



IBM BusinessConnect 2014

A New Era of Smart

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A New Era of Smart



DevOps

Continuous delivery of software-driven innovation

- Philippe Fanjere
- Director, IBM Rational
- Middle East and Pakistan
- philippe@ae.ibm.com





- Most organizations spend >70% IT Budgets on keeping the lights on. → Some >90%

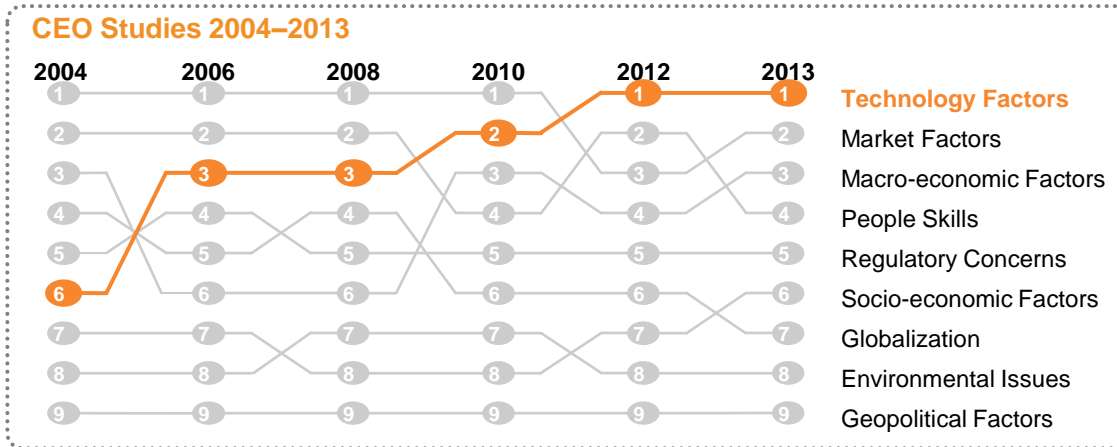


- How are we getting any innovation done?



CEOs identify technology as the most important external force impacting their organizations – again

- External forces that will impact the organization



Source: IBM Institute for Business Value, The Global CEO Study 2013. Question: "What are the most important external forces that will impact your organization over the next 3 to 5 years?"



Organizations that effectively leverage software innovation outperform their competitors... *yet few are able to deliver it effectively*

85%



of companies believe software delivery is “important” or “critical”

But only...

25%



leverage software delivery effectively today

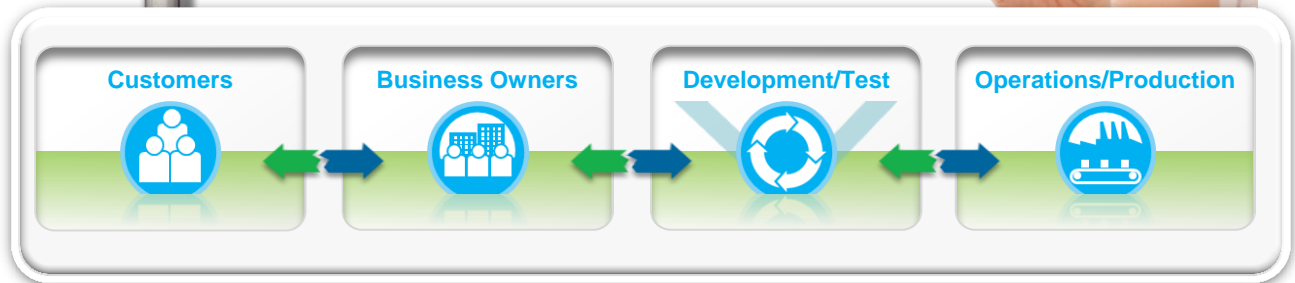


IBV study where organizations self-reported... Insights from 435 executives in 58 countries, spanning 18 industries

Source: “The Software Edge: How effective software development drives competitive advantage,” IBM Institute of Business Value, March 2013

