

IBM Software Group

# Business Needs Agility IT Needs Agile

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A photograph of a person in a black suit performing a handstand on a large sand dune under a clear blue sky. The person is positioned on the right side of the slide, with their hands on the sand and legs in the air.

**Rational** software

# Our organisations have no choice but change at speed

## FTSE performance in the last 2 years

Latest: **4189**    Daily change: **▲ 93.2**    Daily change: **▲ 2.27%**





# We have to reduce cost and risk - and increase speed



*“The message for IT is clear; business needs and expects greater agility from IT. The current approaches to project prioritization, resourcing, agility and governance are clearly not satisfying customer needs. 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.”*

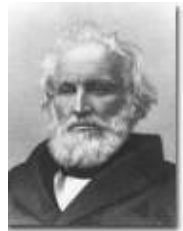
*– Gartner, October 14, 2008, “Changing the Cost Structure of IT Will Become a Business Imperative for Most CIOs”*



# Other industries have used innovation or perished



1805



*Frederick Tudor  
Tudor Ice Company  
Ice Cutting*

1868



*The Louisiana Ice  
Manufacturing Company  
Automated Manufacture*

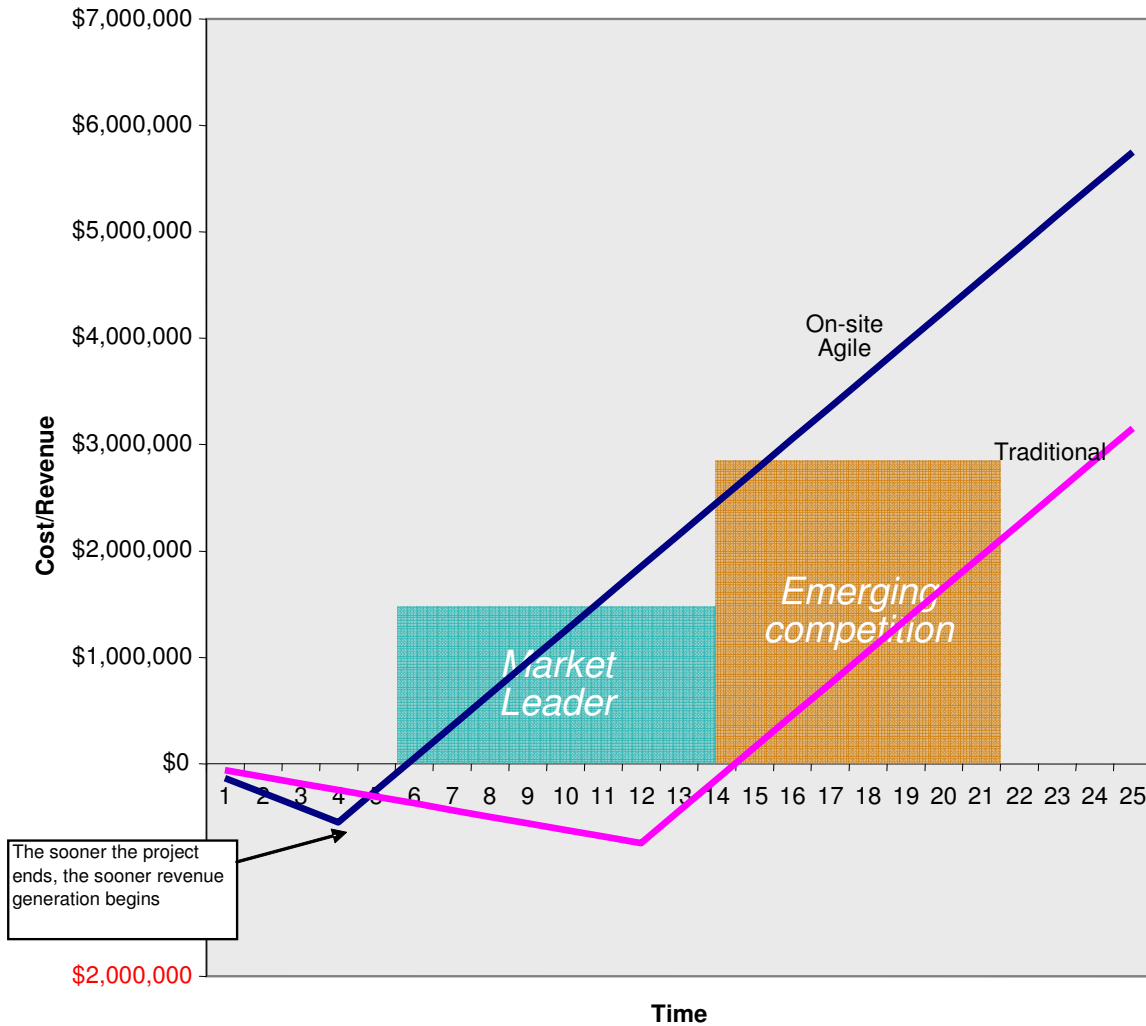
1911



*General Electric  
Home Refrigeration*



# Innovative agile practices allow faster business change



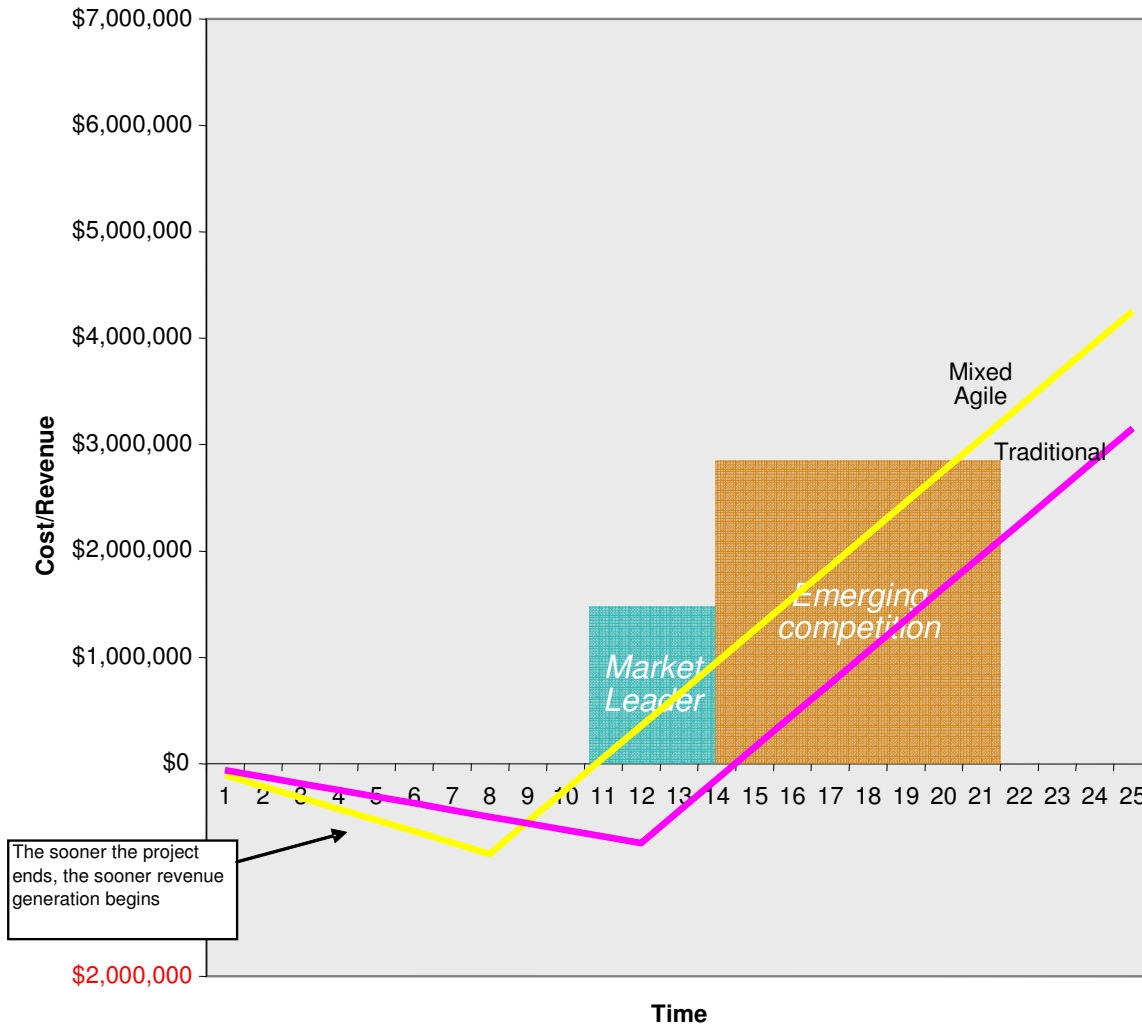
## Enormous value:

- This scenario shows a project that generated 10K of revenue / cost savings per day
- Improved project ROI +
- Increased time and resulting profits as market leader +
- Increased value of technology spend

\* Elaboration of chart from the article "Making RAD Work for Your Project", Extended version of March 1999 IEEE Computer column -- B. Boehm



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# How does agile deliver that improvement?



## Top Ten Reasons for Success

- ✓ 1. User Involvement
- ✓ 2. Executive Management Support
- ✓ 3. Clear Business Objectives
- ✓ 4. Optimizing Scope
- ✓ 5. Agile Process
- ✓ 6. Project Manager Expertise
- ✓ 7. Financial Management
- ✓ 8. Skilled Resources
- ✓ 9. Formal Methodology
- ✓ 10. Standard Tools and Infrastructure

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# How does agile deliver that improvement?

**THE STANDISH GROUP**

**Top Ten Reasons for Success**

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	Success % <sup>1</sup>
Agile	70
Traditional	66
Adhoc	62

<sup>1</sup>Source: Dr Dobb's 2008 Project Success Survey



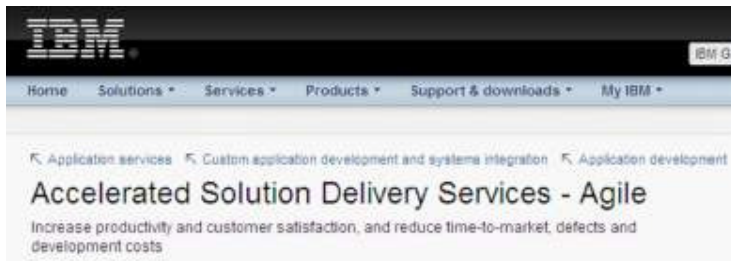
## What does disciplined agile look like?

Disciplined agile teams:

1. Produce working software on a regular basis.
2. Do continuous regression testing, and better yet take a Test-Driven Development (TDD) approach.
3. Work closely with their stakeholders, ideally on a daily basis.
