



IBM DevOps Solution Series Kickoff – Aug 7th 2013

Accelerating the delivery of multiplatform applications



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IBM DevOps Solution Series

5-part webcast series with IBM DevOps experts

Learn more and register:
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Presenters	Topics	Live On
  	IBM DevOps solution: Accelerating the Delivery of Multiplatform Applications <i>Presenters: Carmen DeArdo, Hayden Lindsey, Mike Perera</i>	Aug 7, 2013
 	IBM DevOps solution: Continuous Business Planning to get cost out and agility in <i>Presenters: Rick Slade, Richard Szulewski</i>	Aug 14, 2013
 	IBM DevOps solution: Collaborative Development to Spark Innovation and Integration among Teams <i>Presenters: Tim Hahn, Danny Mace</i>	Sep 4, 2013
 	IBM DevOps solution: Continuous Testing to save costs and improve application quality <i>Presenters: Rosalind Radcliffe, Marty Shelton</i>	Sep 11, 2013
 	IBM DevOps solution: Continuous Release and Deployment to compress delivery cycles <i>Presenters: David Myers, Mike Baskey</i>	Sep 18, 2013



Today's Agenda

The case for DevOps

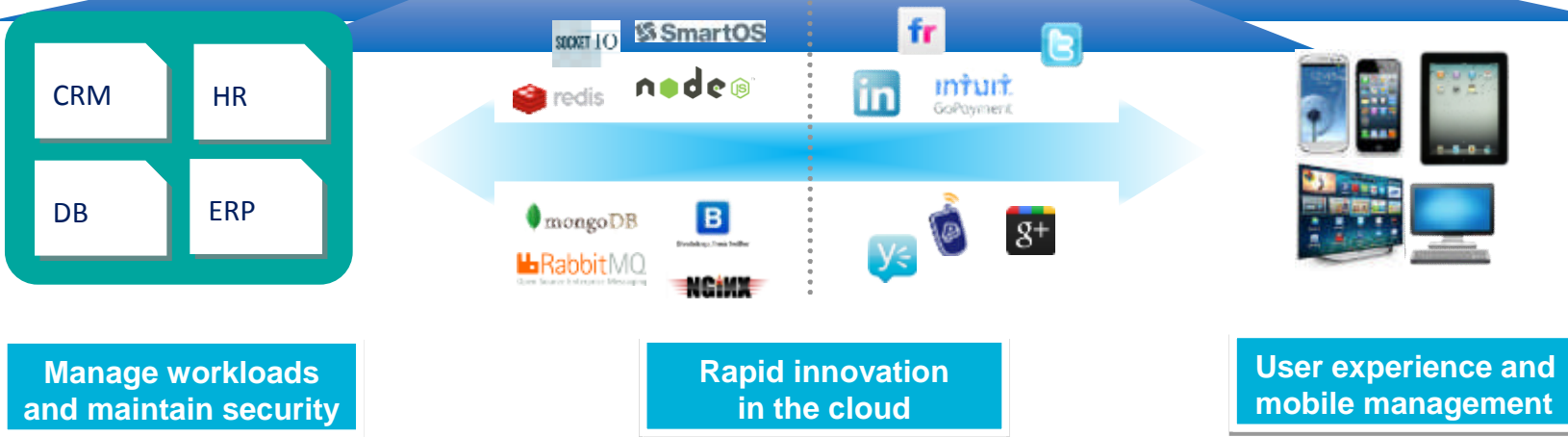
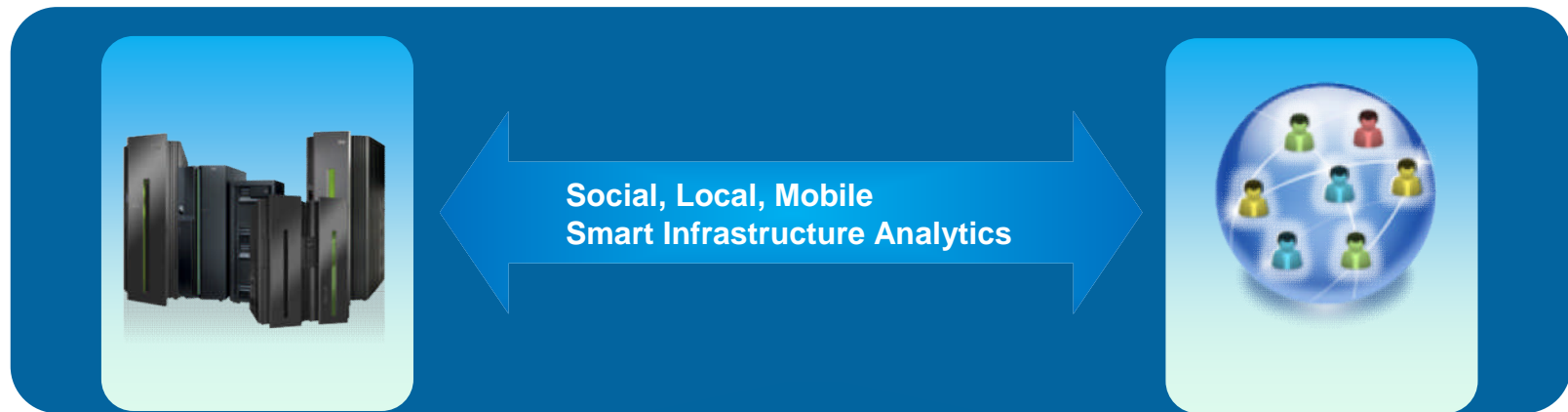
IBM DevOps solution overview