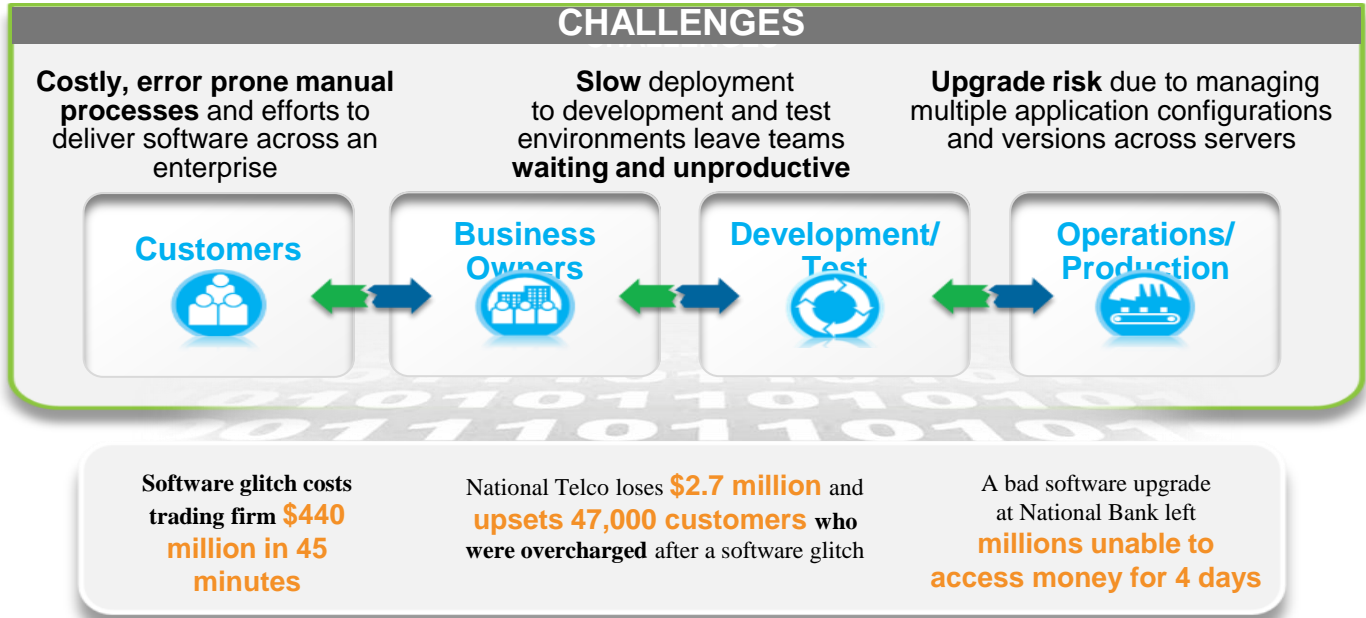


The level of integration and customer feedback determines success or failure



