



Accelerate delivery to optimize business outcomes

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IBM Software

Innovate2012

The Premier Event for Software and Systems Innovation



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

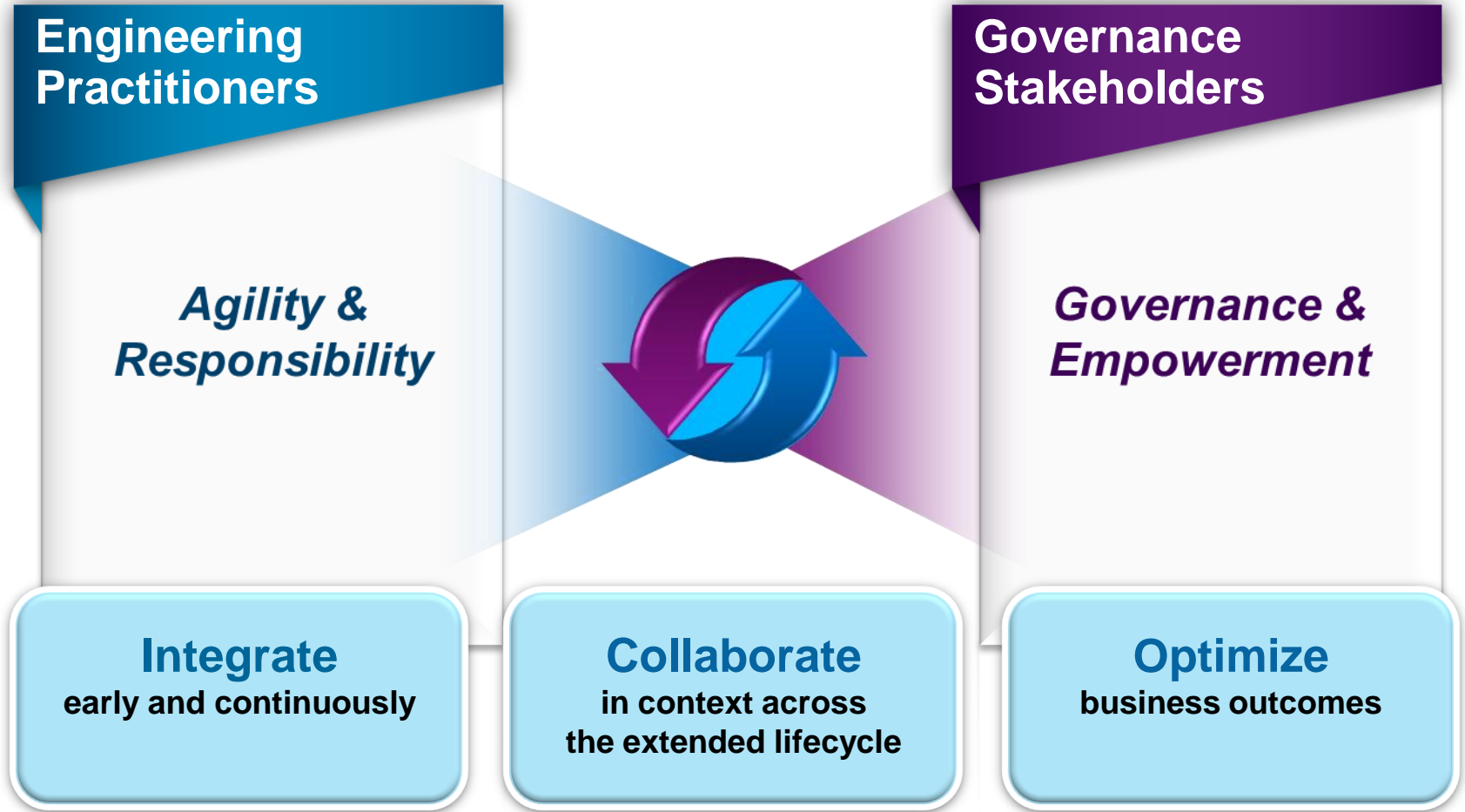
The Speed Of Trust

Governance Stakeholders

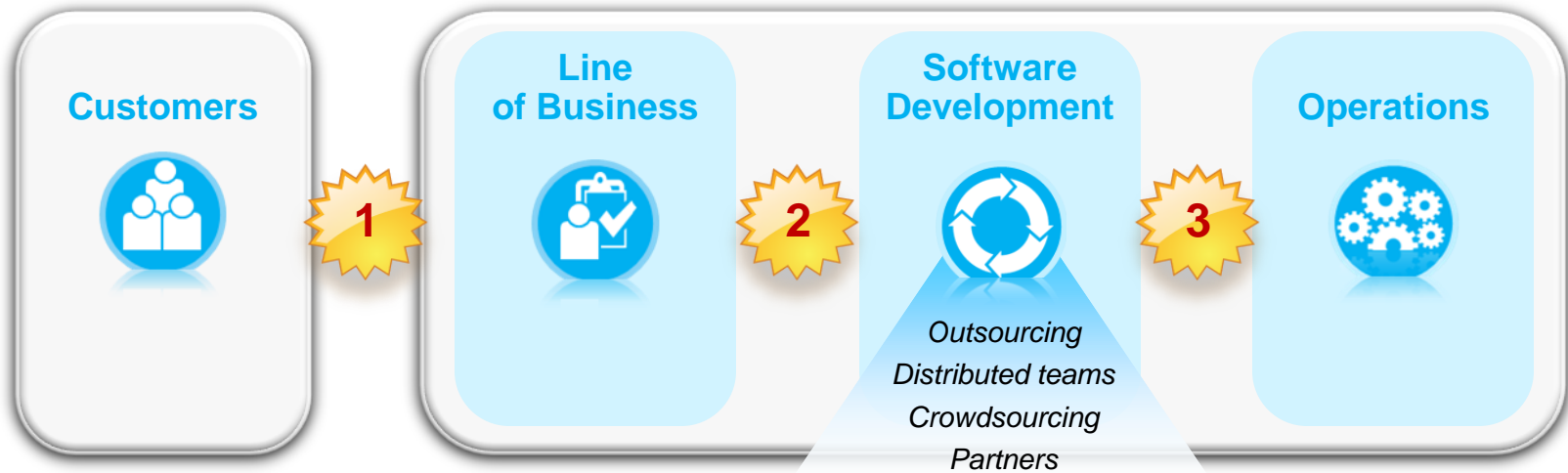
- Achieve predictable outcomes
- Manage risk
- Ensure compliance
- Improve software economics
