



# Accelerate delivery to optimize business outcomes

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*IBM Software, Rational*

IBM Software

# Innovate2012

The Premier Event for Software and Systems Innovation

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# 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**

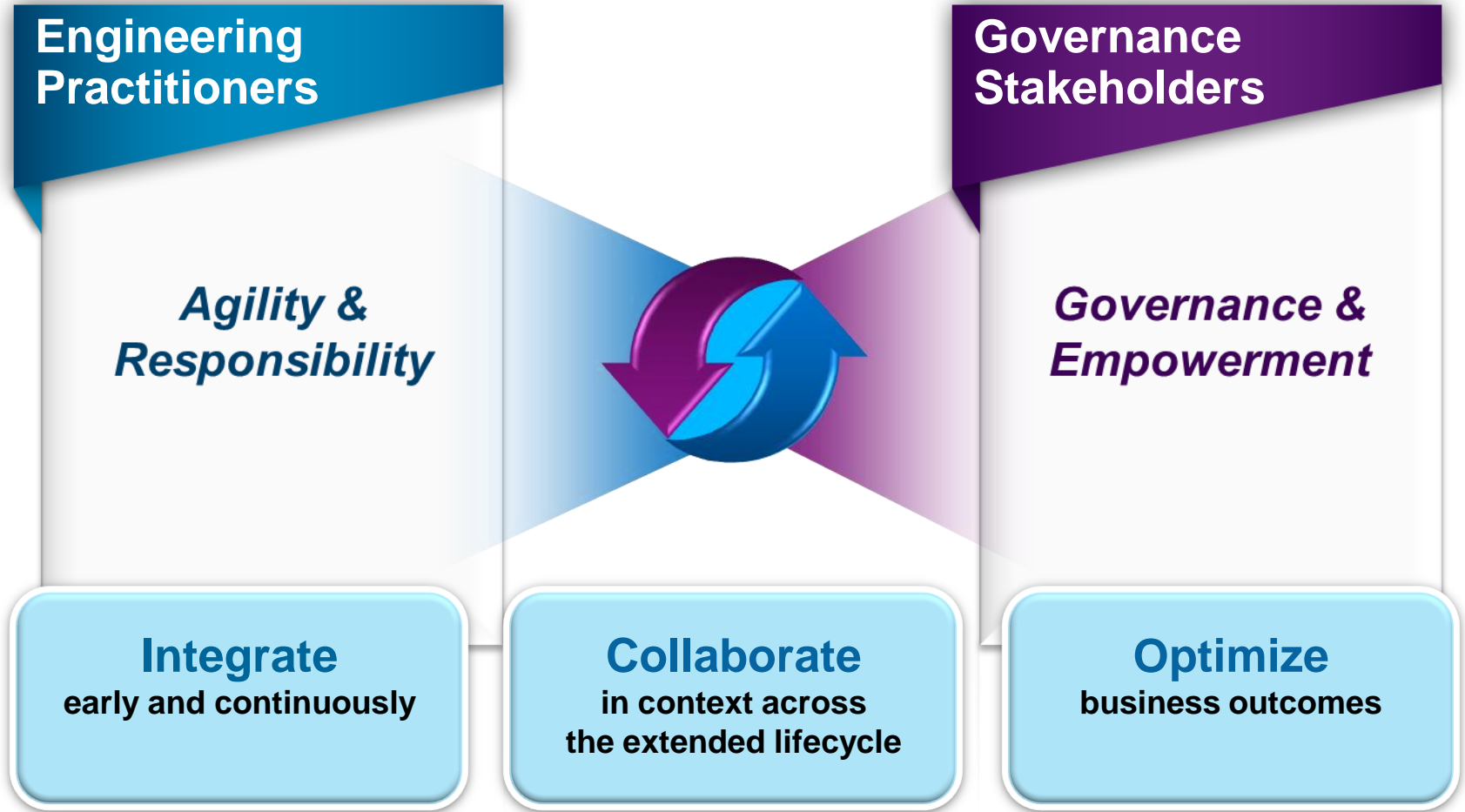


## Governance Stakeholders

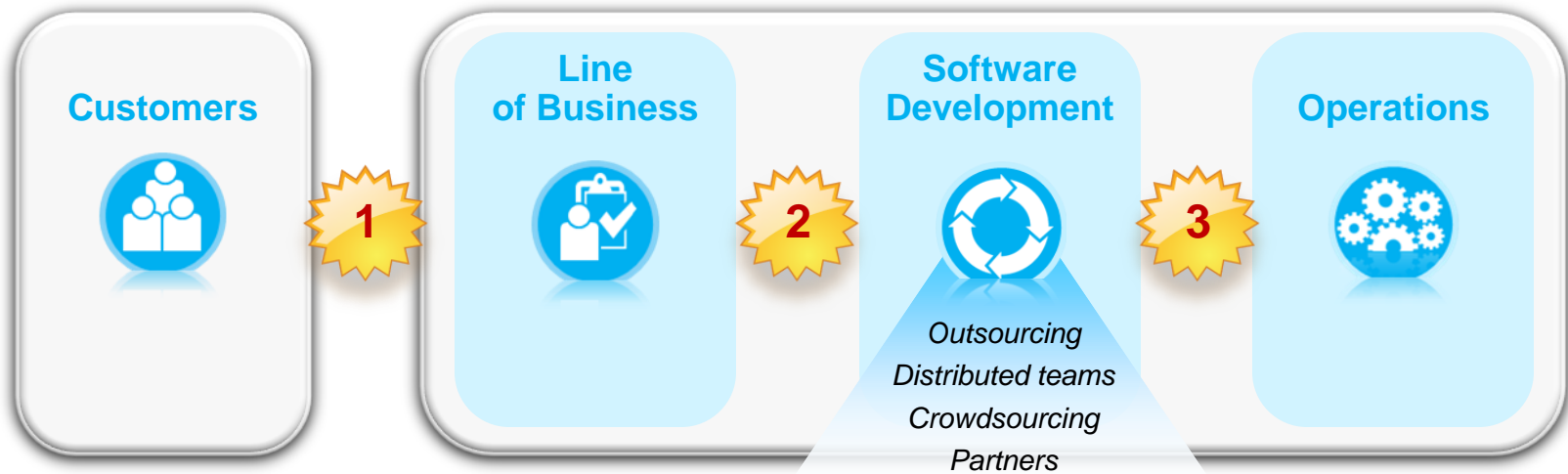
- Achieve predictable outcomes
- Manage risk
- Ensure compliance
- Improve software economics
- Visibility and transparency

