



# Accelerate delivery to optimize Business Outcomes

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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

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

## The world we live in is exciting for developers!

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



***Accelerate delivery or become irrelevant!***

# Accelerated delivery demands a quid pro quo

## Engineering Practitioners

- Design, create, test
- Reuse knowledge, best practices
- Address uncertain things first
- Be adaptive to change

**Embrace Measurement**

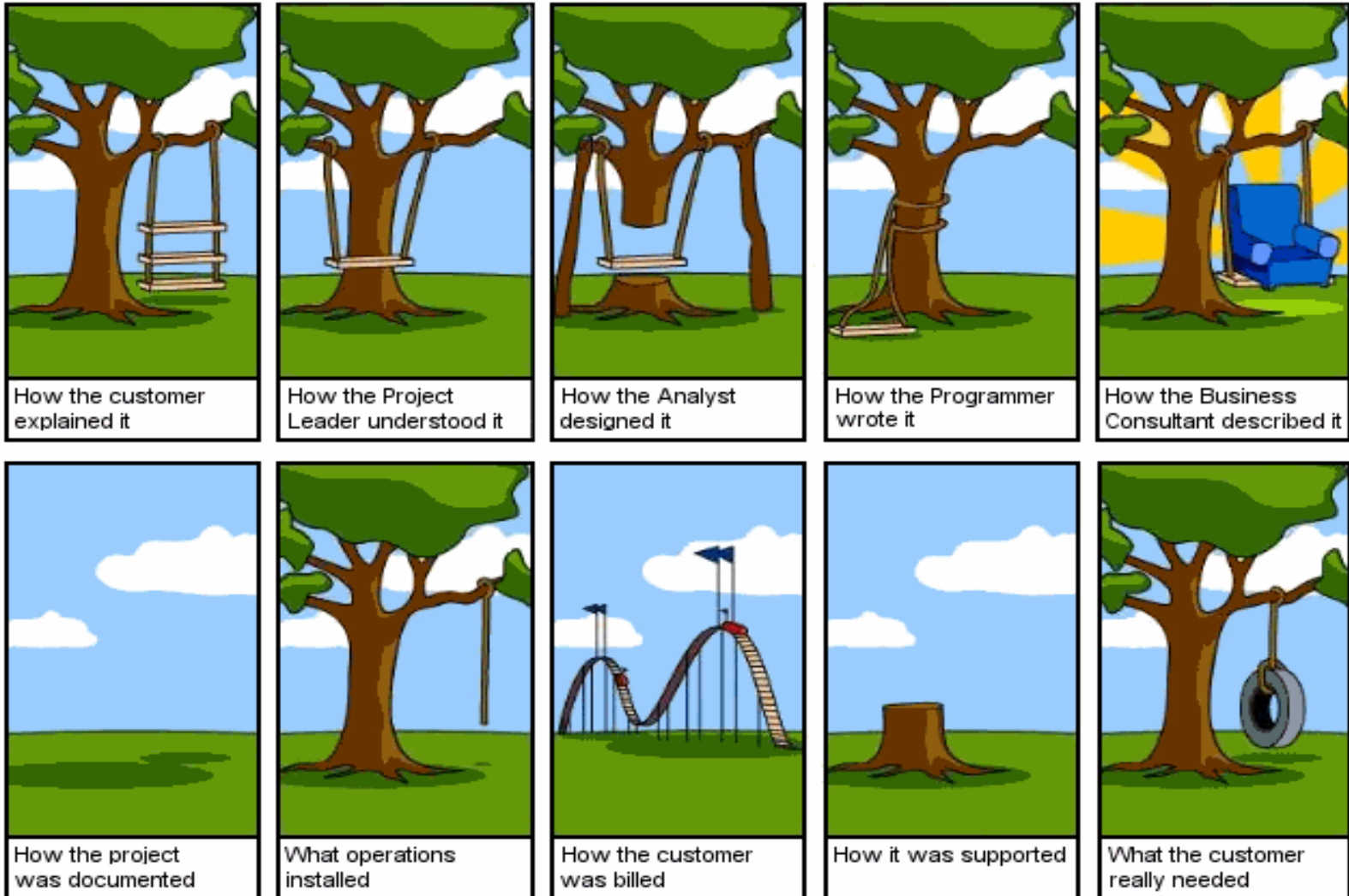
**The Speed  
Of Trust**

## Governance Stakeholders

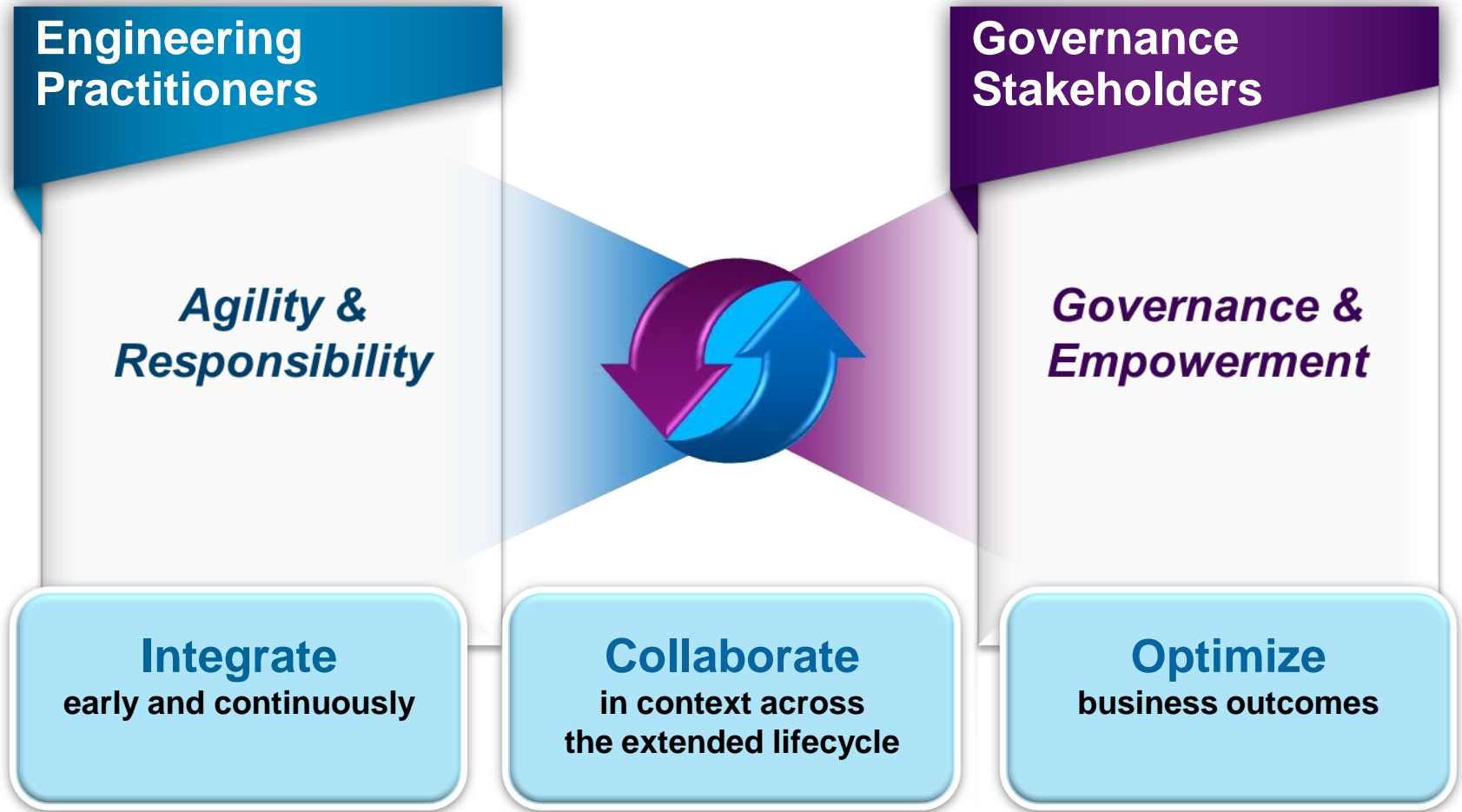
- Achieve predictable outcomes
- Manage risk
- Ensure compliance
- Improve software economics
- Visibility and transparency

