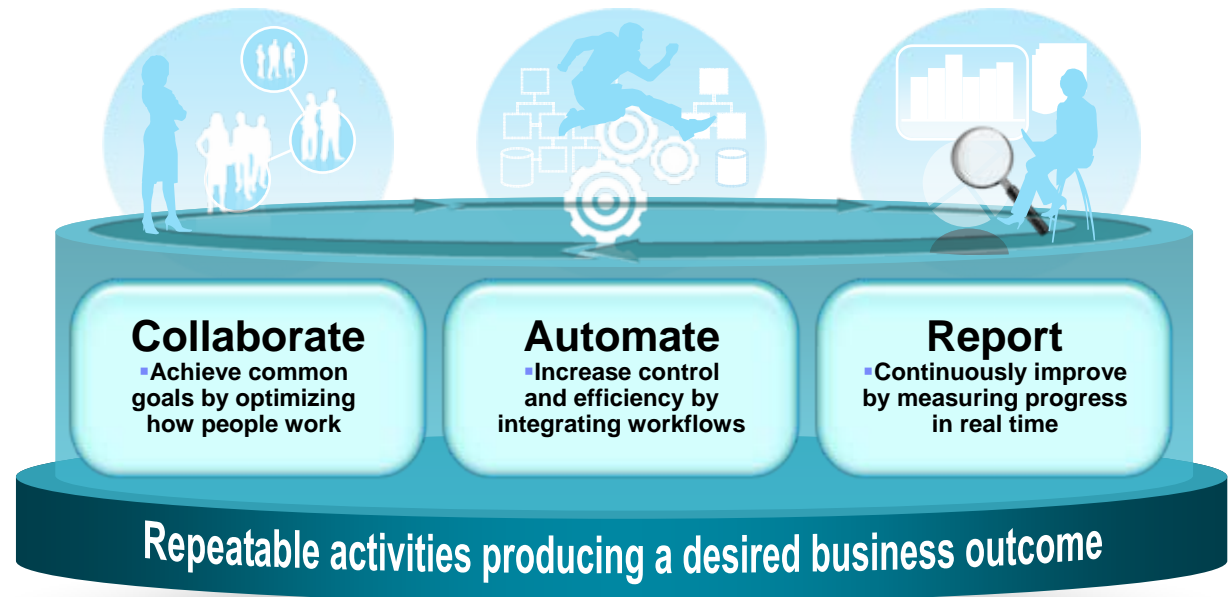
- Further engage community in the design of products
  - ▶ Leverage Rational Requirements Composer capabilities such as storyboards and domains of expertise

- Build on bootstrapping of Rational Quality Manager
  - ▶ Incorporated key feedback from SVT organization to drive version 1.0.1 and 2.0 capabilities
  - ▶ Expand use of RQM 2.0 to all Rational test teams
  - ▶ Publish and share RQM tests

Rational experience demonstrates incremental improvement in software delivery

- **Experience the same results**

- **We can help**
  - ▸ We offer an incremental improvement framework (MCIF)
  - ▸ We deliver a real-time collaborative platform (Jazz)

Collaborate
▪Achieve common goals by optimizing how people work

Automate
▪Increase control and efficiency by integrating workflows

Report
▪Continuously improve by measuring progress in real time

Repeatable activities producing a desired business outcome

Time to Get Real – Starting Today

GET REAL TEAMS

Align teams to business and operational objectives

GET REAL INSIGHTS

Gain insights to incrementally improve software and systems delivery

GET REAL RESULTS

Measure, monitor and steer to desired results
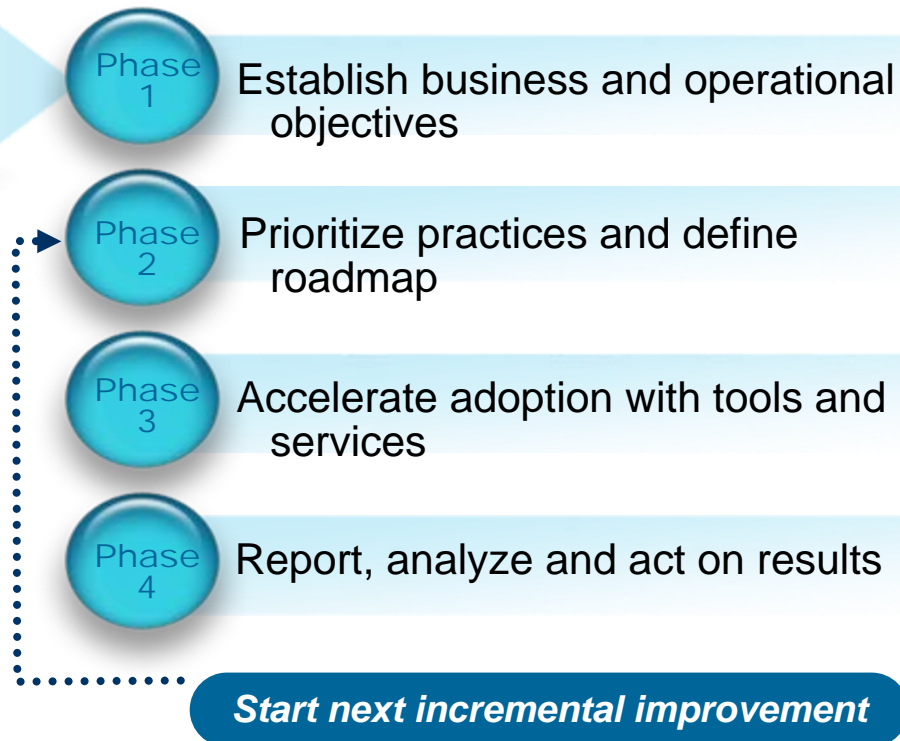
How does one change and improve?