**Enable Agility**

# Succeeding in the new development reality



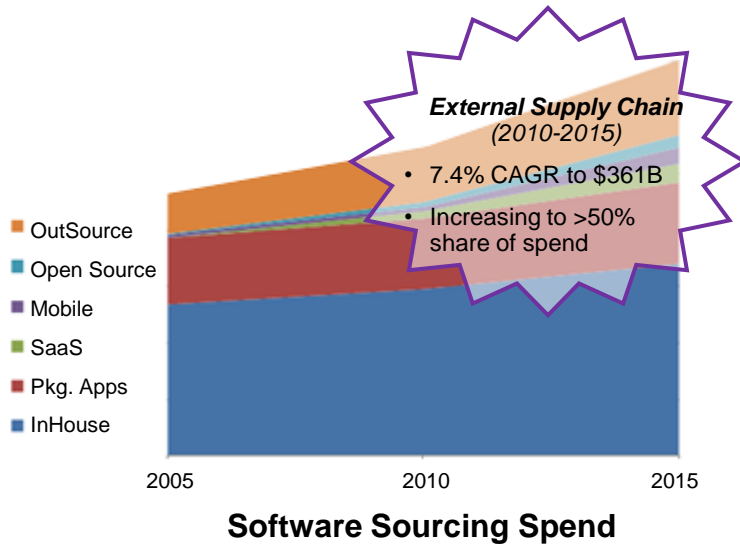
# Inhibitors to accelerated delivery for software and systems engineering



**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

# Software sourcing spend shifting rapidly towards multi-sourcing models creating a software supply chain



Source: IBM Market Development and Insights: "Software Sourcing Market Analysis, Feb 2012"

- **Market Trends**
  - Rapid increase of multi-source options for software and systems delivery strategy
  - Disruptive technologies are evolving traditional sourcing models
  - Increasingly complex multi-sourcing governance requirements
- **Outsourcing**
  - 96% of large enterprises will maintain/grow spend
  - 15.7 % CAGR to \$16.3B
- **Open Sourcing**
  - Global 2000 to increase usage from 75% to 99% by 2016
- **Packaged Apps**
  - 3% CAGR to \$144B
- **Crowdsourcing**
  - Gaining traction especially with proliferation of social technologies

**Opportunity:** IBM Rational has **market permission** and **critical mass of product capabilities** to offer a compelling value proposition around an **enabling Platform** for Software Supply Chain management



Most businesses are *concerned* about their ability to deliver sustained innovation while controlling cost and risk

**Challenge:**

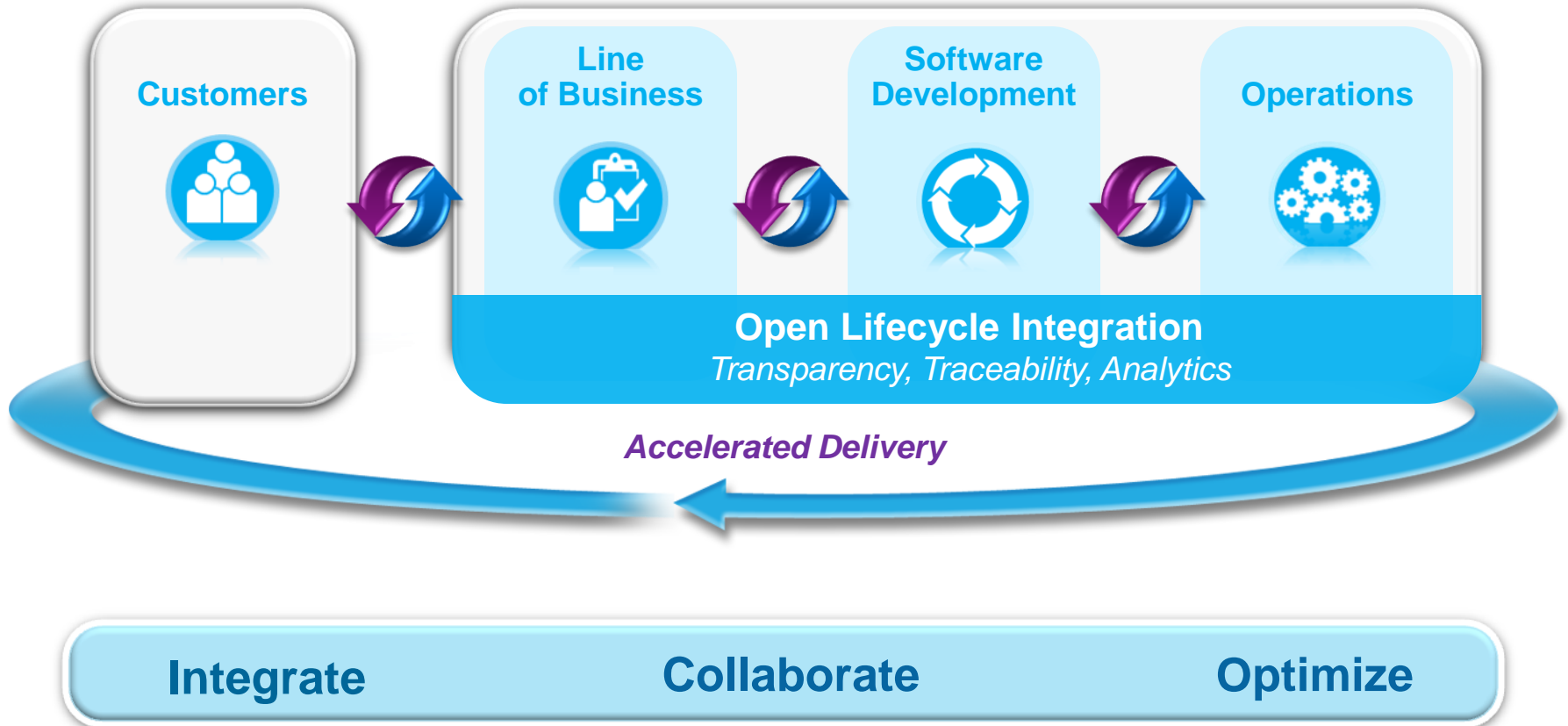
- Global transparency ignores need for multiple, customizable layers of visibility, privacy, security, etc.
- Sub-contracting of deliverables (including off-shore)

