

BusinessConnect

A New Era of Smart

DevOps: Delivering value to the System z Enterprise through Continuous Improvement



Agenda

- The Problem - Criticality of effective software delivery
- The Solution - Enterprise DevOps
- Getting started - DevOps maturity model
- Q&A

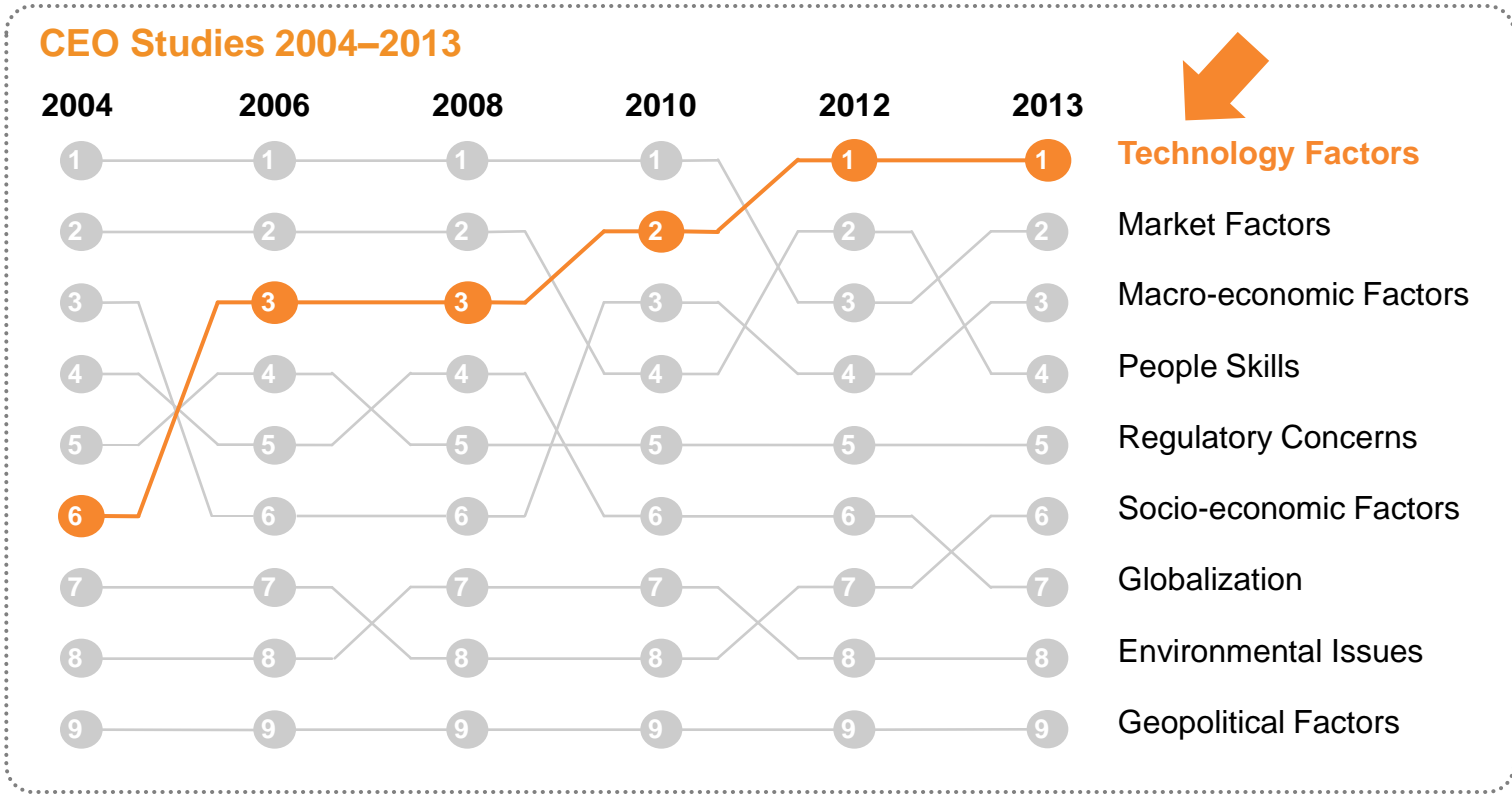


From Mobile to Mainframe



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?"

Software delivery is at the heart of today's top technology trends

Big Data

Insights on new products by more efficiently interpreting massive quantities of data



Cloud

Demand for apps requires fast, scalable environments for dev and test, as well as production



Social Business

Broader set of stakeholders collaborates to deliver continuous innovation and value



Instrumented Products

Industry requirements demand faster response to regulations and standards, with traceability and quality



Mobile

Modern workforce expects constantly updated software to connect to enterprise systems



Software delivery

Intelligent/ Connected Systems

Software component in smart products driving increased value and differentiation



A lack of continuous delivery impacts the entire business enterprise in the new reality of “Systems Of Interaction”