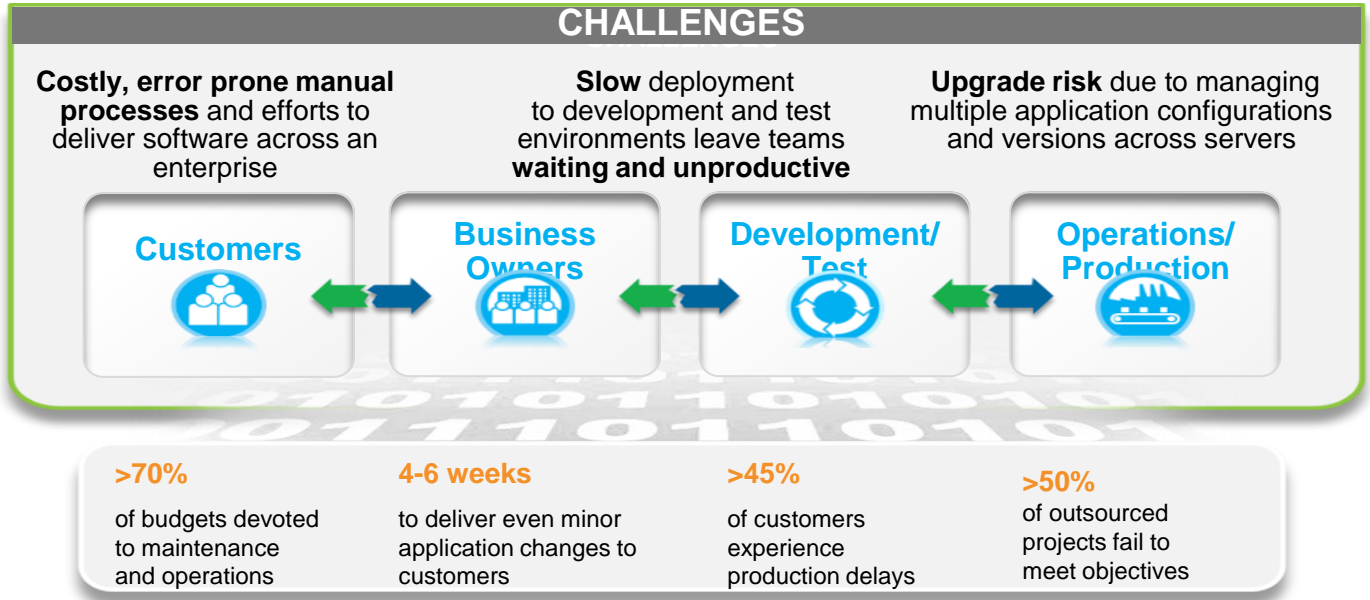


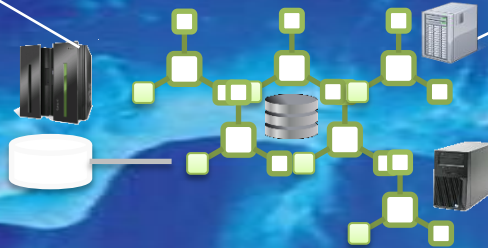
A lack of continuous delivery impacts the entire business