DevOps in a multiplatform environment

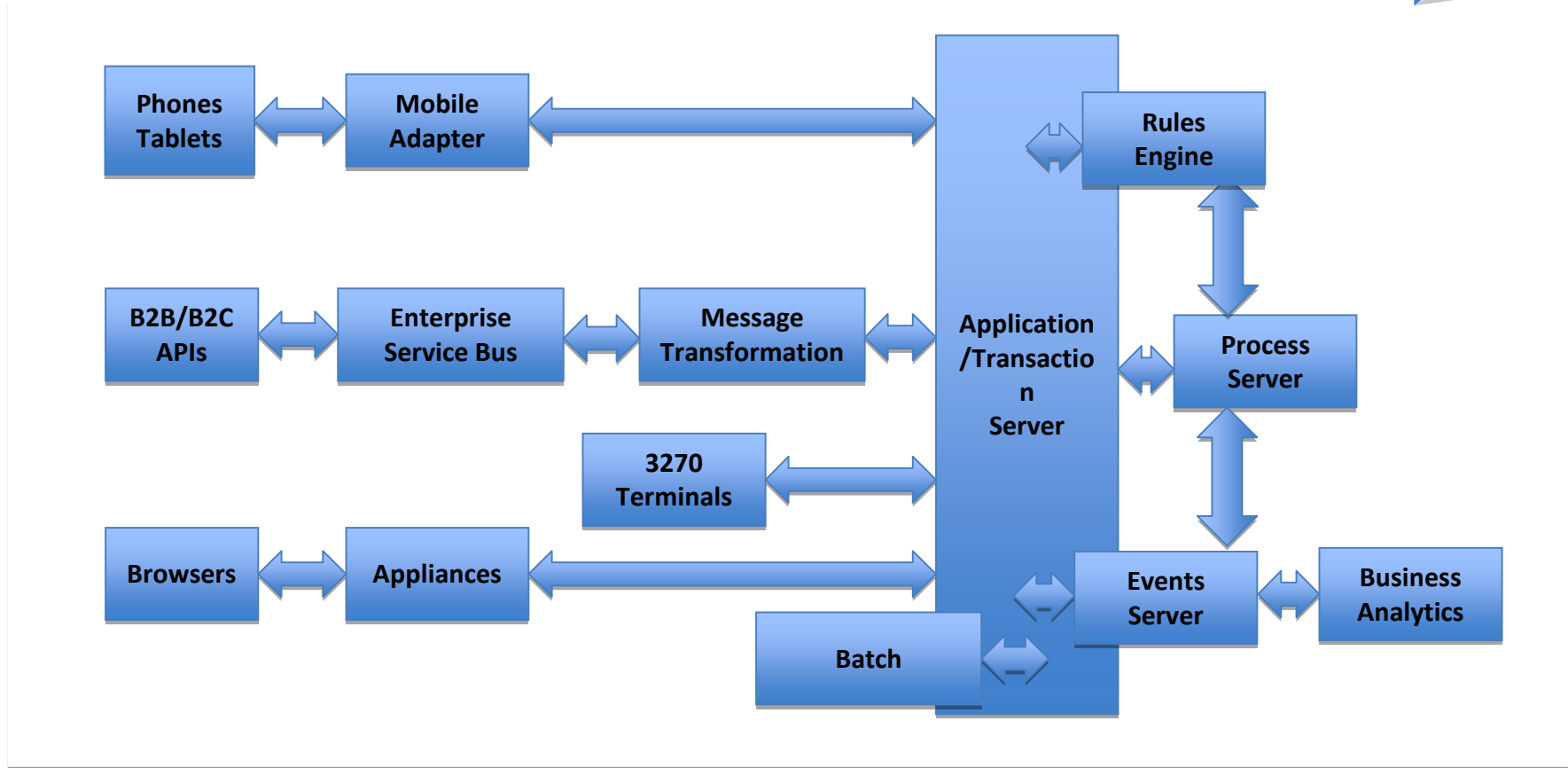
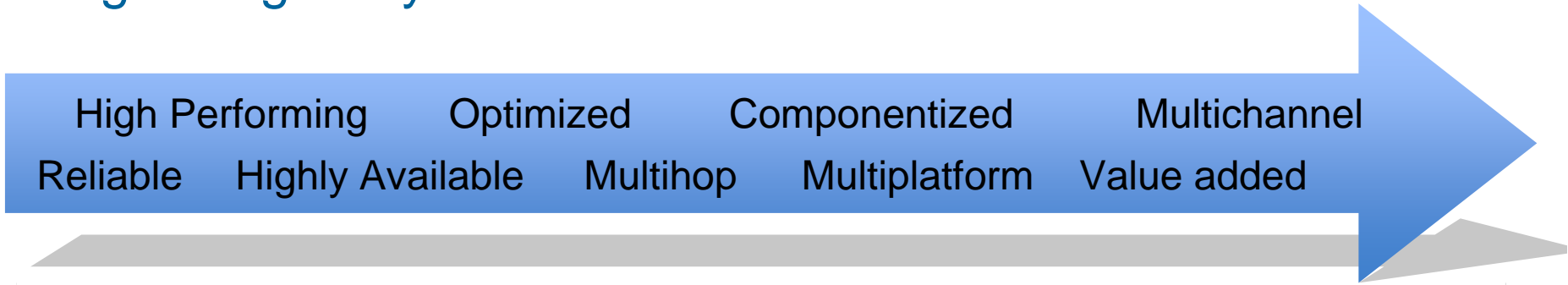
DevOps at Nationwide

Q&A

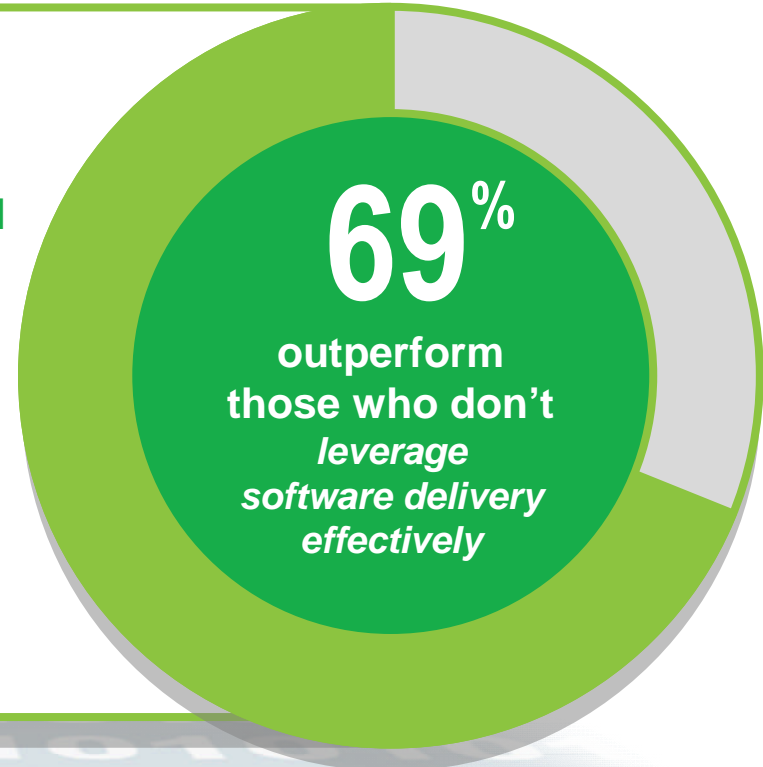
New era systems integrate existing systems of record with new client-facing systems of engagement