Line-of-business

Takes too long to introduce or make changes to mobile apps and services

Operations

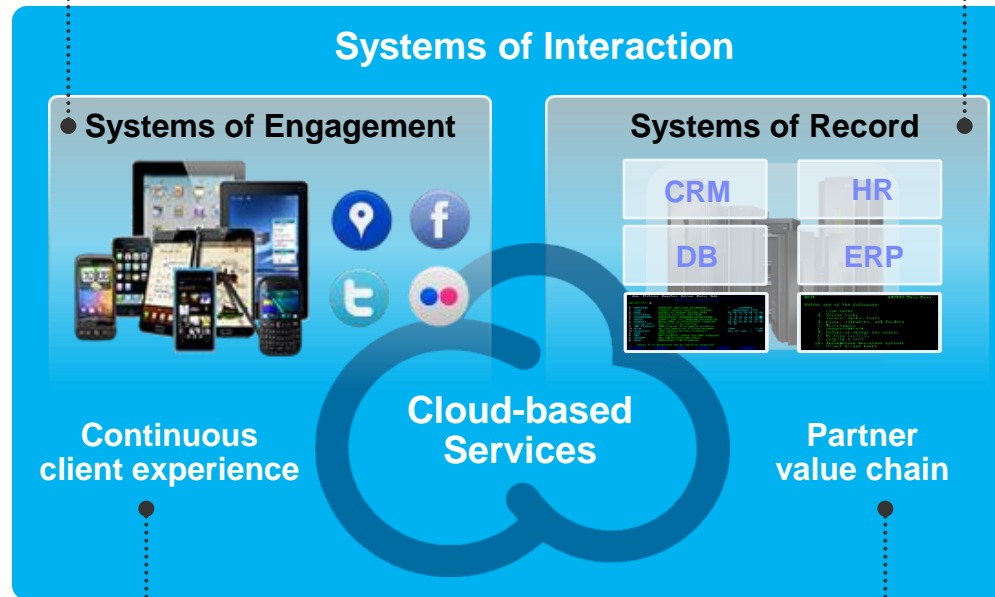
Rapid app releases impact system stability and compliance

>70%

of budgets devoted to maintenance and operations

4-6 weeks

to deliver even minor application changes to customers



>45%

of customers experience production delays

>50%

of outsourced projects fail to meet objectives

Development/Test

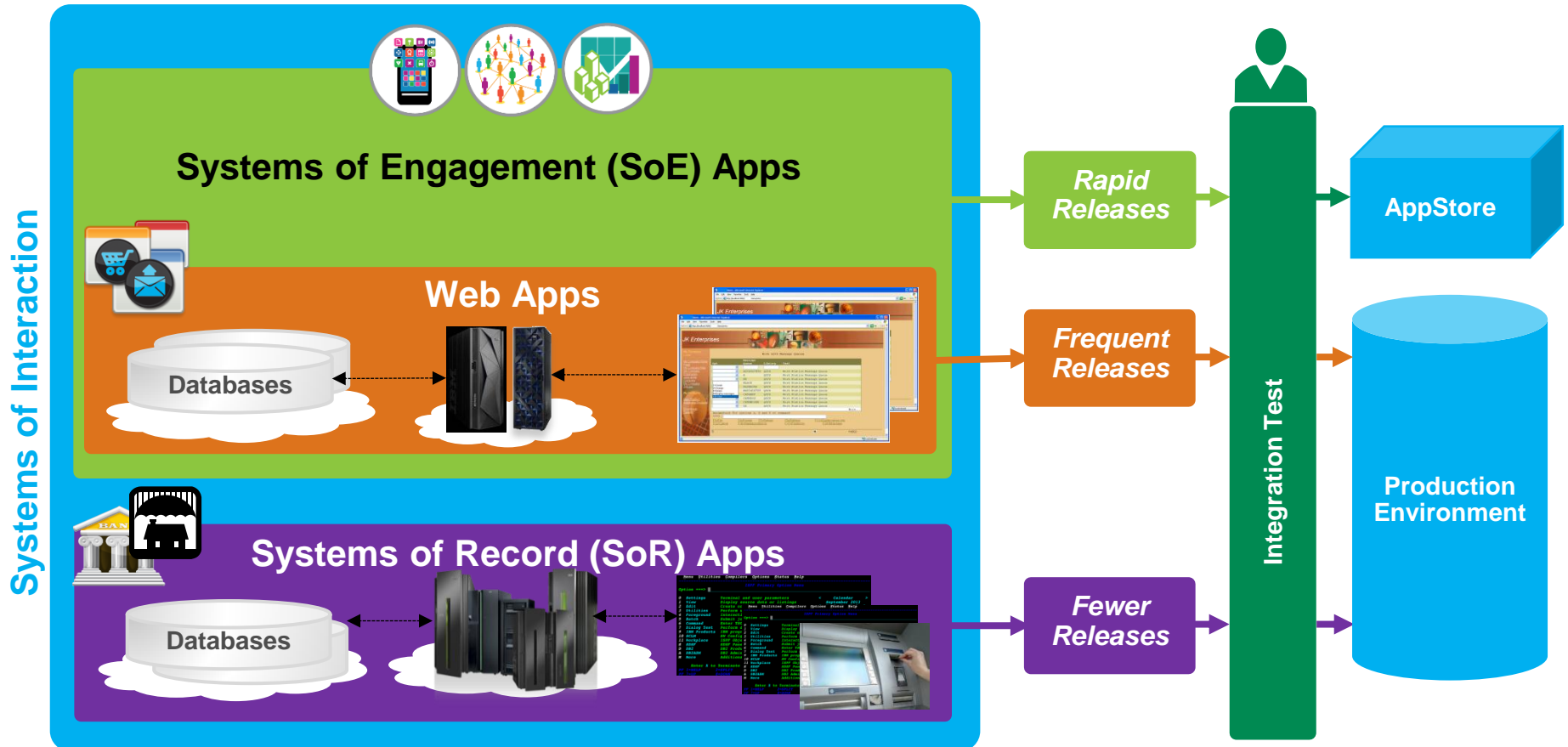
Speed mismatch between faster moving front office and slower moving back office systems, delaying time to obtain feedback