**Enable Agility**

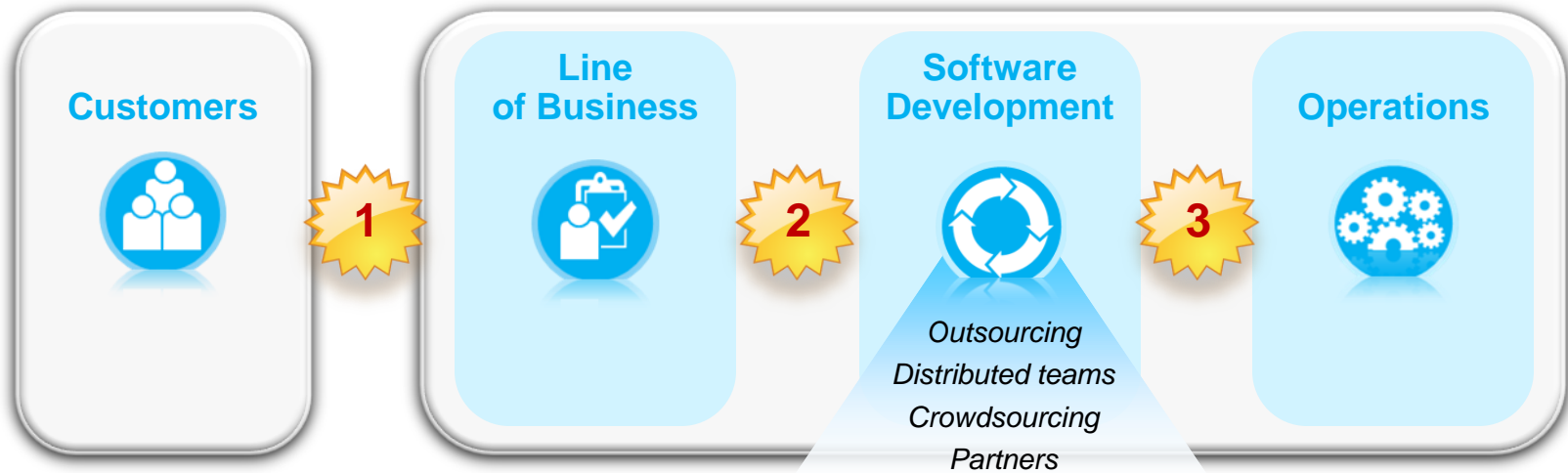
# Linkage between practitioners and stakeholders is key...



# Succeeding in the new development reality



# Inhibitors to accelerated delivery for IT organizations

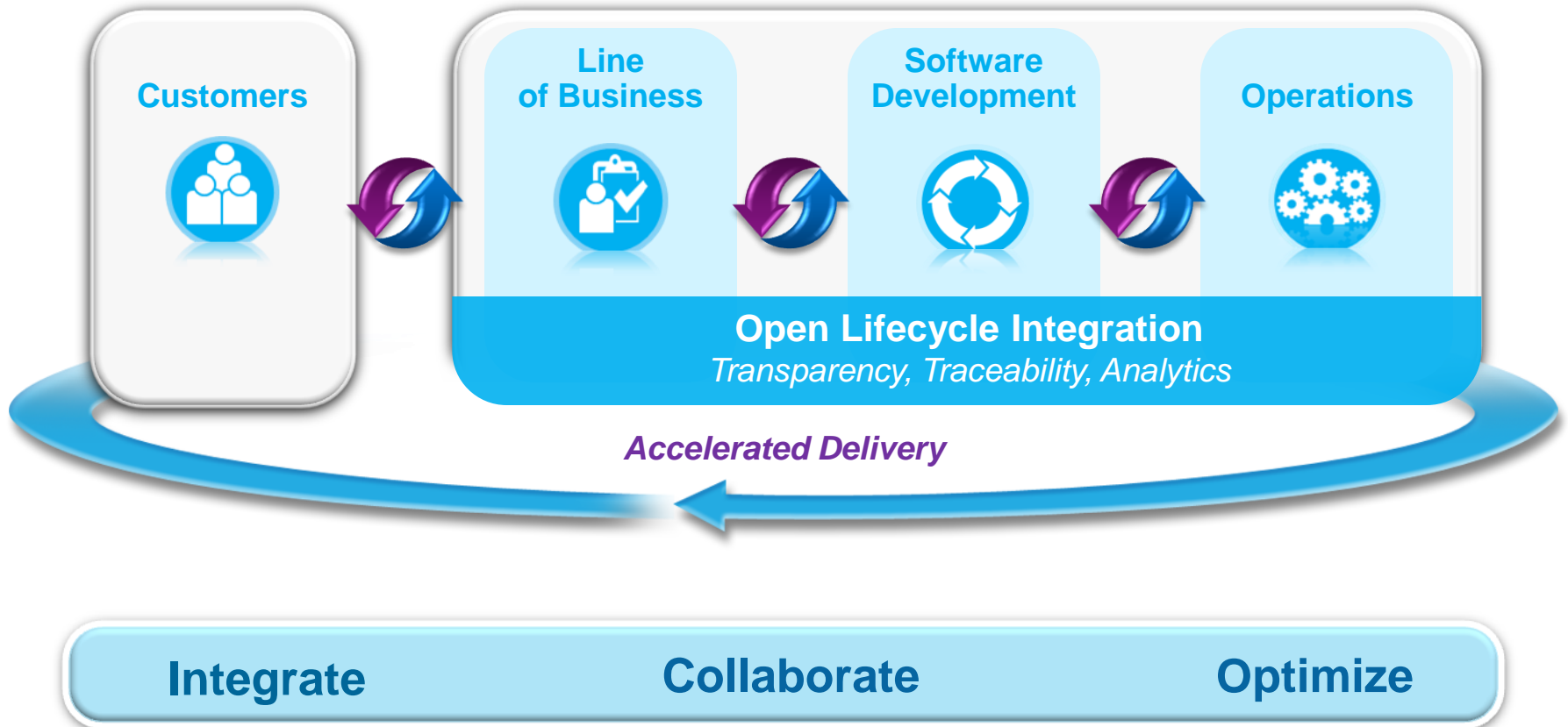


## INHIBITORS

- 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



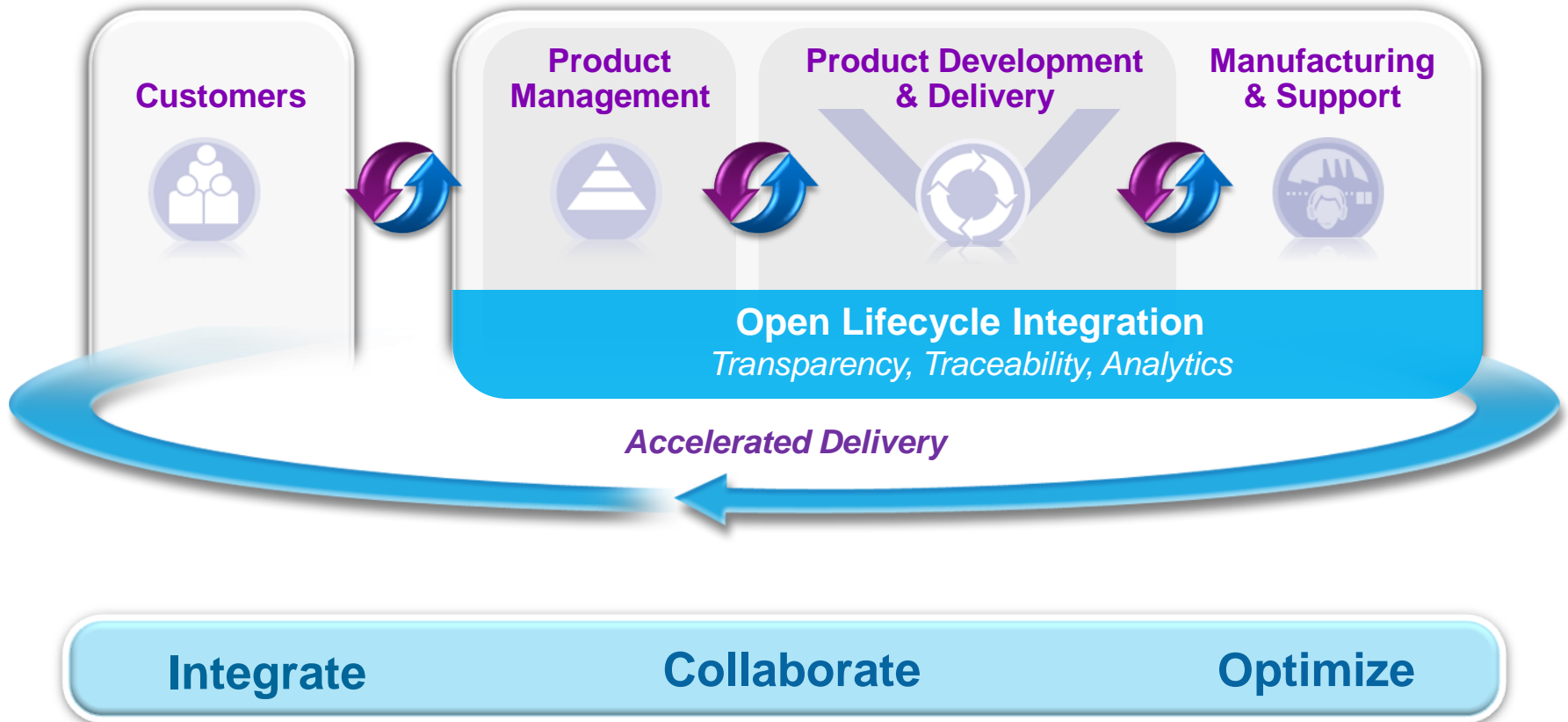
# Inhibitors to accelerated delivery for product & systems organizations