- Visibility and transparency

Enable Agility

Succeeding in the new development reality



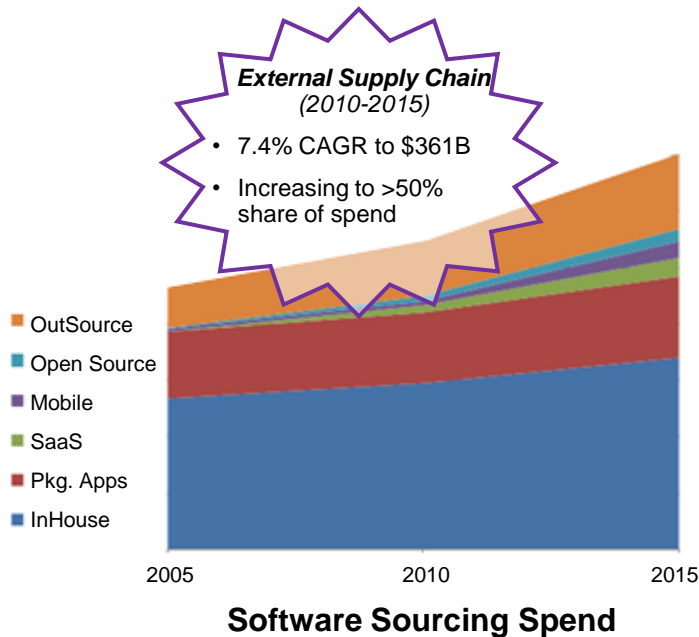
Inhibitors to accelerated delivery for software and systems engineering



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:

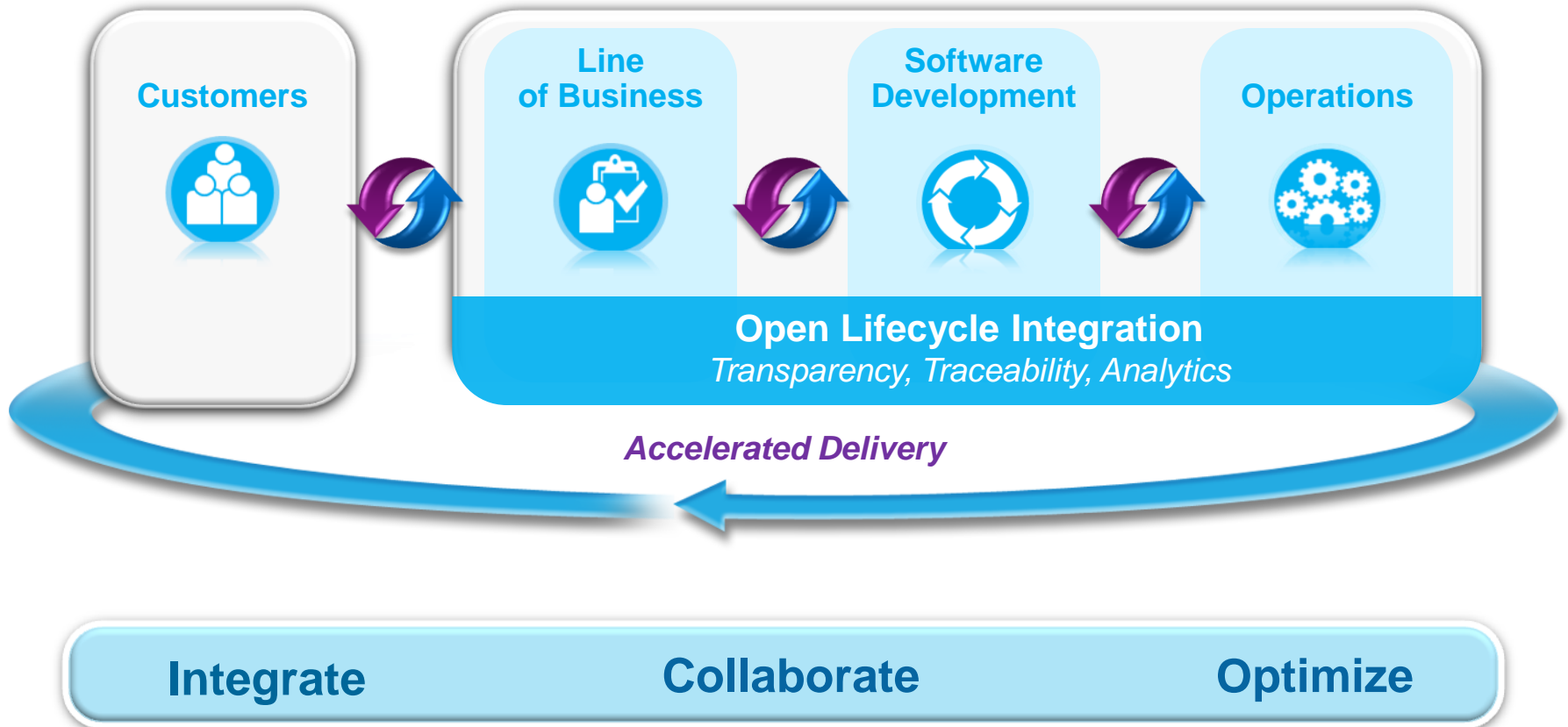
- Global transparency ignores need for multiple, customizable layers of visibility, privacy, security, etc.
- Sub-contracting of deliverables (including off-shore)

