



Accelerate software delivery to optimize business outcomes

Walker Royce
Chief Software Economist
IBM Software, Rational

IBM Software

Innovate2012

The Premier Event for Software and Systems Innovation

Next  NOW!

CEOs believe technology-driven business models are key to innovation and growth

“The biggest risk we face is technological. If we fail to anticipate a huge technology step, we might go out of business.”

Industrial Products CEO

“Today’s connected economy is full of ambiguity, and the skills required to navigate that ambiguity are collaboration, creativity, and communication.”

Healthcare CEO

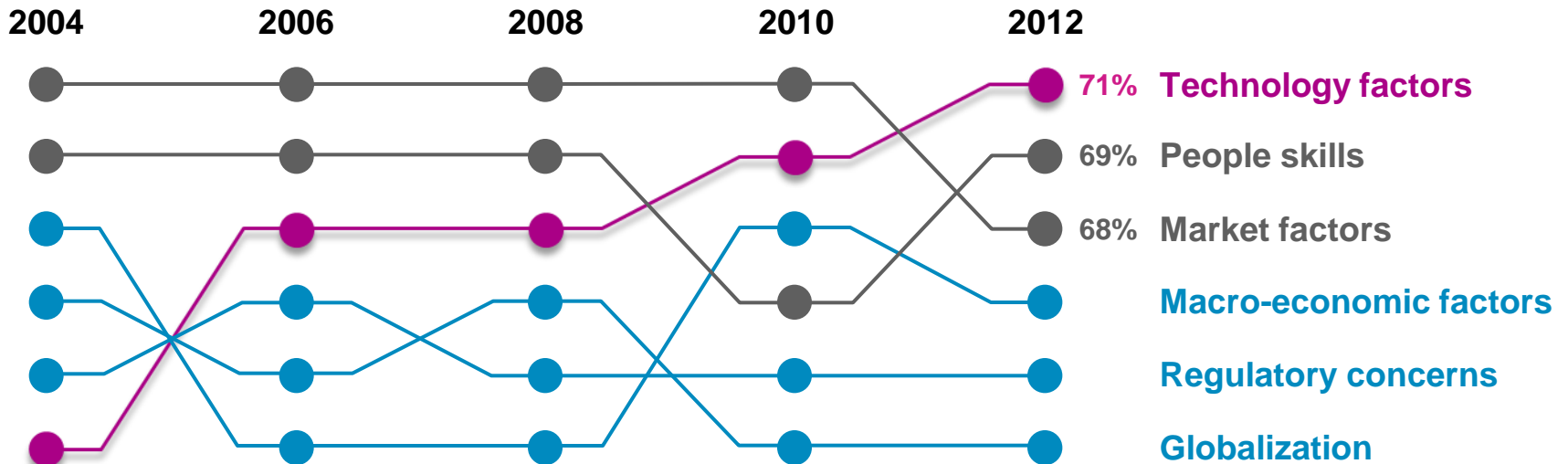


“To innovate, we need to take in insights across industries and knowledge from many different people.”

Electronics CEO

Technology has never been more important to business

For the first time, CEOs identify technology as the most important external force impacting their organizations



Value creation in every industry is driven by software
Software innovation is becoming synonymous with business innovation



Software-driven Mobile Banking

- Most widely used banking channel by 2020, if not sooner

New Surgical Robotic System

- Powered by 1.4 million lines of code
- 3-6 weeks mitral valve procedure recoveries compared to 3-6 months
- Less invasive, breastbone stays intact

There has never been a better time to be a developer!

- Globalization
- Consumerization of technology
- Cloud, mobile, big data, social business
- Increasing complexity, systems of systems



Software developers make all this innovation possible.