Suppliers

Delivery in the context of agile

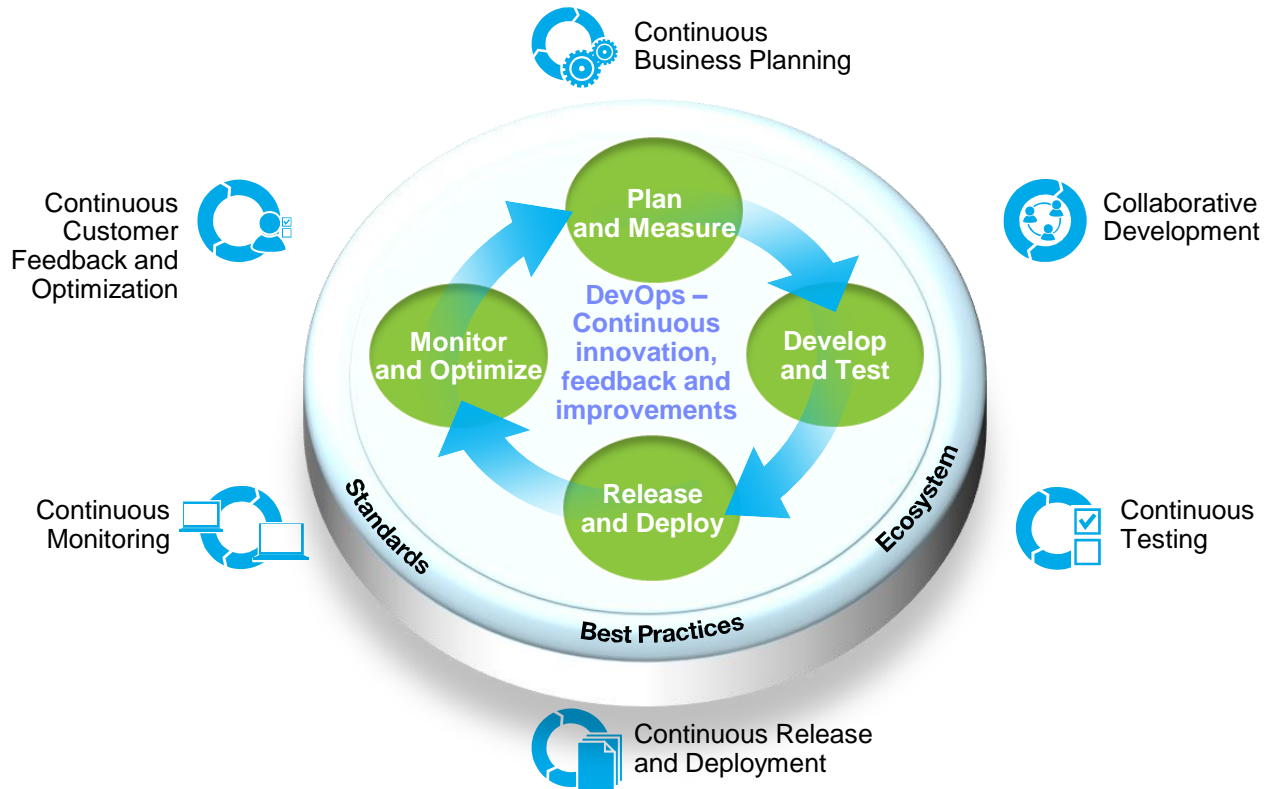
Building the next-generation of Systems of Interaction Applications

By bringing together the people, processes, tools across the entire software delivery lifecycle – spanning mobile to mainframe platforms