Where do we start?

Drive business innovation and reduce costs through measured and continuous process improvement

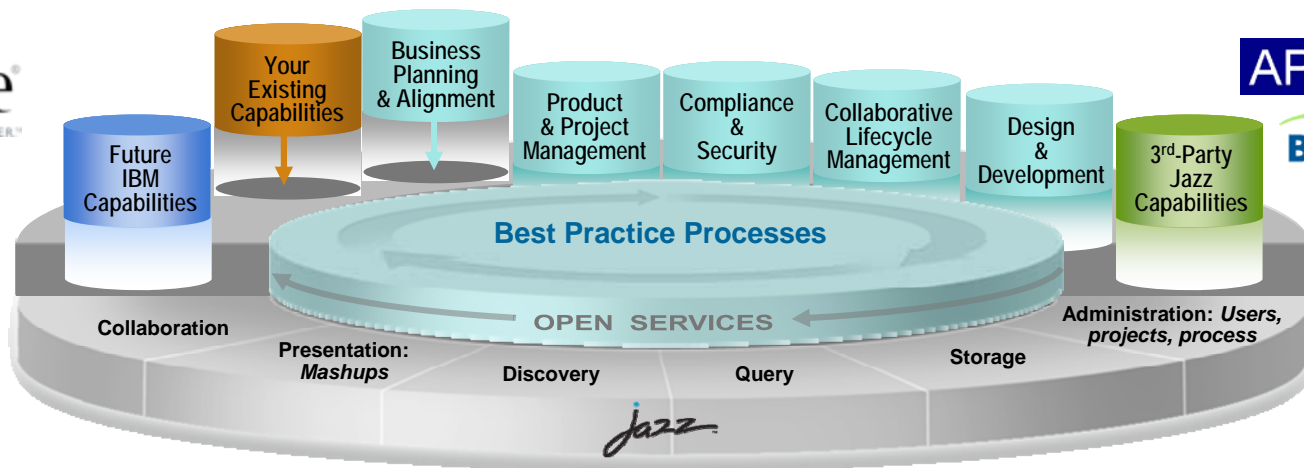**Measured Capability Improvement Framework**

Captures over 10 years of Rational experiences in incremental adoption

- Used in over 80 IBM agile projects

- Used in conjunction with RUP, XP, Scrum and other processes

- Demonstrated in the Rational Executive Dashboard

Phase 1 Establish business and operational objectives

Phase 2 Prioritize practices and define roadmap

Phase 3 Accelerate adoption with tools and services

Phase 4 Report, analyze and act on results

Start next incremental improvement

Unifying platform: Jazz
Operationalize capability improvement

Phases 1 & 2

Phase 3

Phase 4

Define objectives and prioritize practices

Accelerate adoption

Report, analyze and act

iRise
VISUALIZE. INNOVATE. DELIVER.™

blackduck™

Your Existing Capabilities

Business Planning & Alignment

Future IBM Capabilities

Product & Project Management

Compliance & Security

Collaborative Lifecycle Management

Design & Development

3rd-Party Jazz Capabilities

Best Practice Processes

OPEN SERVICES

Collaboration

Presentation: *Mashups*

Discovery

Query

Storage

Administration: *Users, projects, process*

jazz™

APG

CAST
ACHIEVE INSIGHT. DELIVER EXCELLENCE.