A great opportunity, a great responsibility

We must accelerate delivery or become irrelevant

The Secret of accelerating software delivery

More Speed and Agility

- Compelling user experience
- Rapid iterations
- Continuous delivery



Better Control

- Regulatory compliance
- End-to-end security
- Financial predictability

Accelerated delivery demands a quid pro quo

Engineering Practitioners

- Design, create, test
- Reuse knowledge, best practices
- Resolve the hard things first
- Minimize overhead

Embrace Measurement



The Speed Of Trust

Governance Stakeholders

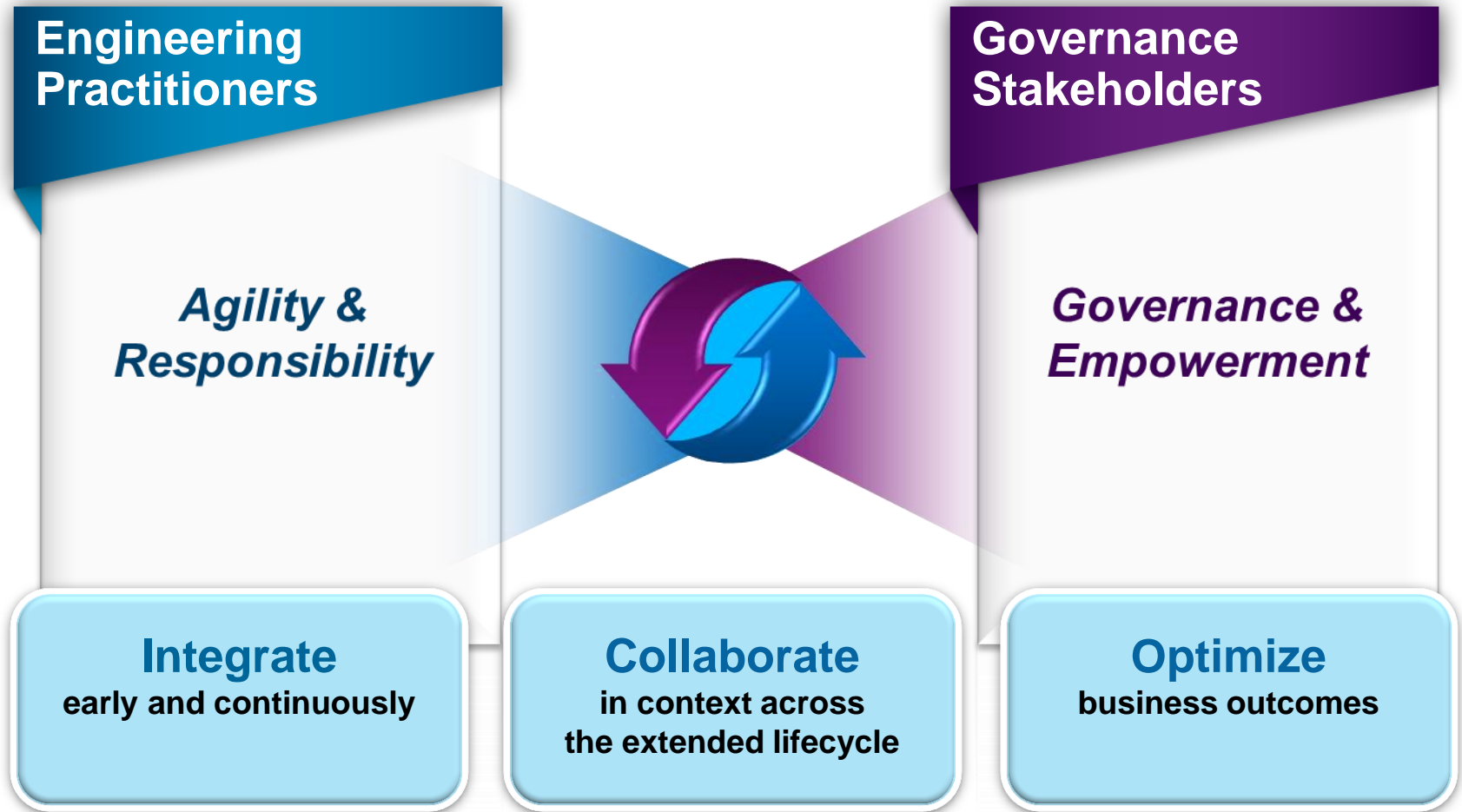
- Achieve predictable outcomes
- Manage risk, steer
- Ensure compliance
- Improve software economics
- Visibility and transparency