4. Are self-organizing, and disciplined teams work within an appropriate governance framework.
5. Regularly reflect, and measure, on how they work together and then act to improve on their findings in a timely manner.



# Outsourced development can still use agile practices



## Agile practices can reduce the risk of outsourcing

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Improved Visibility and Collaboration	You and your stakeholders have access to the teams dashboards and can collaborate with the teams using technologies like Rational Team Concert and Requirements Composer
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Reward Software Delivery	You can align the contract deliverable schedule with more emphasis on delivering acceptable software than on delivering signed off documentation
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Improved Regression Testing	Disciplined agile teams have to produce automated tests which continue to remain valuable during on-going maintenance
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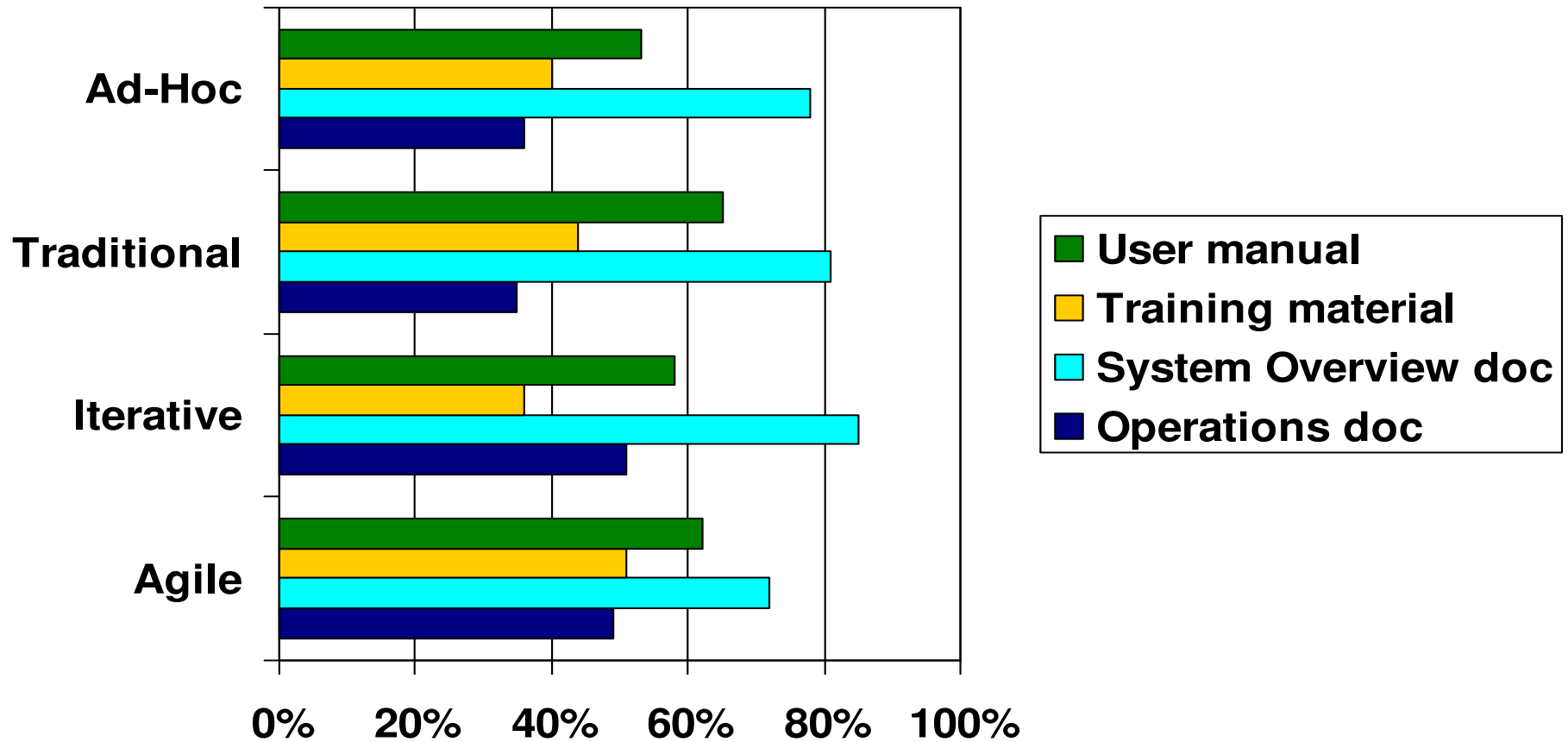
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Faster Delivery	The surveys show that disciplined agile is faster and delivers more successful projects
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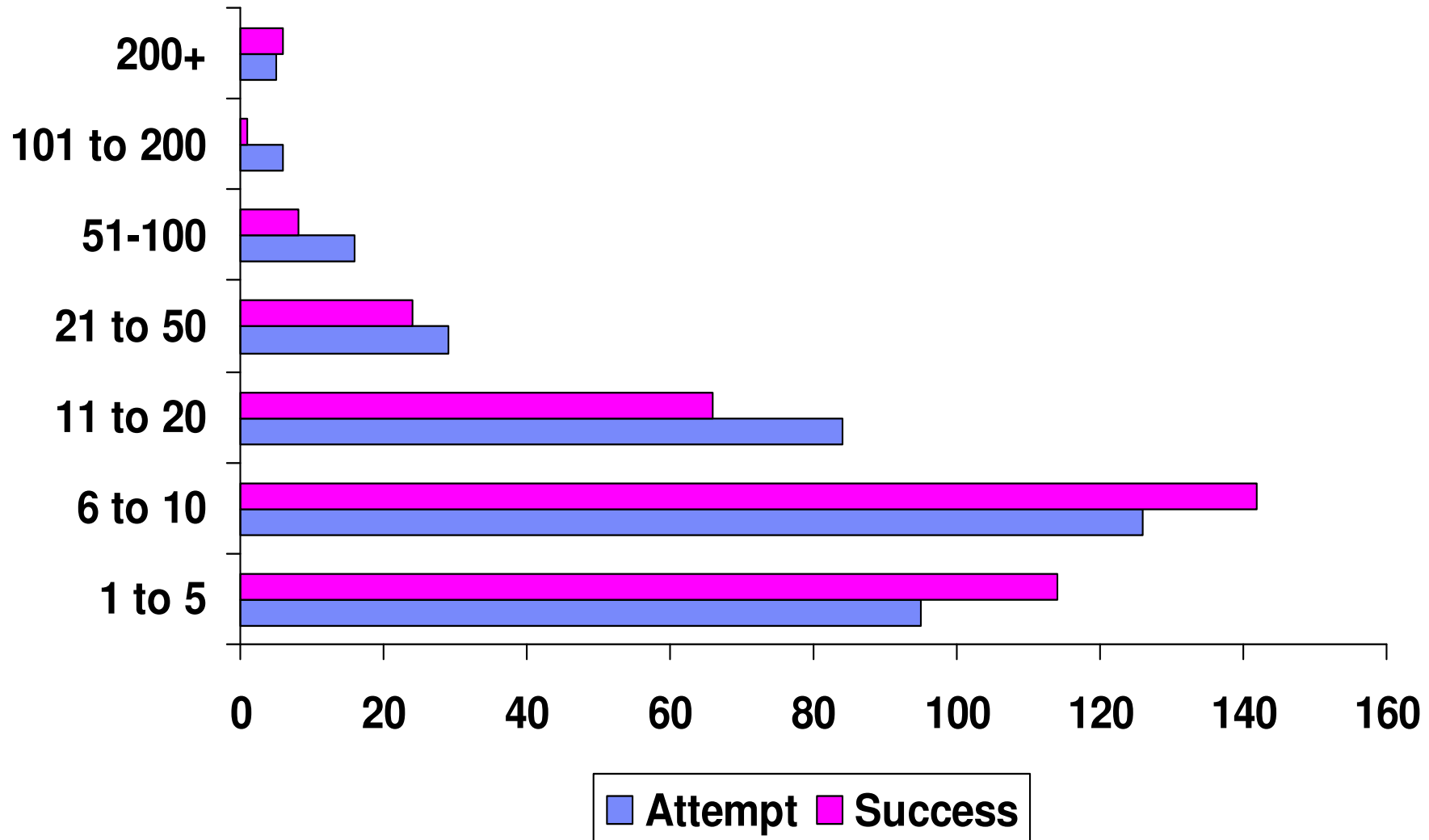
## Percentage of teams creating deliverable documentation