**DevOps**

- 65% of clients see lack of automation slowing down software releases
- 39% of application releases take between 1-7 days to deploy
- Applications deployed into production need to be rolled back due to unforeseen errors



# Accelerated delivery for software and systems engineering



# 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*

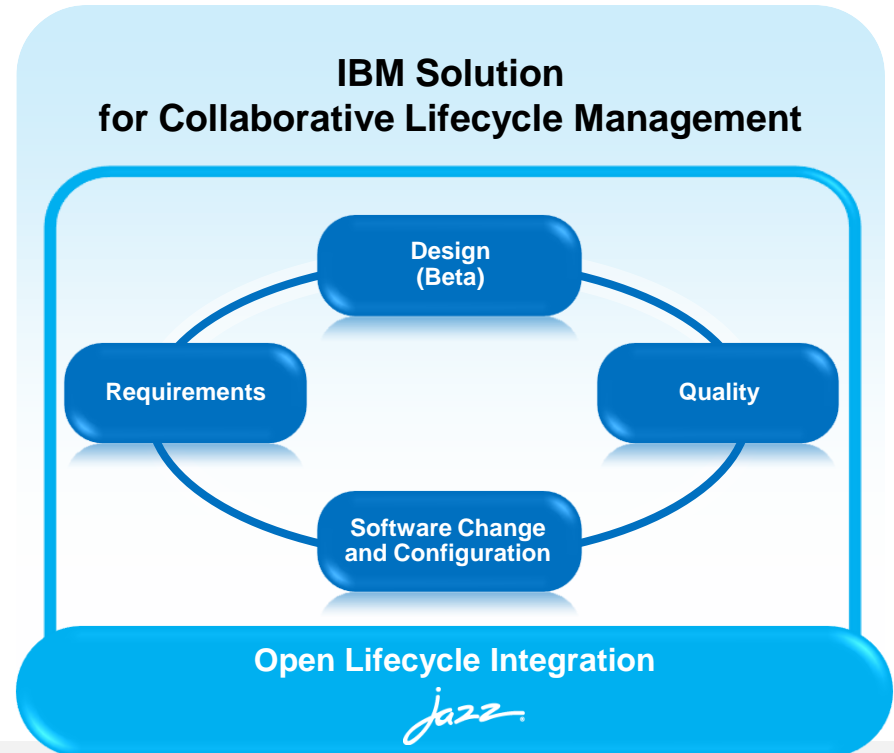
**40%**

reduced time-to-market

*for signaling systems products*

# 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

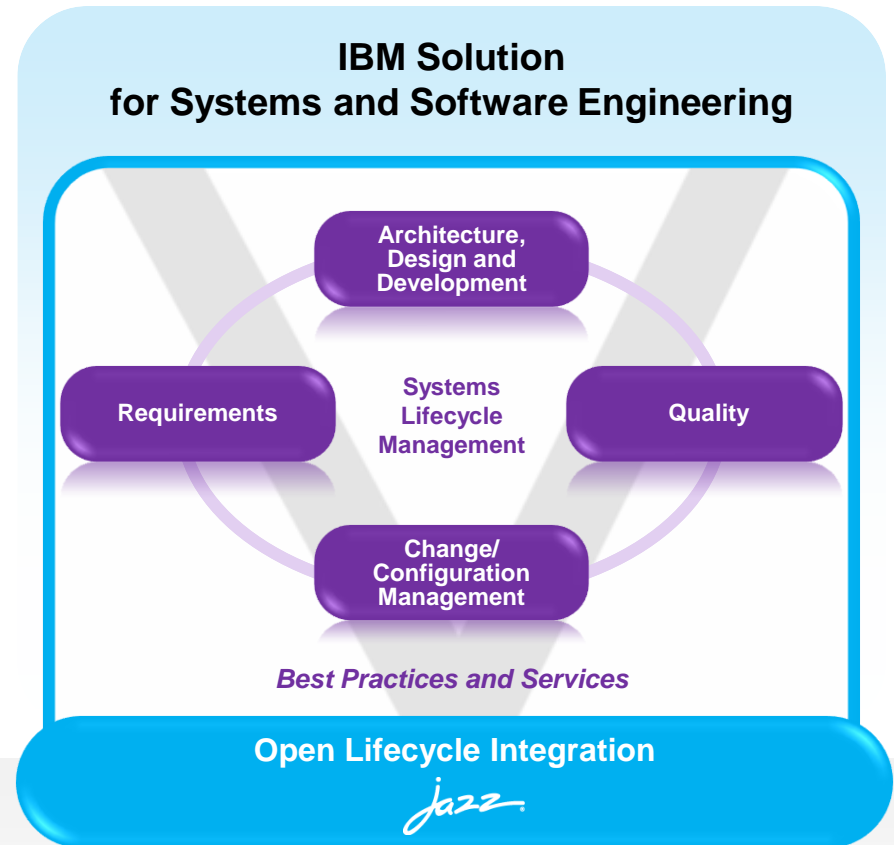


**ENHANCED**

- 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 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