BSD GROUP

cm-logic
empowering change

Mainsoft

RAVENFLOW

SEER
by GALORATH

QSM

WebLayers

Phases 1 & 2: From business value to practices
Establishing an improvement roadmap

- **Executive Business Value Workshop**
  - ▸ Service offering to explore business and operational objectives and delivery strategies

- **Health Assessment**
  - ▸ Service offering that assesses current health of target projects and organizations
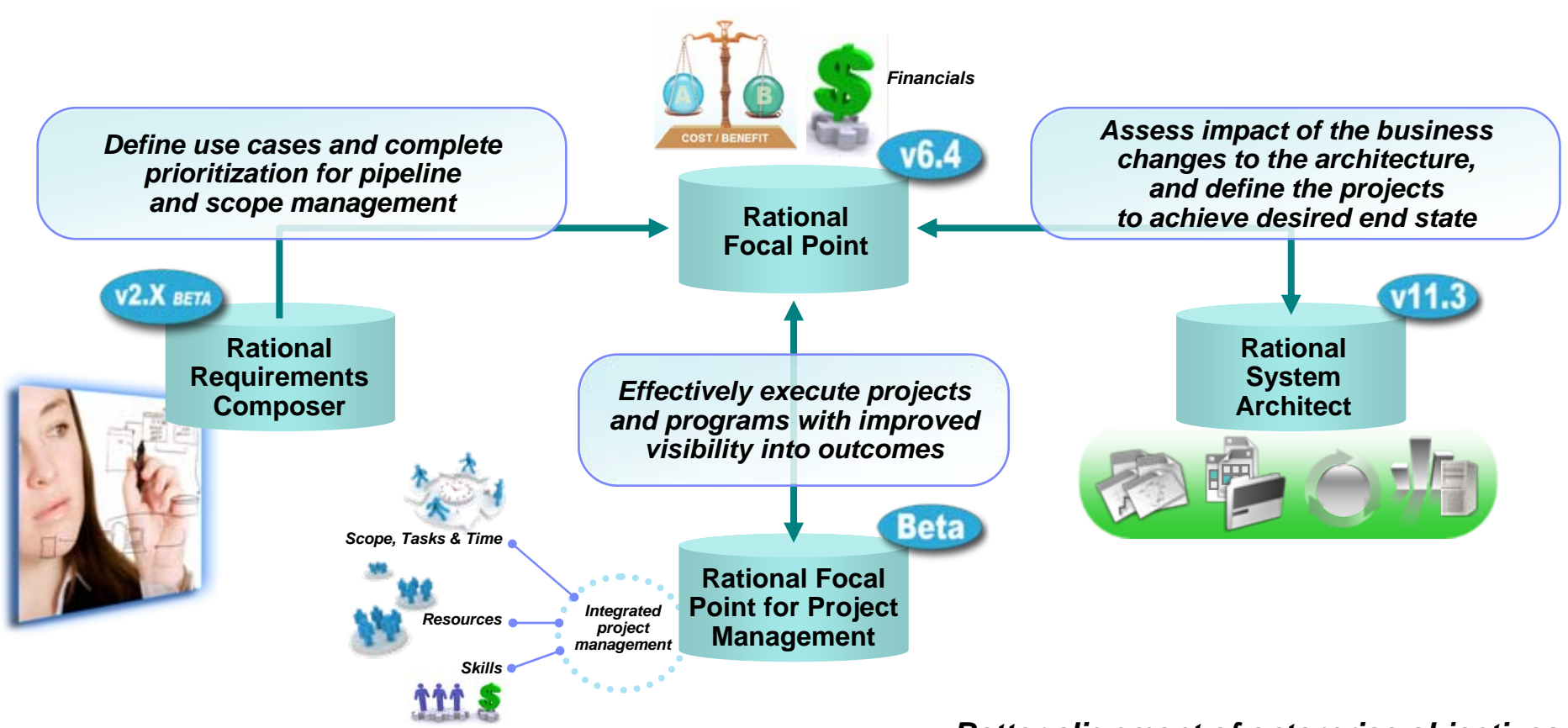 - ▸ Provides a measurable and incremental improvement roadmap

**Customer
Business
Challenges**

**Operational
Objectives**

**Best Practices
for Identified Strategy**

| Stay ahead of the competition | Improve business alignment Reduce time-to-market Improve quality | Use-case driven development Continuous integration Enterprise architecture Test management |