Source: Dr Dobb's 2008 Modeling and Documentation Survey



# Is agile only for small teams?



Source: Dr Dobb's 2008 Agile Adoption Survey





# Ford Motor Company – Accelerated Solution Center (ASC)

## The first IBM ASD partnership implementation in 1998

### The Challenge

- Reduce development time by half
- Reduce costs by 30%
- Do not transfer Ford staff
- IBM to provide 50% of resources
- Develop e-Business solutions

### Results/Accomplishments

- Time to market reduced by 67% improving Ford's ability to generate new products and increase revenue
- Cost reduced by 30% improving Ford's profit margins
- Defects reduced to an average of 6 defects per 1000 function points
- Centralized development
- Institutionalized project management
- Implemented CMM Level 2 compliant processes
- Hundreds of projects delivered
- Large enterprise initiatives were decomposed and delivered for incremental value to the business

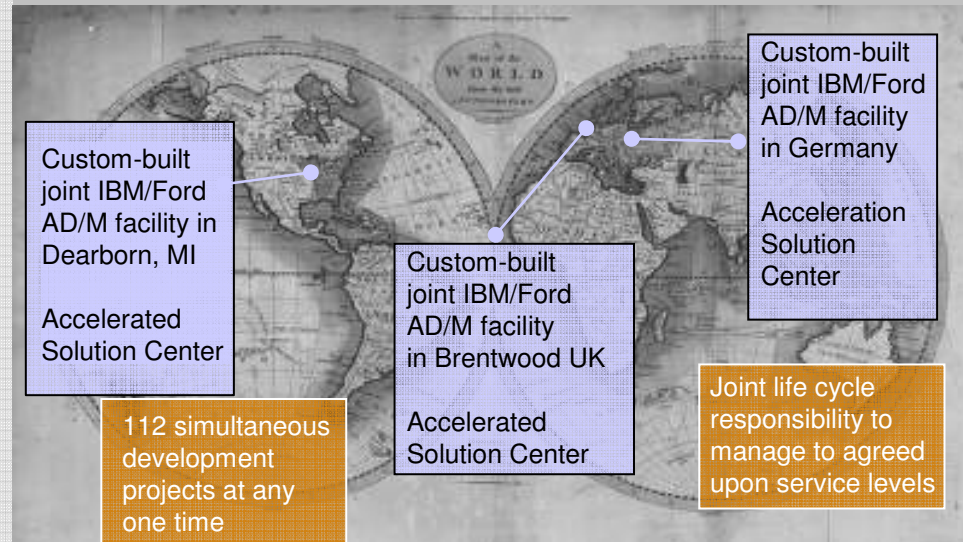
### The Solution

Develop 112 team room Accelerated Solution Center  
5 year Co-source Partnership

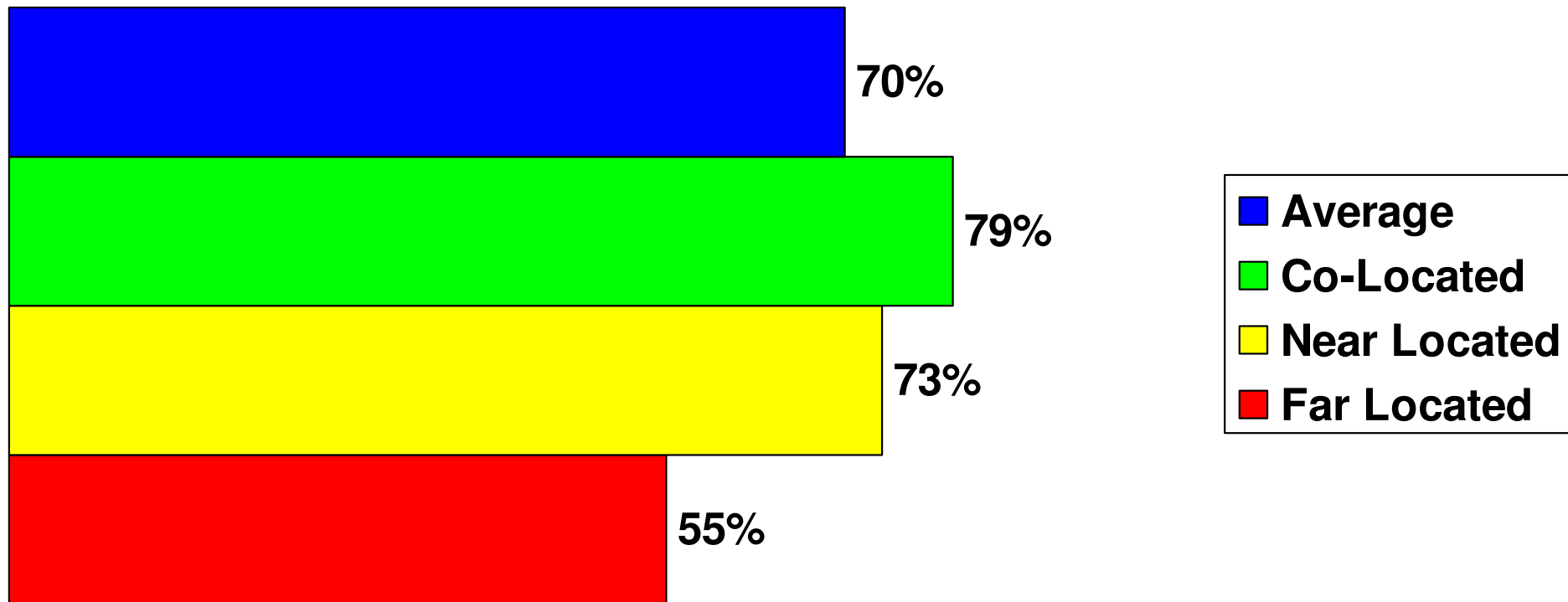


- |                                                                                                                          |                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▪ Automotive expertise</li> <li>▪ Application &amp; business knowledge</li> </ul> | <ul style="list-style-type: none"> <li>▪ Development methodologies and processes</li> <li>▪ Development management</li> <li>▪ Technologies</li> <li>▪ e-Business expertise</li> </ul> |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Custom-built Accelerated Solution Centers



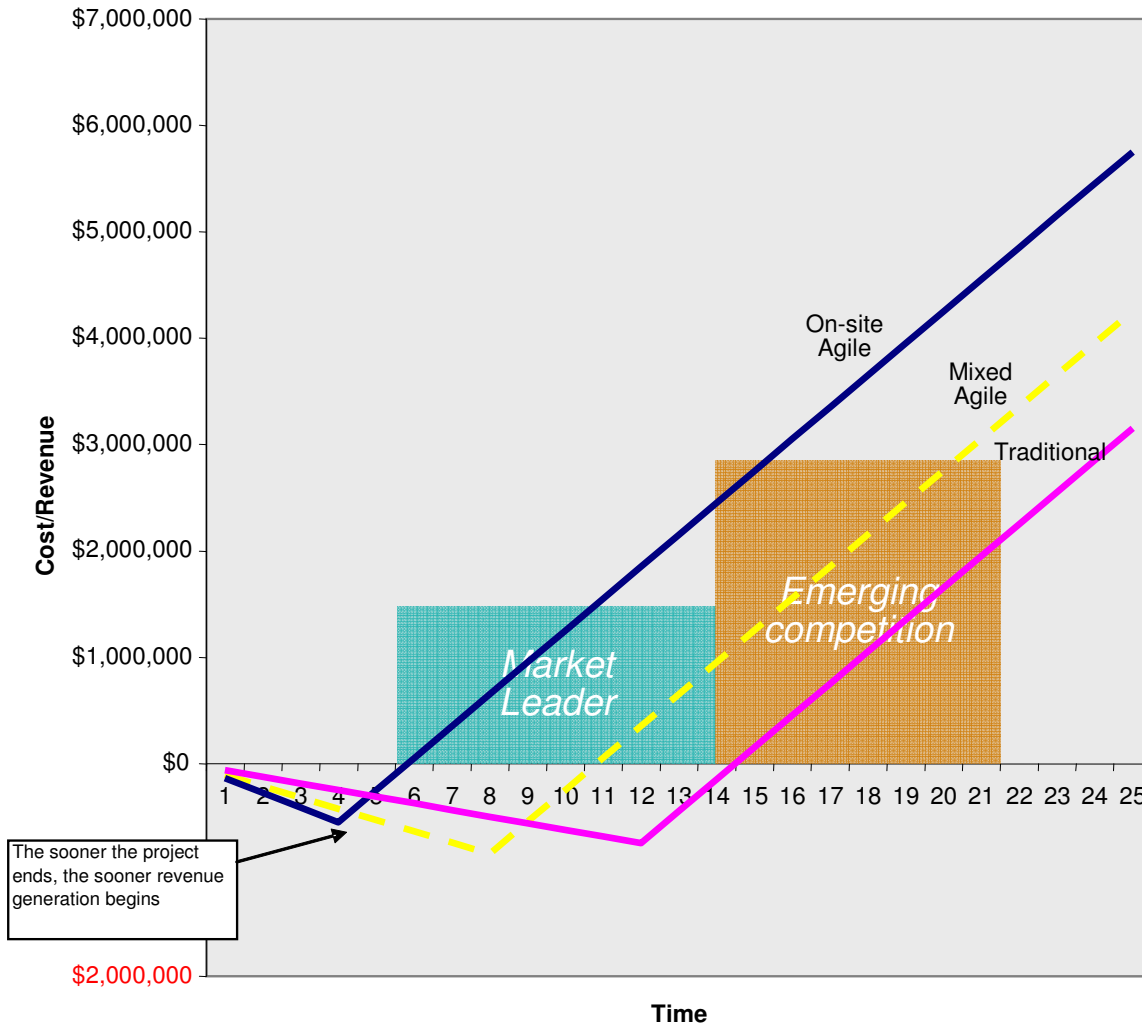
## Agile project success rates: the effect of distribution