## 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%**

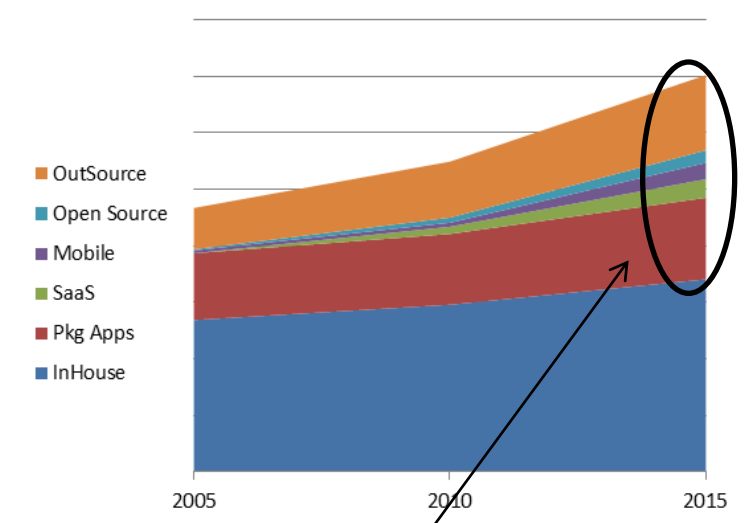
reduced  
time-to-market

*for signaling  
systems products*

## Disruptive technologies (Cloud, Mobile) are driving Multi-Sourcing

- A Gartner benchmark study found that 55% of global organizations manage their sourcing activities tactically and at an operational level, failing to add a strategic management layer and invest enough in developing critical multisourcing competencies.
- Key challenges that organizations face in multisourcing include:
  - Deals are difficult to build and manage
  - Deals often fail to deliver on expected outcomes
  - Deals often fail to evolve
  - Need for balance: Agile is growing as well>> Both require new governance models
  - Balance the governance, oversight with Innovation

Software Sourcing Spend



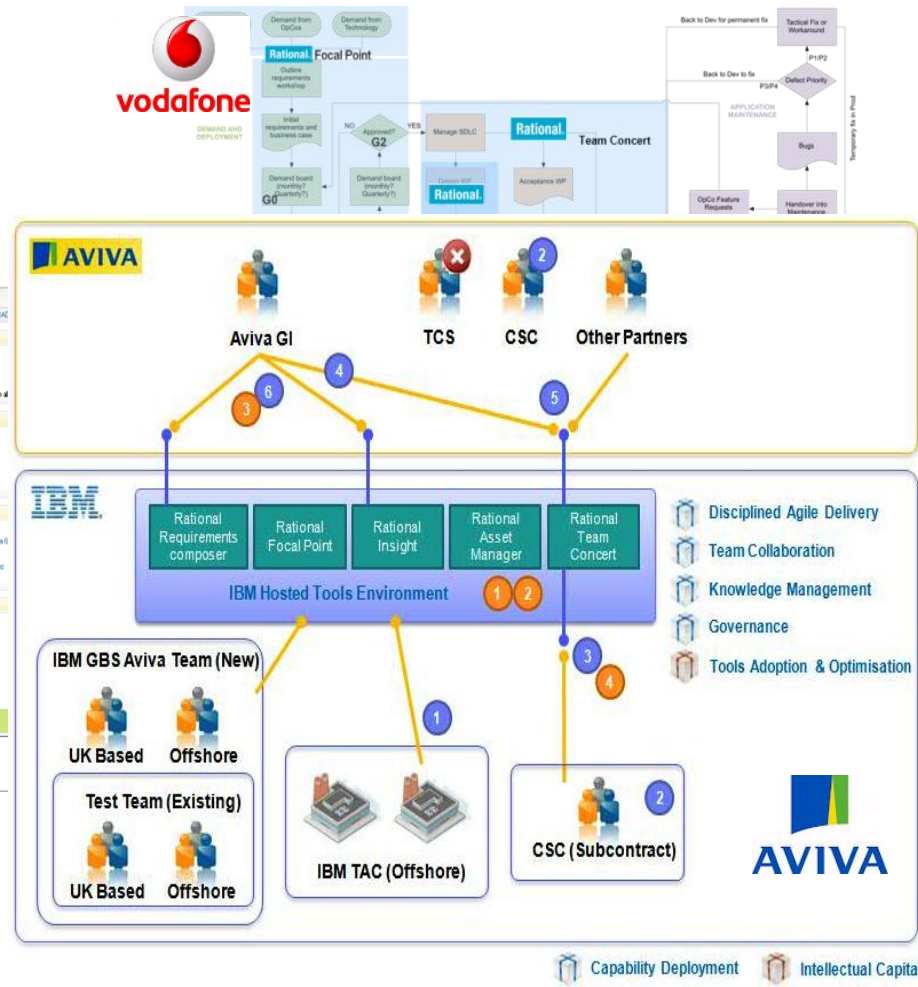
External Supply Chain (2010-2015):