A lack of continuous delivery impacts the entire business





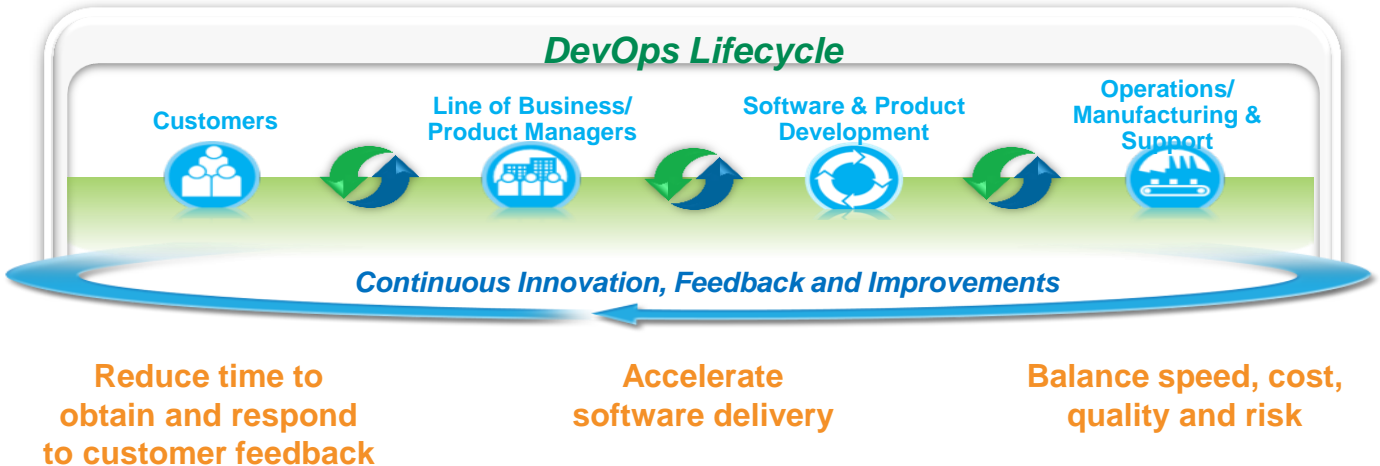
Complexity
lies beneath
the surface



An approach for continuous delivery of software-driven innovation

dev-ops noun \ˈdev-äps\

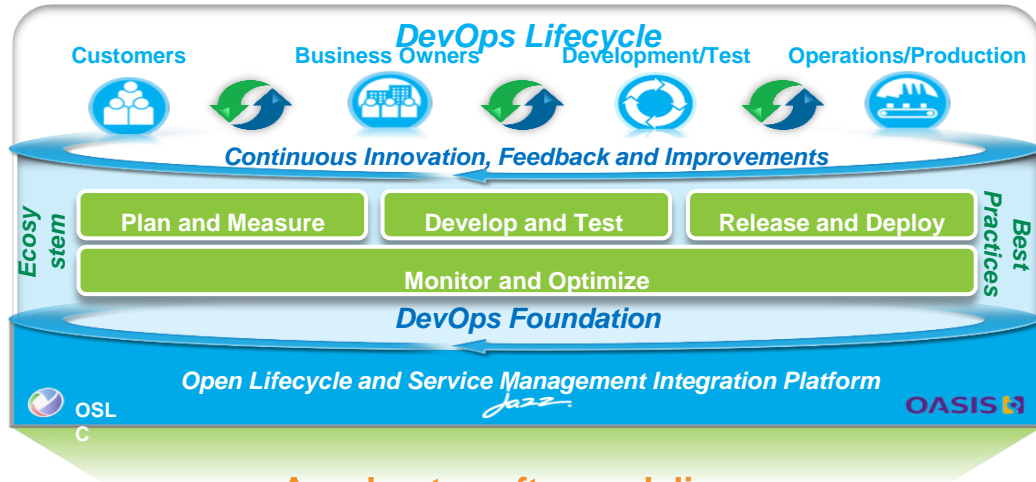
Enterprise capability for continuous software delivery that enables clients to seize market opportunities and reduce time to customer feedback





Capabilities to enable a DevOps approach

Enterprise capability for continuous software delivery that enables clients to seize market opportunities and reduce time to customer feedback

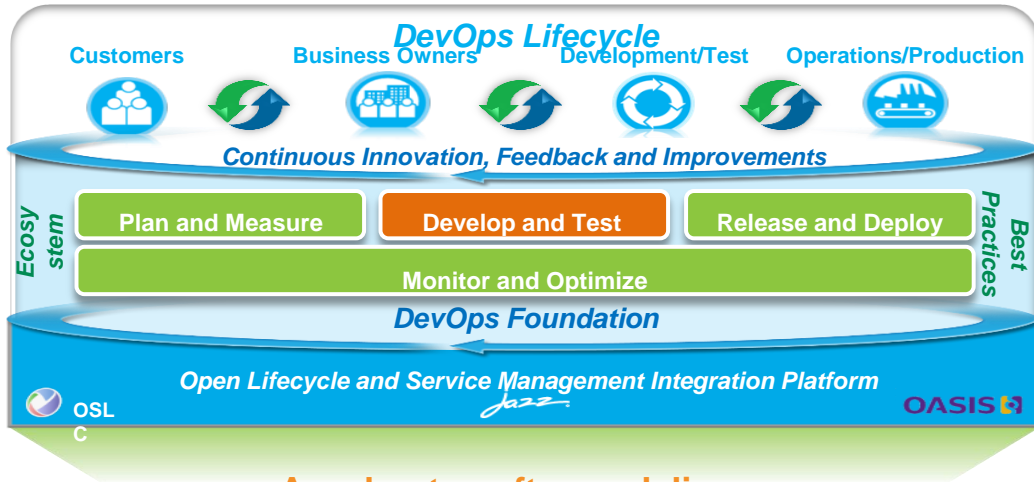


Accelerate software delivery
Balance speed, cost, quality and risk
Reduce time to customer feedback