Enable Agility

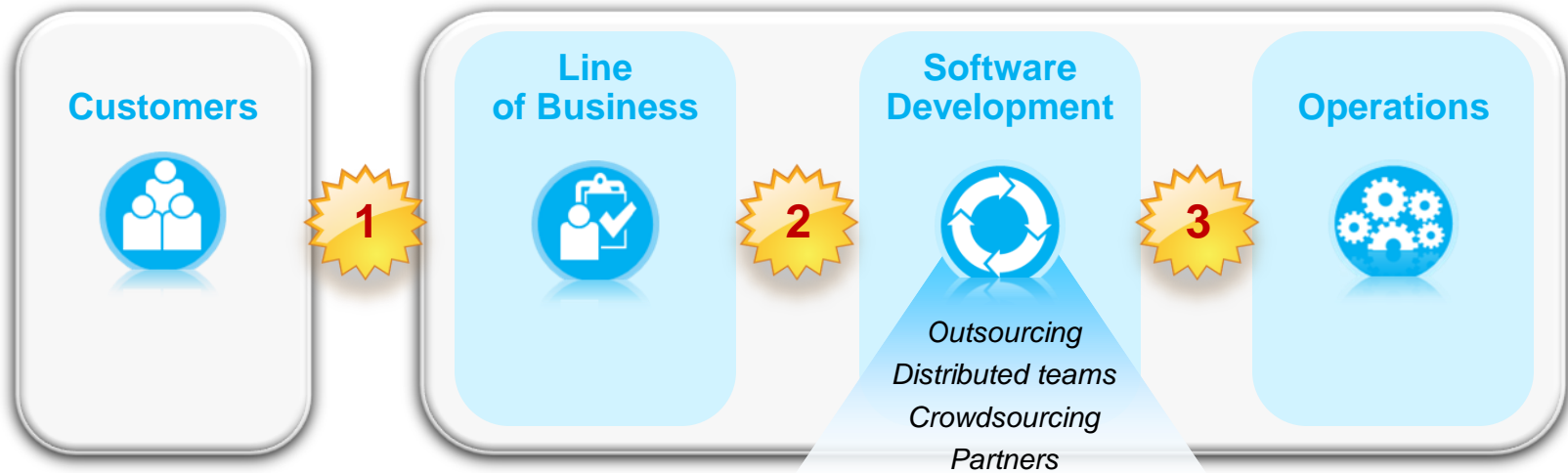
Foundational Practices for Software-driven Innovation



Succeeding in the new development reality



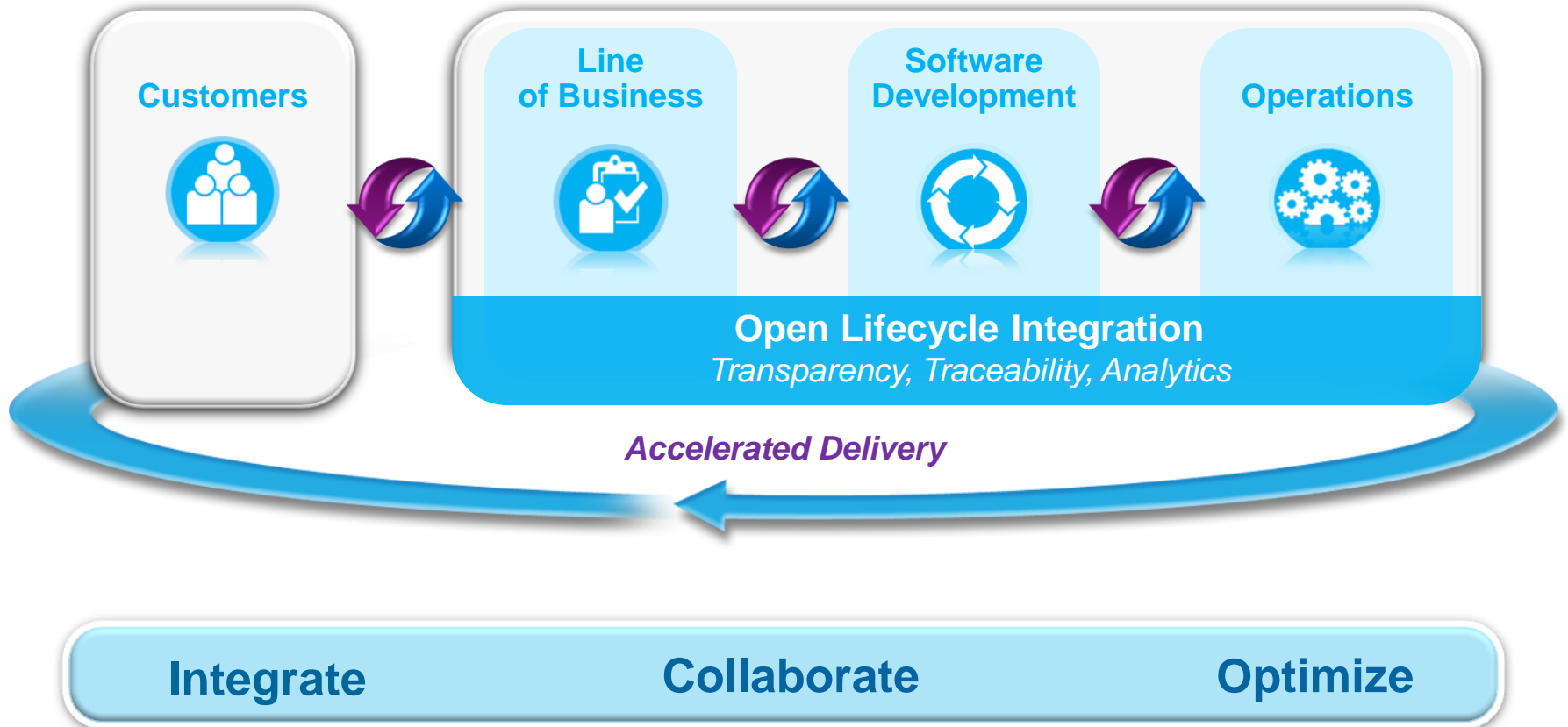
Inhibitors to accelerated delivery for IT organizations