- 7.4% CAGR to \$361B
- Increasing to >50% share of spend

# Align multisource with a well-managed Software Supply Chain

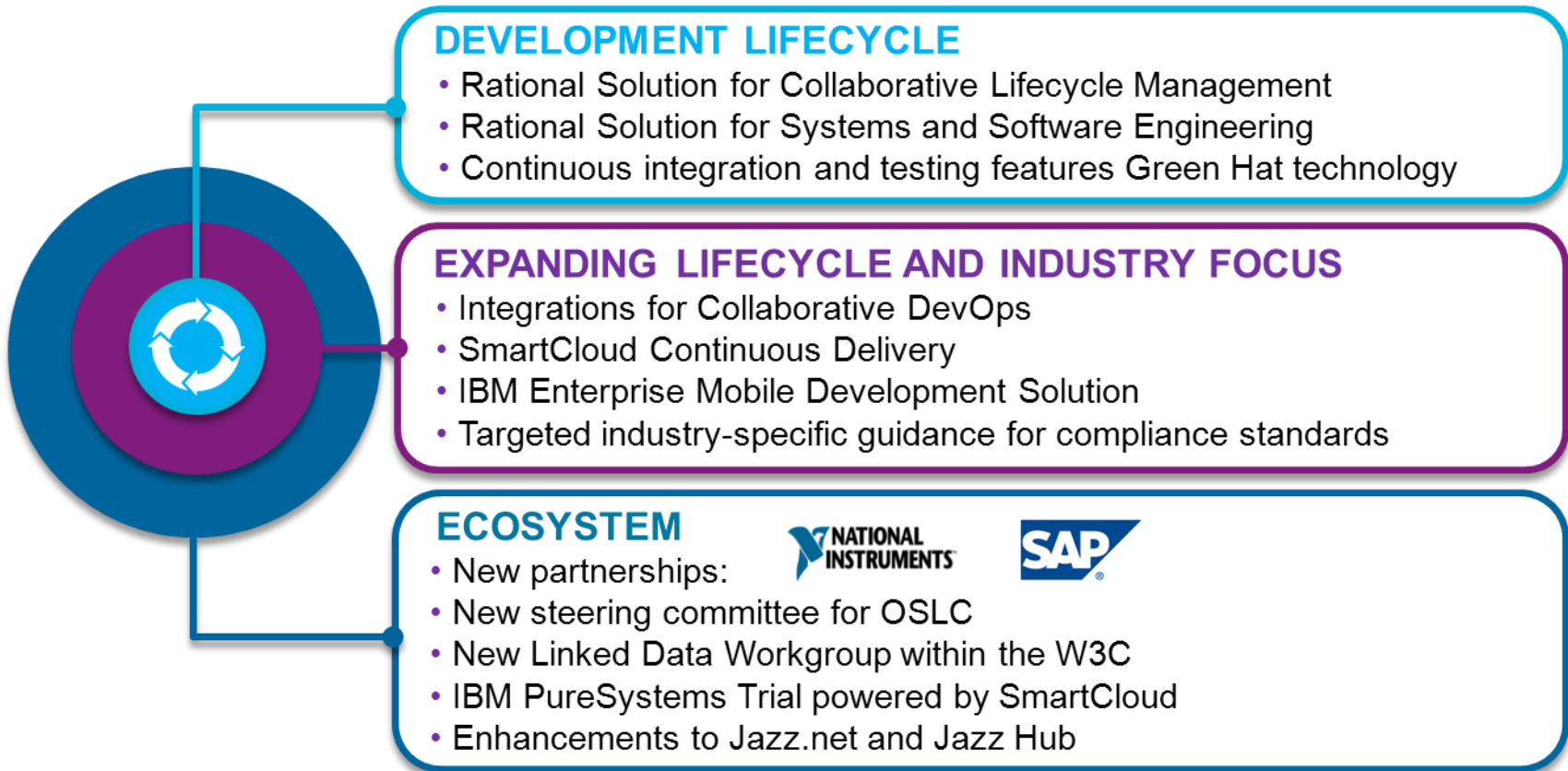
## Deliver consistent business outcomes across the Software Supply Chain

- Visibility across all contributions to SW Supply Chain (SSC)
- Improved accuracy of project outcomes and revenue forecasts
- Consistent delivery process across all elements of SSC



- Capacity alignment to change management
- Improved visibility into contracts, SOW, vendor selection, project scoping, requirements across the integrated suppliers

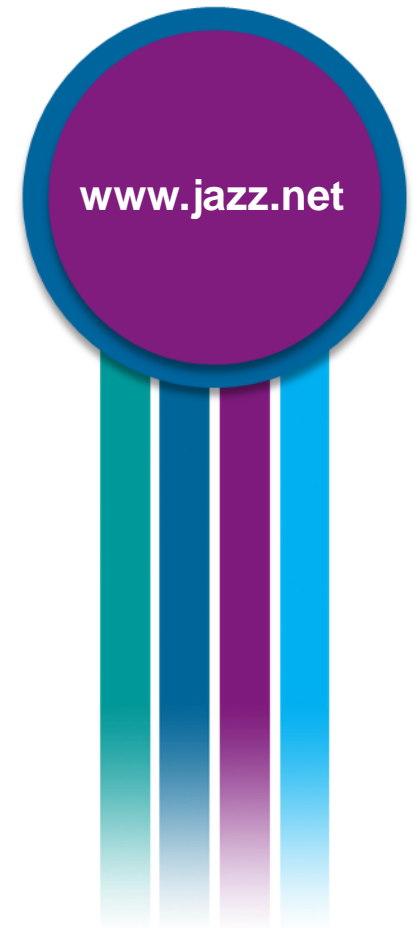
# New capabilities from IBM to enable agility with governance



## Community drives everything

*Community directs our vision, development, and this conference*

- Jazz.net – now more than 100K members
- developerWorks – more than 4M visitors per month
- OSLC - active and growing, now transforming through a new governance model and guided by a steering committee constructed by community members
- W3C – working group chartered on Linked Data, underpinnings of Internet style integration
- Over 500 IBM Rational authorized business and technology partners





## Wrap Up

- There has never been a better time to be in software engineering!
  - Technology is #1 driving factor for business
  - Software is the fiber of innovation
- Integration, collaboration and optimization is key
  - Rational Jazz is a proven solution
  - The community and investment around Jazz continues to grow and thrive!
- FIND OUT HOW WE CAN HELP YOU MORE TODAY!
  - Leverage Innovate to the maximum!



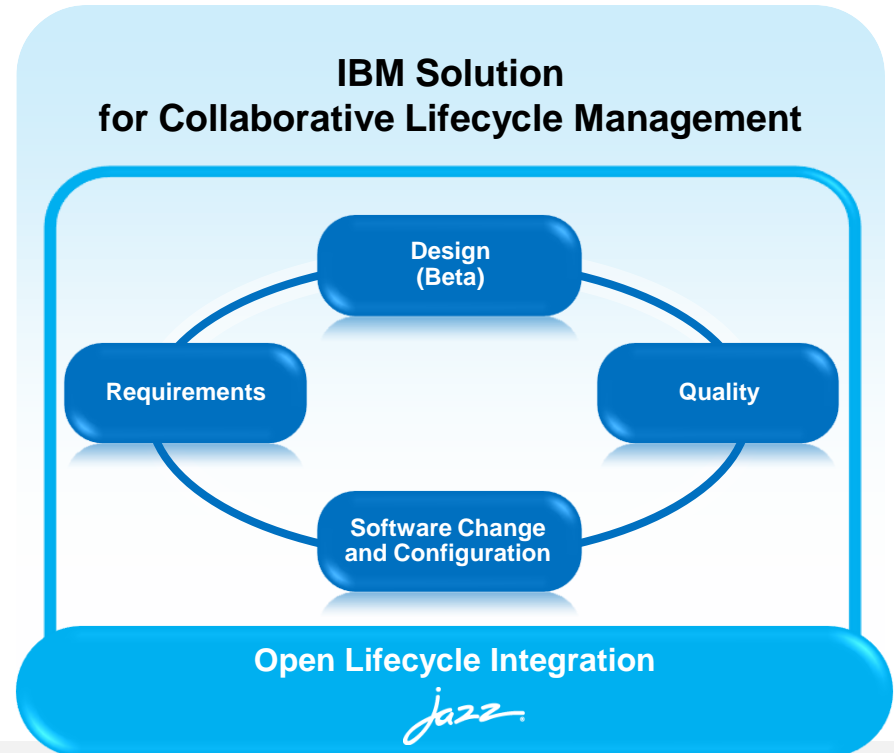


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# Accelerate development with integrated Application Lifecycle Management

- Integrate software design
- Enjoy faster, easier deployments
- Upgrade your teams at their own pace
- Leverage optimized support for Mobile, SAP and IBM WebSphere Application Server



## ENHANCED

- IBM Solution for Collaborative Lifecycle Management
  - Rational Software Architect integration through Rational Software Architect Design Manager (Beta)
  - Comprised of Rational Requirements Composer v4.0, Rational Team Concert v4.0, and Rational Quality Manager v4.0