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

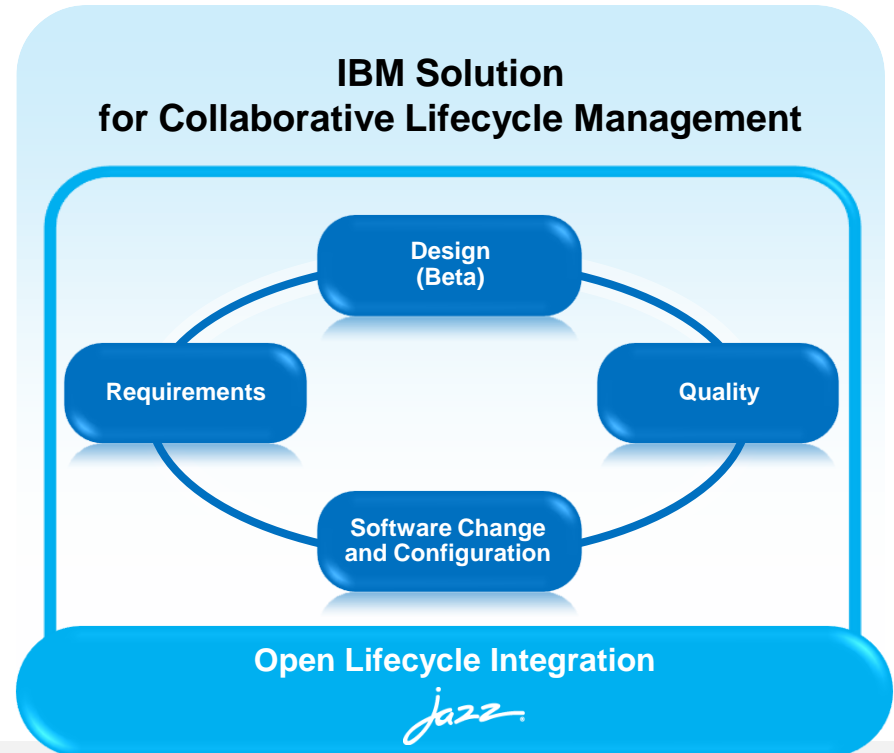
40%

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

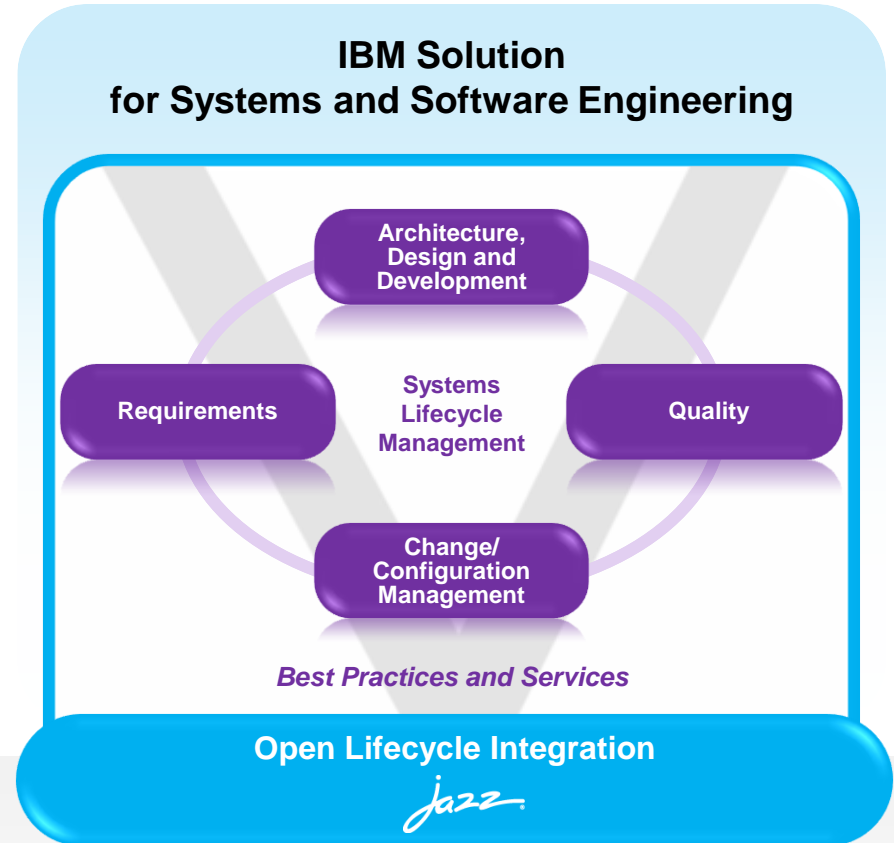


ENHANCED

- 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

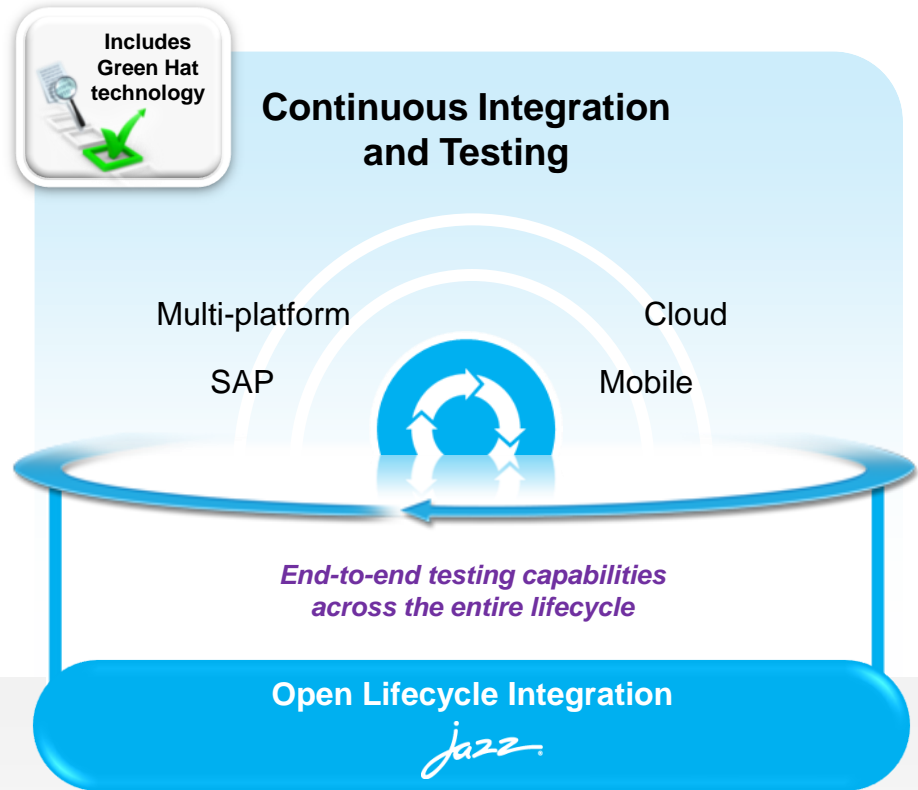