Start small, add as needed

Phase 3: Deploying best practices and tools
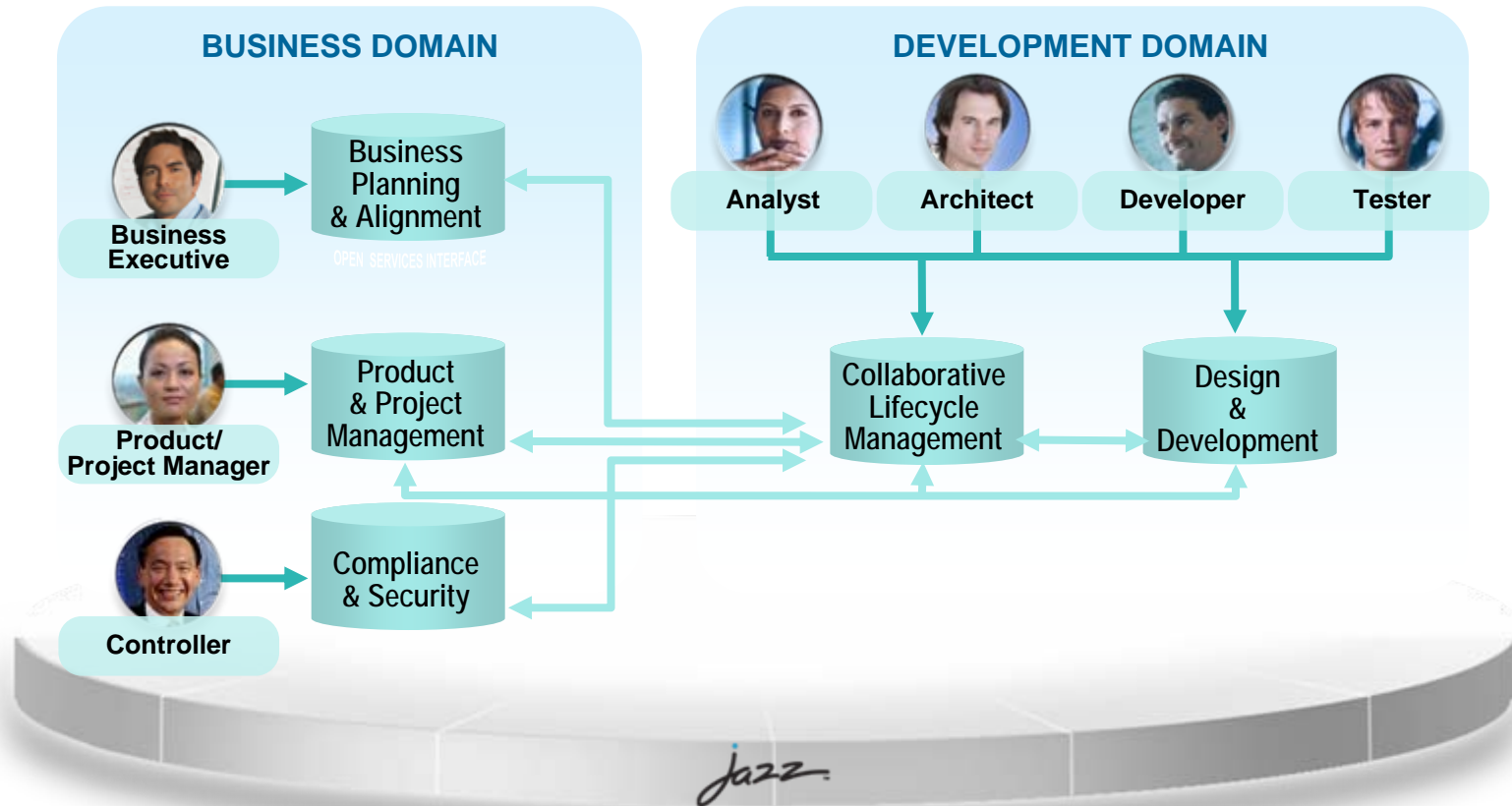
Connecting business value to delivery outcomes
Achieving business alignment

Financials

v6.4

Rational Focus Point

Define use cases and complete prioritization for pipeline and scope management

Assess impact of the business changes to the architecture, and define the projects to achieve desired end state

v2.X *BETA*

Rational Requirements Composer

v11.3

Rational System Architect

Effectively execute projects and programs with improved visibility into outcomes

Scope, Tasks & Time

Resources

Integrated project management

Skills

Beta

Rational Focus Point for Project Management

Better alignment of enterprise objectives and solution efforts can result in a
17% productivity improvement

Making delivery outcomes real
Improving time-to-market and quality

Elicit and drive evolving requirements into development and test plans

Synchronize and manage test plans with evolving requirements and development activities