The growing lifecycle of modern transactions

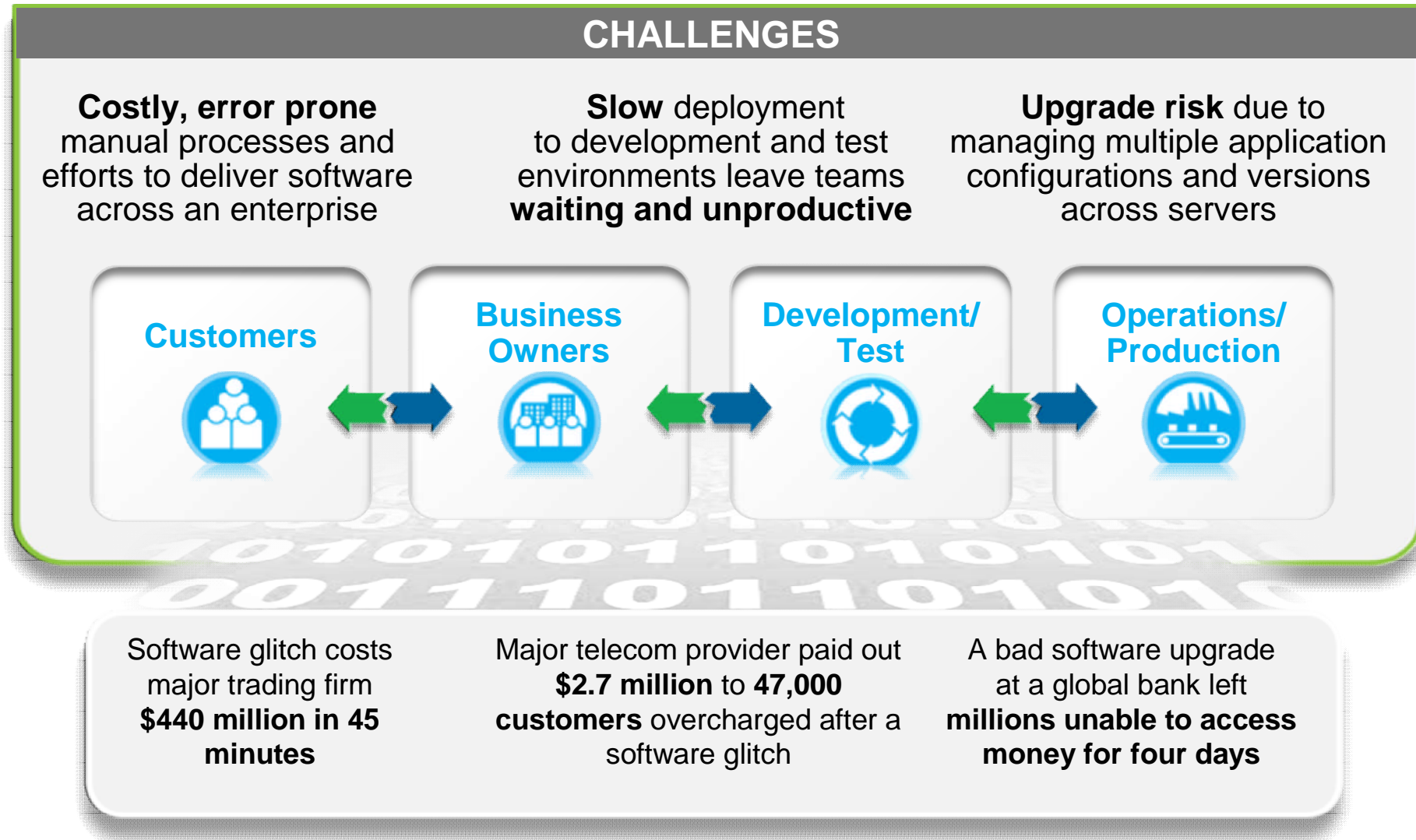


Software delivery is critical to success



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

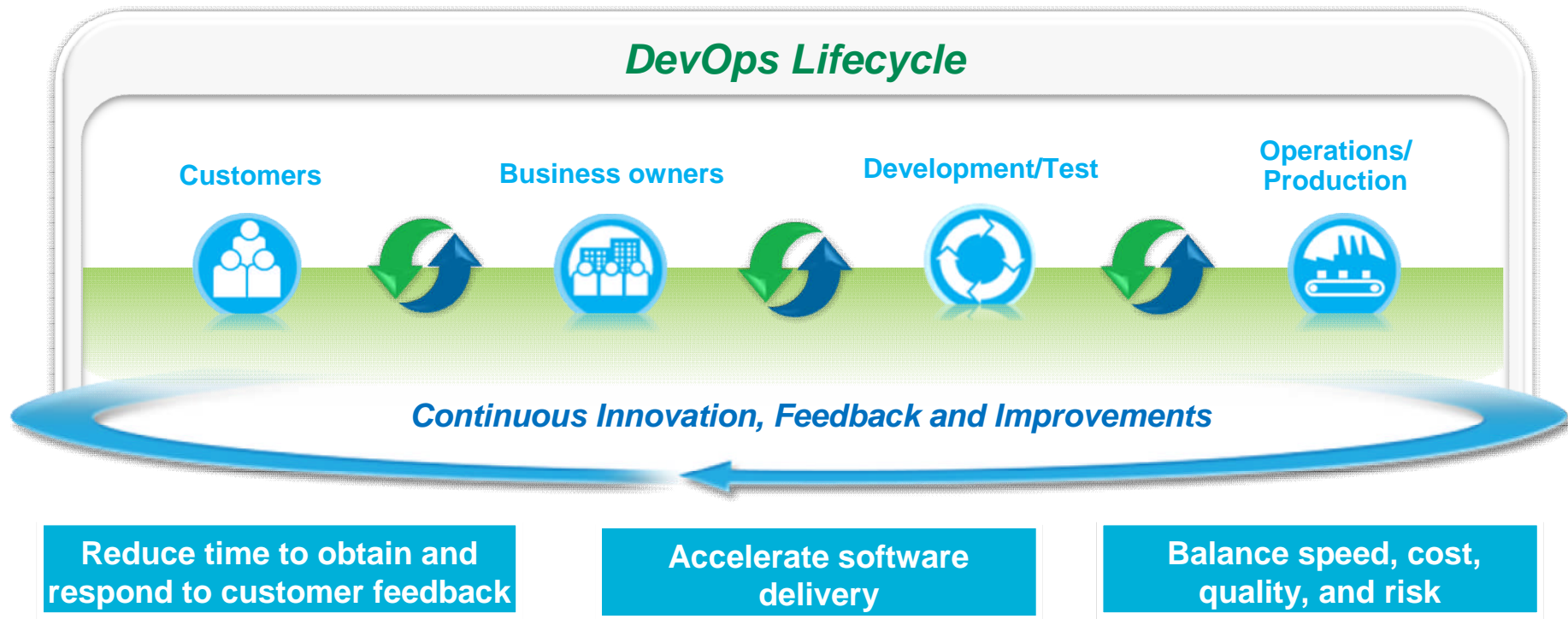
And a lack of continuous delivery impacts the entire business