# Deliver software quality at the speed your business demands through continuous integration and testing

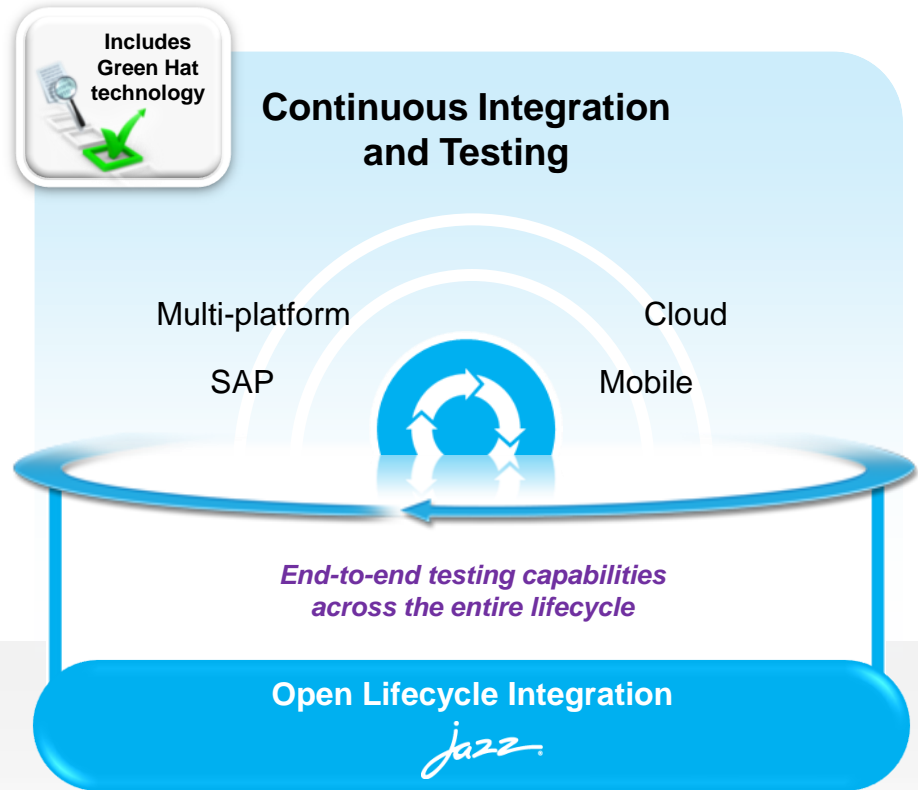
- Simplify testing across mainframe and composite application layers
- Avoid late stage, big-bang integration issues
- Automate regression testing throughout lifecycle
- Validate system functionality, scalability and stability continuously

## NEW

- IBM Rational Test Workbench v8.0
- IBM Rational Performance Test Server v8.0
- IBM Rational Test Virtualization Server v8.0
- IBM Continuous Integration Solution for System z

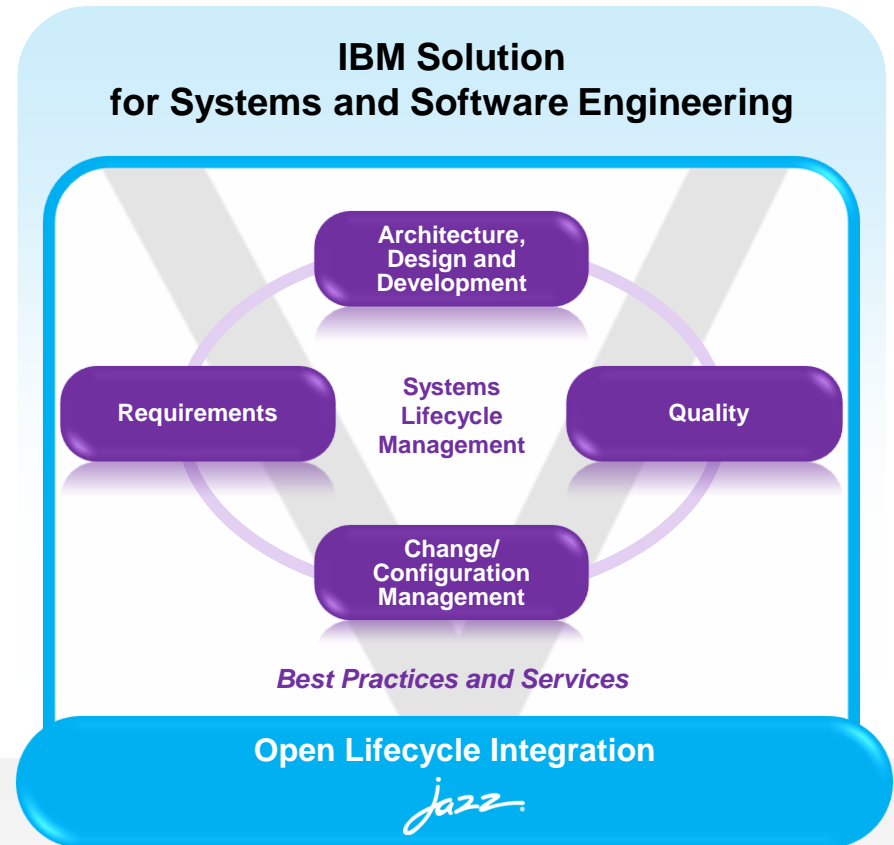
## ENHANCED

- IBM Rational Development and Test Environment for System z v8.5



# Deliver complex products and the software that powers them with an integrated systems lifecycle management solution

- Improve quality and compliance with requirements-driven testing and workflow guides
- Improve asset reuse with software variant management
- Increase efficiency with cross-project planning
- Increase security for product development IP

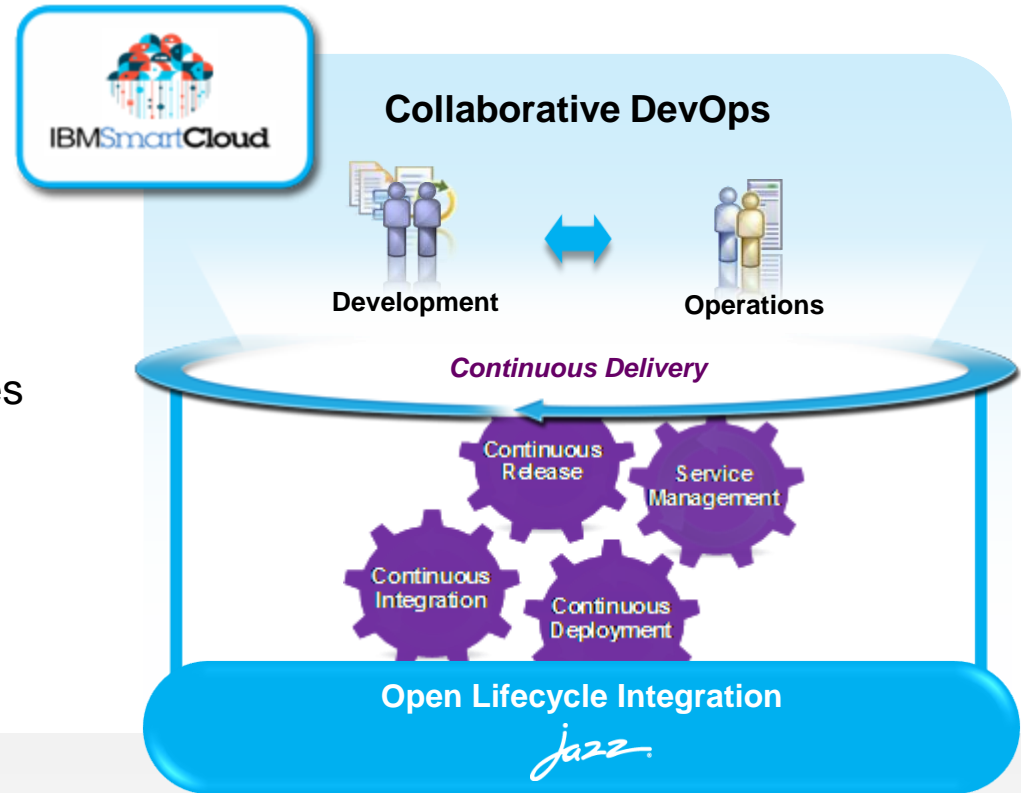


## ENHANCED

- IBM Solution for Systems and Software Engineering
  - IBM Rational DOORS v9.4
  - IBM Rational Quality Manager v4.0
  - IBM Rational Team Concert v4.0
  - IBM Rational Rhapsody v7.6.1 with Design Manager v3.0.1

## Enable continuous delivery by bridging the chasm between development and operations

- Create efficiencies and reduce errors with automation across lifecycle
- Leverage IBM SmartCloud solutions to automate resource provisioning
- Increase utilization, reduce delivery times and improve flexibility in development, testing and deployment