INHIBITORS

- 1 Slow feedback between Customers *and* Line of Business
- 2 Ineffective iteration between Line of Business *and* Development
- 3 Inefficient linkage between Development *and* Operations

Accelerated delivery for IT organizations



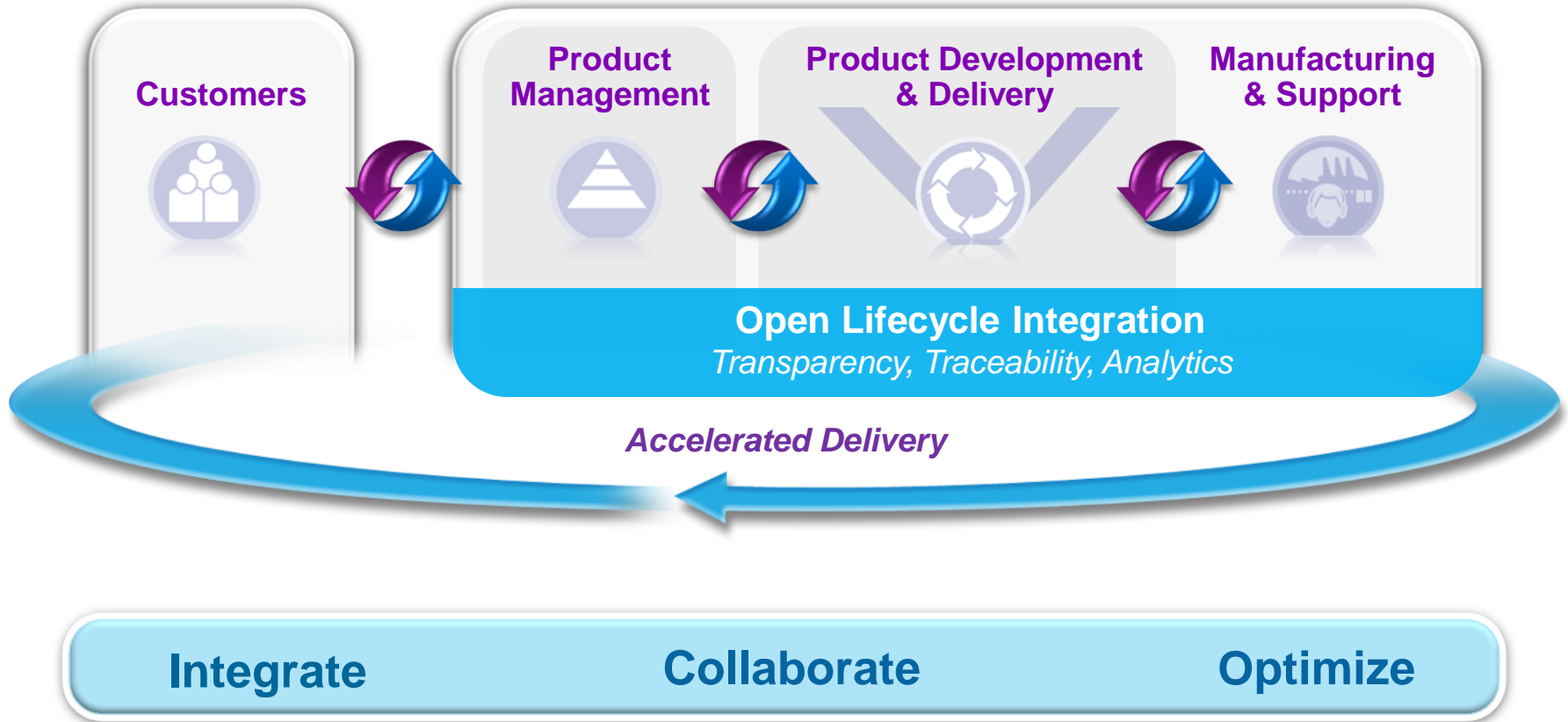
Inhibitors to accelerated delivery for product & systems organizations