Source: Dr Dobb's 2008 Project Success Survey



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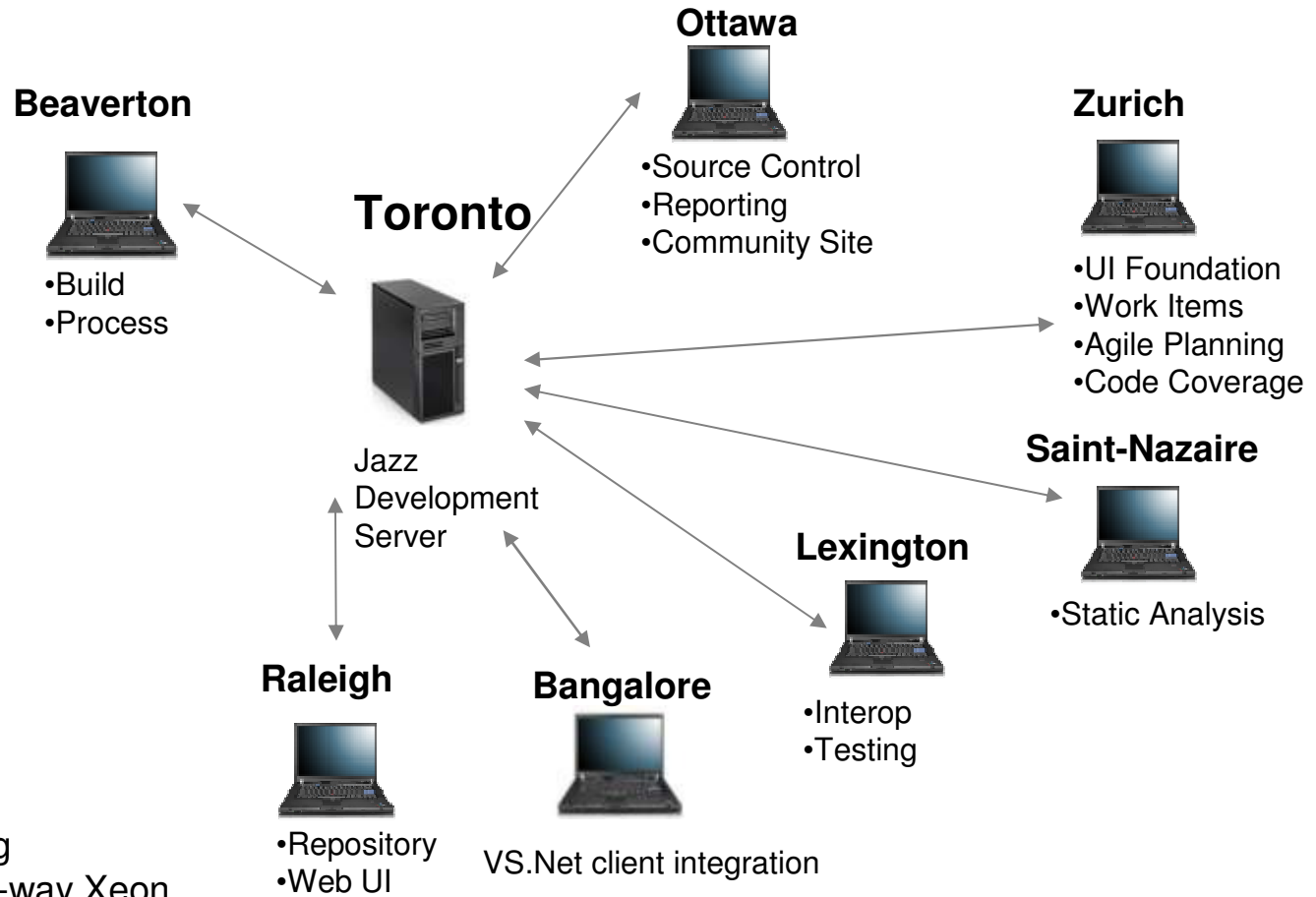
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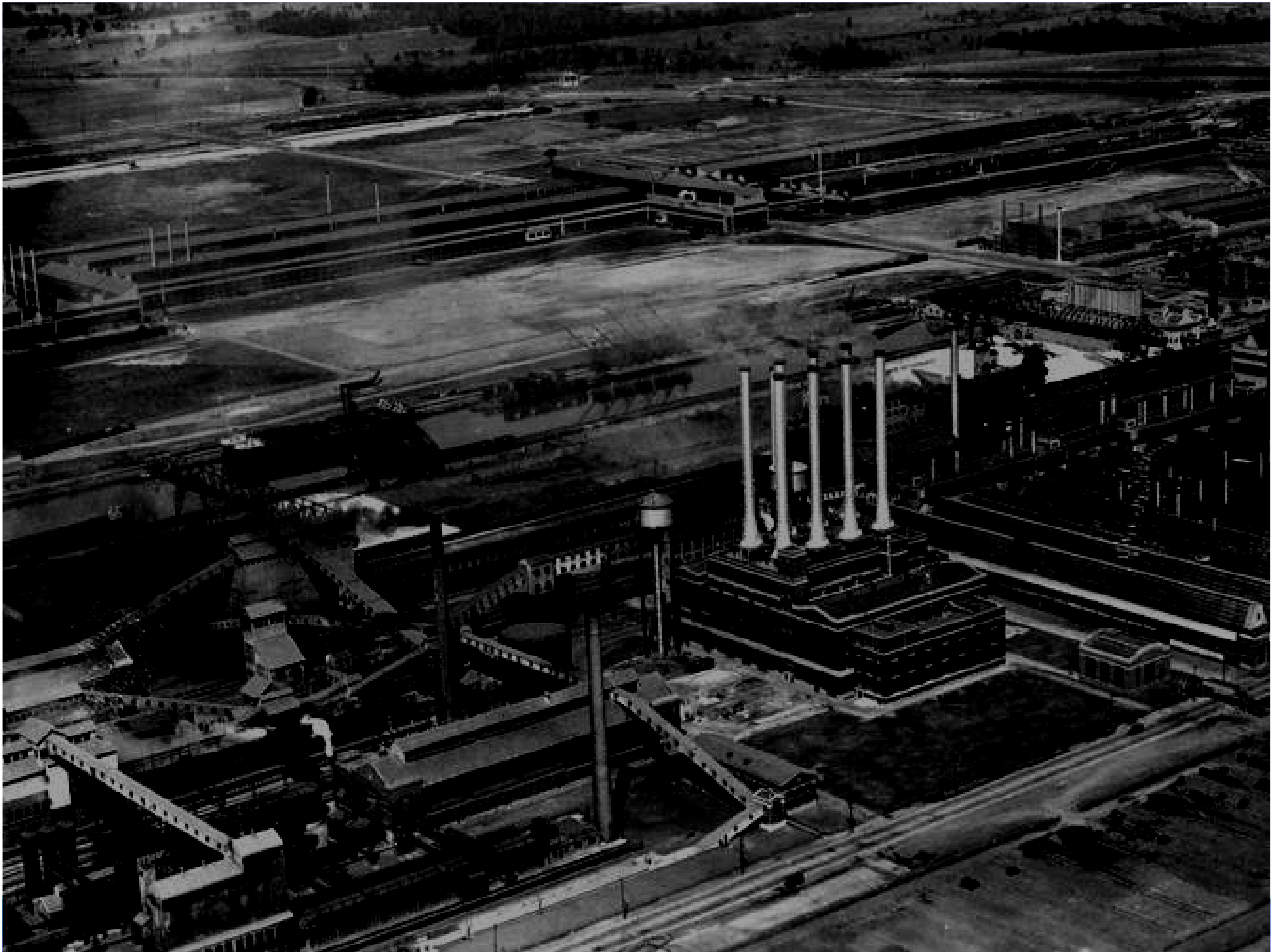


# IBM Jazz/RTC Development team



- As of July 2008
- Users: 12922
- 188 contributors
- 48,000+ change-sets
- 47,000+ work items
- 67 teams
- 25+ GB content
- 2-way Xeon server running application server (WAS), 2-way Xeon server running DB2