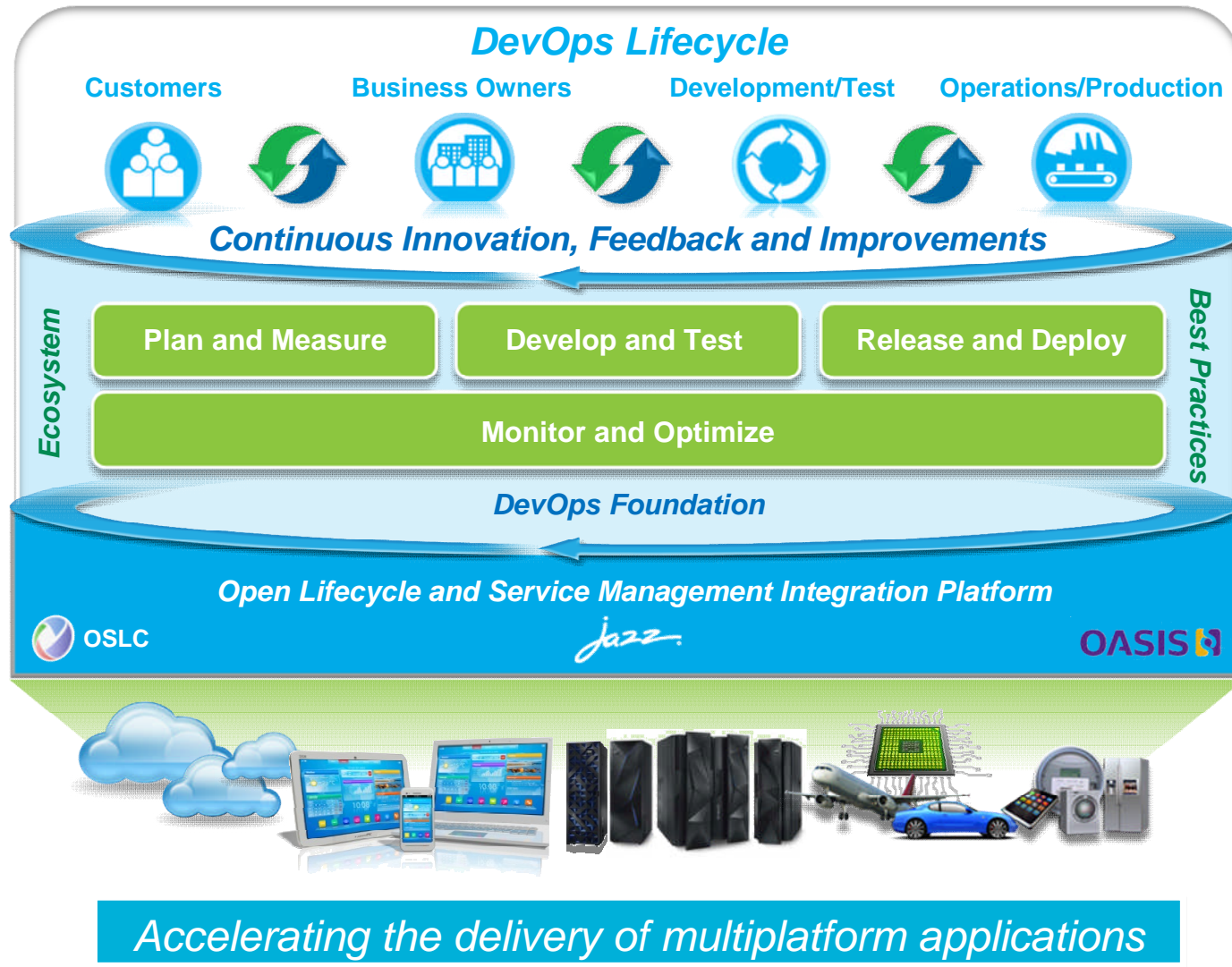
An approach for continuous delivery of software-driven innovation