IBM DevOps accelerates enterprise software delivery lifecycle

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



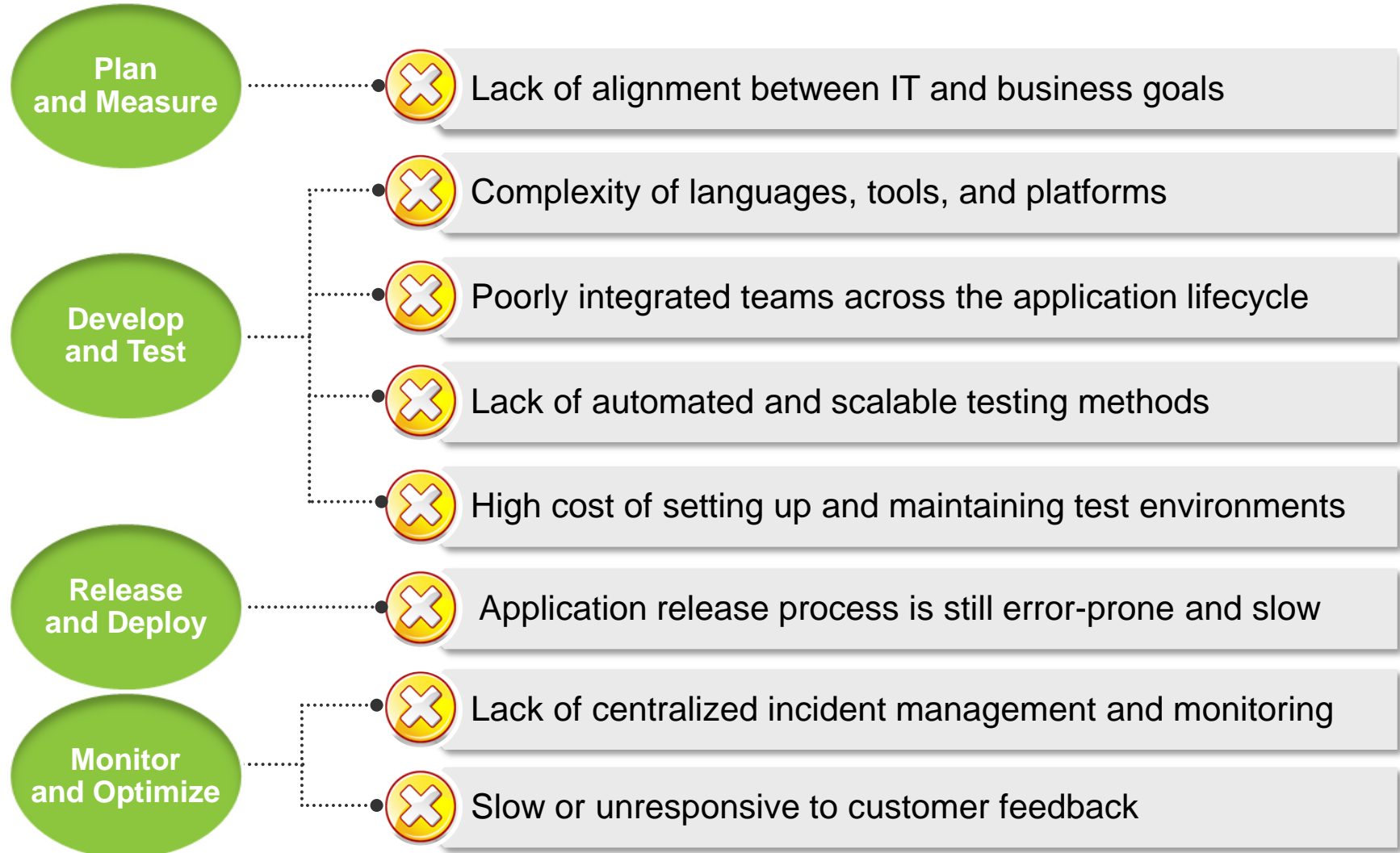
Accelerate software delivery – for faster time to value

Balance speed, cost, quality and risk – for increased capacity to innovate

Reduce time to customer feedback – for improved customer experience

Software delivery bottlenecks exists today

Slow delivery creates unnecessary delays, rework, and waste resources

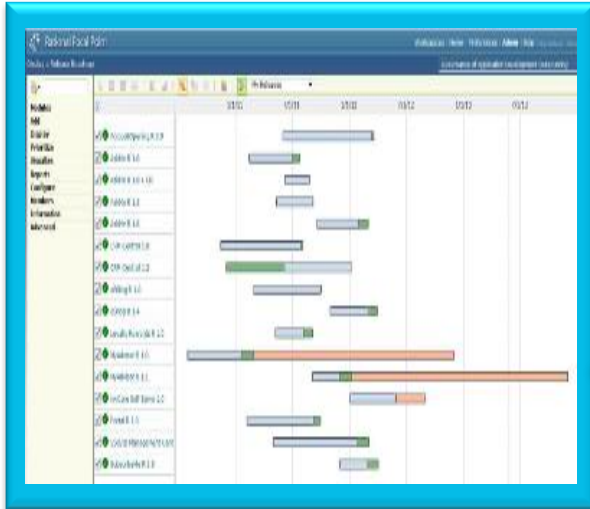


Continuously align business, IT, and operations



Improve visibility and transparency

Rational Focal Point



Requirements, priorities, & status

Develop & Test

Release & Deploy

Define scope & view status

- Simplified project prioritization using key stakeholder dashboard
- Ongoing monitoring, reporting, and pivoting of approved projects – development and deployment status
- Enhanced visibility and transparency of development initiatives
- New** • Improved visualization, management and import/export support for linked data

Rational Focal Point



Join the 21st century! Use modern tools for multiplatform dev



Boost developer productivity



- Standardize on common Eclipse-based IDEs for all types of development
- Refactor and extend back-end services and data for optimal mobile experience
- Use code coverage, code governance, and unit test support for improved quality
- Leverage rich program understanding and control flow analysis for onboarding
- Exploit fully integrated source level debugger for increased productivity
- Interoperate with the IBM PD Tools Suite