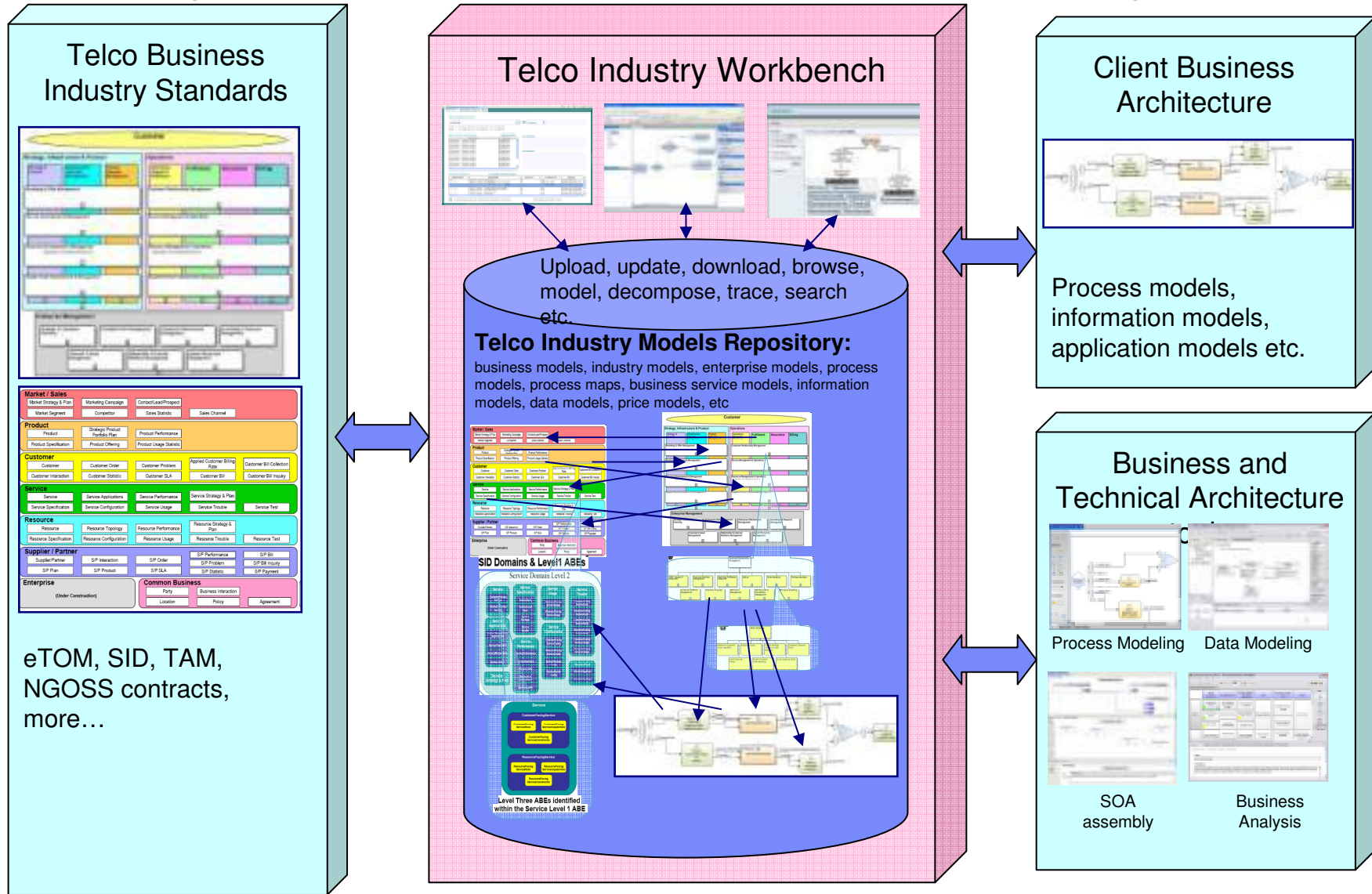




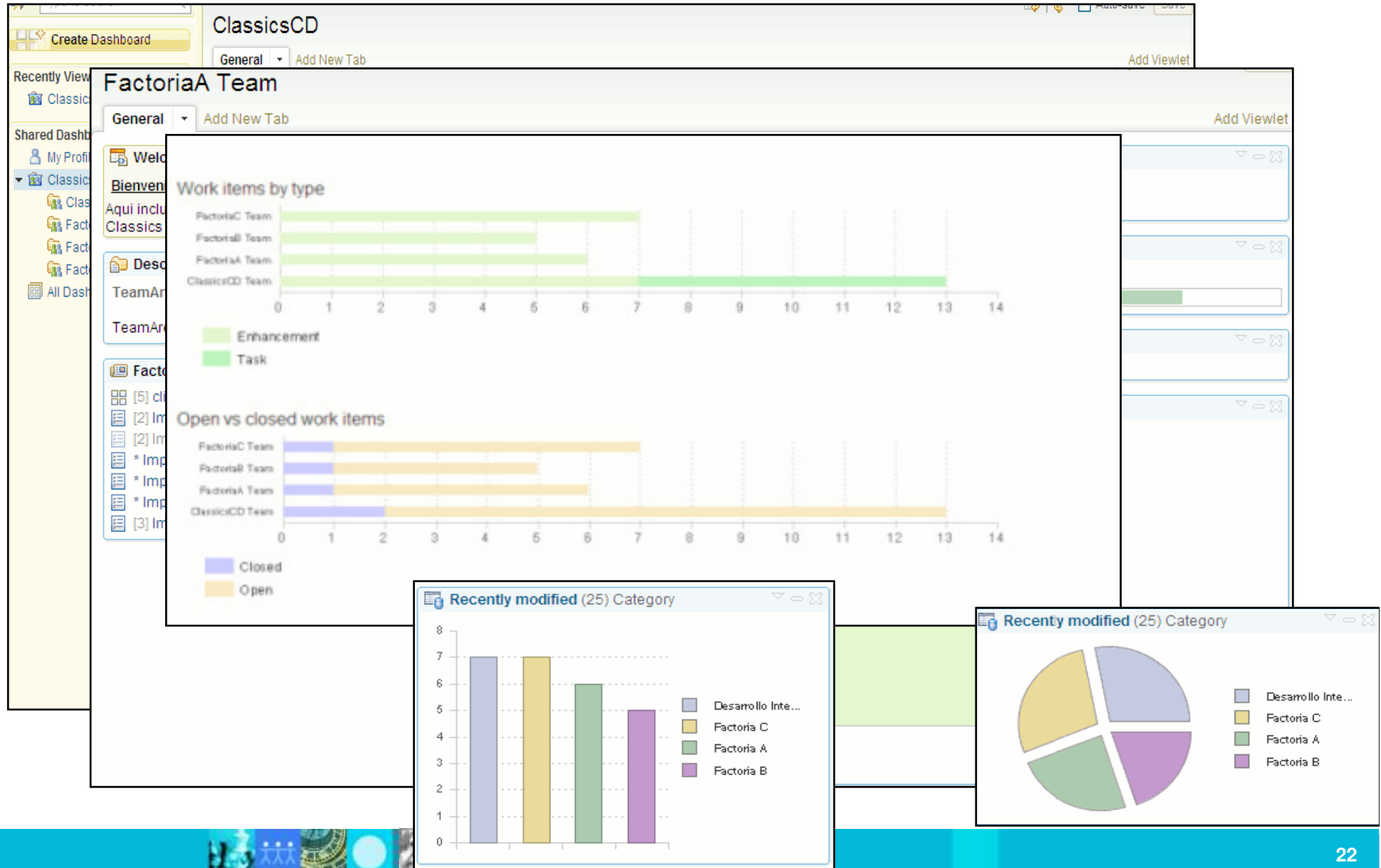




# An Example – A Telecoms Software Factory



# Governance and Control of Software Delivery Factories



# Creating a Platform That Can Transform Software Delivery

An open technology initiative to *transform how people work together* to deliver greater value and performance from their software investments



- Robust, extensible and scaleable
- Globally distributed, fluid and dynamic
- Community-based and open at Jazz.net

## Collaborate in Context

- Enable team transparency of “who, what, when, why”
- Build team cohesion and presence
- Automate hand-offs – so nothing falls through the cracks



## Right-size Governance

- Automate team workflow improving productivity
- Automate data collection eliminating administrative overhead
- Real time reporting and alerts reduces project risk



## Day One Productivity

- Dynamic provisioning of projects and teams
- Real-time iteration planning and workload balancing
- Unify teams with tools choice