Capabilities to enable a DevOps approach

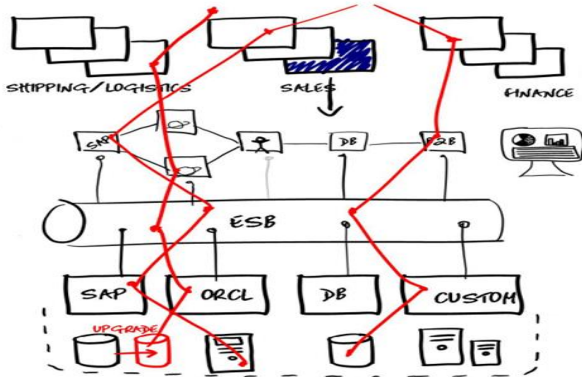
Enterprise capability for continuous software delivery that enables clients to seize market opportunities and reduce time to customer feedback



Accelerate software delivery
Balance speed, cost, quality and risk
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Barriers to complete test environments



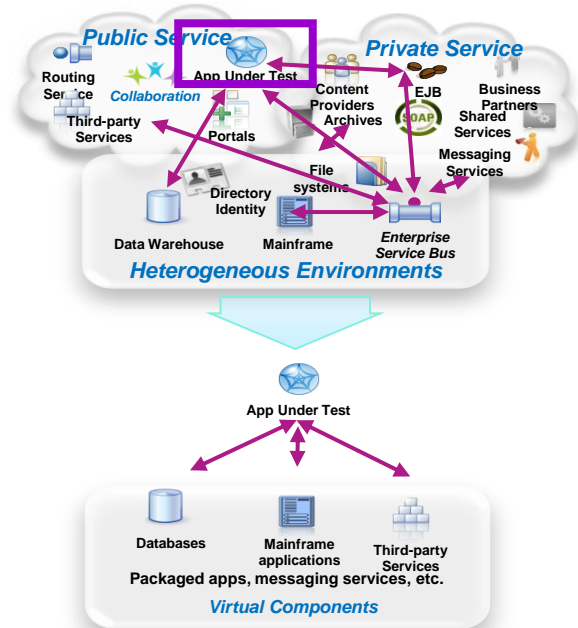
- **System dependencies** are a key challenge in setting up test environments
- **Unavailable/inaccessible services** slow down the testing process
- **Costly 3rd party access fees** can significantly impact testing availability
- **Impractical negative testing** creates exposure given systems production

Application complexity is exploding. Organizations have application portfolios that contain a large number of interconnected and interdependent architectures: mainframe, client server, web services and SOA.



Introducing Service Virtualization

- **Virtual components** simulate the behavior of a service or application during testing
- Virtual components run on **commodity hardware**
- Each developer and tester can easily have **their own test environment**
- Developers and testers can continue to use **current testing procedures and tools**
- Streamline creation of **production-like environments** and **negative testing**





Service Virtualization Benefits

Significantly reduced test environment costs

- Test Env. infrastructure costs can be reduced by up to **90%**
- Labor involved in setting up test environments can be reduced by **80%+**
- Reduced or eliminated the cost of invoking 3rd party systems for non-production use, fee-based web services

Significantly reduced cycle time

- Test environments can be configured in **minutes vs weeks**
- **More testers** can be focused on testing, rather than configuring test environments
- **More regression testing** can be done independently from the User Interface, during development

Lower risk

- Developers have the means to test software earlier at the Service/API level
- Increased parallel development by virtualizing different parts of the system



Forrester Total Economic Impact Study on Service Virtualization

A major European bank implemented service virtualization and automated integration testing as part of an Agile transformation to enable continuous testing. As a result of IBM capabilities, their system integration test (SIT) process was **reduced from 3 weeks down to four hours!**

Table 1
Risk-Adjusted ROI Over Three Years¹

Year 1 ROI	Year 2 ROI (Cumulative)	Year 3 ROI (Cumulative)	Payback period	Total benefits (PV)	Total costs (PV)	Net present value
398%	860%	1,333%	< 2 months	\$6,273,147	(\$433,149)	\$5,839,998

Source: Forrester Research, Inc.