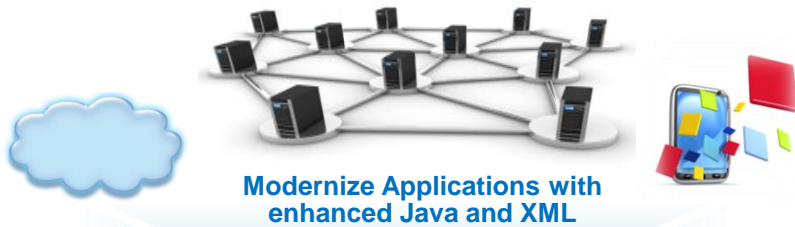
New

- Rational Developer for System z
- Rational Developer for IBM i
- Rational Developer for AIX and Linux
- Rational Application Developer
- Rational Business Developer
- Rational Software Architect

Leverage advanced compiler and optimization technologies



Increase application performance



Leading-Edge Optimization Technology



Bolsters benefits of latest CICS, IMS, DB2

Increase Performance
Reduce CPU utilization & processing time
Lower operating cost



Collaborative Development

- Use COBOL, PL/I, and C/C++ compilers to exploit latest z architecture and middleware
- Modernize business critical applications with enhanced XML and Java support

New

- Gain 10+% performance improvement with new optimizations in Enterprise COBOL

New

- Recognize up to 17% performance improvement and new 'Metal C' system programming capabilities in z/OS XL C/C++

New

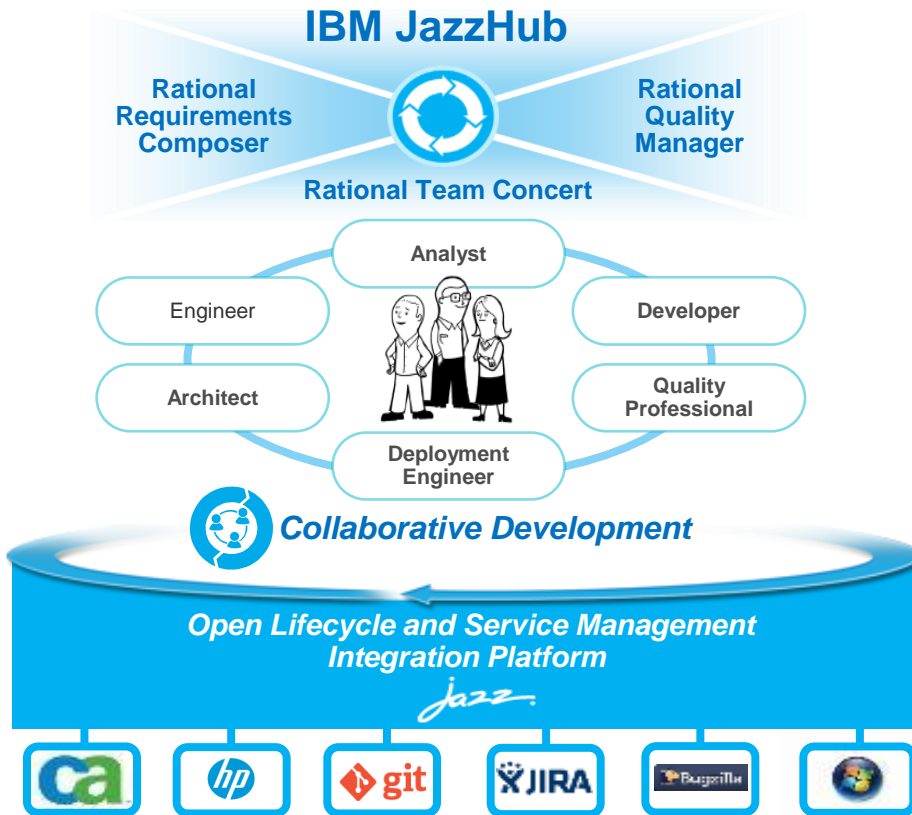
- Compile faster for XML and compile listing with Enterprise PL/I