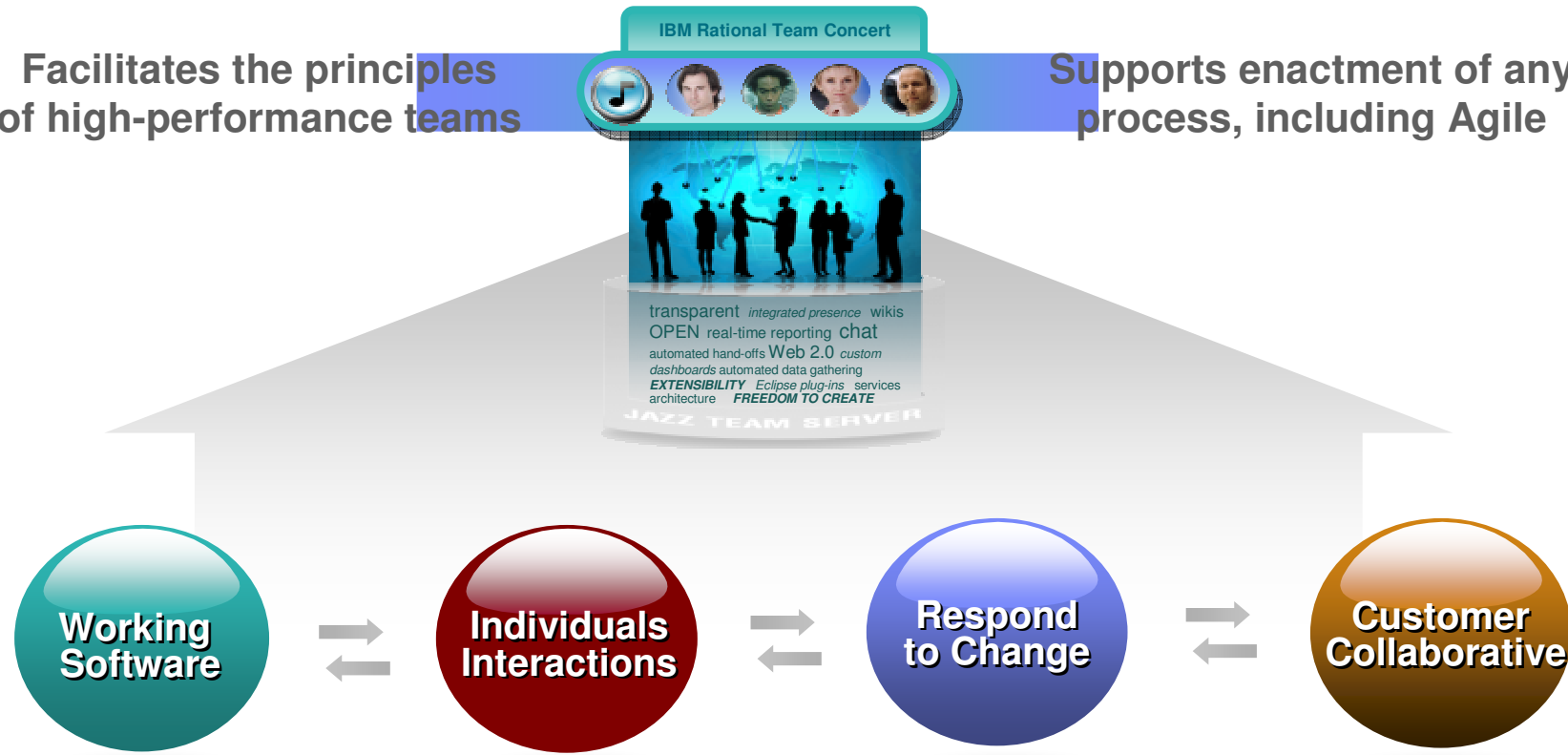
***Real-time integration of people, process and projects across the lifecycle***



# IBM Rational Team Concert: Designed by and for agile teams

Facilitates the principles of high-performance teams

Supports enactment of any process, including Agile



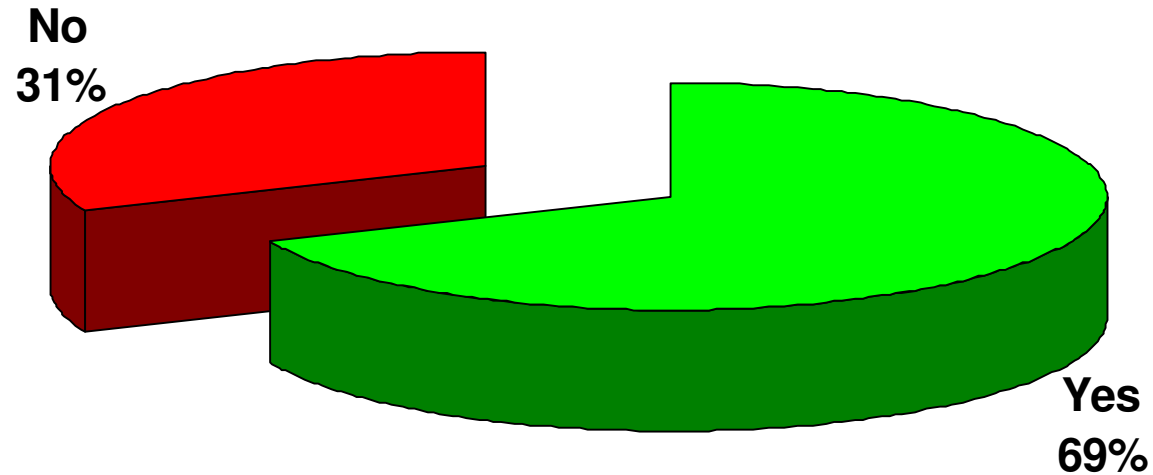
- Continuous integration
- Manage team assets
- Change driven
- Integrated / traceable

- Starting ad-hoc teams
- Team awareness
- Process awareness
- Ad-hoc sharing

- Process flexibility
- Iterative plan-execution
- Multiple releases
- JIT code reviews

- Transparency
- Objective commonality
- Project health checks
- Context driven

## Your competitors have already started



Has Your Organization Adopted One or More Agile Techniques?

18% of respondents indicated they're still in the pilot stage

15% of "No" respondents hope to do Agile this year

Source: Dr Dobb's 2008 Agile Adoption Survey



# 78%

said the **business was more satisfied**





88%

said they had **increased productivity**



# 77%

said they had **better quality**



# 72%

said costs were lower



# Where are you?

## 1 Agile Software Development

Focus is on construction

Goal is to develop a high-quality system in an evolutionary, collaborative manner