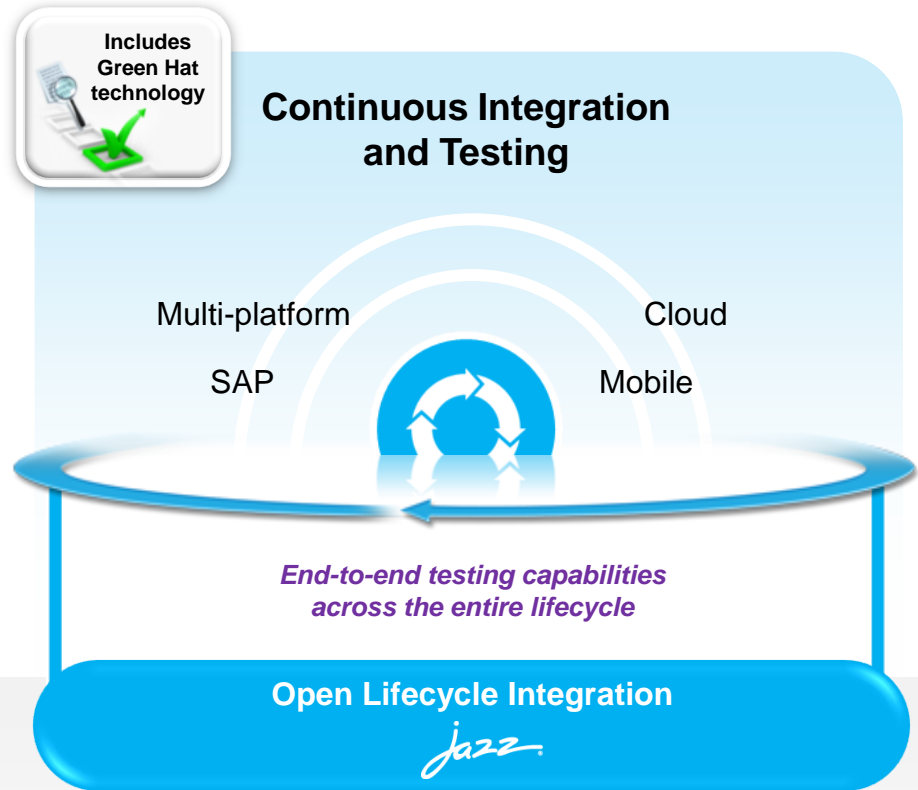


**ENHANCED**

- 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

# 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**

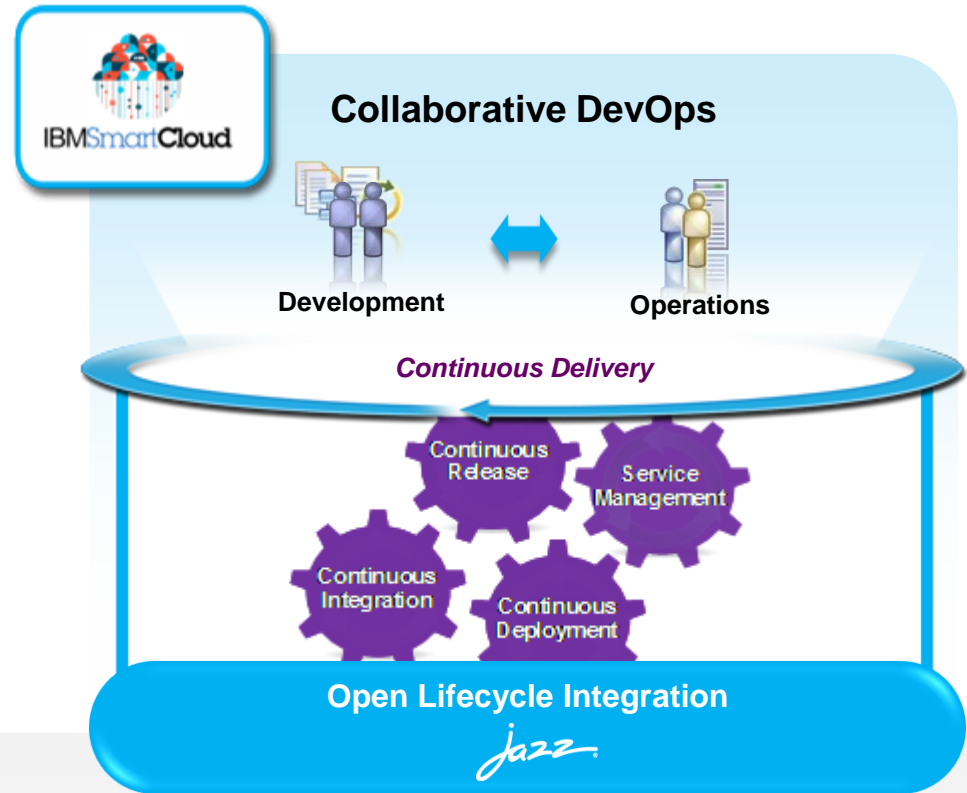
- IBM Rational Test Workbench v8.0
- IBM Rational Performance Test Server v8.0
- IBM Rational Test Virtualization Server v8.0
- IBM Continuous Integration Solution for System z