IBM Enterprise COBOL for z/OS
IBM Enterprise PL/I for z/OS
IBM z/OS XL C/C++

Break down silos by moving to an Agile team environment



Maximize team productivity



- Manage all types of code from JavaScript to COBOL – mobile to mainframe

New • Instant-on, self-serve development capabilities with JazzHub on SoftLayer

- Accelerate agile adoption on the mainframe

- Integrate existing SCM and deployment tools, e.g. ChangeMan and Endeavor

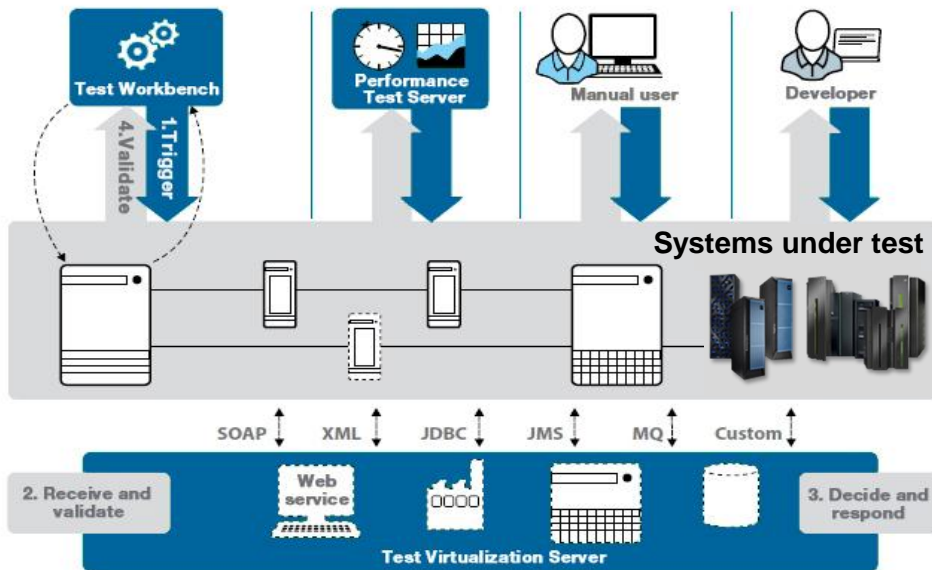
New • Enhanced Lifecycle integration adapters for third-party tools

Rational Team Concert
 Rational Requirements Composer
 Rational Quality Manager
 DevOps Services (JazzHub) for IBM Cloud Platform
SOFTLAYER
 an IBM Company

Automate functional, regression, load, and integration testing



Improve application quality



New

- Fully embrace automated testing
- Create test automaton of native and hybrid mobile and mainframe applications
- Run automated tests to validate builds
- Simulate unavailable software / systems using virtual components
- Engage users in mobile app testing with streamlined quality feedback and metrics

 **Continuous Testing**

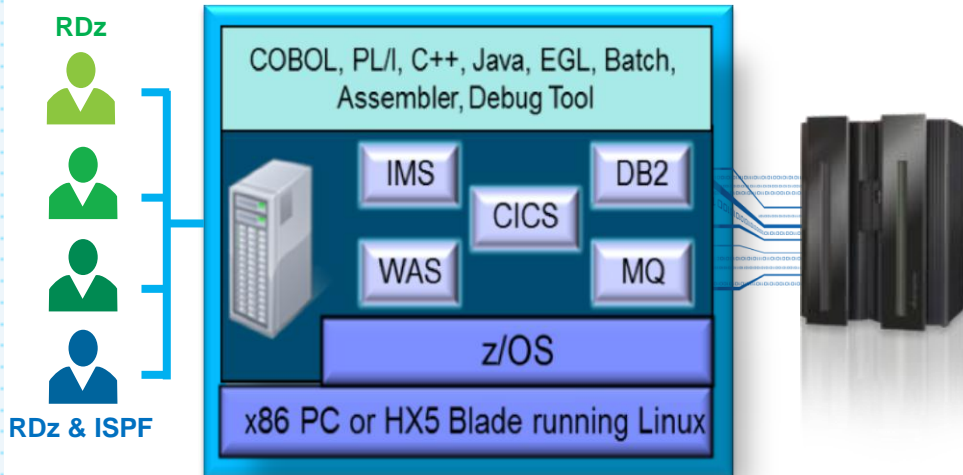
Includes Green Hat technology

Rational Test Workbench
IBM Mobile Quality Assurance (open beta)

Offload development and testing to reduce MIPS



Improve development flexibility



- Liberate developers to rapidly prototype new applications
- Develop and test System z applications anywhere, anytime
- Free up mainframe development MIPS for production workload
- Eliminate costly delays by reducing burden on existing IT operation staff
- New** • Exploit the latest middleware, including CICS, IMS, and WebSphere

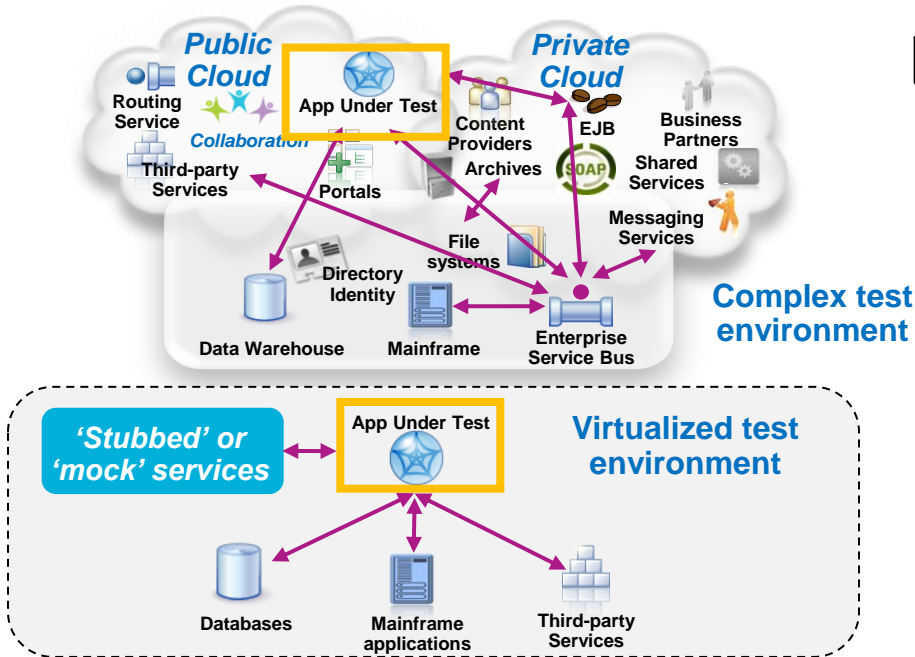


Rational Development and Test Environment for System z

Virtualize services to reduce ops burden and speed testing



Maintain test environments effectively



New

- Test in isolation with 'stubbed' or 'mock' services
- Virtualize CICS applications inside the mainframe and Java applications in the JVM
- Reduce development dependency on operations
- Minimize subsystem dependency during testing
- Reduce infrastructure costs and free up MIPS for production use