v2.X BETA

Rational Requirements Composer

Continuously integrate code linked to changing requirements and defects

v2.0

Rational Quality Manager

v2.0

Rational Team Concert

Lotus. software

jazz.
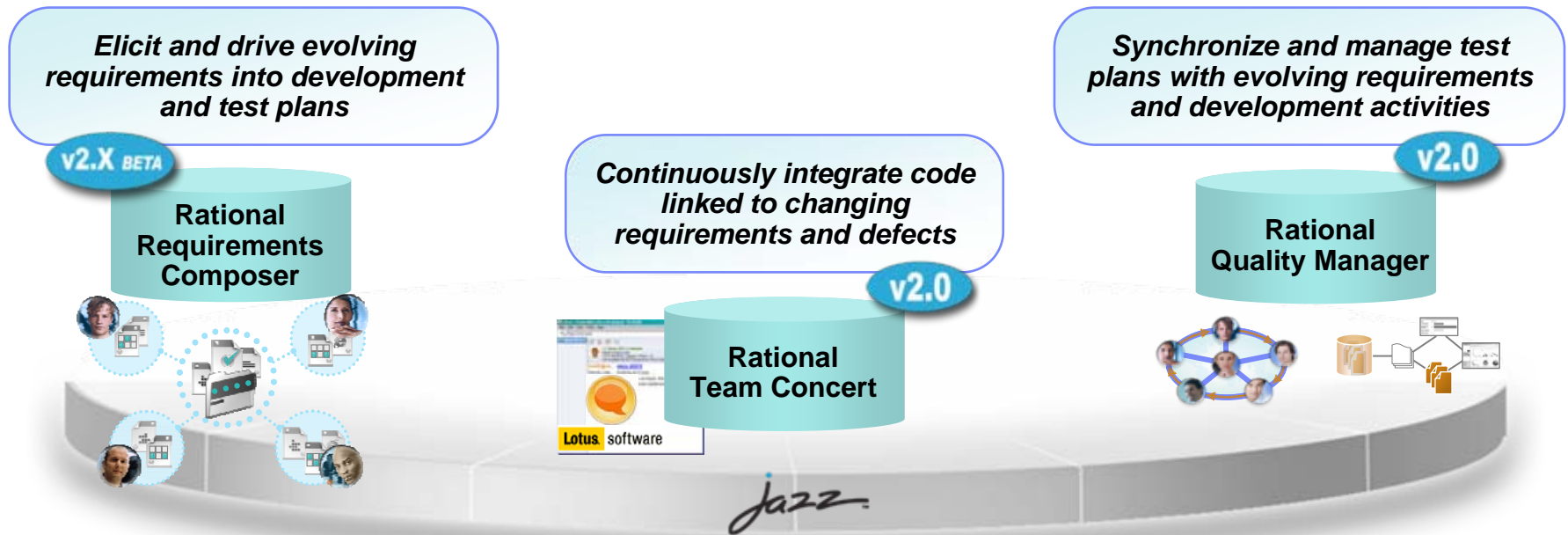
By reducing requirements rework, *we cut costs up to 30%*

Phase 4: Report and analyze business results

New!

Rational Insight
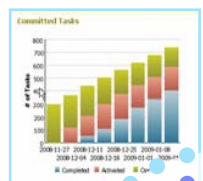
Integrated lifecycle intelligence

Control Settings

Better

Results

Get started today with your transformation

Learn how to make your business more agile & improve flexibility

Learn more about how our new Jazz offerings will help you:
Collaborate, Automate and Report!
Visit the Solutions Center, Rational Labs, the Jazz Corner and our Partner booths to share in the Jazz excitement!

How does one change and improve?

How do we innovate?

Innovation is about taking deep insight to create new value – for business and society.

Innovation resides at the intersection of invention and insight, leading to the creation of social and economic value.

National Innovation Initiative

We are on the verge of a new wave of innovation...