**ENHANCED**

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

# 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

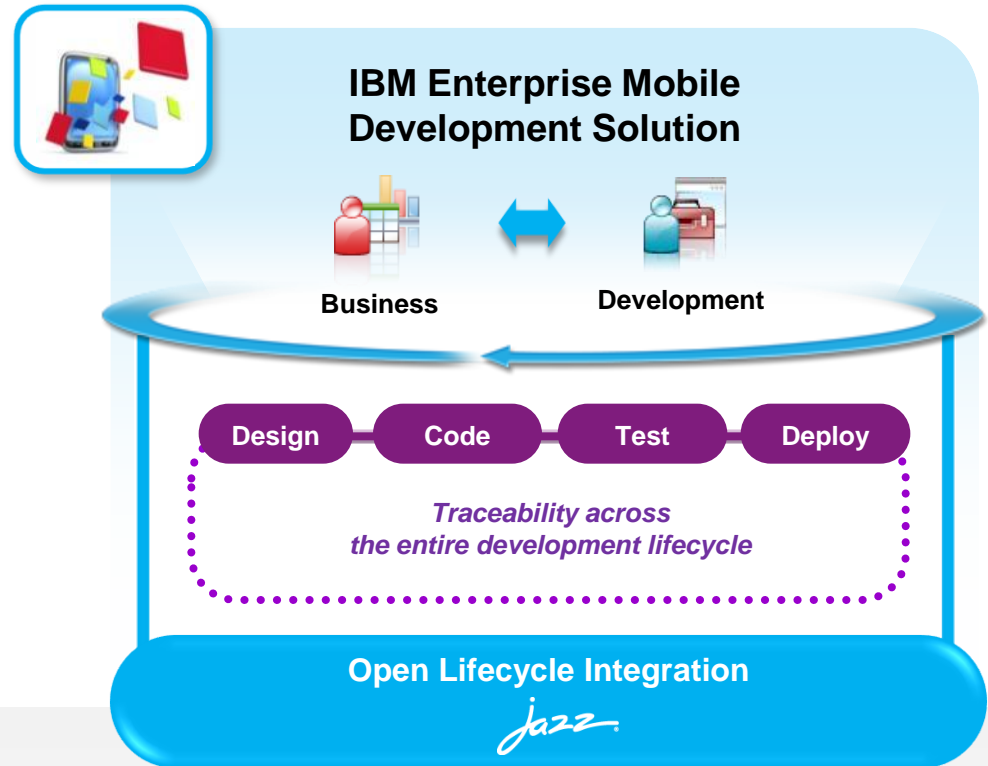


**NEW**

- 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**

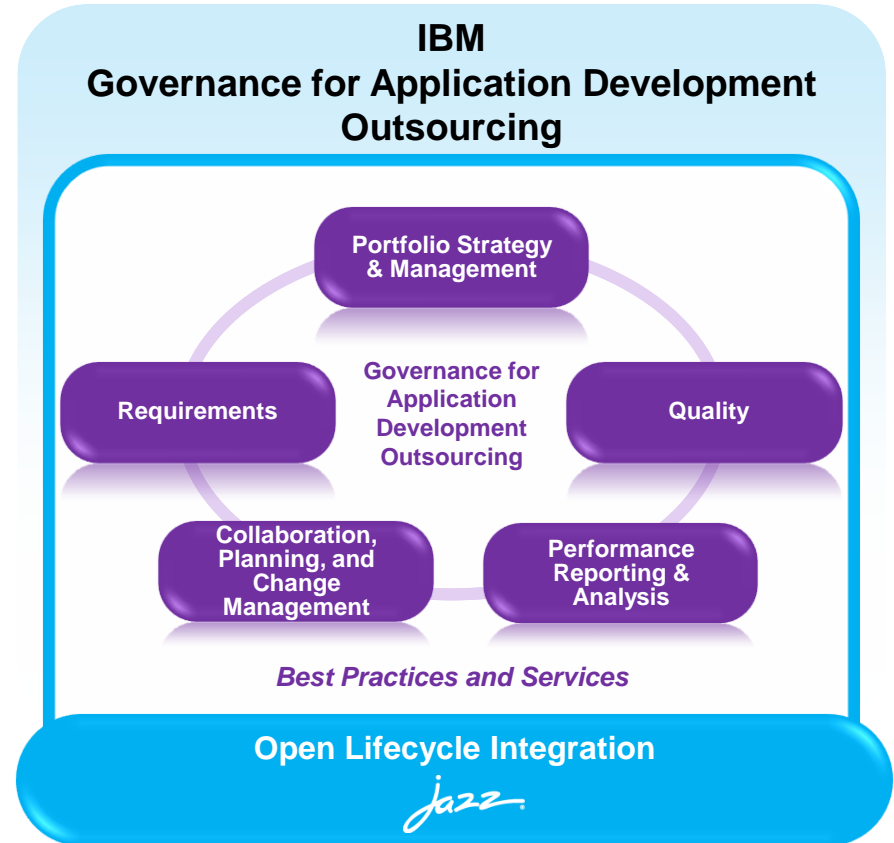
- IBM Enterprise Mobile Development Solution
  - IBM Solution for Collaborative Lifecycle Management
  - IBM Worklight Studio v5.0 and IBM Worklight Server v5.0
  - IBM Application Center v5.0