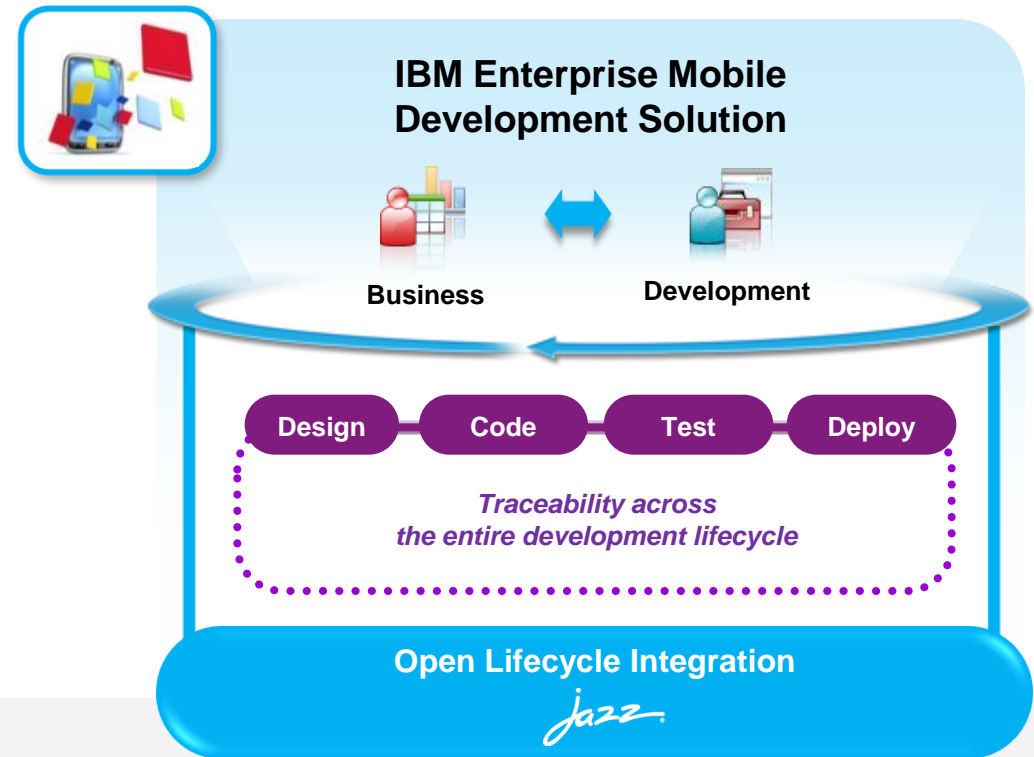


### NEW

- IBM SmartCloud Continuous Delivery (*hosted, managed Beta*)
- IBM SmartCloud Control Desk v7.5
- IBM SmartCloud Application Performance Management v7.5
- IBM SmartCloud Provisioning v2.1 (*Beta*)

# Accelerate the delivery of enterprise-class mobile applications on multiple platforms

- Meet time to market pressures and frequent release requirements of mobile applications
- Design mobile applications that delight users and optimize testing to ensure quality
- Integrate with the IBM Mobile Platform for device-agnostic mobile application development and build



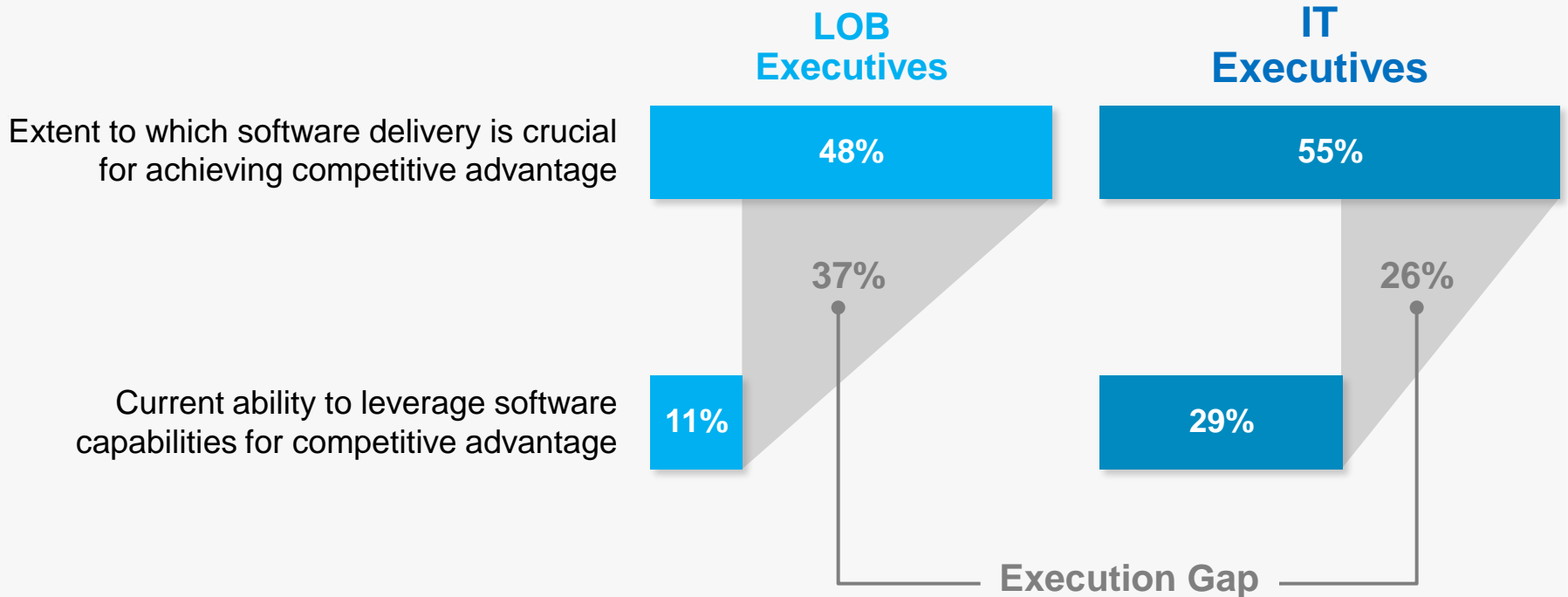
**NEW**

- IBM Enterprise Mobile Development Solution
  - IBM Solution for Collaborative Lifecycle Management
  - IBM Worklight Studio v5.0 and IBM Worklight Server v5.0
  - IBM Application Center v5.0

KK/Harish

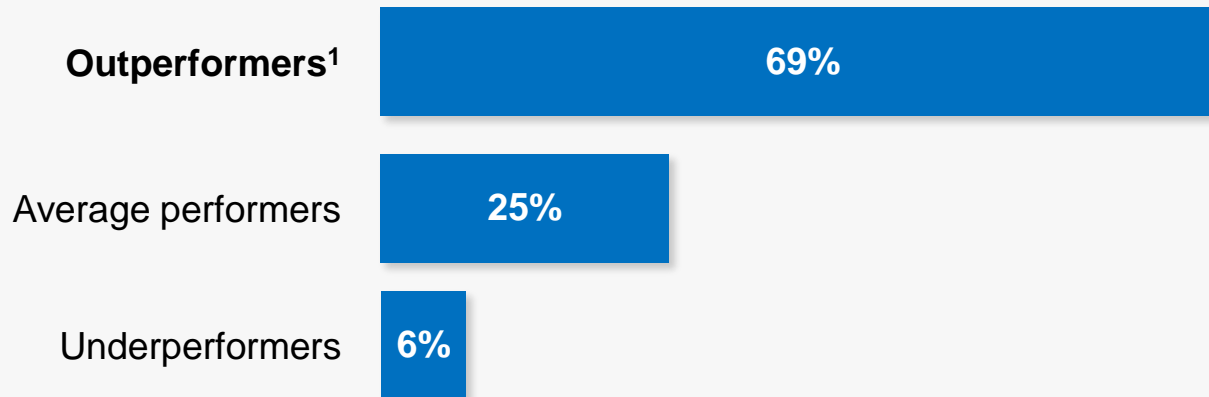


*Yet the ability execute remains limited*



Source: *Leveraging Software Delivery for Competitive Advantage 2012 Global Study*, IBM Institute for Business Value.

## Of those companies that leverage software delivery for competitive advantage



Source: *Leveraging Software Delivery for Competitive Advantage 2012 Global Study*, IBM Institute for Business Value.

<sup>1</sup>Outperformance is based on self-rating of the organization's performance relative to their peers based on profitability.