13x ROI in 3 years!

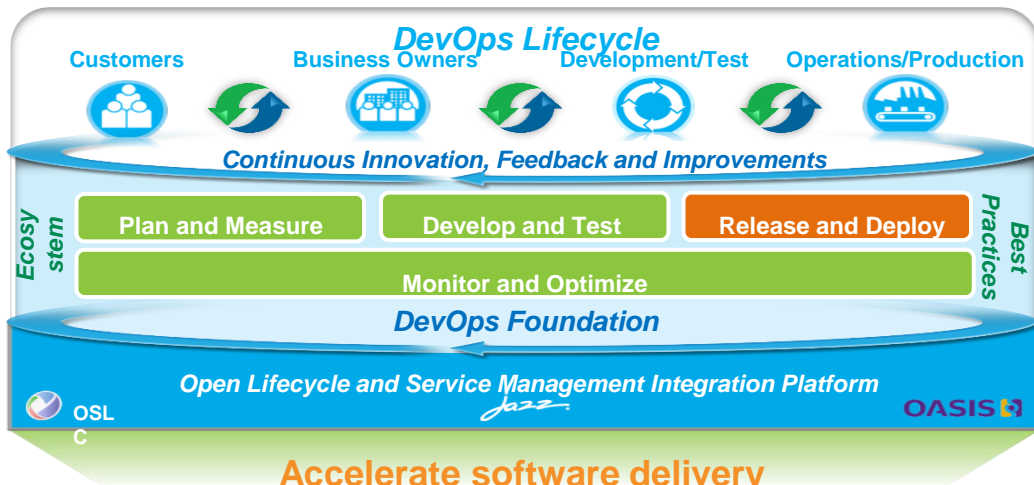
3 Year Benefits:

- Increased project delivery capacity 100% (40 projects to 80 projects)
- Avoided hiring three additional FTE's, saving almost \$600k.
- Reduced incidents found in production from 2.5 to .3 per project, saving \$3 million
- Identified defects earlier and freed the team up to focus on new capabilities, saving over \$560k
- Reduced consulting and third party testing fees with better test automation, saving \$408k
- Eliminated the need for additional hardware and labor to set up test environments, saving \$700k
- Generated new revenue for the business – estimated at tens of millions!



Capabilities to enable a DevOps approach

Enterprise capability for continuous software delivery that enables clients to seize market opportunities and reduce time to customer feedback



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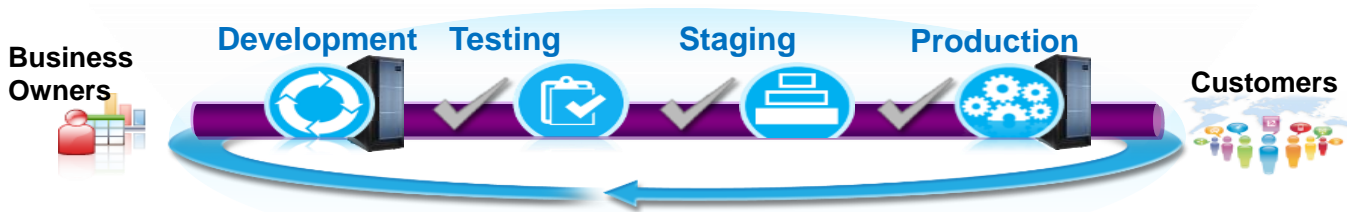


Common Application Deployment problems





Urban Code: A 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

Validate on more production-like conditions earlier

Standardization on processes and assets between Dev and Ops

Automate hand-offs/promotions to increase velocity through the different stages

Automated monitoring and dashboarding of quality and performance against service level agreements at multiple stages