# Lower the risks of application development outsourcing

*Deliver predictable business outcomes across multi-supplier structures*

- Collaborate with providers to maximize value
  - Leverage eco-system of value-add providers
  - Facilitate on/off boarding of SW suppliers based on quantifiable business results
- Integrate to make value- based decisions
  - Capture business value of software requirements
  - Perform joint cost/benefit and trade-off analysis to make more informed investment decisions
- Optimize business value
  - Maintain continuity of business value of software requirements across all application development suppliers
  - Increase value of business outcomes with effective change management practices



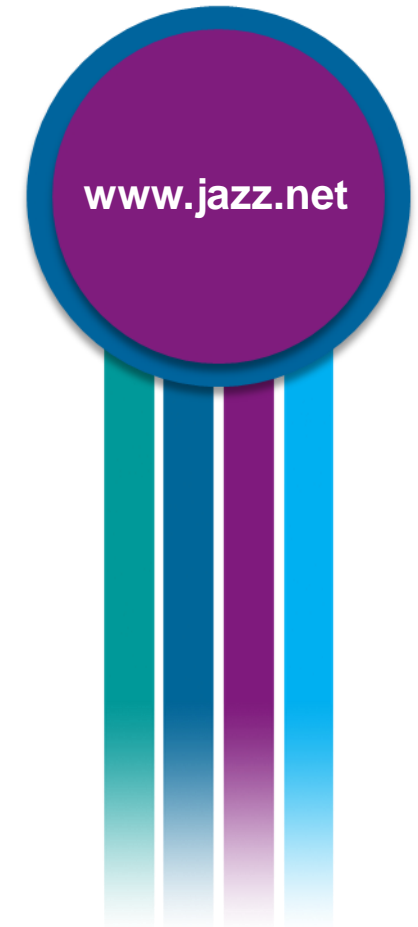
**NEW**

- IBM Rational Focal Point 6.5.2
- IBM Rational Requirements Composer 4.0

## 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



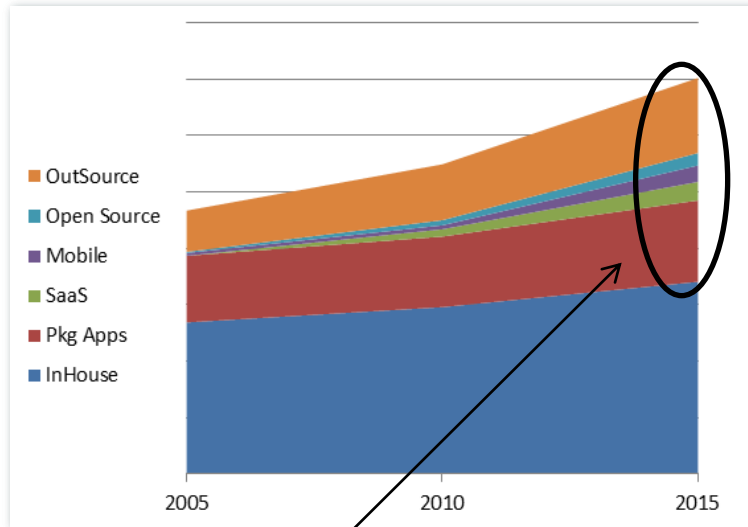


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# Software Sourcing Spend Shifting Rapidly Towards Multi-Sourcing Models creating a Software Supply Chain

Software Sourcing Spend



Source: IBM Market Development & Insights: "Software Sourcing Market Analysis, Feb 2012"

**External Supply Chain (2010-2015):**

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

### Market Trends

- Rapid increase of multi-source options for Software and Systems Delivery strategy
- Disruptive technologies are evolving traditional sourcing models
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### Outsourcing

- 96% of Large enterprises will maintain/grow spend
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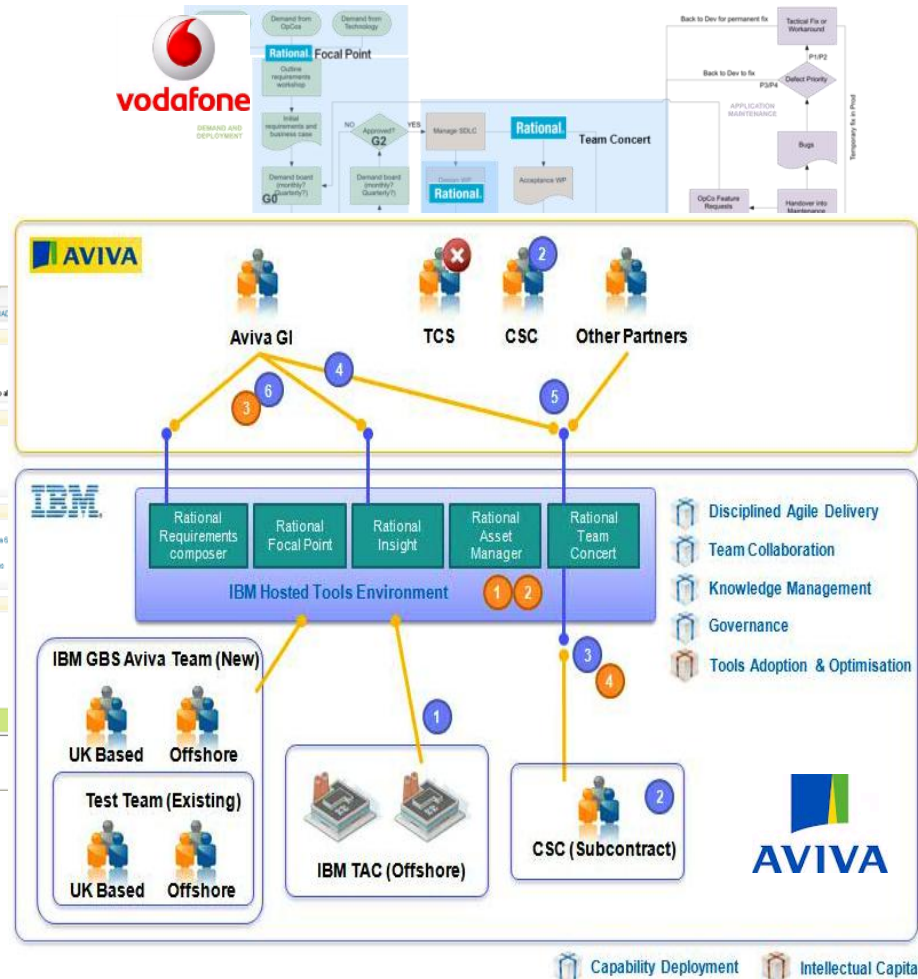
- Gaining traction especially with proliferation of social technologies