ENHANCED

- 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

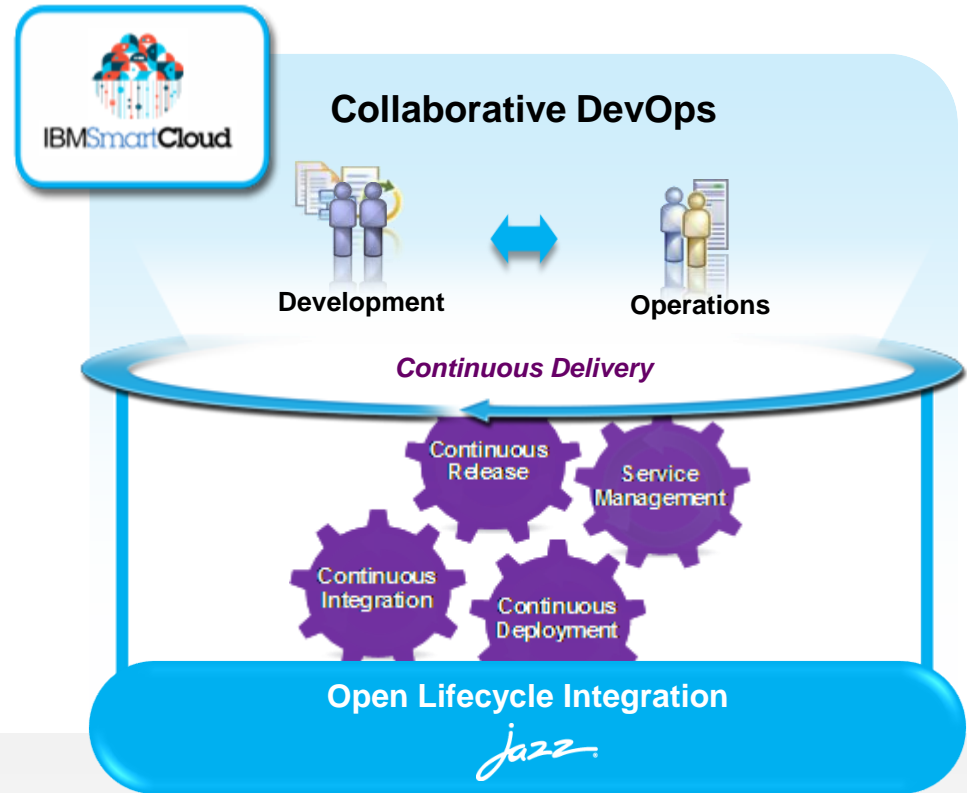
- IBM Rational Test Workbench v8.0
- IBM Rational Performance Test Server v8.0
- IBM Rational Test Virtualization Server v8.0
- IBM Continuous Integration Solution for System z