INHIBITORS

- 1 Poor end-to-end customer requirements visibility
- 2 Diverse perspectives among engineering disciplines
- 3 Complex network of stakeholders and actors

Accelerated delivery for product and systems organizations



IBM client successes



30 – 35%

production
increase

*with no
additional staff*



77%

quality issue
reduction

*by leveraging
agile testing*



100%

on-time
deliveries

*with 25% increase
in team satisfaction*

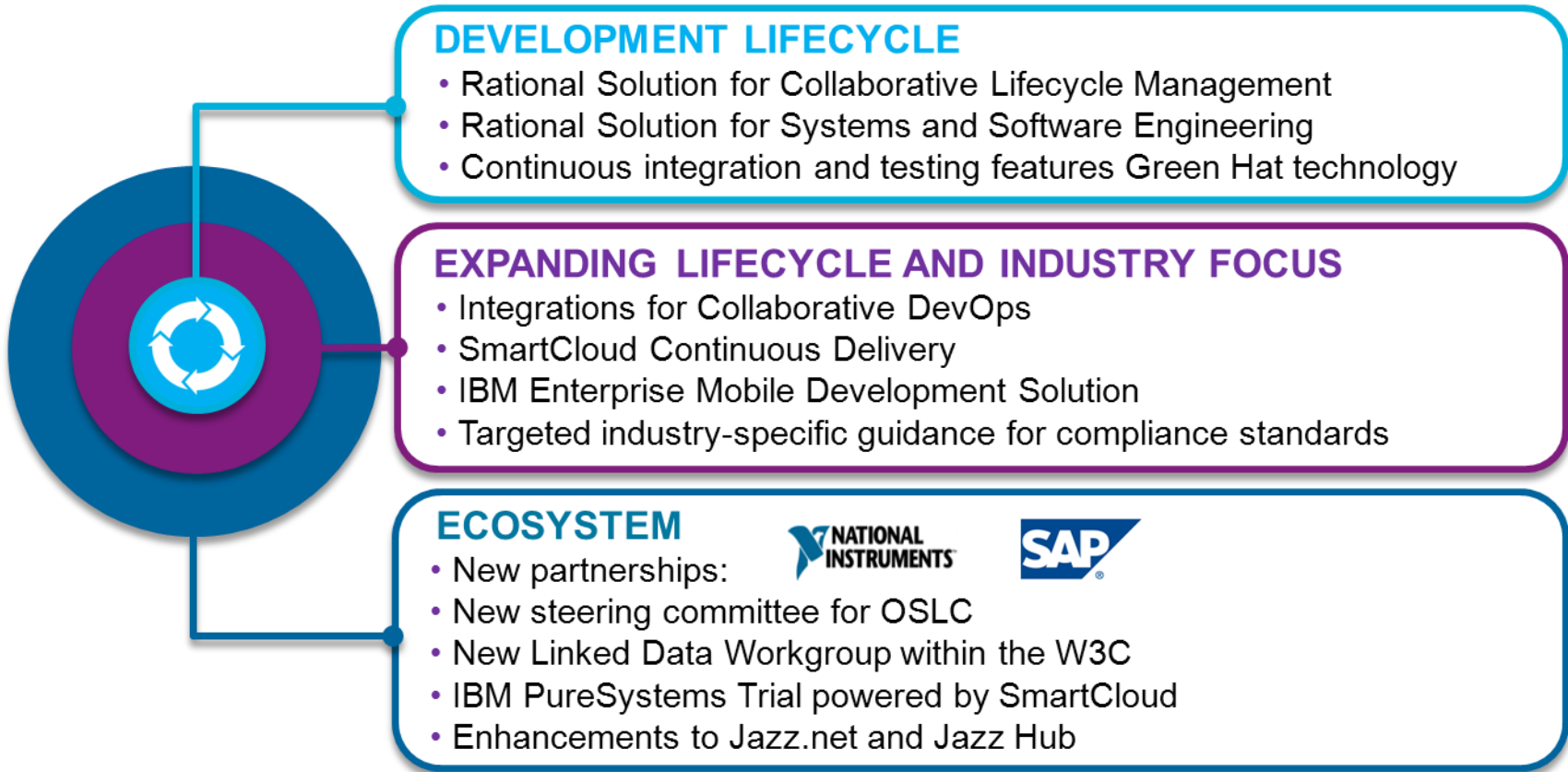


40%

reduced
time-to-market

*for signaling
systems products*

New capabilities from IBM to enable agility with governance



High impact initiatives to accelerate delivery today

IT organizations

1. Elaborate user experience earlier in lifecycle
2. Link requirements management to test
3. Make integration, test and deployment continuous
4. Scale agile to enterprise with governance and metrics

Product and systems organizations

1. Implement cross-discipline systems engineering
2. Implement model-based systems engineering
3. Integrate tools and data to support common processes

4. Scale agile to enterprise with governance and metrics

- Challenge
 - Dynamic change competes with governance/ compliance
 - High number of constituencies complicates collaboration
- Solution
 - Automate and instrument project management, change management and test management
 - Leverage integrated platform for processes, measurements
 - Encompass the end-to-end lifecycle and entire software supply chain
- Benefit
 - Accelerated delivery cycles
 - Measured feedback control



Typical target