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# Align multisource with a well-managed Software Supply Chain

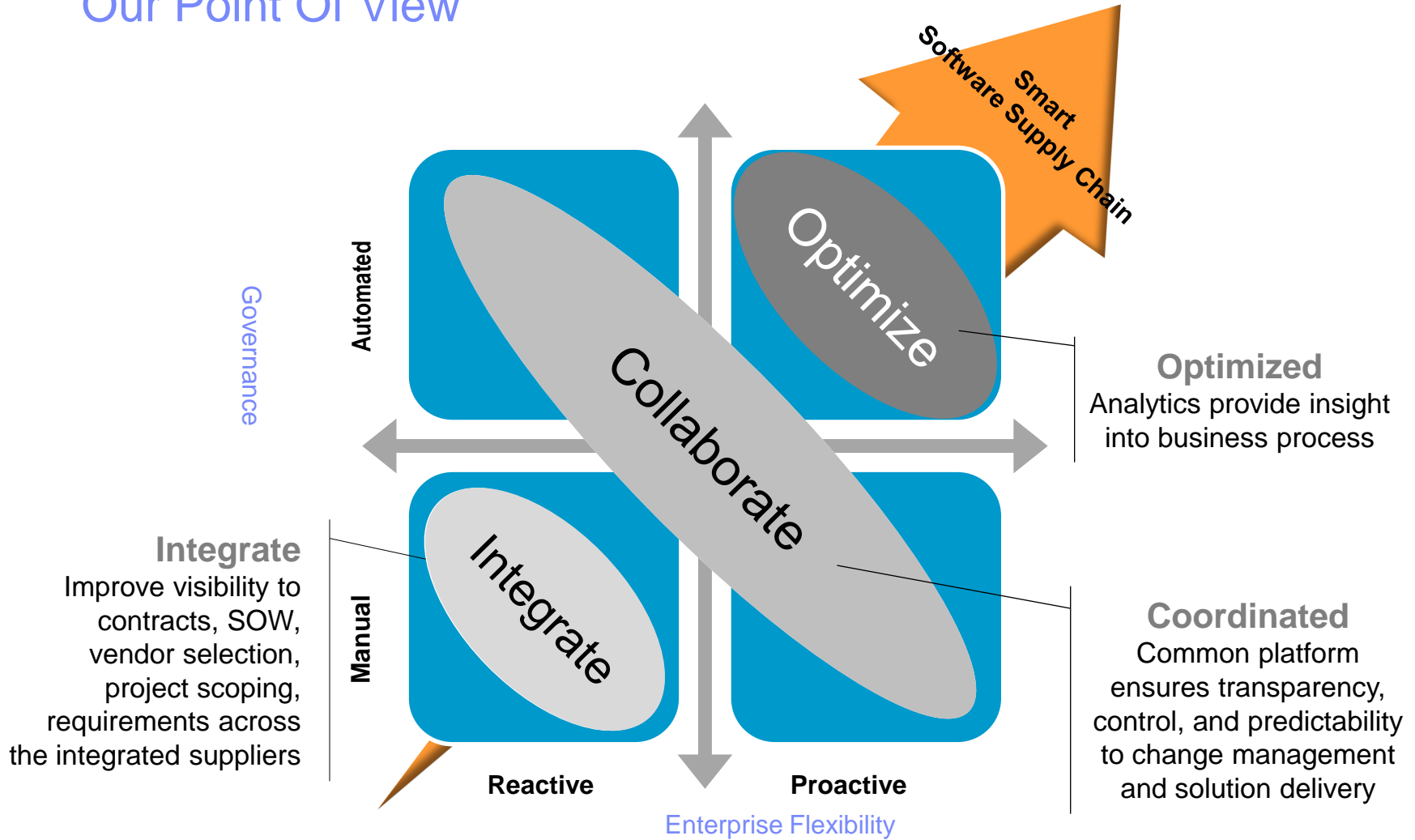
## Deliver consistent business outcomes across the Software Supply Chain

- 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

# Our Point Of View



Software Supply chain is currently a fragmented business process just as SDLC was before ALM