## IT organizations

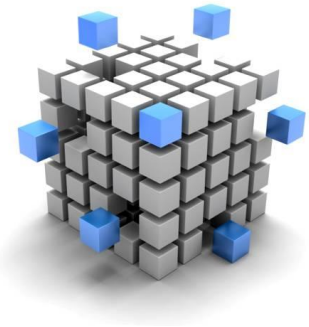
1. Elaborate user experience earlier in lifecycle
2. Link requirements management to test
3. Make integration, test and deployment continuous
4. Scale agile to enterprise with governance and metrics

## 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

***Significant pressure on line of business to:***

- Innovate to create new business value by employing cloud, mobile and social channels and leveraging Big Data – Systems of Engagement
- Integrate with transactional systems – Systems of Record
- Balance with governance, risk and compliance



***Continuously deliver software driven innovation and business value...***

Challenges meeting business time pressures with quality software

34% of all new IT Projects deploy late

41%

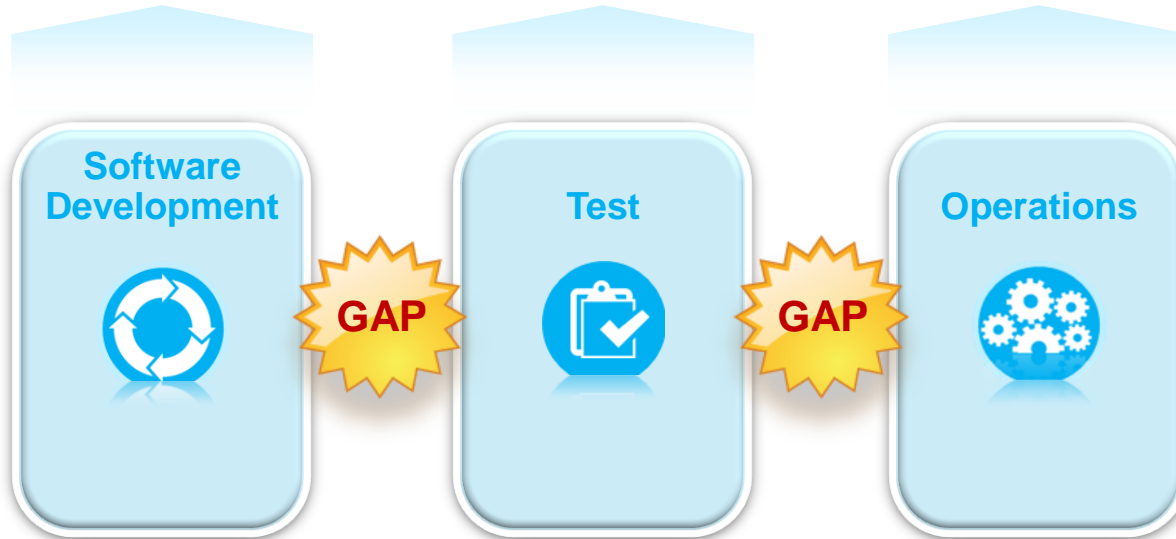
experience delays in integration, configuration and testing of applications

51%

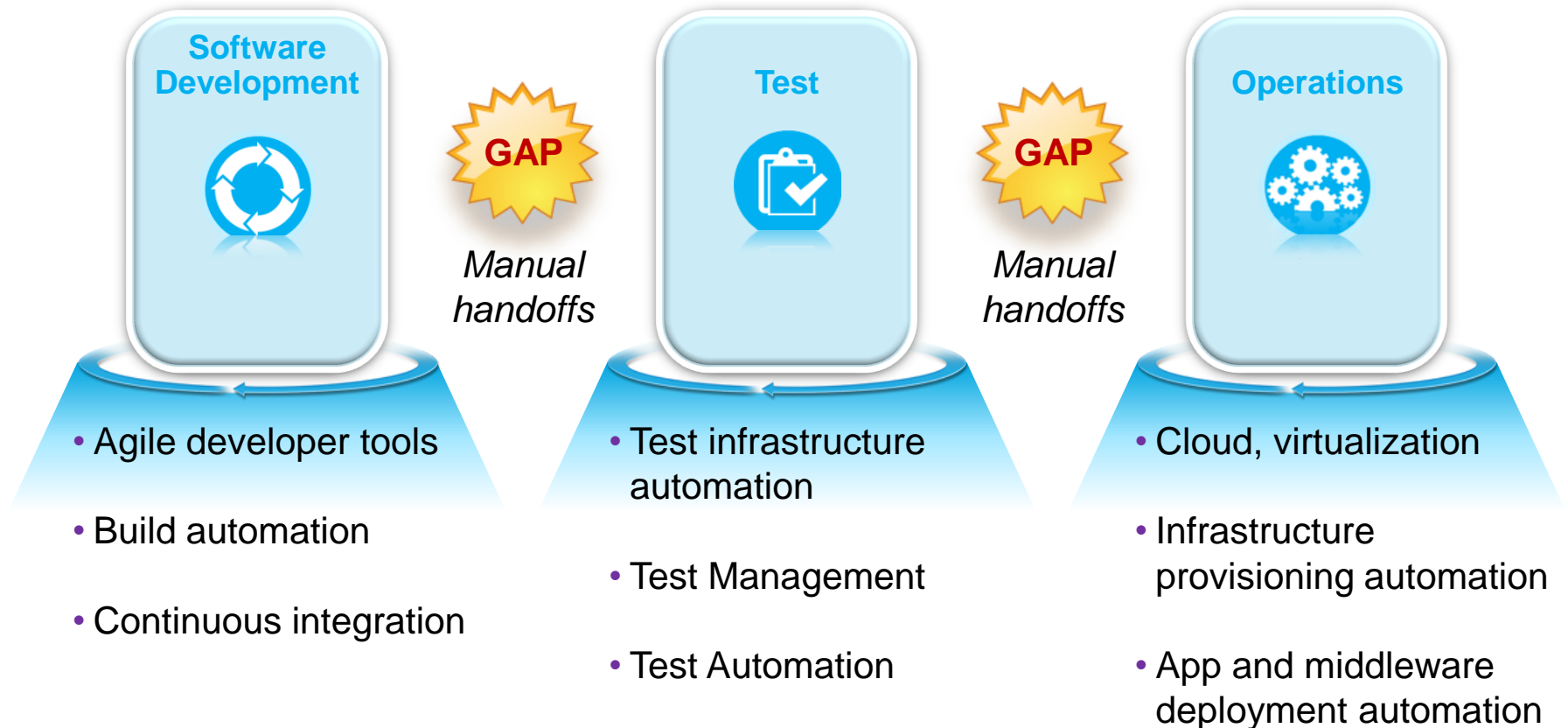
applications rolled back due to quality issues escaping into production

45%

experience delays due to troubleshooting and fine-tuning issues in production

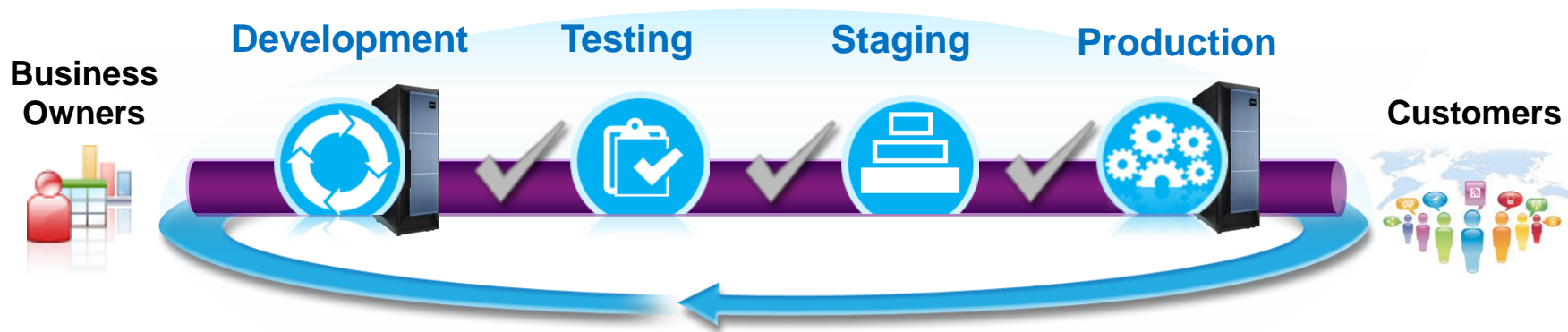


Selective and siloed solutions limit visibility across people, process and tools and create gaps in the delivery process



Goal of continuous delivery and need for continuous delivery pipeline

*Ensure applications are production-ready throughout the lifecycle and can be released at any time while minimizing rollback due to quality issues*



**Continuous Delivery Pipeline:**

An iterative set of quality checks and verifications that each piece of application code must pass during lifecycle phases before being released to production.