dev-ops *noun* \dev-äps\

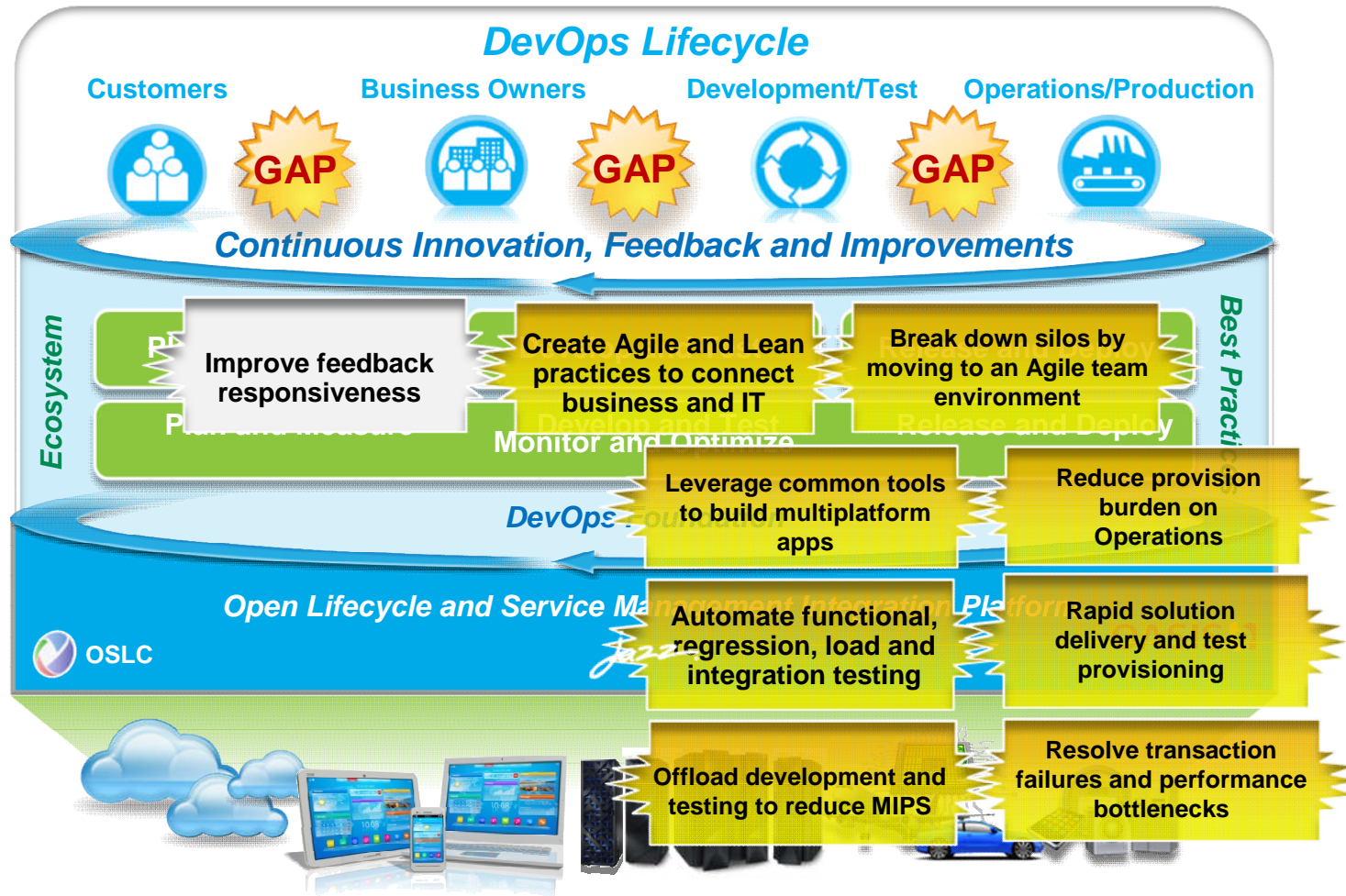
Enterprise capability for continuous software delivery that enables clients to seize market opportunities and reduce time to customer feedback



IBM DevOps solution



DevOps in a multiplatform development environment



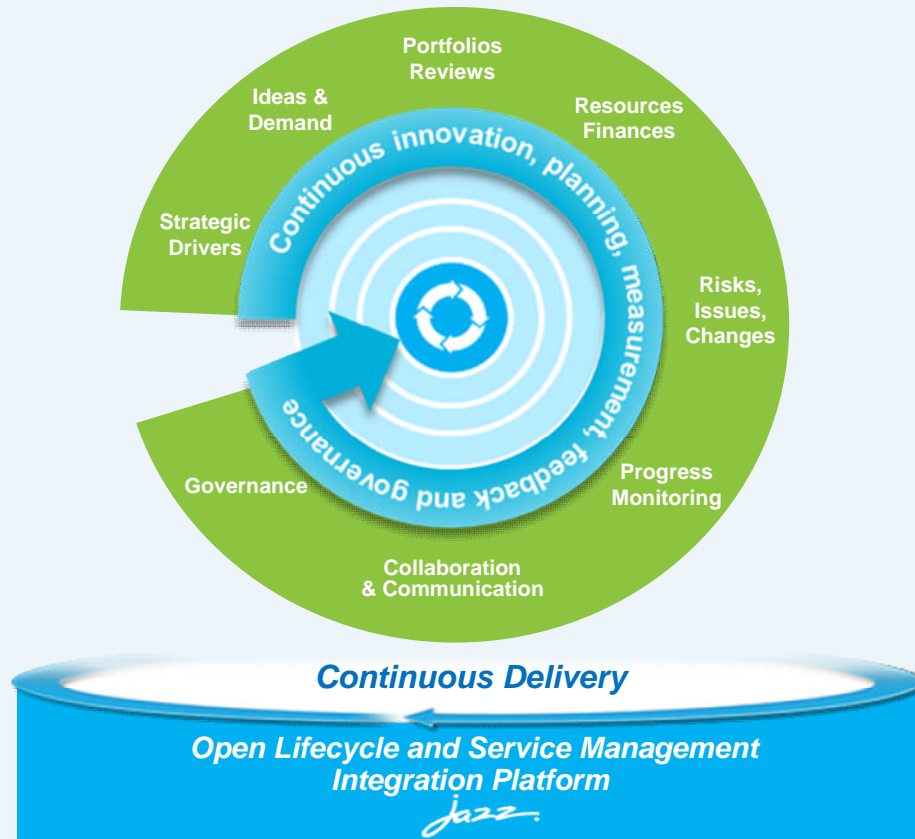
Bottlenecks in software delivery can result in long delays, unnecessary costs, and waste of resources



Create Agile and Lean practices to connect business and IT



Improve visibility and transparency



Rational Focal Point

Enabling you to...