# The Global Software Supply Chain

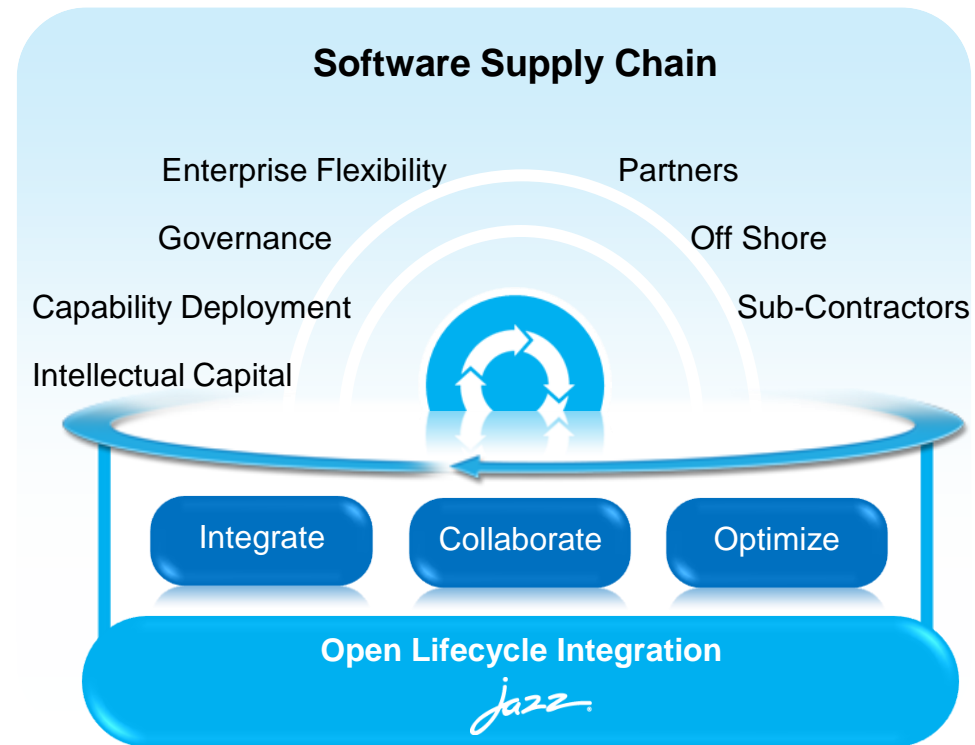
In the beginning...	Typical Practice	Advanced Practice
<ul style="list-style-type: none"> <li>Country-based delivery</li> </ul>	<ul style="list-style-type: none"> <li>Onshore / Offshore</li> </ul>	<ul style="list-style-type: none"> <li>Networked Global Centers</li> </ul>
<ul style="list-style-type: none"> <li>Utilization based</li> </ul>	<ul style="list-style-type: none"> <li>Deliverables based</li> </ul>	<ul style="list-style-type: none"> <li>Outcome based</li> </ul>
<ul style="list-style-type: none"> <li>Limited collaboration</li> </ul>	<ul style="list-style-type: none"> <li>Core team collaboration by project</li> </ul>	<ul style="list-style-type: none"> <li>Community Collaboration across process and technology</li> </ul>
<ul style="list-style-type: none"> <li>No workflow management</li> </ul>	<ul style="list-style-type: none"> <li>Limited workflow management</li> </ul>	<ul style="list-style-type: none"> <li>Component-based workflow management</li> </ul>
<ul style="list-style-type: none"> <li>No reuse</li> </ul>	<ul style="list-style-type: none"> <li>Ad hoc reuse</li> </ul>	<ul style="list-style-type: none"> <li>Systematic reuse</li> </ul>
<ul style="list-style-type: none"> <li>Limited visibility</li> </ul>	<ul style="list-style-type: none"> <li>Visibility of standard project metrics</li> </ul>	<ul style="list-style-type: none"> <li>Pervasive transparency of all project artifacts</li> </ul>
<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Ad hoc improvement processes</li> </ul>	<ul style="list-style-type: none"> <li>Continuous improvement with Lean</li> </ul>
<b>Technology Platform</b>		
<ul style="list-style-type: none"> <li>Standalone development and project management tools</li> </ul>	<ul style="list-style-type: none"> <li>Limited tool integration and collaboration capability</li> </ul>	<ul style="list-style-type: none"> <li>Integrated technology platform enabling real-time collaboration and AD/M automation</li> </ul>



# Align multisource with a well-managed Software Supply Chain

## *Deliver consistent business outcomes across the Software Supply Chain*

- Today (Acquirer Focus):
- Future (Supplier Focus):
  - 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



**Software Supply chain is currently a fragmented business process just as SDLC was before ALM**

**NEW**

- IBM Rational Governance for Application Development Outsourcing



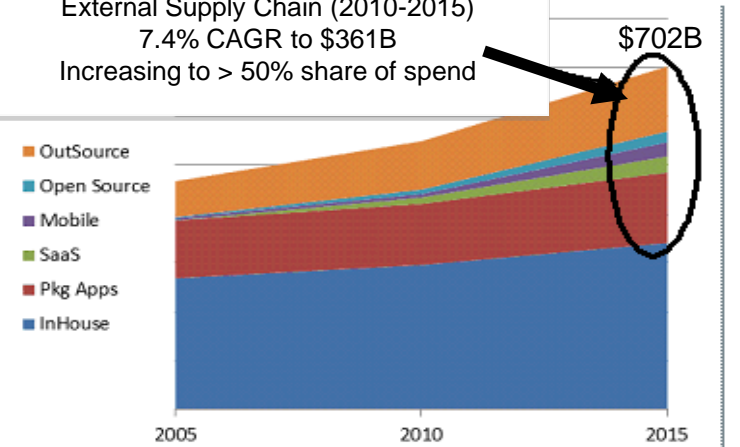
# Most businesses are *concerned* about their ability to deliver sustained innovation while controlling cost and risk

## Investment

## Challenge

### Software Sourcing Spend

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7.4% CAGR to \$361B  
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- Global transparency ignores need for multiple, customizable layers of visibility, privacy, security, etc.
- No sub-contracting of deliverables (incl. off-shore)
- 65% of clients see lack of Automation slowing down software releases
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Design & Development Processes

Service Delivery, Support & Operational Processes