50% more time on task by eliminating overhead activities
(*progress reporting, documentation, change propagation, etc.*)



Amir Gomroki

*Vice President, R&D Operations, IP and Broadband
Ericsson*

2. Implement model-based systems engineering

- Challenge
 - Rising complexity of product and systems
 - Error-prone hand-offs between systems engineers and software engineers
- Solution
 - Shared models using standard visual languages
 - Rapid, automated cycles from models to code
 - Simulation and analysis to prove functionality and timing
- Benefit
 - Integration issues resolved earlier, lower cost of change
 - Architecturally significant errors discovered earlier in lifecycle



Typical target

50% reduction rate of lifecycle scrap and rework
And reduction of critical defects to (nearly) zero



Brian Wells

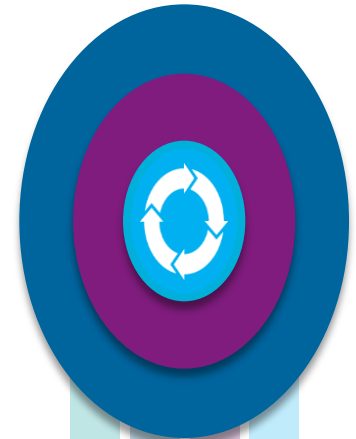
*Vice President of Corporate Engineering
Raytheon*

How to move forward

- Act now to transform your software and systems delivery
 - Integrate across the lifecycle
 - Collaborate across roles and organizations
 - Optimize the business outcomes of development

- Start today and leverage Innovate to the maximum
 - Learn from sessions – challenge speakers
 - Interact with peers, IBM SMEs, and business partners
 -

- *Call us in to help!*
 - We'll help to identify and measure expected benefits of accelerated product and service innovation and help identify appropriate next steps





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Asist and Rational, two of a kind

by Maurice Brouwers

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