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

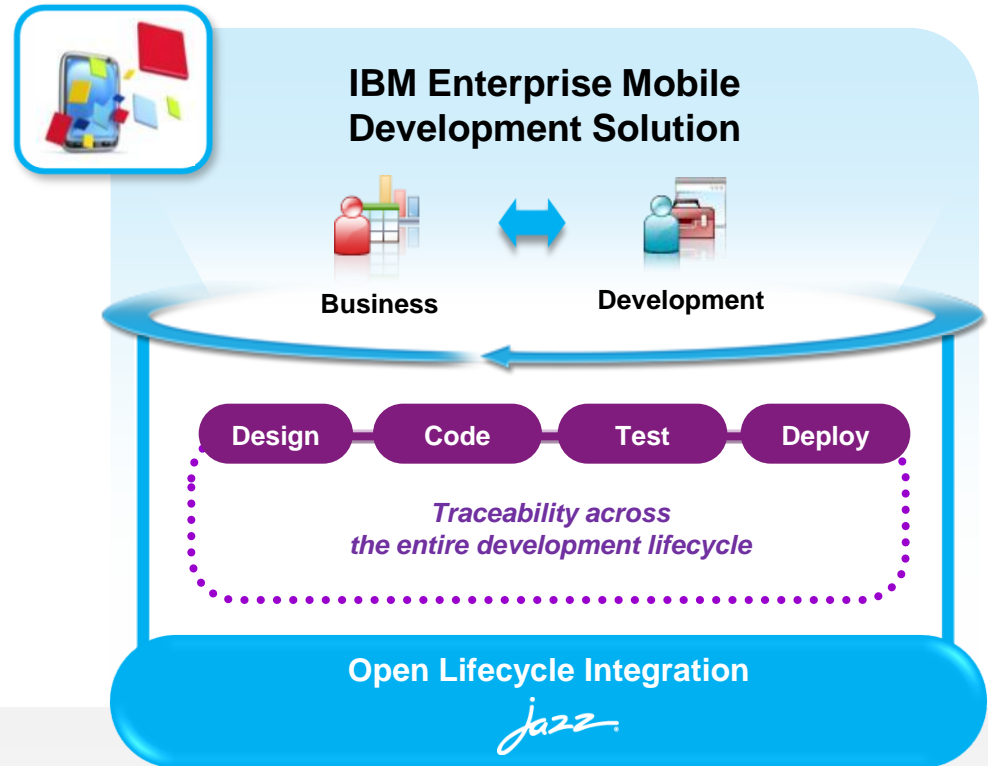


NEW

- 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



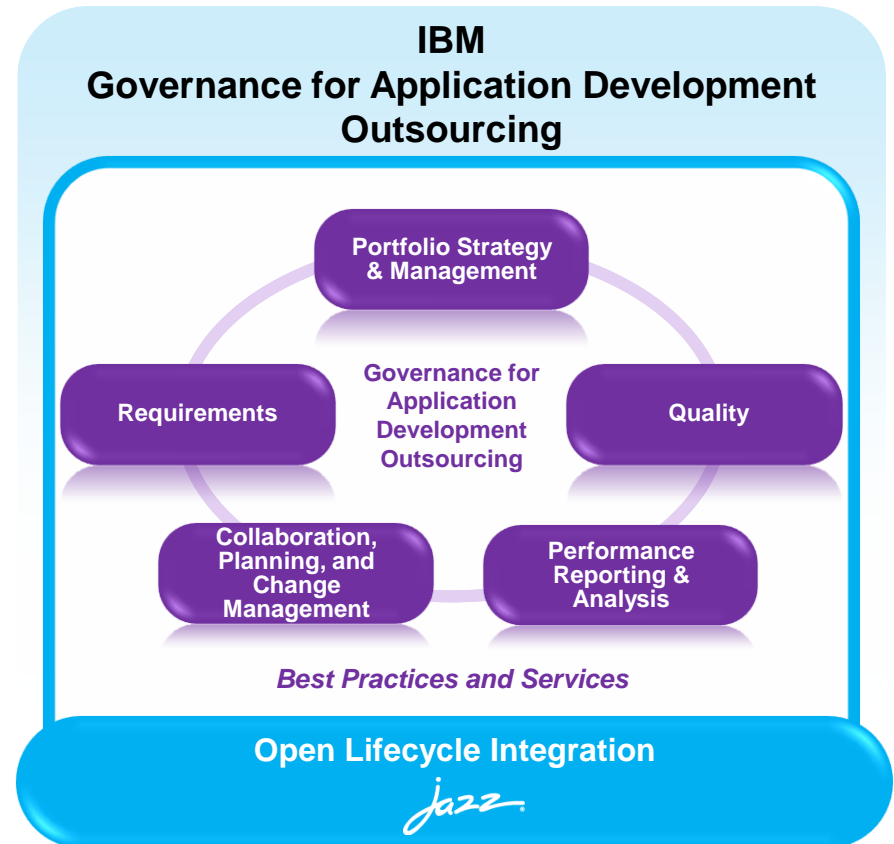
NEW

- 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



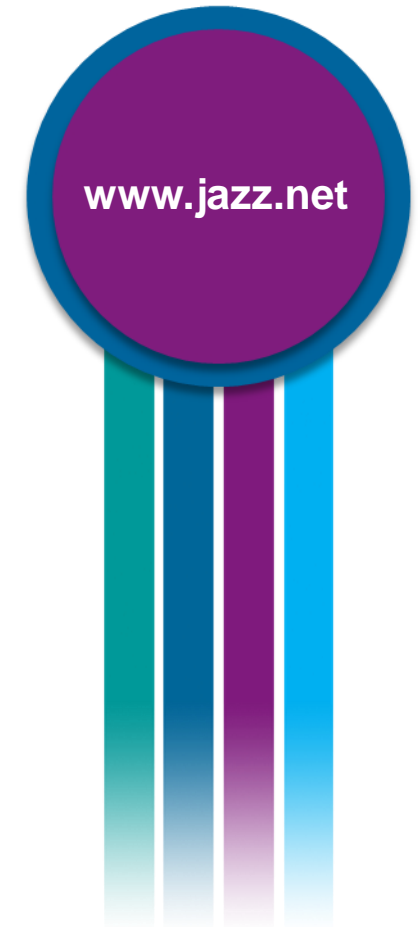