Value-driven lifecycle with regular production of working software

## 2 Disciplined Agile Software Development

Extends agile development to address full system lifecycle

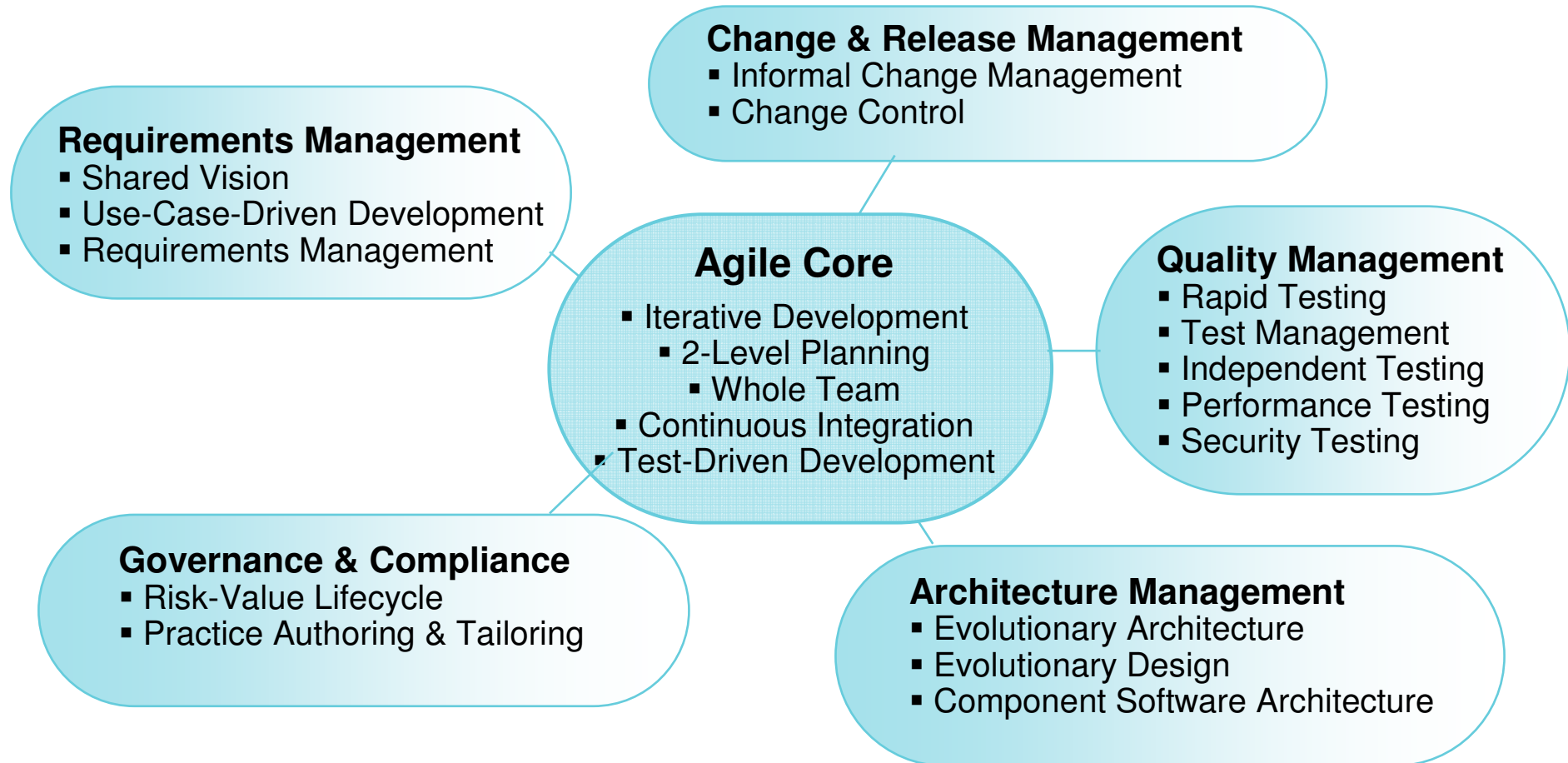
Risk and value-driven lifecycle.

## 3 Agility at Scale

- Addresses one or more scaling factors, including:
  - ▶ Team size
  - ▶ Geographical distribution
  - ▶ Organizational distribution
  - ▶ Regulatory compliance
  - ▶ Governance
  - ▶ Environmental complexity



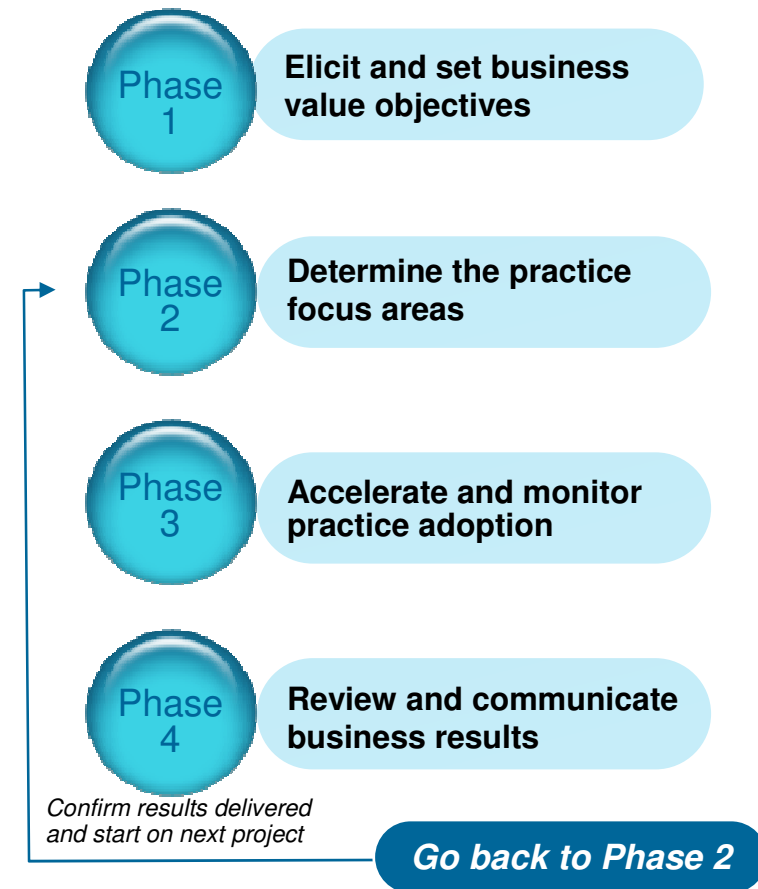
# Rational solutions for agile teams



## A phased approach to continuous capability improvement

### *The Measured Capability Improvement Framework*

- Objective: Drive business innovation and reduce costs through measured and continuous process improvement
- A phased approach that helps teams
  - ▶ Adopt an incremental, measured approach to transformation
  - ▶ Focus on the core practices that matter most
  - ▶ Accelerate adoption through out-of-the-box assets
  - ▶ Articulate capability improvements in terms of business value
  - ▶ Support any method
    - Optimized for Agile practices



***Empower teams to measure, manage and incrementally improve their software delivery capability.***





IBM runs a \$13,000,000,000 software business



IBM **has** to have industrial-strength Agile

## Parting thoughts - Why IBM?

- Our integrated tooling based on the Jazz platform enables disciplined agile software development
- Our Measured Capability Improvement Framework (MCIF) service offering helps organizations to successfully improve their IT practices in a sustained manner
- We are one of the largest agile adoption programs in the world
- We understand the enterprise-level issues that you face
- We scale from pilot project consulting to full-scale agile adoption
- Our Accelerated Solutions Delivery (ASD) practice has years of experience delivering agile projects at scale



## Critical resources

- [www.ibm.com/rational/agile/](http://www.ibm.com/rational/agile/)
- [www.ibm.com/developerworks/](http://www.ibm.com/developerworks/)
- [www.ibm.com/developerworks/blogs/page/ambler](http://www.ibm.com/developerworks/blogs/page/ambler)
- [www.jazz.net](http://www.jazz.net)





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# Additional Rational Products for Disciplined Agile Development

- Rational AppScan
  - ▶ Web site security testing
- Rational Build Forge (RBF)
  - ▶ Continuous integration
  - ▶ Continuous deployment
- Rational Quality Manager (RQM)
  - ▶ Test management
- Rational Requirements Composer (RRC)
  - ▶ Requirements modeling
- Rational Software Analyzer (RSAR)
  - ▶ Static code analysis

## Core Principles

- “Fits just right” process
- Continuous testing and validation
- Consistent team collaboration
- Rapid response to change
- Ongoing customer involvement
- Frequent delivery of working software