✓ **Continuous Integration**

- Deliver code changes faster via automated, repeatable execution of build processes

✓ **Continuous Deployment**

- On-demand environment configuration
- Continuously deploy code and configure middleware

✓ **Continuous Testing**

- Automate testing in production-like environments

✓ **Continuous Monitoring**

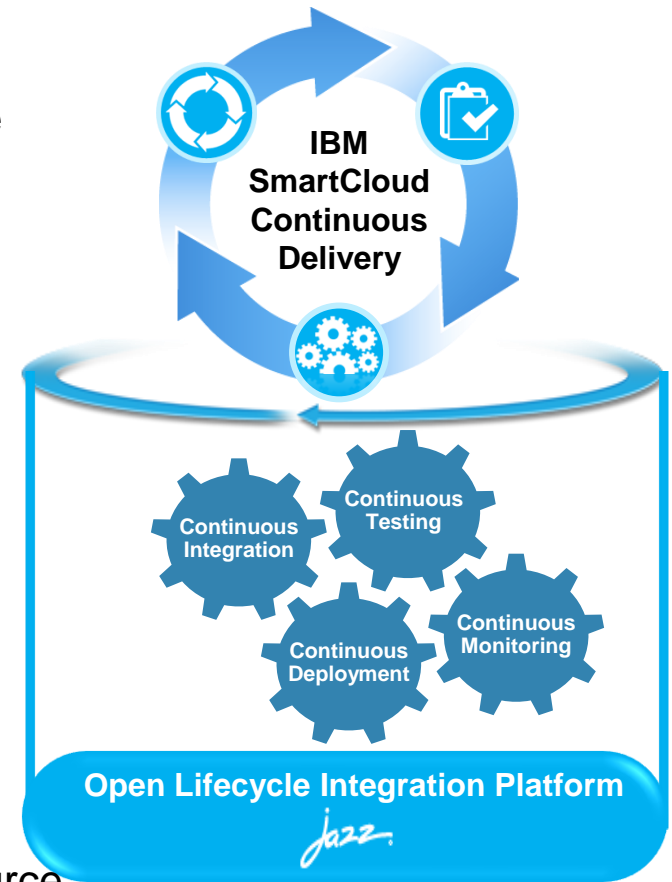
- Gain visibility into application performance
- Trace and isolate product defects

✓ **Deployment Library**

- Govern software delivery assets in the pipeline

✓ **Leverage existing investments**

- Sure OSLC integration with IBM, 3rd party & Open source



NEW

IBM SmartCloud Continuous Delivery 2.0

*"I tested earlier, reduced testing time by 99% from 2 weeks to 3 days"*



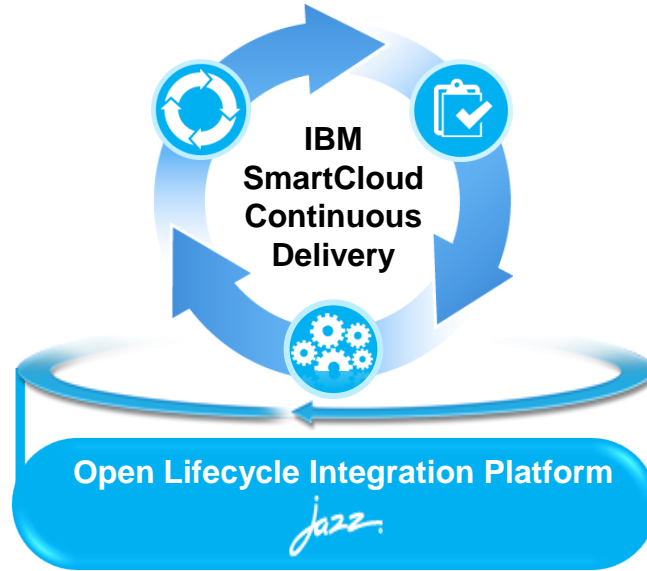
Testing Team  
IBM Case study

NOW!



Supported integrations enabling continuous delivery across the lifecycle

✓ Extending ALM with continuous delivery



✓ Deployment to cloud and virtual systems

**Continuous Integration**

- IBM Rational Build Forge
- Hudson
- Jenkins

**Continuous Deployment**

- *IBM Private Clouds:*
  - IBM SmartCloud Provisioning
  - IBM PureSystems
  - IBM Workload Deployer
- IBM Rational Automation Framework
- Chef / Custom Scripts

**Continuous Testing**

- IBM Rational Quality Manager
- IBM Rational Test Workbench
- jUnit
- Cucumber

**Continuous Monitoring**

- IBM SmartCloud Application Performance Management
- IBM SmartCloud Control Desk

Support for IBM clouds and virtual systems

*Patterns can be automatically provisioned to IBM Cloud and virtual systems*



**IBM Private Cloud Solutions:**



**IBM SmartCloud Provisioning**

Virtualization management and cloud computing for fast application deployment



**IBM Workload Deployer**

Speeds application deployment to cloud and virtualization environments



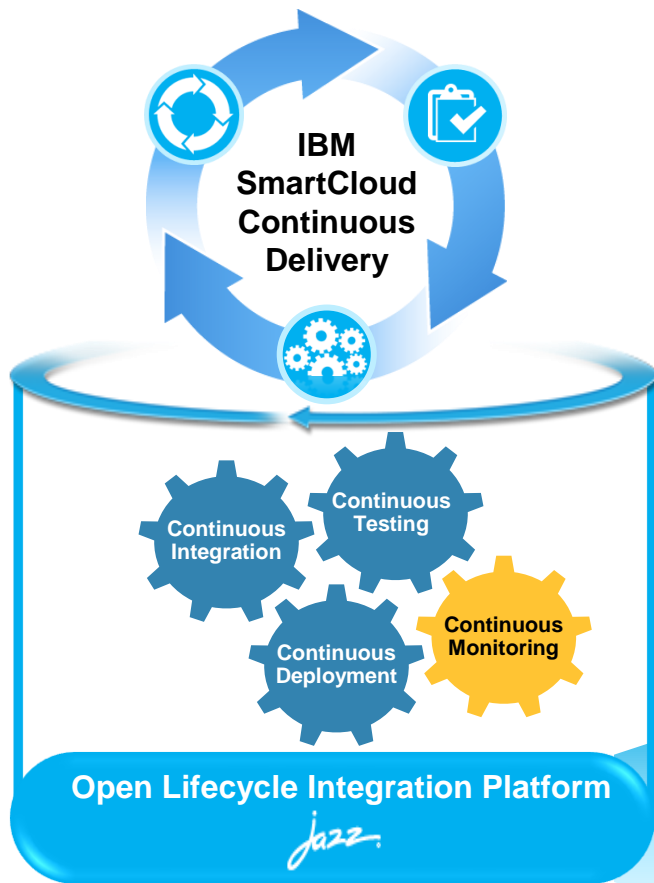
**IBM PureSystems**

Expert integrated systems combine the flexibility of general purpose systems, the elasticity of cloud and the simplicity of an appliance



Extend: leverage application performance management

*Integrating performance earlier and more often in the lifecycle enabling continuous improvements*



*Helped IT administrators increase systems availability from 90% to 99%*

**Performance Management:  
IBM SmartCloud Application Performance Management**

Provisions performance profile for development and test to view performance trending and improvements throughout the lifecycle.



Enabled costs to remain flat as demand for services increased **35 percent**

*Reduced the time required to begin working on a new project from three months to four weeks*



Reduced testing time from **2 weeks to 3 hours**

*Accelerated product delivery with significantly improved quality*

**Large Insurance Company**

**Increased speed and innovation**

*Delivered new capabilities to their clients while reducing the effort required to maintain existing applications*