- Better align investment decisions with value and organizational strategies and priorities
- Plan releases predictably driven by the needs of the business
- Gain control of development initiatives by improving visibility and transparency
- Provide proactive portfolio evolution and delivery governance



Leverage common tools to build multiplatform apps



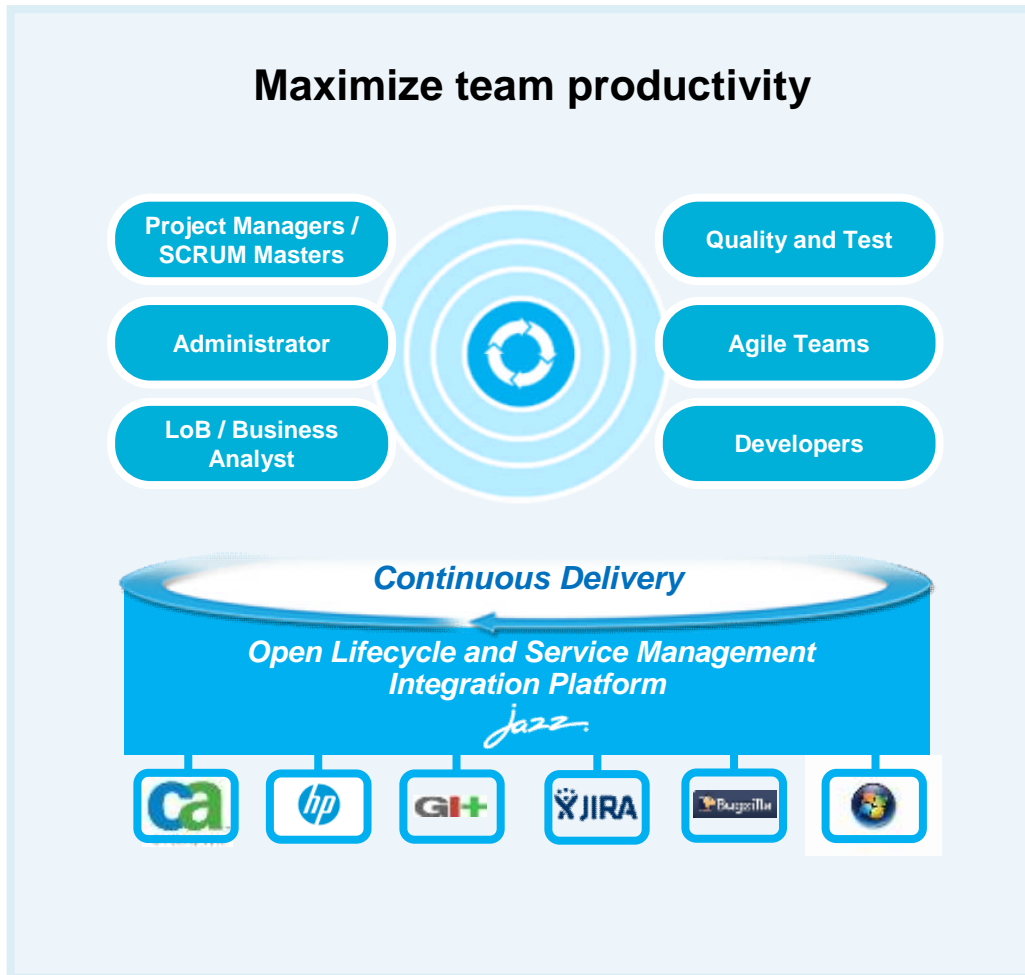
Rational Developer for the Enterprise
 IBM Worklight for MobileFirst platform
 IBM Debug Tool for z/OS
 IBM Enterprise COBOL, PL/I, C/C++
 Operational Decision Management

Enabling you to...

- Leverage common Eclipse-based IDEs for all types of development
- Access broad coverage of runtimes, languages, compilers, and platforms
- Accelerate business rule changes from weeks/months to days/weeks
- Create agile services from existing mainframe assets



Break down silos by moving to a collaborative environment



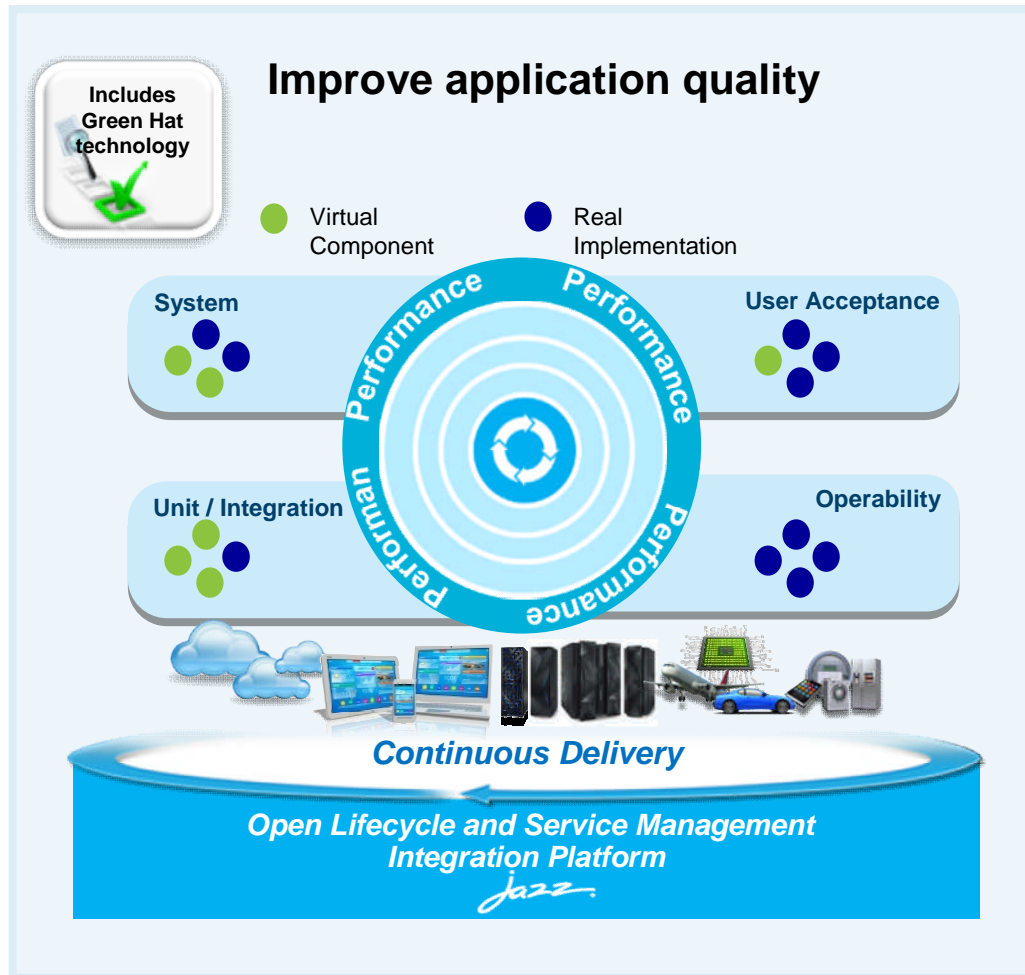
**Rational Team Concert
Rational Requirements Composer
Rational Quality Manager**

Enabling you to...