NEW

- 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





www.ibm.com/software/rational

jazz.net

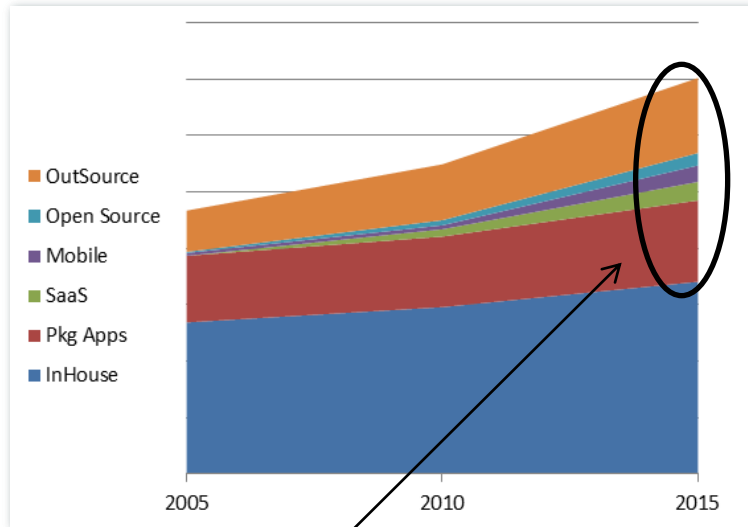
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Software Sourcing Spend Shifting Rapidly Towards Multi-Sourcing Models creating a Software Supply Chain