Innovation

					Smarter Products
				IT and Telecom	• Instrumented, interconnected, and intelligent
			Oil, Cars and Mass Production		• Building blocks for a smarter planet
		Steel, Electricity and Heavy Engineering			
	Steam And Railways				
The Industrial Revolution					
1770	1830	1875	1920	1970	2010
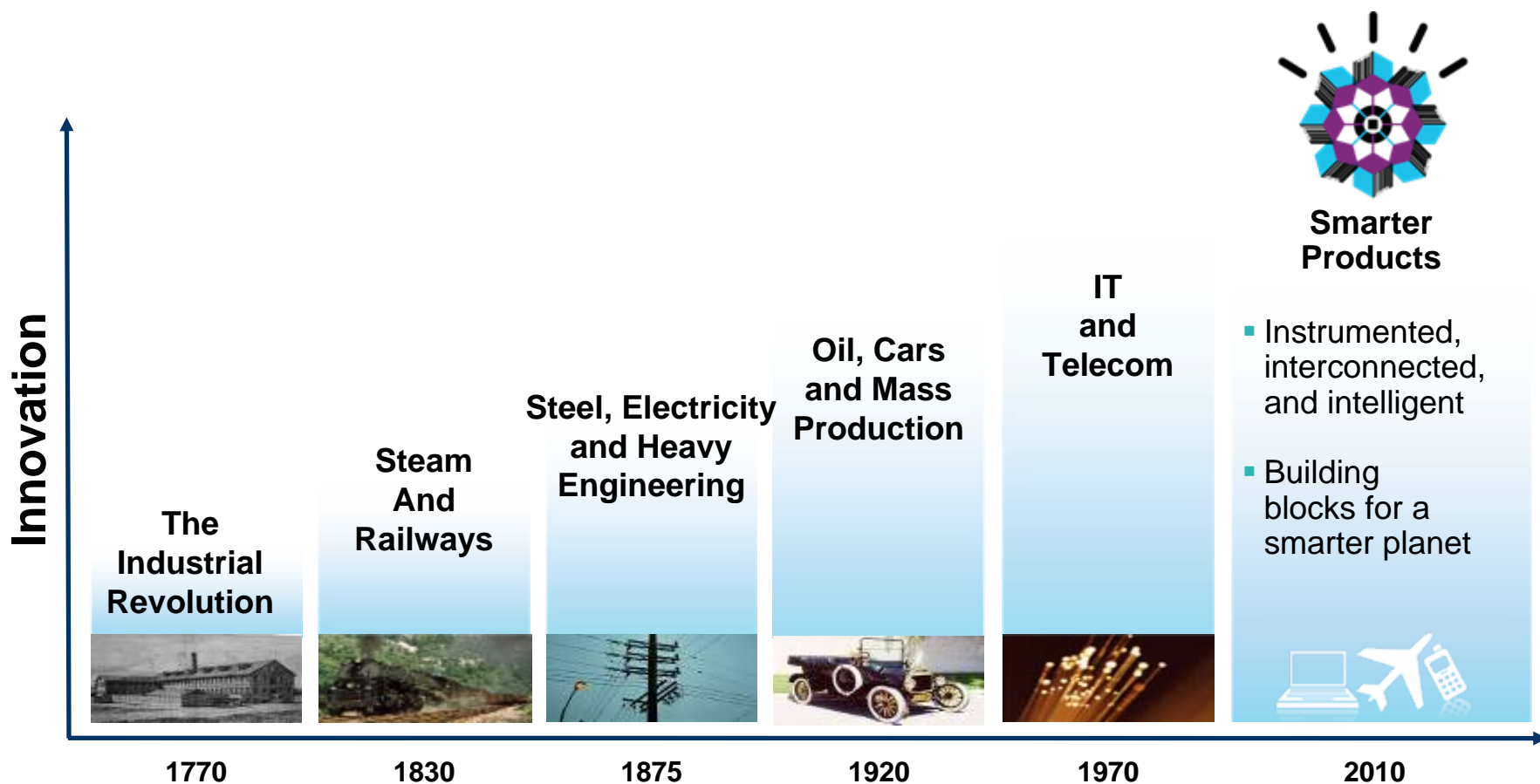
…where embedded software becomes even more crucial for product innovation and differentiation.

Electronics

- Apple's iPhone is **completely instrumented,** with GPS positioning software that helps the device know where you are

Automotive

- **90% of innovation** is based on electric and electronic systems

- **80% of this innovation** is based on embedded software

Aerospace and Defense

- F-22 Raptor (2003) contains **1.7 million lines of code**

- F-35 Lightning II will have **5.7 million lines of code**

Key benefits
- ✓ Create new opportunities
- ✓ Increase revenue / profit
- ✓ Enhance customer loyalty
- ✓ Faster time-to-market

These smarter products will play a major role for enabling tomorrow's ecosystems, such as for smarter transportation.