- Manage all types of sources - JavaScript to COBOL
- Create work items spanning technologies and solutions
- Accelerate agile adoption on the mainframe
- Integrate existing SCMs and deployment tools, e.g. ChangeMan and Endeavor
- Use Lifecycle integration adapters for third-party tools



Automate functional, regression, load, and integration testing



Rational Test Workbench - leveraging Green Hat Technology

Enabling you to...

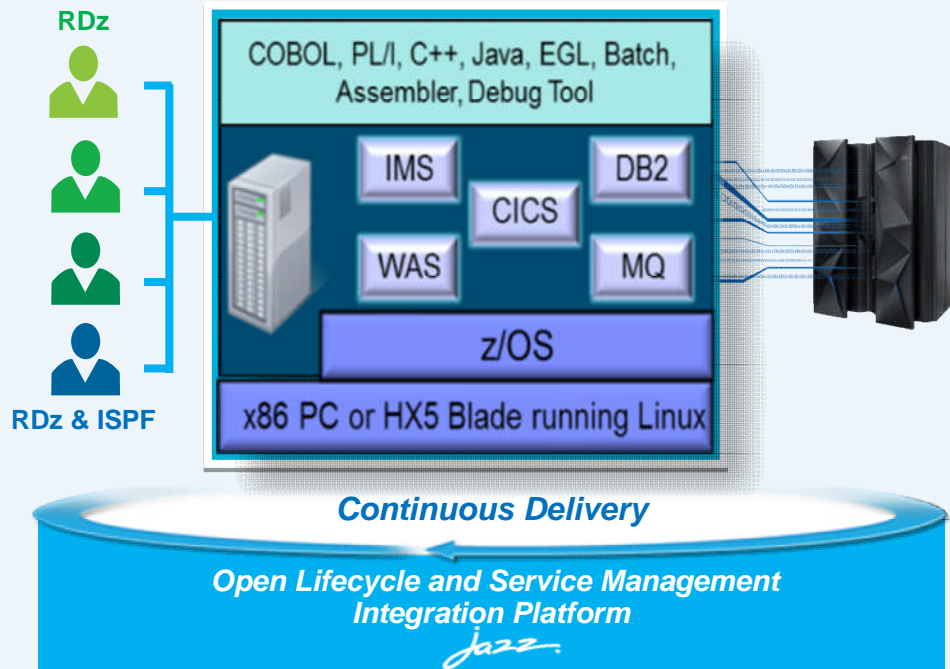
- Fully embrace automated testing
- Create test automaton of native and hybrid mobile and mainframe applications
- Run automated tests to validate builds
- Take advantage of over 70 technologies and protocols out of the box



Offload development and testing to reduce MIPS



Improve development flexibility



Rational Development and Test Environment for System z

Enabling you to...

- 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 dependencies on operations staff
- Try latest middleware, including CICS 5.1, IMS 12.1, and WebSphere 8.5

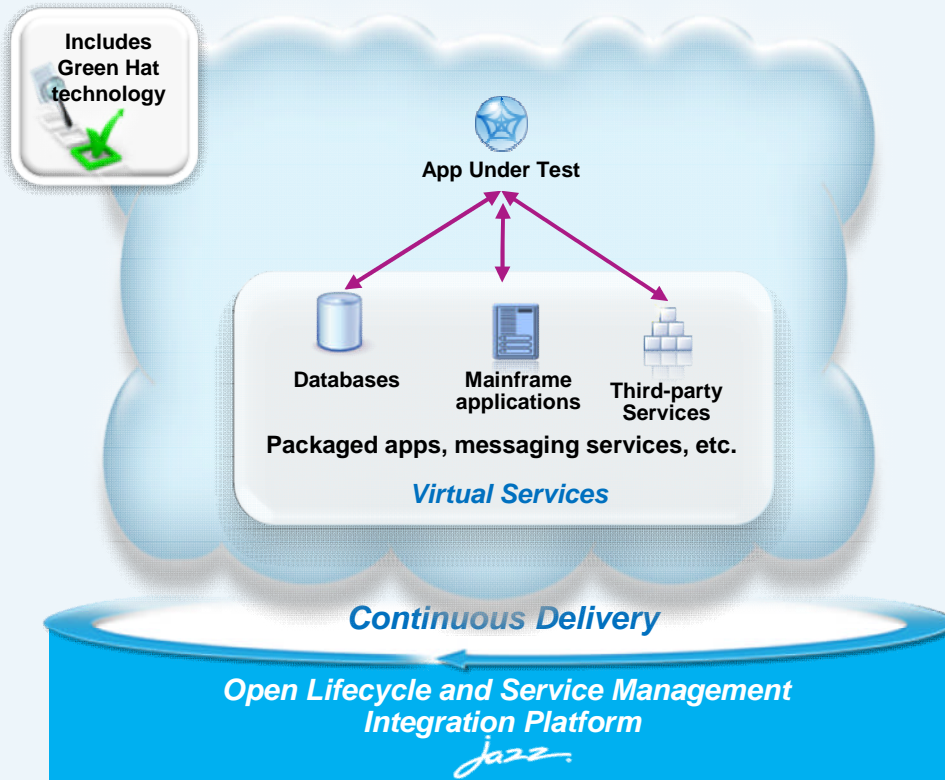
Note: This Program is licensed only for development and test of applications that run on IBM z/OS. The Program may not be used to run production workloads of any kind, nor more robust development workloads including without limitation production module builds, pre-production testing, stress testing, or performance testing.