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

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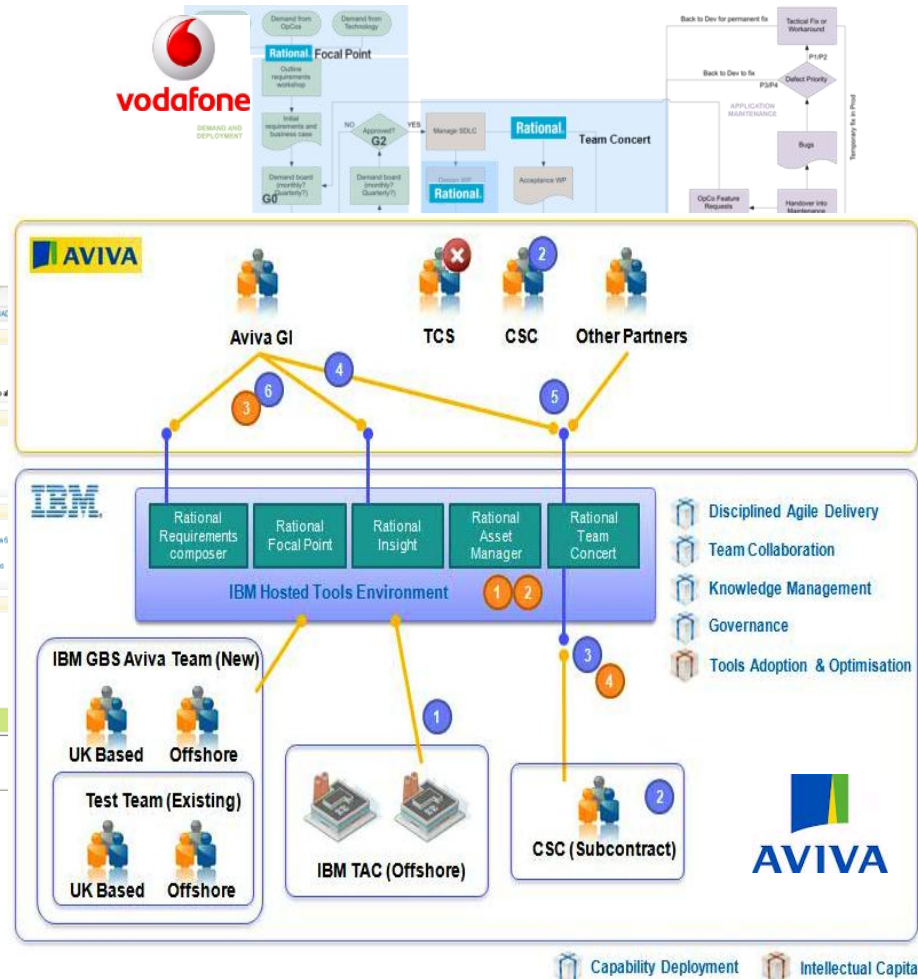
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Align multisource with a well-managed Software Supply Chain

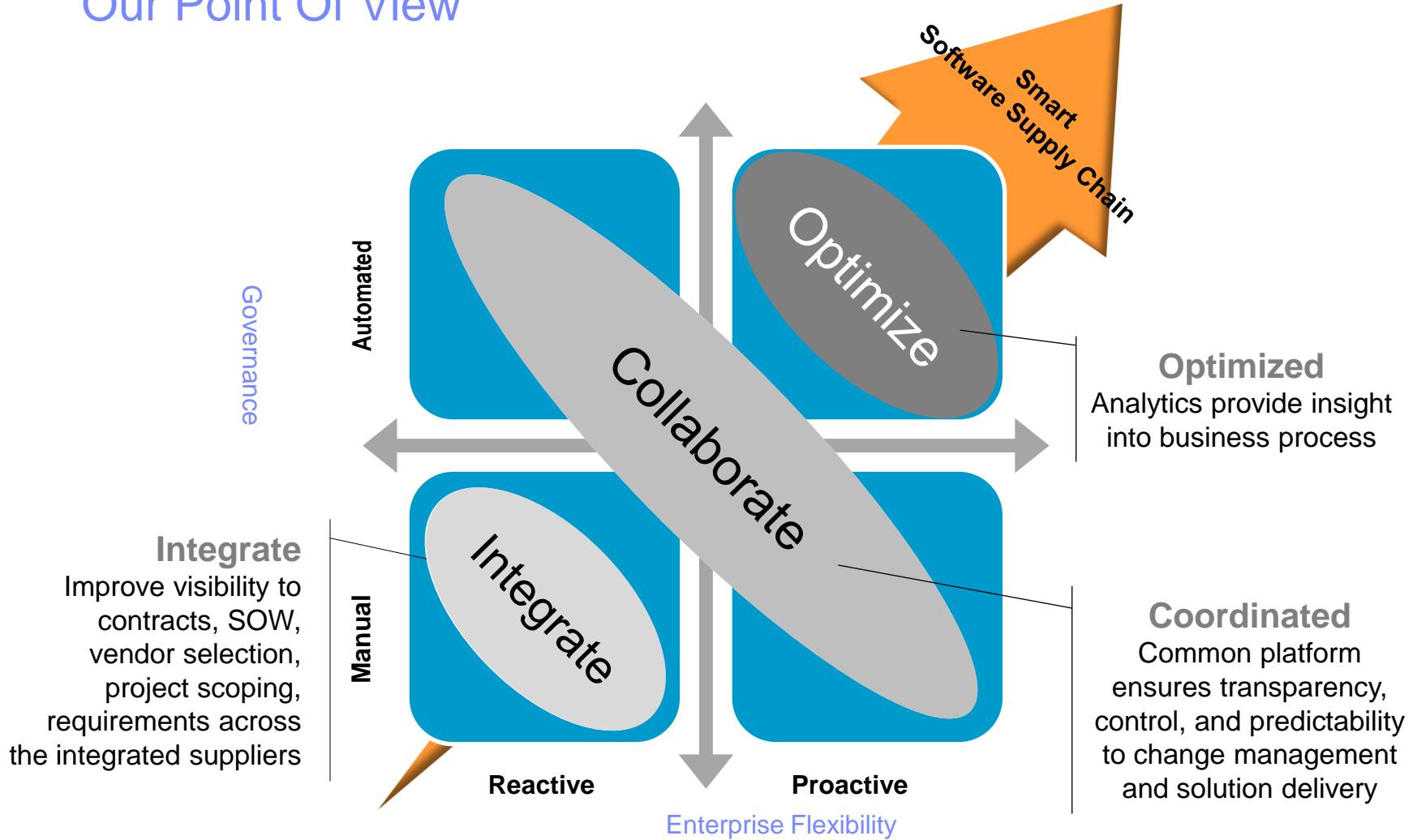
Deliver consistent business outcomes across the Software Supply Chain