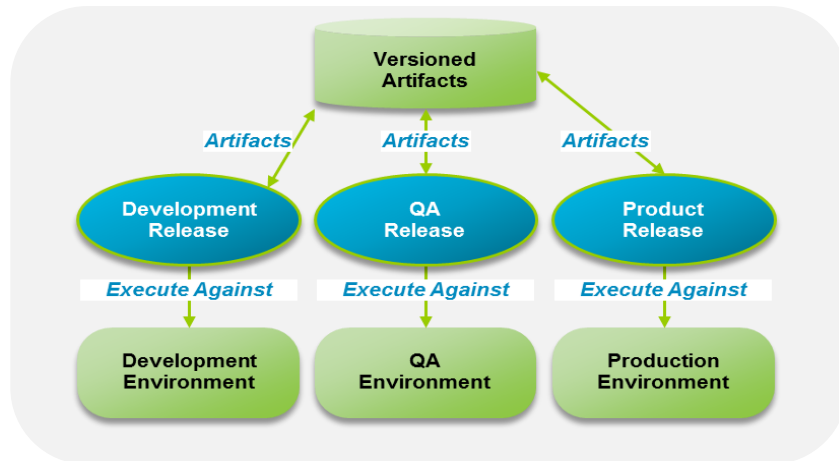
Rational Test Virtualization Server

Accelerate solution delivery and test provisioning



Deliver test environments in minutes

Application Blueprint



- Orchestrate and automate application deployment across multiple environments
- Quickly deploy multiple test instances in minutes versus hours or days

- New** • Leverage with zLinux today
- New** • Deploy Java applications with new z/OS agent
- New** • Integrate with existing host SCM to deploy z/OS applications using REXX

IBM UrbanCode Deploy
 IBM UrbanCode Release
 IBM UrbanCode Deploy plug-in for IBM Worklight

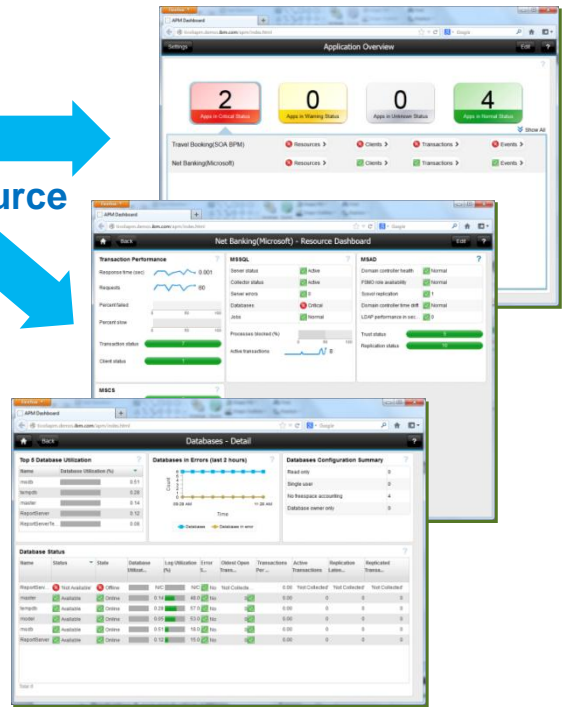
Optimize application and infrastructure performance



Gain actionable insights

Quickly:

- ✓ ID the problem
- ✓ Isolate problem source
- ✓ Find root cause



Continuous Monitoring

- Improve collaboration with centralized incident management and tracking
- Easily determine application health and quickly isolate the source of any issues
- Quickly determine the root cause of critical cross-platform applications

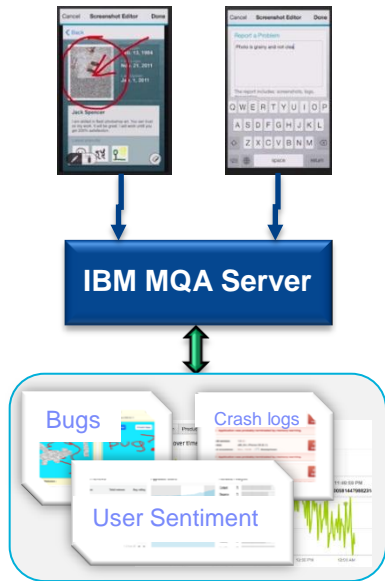
IBM SmartCloud Application Performance Management
 IBM SmartCloud Control Desk