Government Authorities

Enterprises

Consumers

Transportation System

Geographies

Smarter Products

Energy & Utilities

Communities
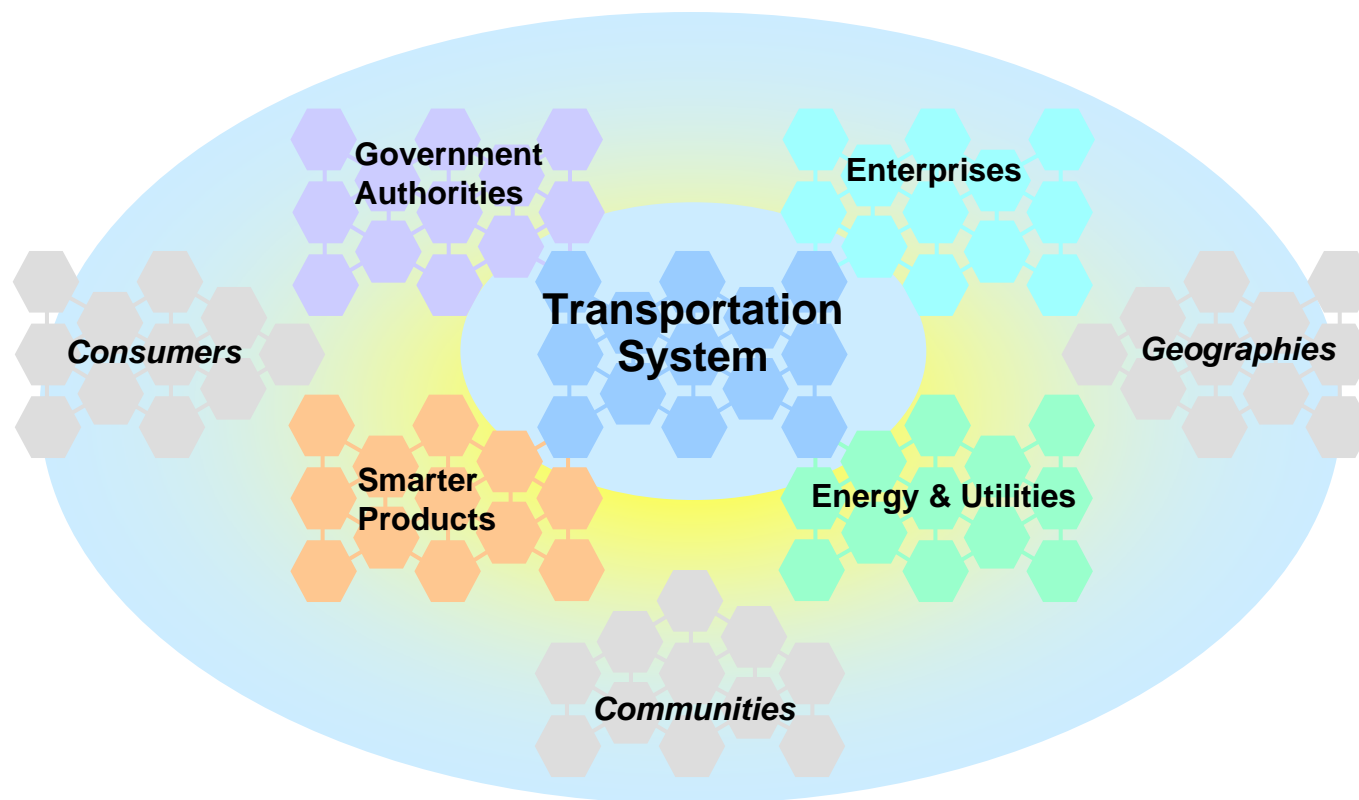
INSTRUMENTED

INTERCONNECTED

INTELLIGENT

IBM continues to invest in industry assets and frameworks to help develop and deploy smarter products.

Industry Solutions

Composite Business Services

ISV Services

Process Models
Data Models

Industry Frameworks

Open, Industry Standards

Business Integration

IT Operations

Business Optimization
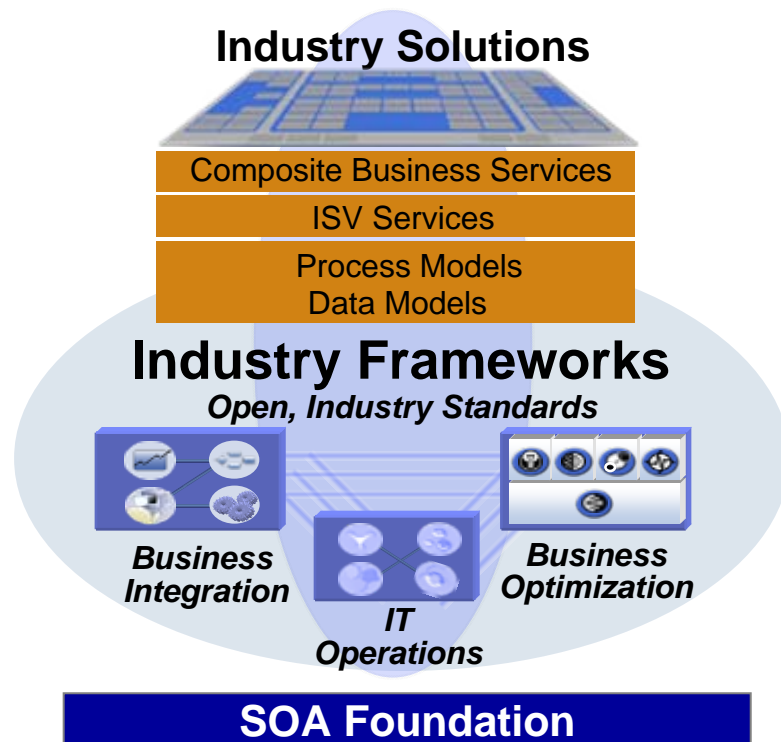
SOA Foundation

IBM Industrial Sector Industry Frameworks

- PDIF Product Development Integration Framework

- MIF Manufacturing Integration Framework

- IIF Integrated Information Framework

...with a core foundation of software delivery offerings that enable smarter products.