- 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

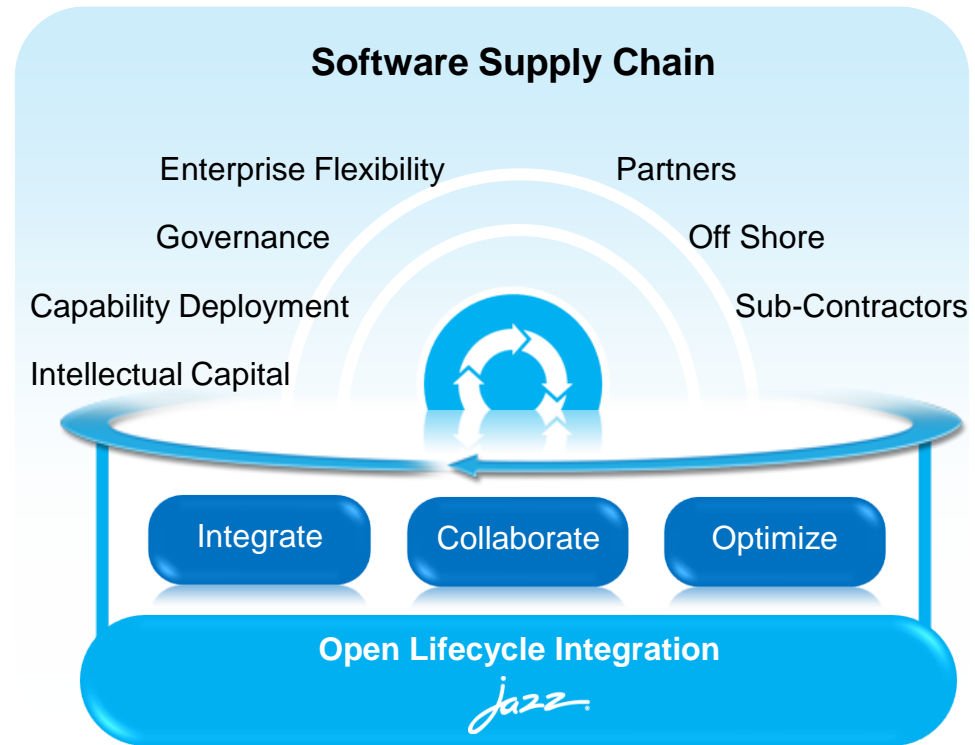
The Global Software Supply Chain

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

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



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NEW

- IBM Rational Governance for Application Development Outsourcing

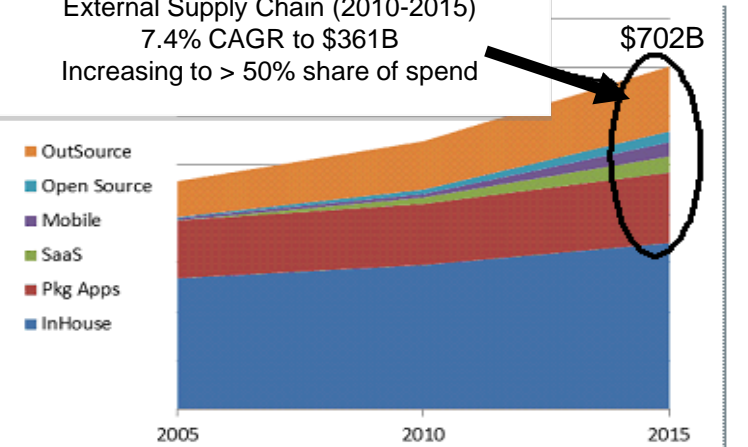
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Investment

Challenge

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- 65% of clients see lack of Automation slowing down software releases
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Design & Development Processes

Service Delivery, Support & Operational Processes