IBM UrbanCode Deploy works in heterogeneous environments

Deployment Sources

- Build servers
- Source control tools
- Maven repositories

IBM Integrations

- RTC / ClearCase / Synergy
- WebSphere Application Server
- MQ
- Message Broker

Other Java Platforms

- WebLogic, Tomcat, Jboss, etc

Quality & Change Management

- QualityCenter
- Remedy
- ServiceNow

Microsoft Platform

- IIS
- SharePoint & Biztalk

Infrastructure

- Public / Private Cloud
- Load Balancers
- DataBases



IBM UrbanCode



“One key benefit of UrbanCode *is how quickly it can be implemented and used for deployments.*”

Gartner®



Real life ROI Examples with UrbanCode:

Company	Before	After	Business Value
Global Ins. Co	3 days	2 hours	\$2.3M / year
On-line Retailer	6 hours	20 minutes	95% reduction in time
Large UK Retailer	2.5 days	20 minutes	£250K / month
Global Bank	12 days	1.5 minutes	£8.6M / year
Global Oil Co	3 days	4 minutes	£380K / month
Global SVCS Co	90 minutes	3 minutes	\$1.3M / year
Manufacturer AP	2 days	3 minutes	\$2.3M / year
Large US Retailer	2 days	12 minutes	\$1.2M / year



DevOps solutions for Mobile

New DevOps capabilities for high quality mobile apps delivery



Visibility into mobile app quality

- New IBM Mobile Quality Assurance offering to engage users in app testing with feedback and metrics
- Expanded support for mobile app functional testing through Dojo, mobile web, and cross-platform testing

Control over mobile app deployment

- Enhanced automated deployment planning and execution for Worklight apps with UrbanCode Deploy

Integration of back-end data and services

- New automation for back-end data and service integration to drive service-driven Worklight mobile apps

Reduce time to customer feedback



Business objective of brand loyalty delivered via mobile strategy

Rapidly delivered quality mobile app featuring seamless integration with back-end services, and stunning, intuitive design

“PointSource’s ability to translate our business objectives into a mobile strategy enabled us to deliver a solution that adds value to our existing customers. PointSource also identified ways for us to optimize for faster, higher quality delivery with IBM tools for the mobile development lifecycle.”

— **Scott Liberatore**
President/CEO FIMC



DevOps solutions for Cloud

New capabilities for continuous delivery on the Cloud



Speed continuous delivery with IBM Cloud offerings

- New SDLC patterns to automate provisioning of environments as part of the end-to-end software delivery process for private/hybrid clouds
- Control operating costs with token licensing while offering practitioners easy access to DevOps capabilities

Accelerate continuous testing with service virtualization

- IBM UrbanCode Deploy integration with Rational Test Workbench enables testing earlier in the development cycle
- IBM UrbanCode Deploy integration with Rational Test Virtualization Server automates deployment of applications to virtual test environments

Accelerate software delivery



Leading diversified financial services company in the U.S.

Achieved a **6-month reduction in application testing** timeframe

Reduced costs and virtually eliminated

“With the IBM SDLC patterns, we were able to give our developers ‘instant’ zero-install access to the right tools at the right time.” — VP Technologies



DevOps solutions for SAP

New capabilities for managing changes for SAP applications



Accelerate SAP application delivery

- Rational connector for SAP now completes the full lifecycle from business blueprint to testing, defect and workflow management
- Improve the end-to-end delivery of SAP ABAP, HANA and NetWeaver projects with RTC

Reduce the time spent on SAP upgrade and software updates

- Automate regression, functional, performance and integration testing for SAP and non-SAP applications

Minimize integration risk with non-SAP systems

- Test virtualization speeds up integration testing of SAP and non-SAP apps earlier into the test cycle

Balance speed, cost, quality and risk



IBM Rational continuous testing for SAP is now a preferred solution by SAP Value Prototyping

Accelerated SAP application delivery

Reduced testing cost

Minimized risk

Rational solutions for SAP testing have helped our clients manage change in the SAP environment at the speed that business demands, accelerated the speed of SAP deployments, and meet the deadlines that resulted in significant reduction in cost and risk of managing change in SAP environments.

— **Abhik Bose**, Principal Consultant,
SAP Global Services



- ## Thank you

- Philippe Fanjere
- Director, IBM Rational
- Middle East and Pakistan
- philippe@ae.ibm.com