Improve feedback responsiveness

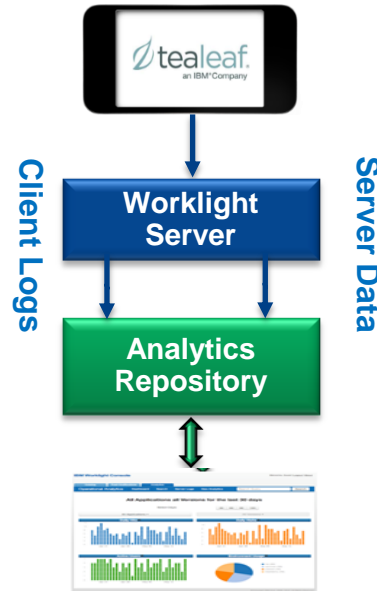


Analyzing the customer experience

Improving quality



Enhancing experience



- New**
- Improve mobile app quality with holistic visibility into user experience
 - Increase visibility into the actual customer experience
 - Quickly diagnose and resolve issues
 - Easily quantify business impacts
 - Perform real-time customer analytics

IBM Mobile Quality Assurance (open beta)
 IBM Tealeaf
 IBM Digital Analytics

 **Continuous Feedback and Optimization**

Client Successes with DevOps



laminarmedica
insulated shipping systems

Laminar Medica reduced new product development time and costs by 25%, contributing to 10% increase in competitive wins

SIBRA
Ingenieurgesellschaft für Datentechnik mbH
Germany

SIBRA GmbH keeps a vital project within budget and on time

Nationwide
On Your Side™

Nationwide improved code quality 50%, reduced end-user downtime by 70%, and increased on-time delivery 90%



A healthcare information provider cuts deployment time down to minutes



招商銀行
CHINA MERCHANTS BANK

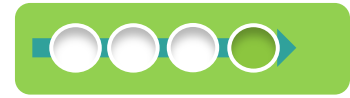
China Merchants Bank profits from a unified collaboration platform

sandhata
we integrate your business

Sandhata increased productivity 100%, and added tens of millions in new revenue

IBM

IBM CICS development team simplifies software builds and helps support agile development, improve collaboration



Sky Bet monitors the online customer experience to increase overall revenues

inter
VERSICHERUNGSGRUPPE

INTER Versicherungsgruppe increases productivity in application development



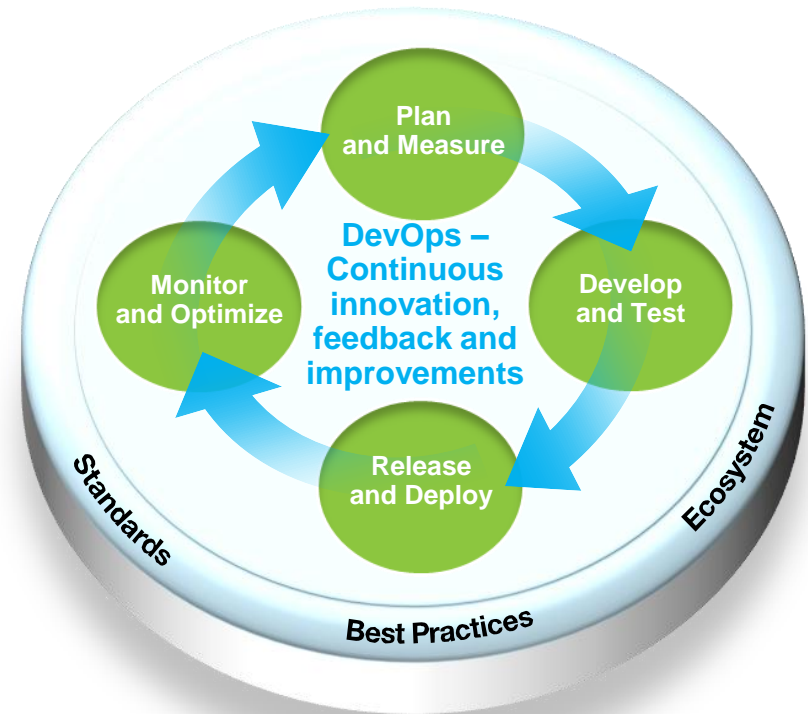
IBM Watson team is reducing delivery cycles from 9 weeks to 3 weeks, & has achieved zero maintenance window downtime

Aon *Integramark*

Aon Integramark establishes a dynamic SOA environment that automates data synchronization

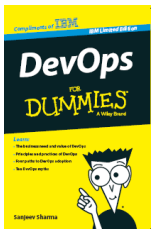
Summary

- There are challenges to delivering software-driven innovation
- Disruptive technologies are driving greater need to innovate
- DevOps is critical to your success
- IBM has first class DevOps solutions and is continuing to invest and improve upon these solutions
- DevOps is just as relevant, if not more so, for the Mainframe as it is for mobile, cloud, and distributed platforms



Take Action Now!

- Develop an end-to-end DevOps strategy
- Adopt mobile-first design thinking, and cloud-centric architectures
- Start incrementally on business-critical projects
- Measure and reduce overhead, rework and duplication
- Innovate! It's a great time to be in the technology business
- Get your free guide to faster, continuous software delivery with DevOps



<http://ibm.co/devopsfordummies>

It is not a typo....use .co not .com



QUESTIONS

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