- **Rational DOORS Web Access** New!
- **Rational Rhapsody** New!
- **Rational Team Webtop** New!
- **Rational MCIF for Systems** New!
- **Rational Focal Point**
- **Rational System Architect**
- **Rational Team Concert**
- **Rational Synergy / Change**
- **Rational ClearCase / ClearQuest**
- **Rational Quality Manager**
- **Rational Build Forge**
- **Rational Harmony**

  Plus… New Integrations

Smarter Products

The Rational Software Platform for Systems
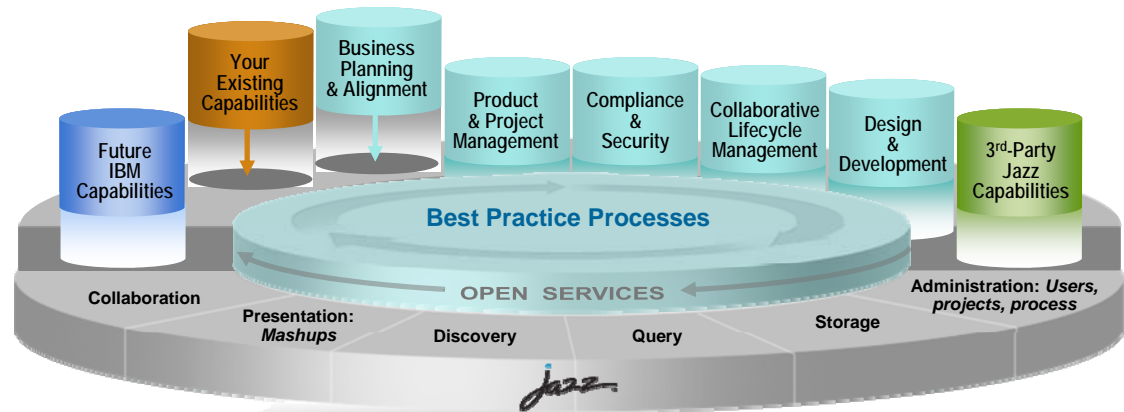
Innovation journey continues
IBM Software Delivery Services for Cloud

Rational Software Delivery Services ON the cloud

- **Turnkey Collaborative Application Lifecycle Management solution for software and systems delivery**

- **Rational Team Concert, Quality Manager, Requirements Composer, Insight, and Build Forge hosted in the Cloud**
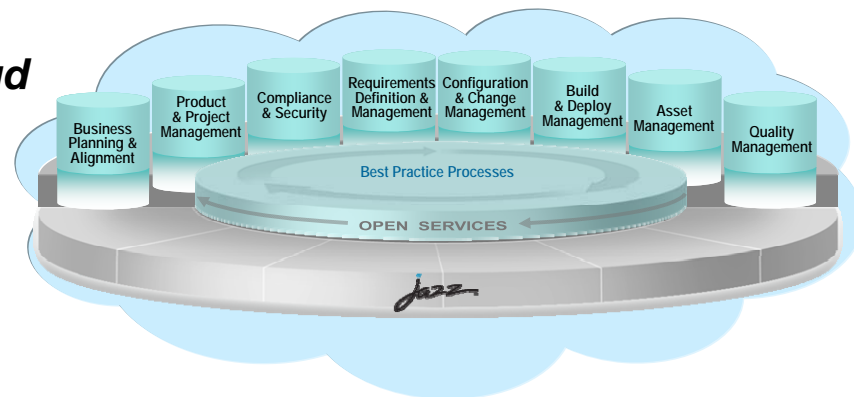
Rational Software Delivery Services FOR the cloud

- Support IBM CloudBurst and IBM Smart Business Test Cloud

- Leverage Cloud resources with Rational Software Architect and Rational Build Forge

- Manage Cloud assets with Rational Asset Management, Quality Management and Tivoli Solutions
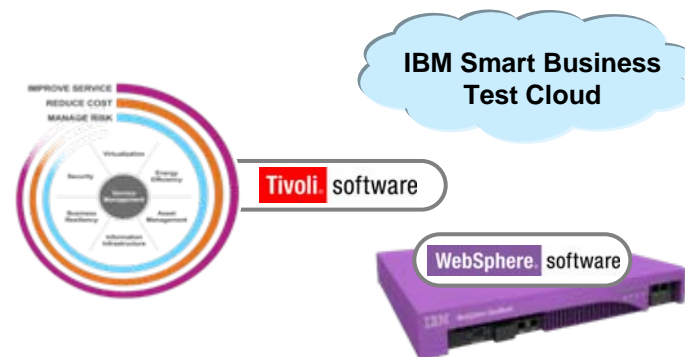
Learn more at:

- **IBM Rational software**
- **Rational launch announcements**
- **Rational Software Delivery Platform**
- **Accelerate change & delivery**
- **Deliver enduring quality**
- **Enable enterprise modernization**

- **Ensure Web security & compliance**
- **Improve project success**
- **Manage architecture**
- **Manage evolving requirements**
- **Small & midsized business**
- **Targeted solutions**

- **Rational trial downloads**
- **developerWorks Rational**
- **Leading Innovation**
- **IBM Rational TV**
- **IBM Business Partners**
- **IBM Rational Case Studies**