Reduce provisioning burden on Operations



Maintain test LPARs effectively



Rational Test Virtualization Server - leveraging Green Hat technology

Enabling you to...

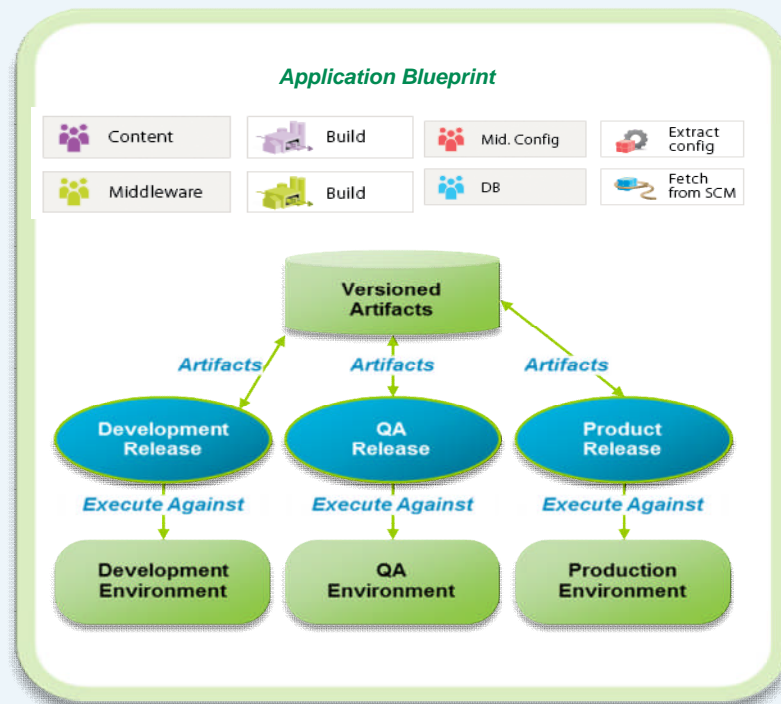
- Test in isolation with 'stubbed' or 'mock' services
- Virtualize CICS applications inside the mainframe and Java applications in the JVM
- Reduce development dependency on operations
- Minimize subsystem dependency during testing
- Reduce infrastructure costs and free up MIPS for production use



Rapid solution delivery and test provisioning



Deliver test environments in minutes



urban{code}

An IBM company

IBM UrbanCode Deploy
 IBM UrbanCode Release
 IBM SmartCloud Orchestrator
 CICS Deployment Assistant

Enabling you to...

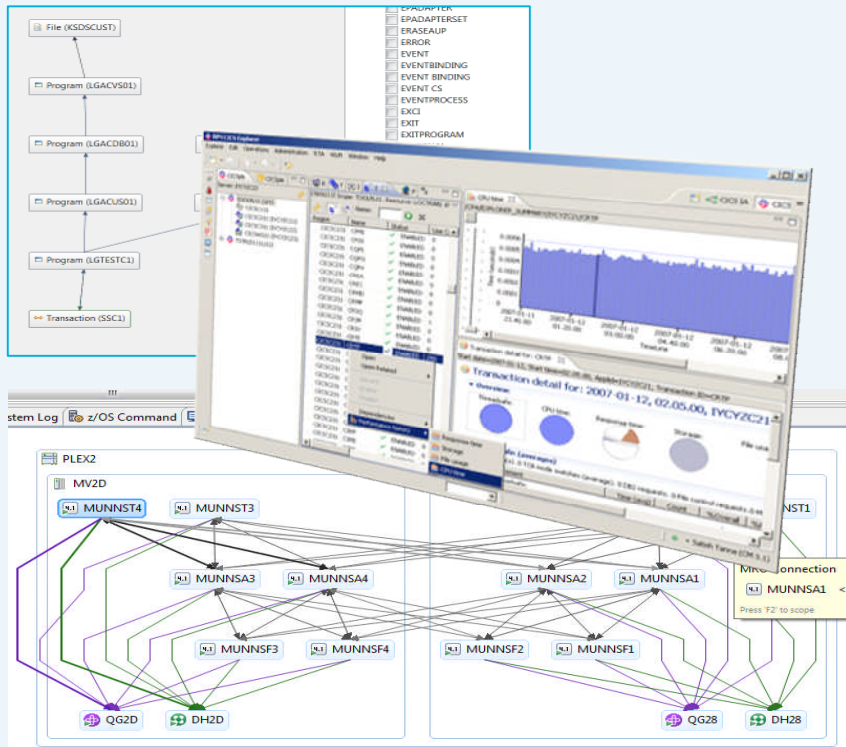
- Provision consistent images for test environments, reduce rework, and speed redeploy of new instances
- Quickly deploy multiple test instances in minutes versus hours or days
- Orchestrate the development, deployment and management of enterprise clouds
- Quickly clone (and destroy) test CICS regions



Resolve transaction failures and performance bottlenecks



Increase application availability



**z/OS Problem Determination Tools
IBM CICS Tools family
IBM Explorer for z/OS**

Enabling you to...

- Accelerate deployment of new CICS workloads
- Discover and visualize your real CICS environment
- Analyze and fix application and system failures
- Examine, monitor, and control the execution of application programs
- Identify root cause of performance issues



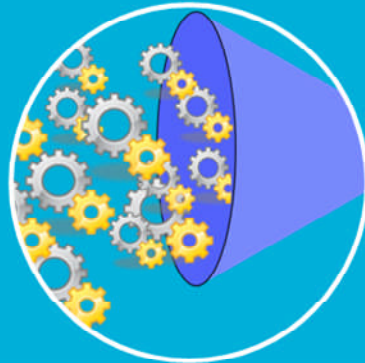
Nationwide[®]
On Your Side

For more than 80 years Nationwide's products and services have helped millions of people protect what matters most to them—their homes and cars, their businesses, and their financial security as they prepare for and live in retirement.

Business needs – Driver to agile practices



The Business requires rapid system changes to adapt to more frequent changes in the financial & insurance markets



As such, change can no longer be seen as a deterrent to IT productivity and quality



Development practices must embrace change in a way that promotes productivity and improves quality of delivery



Key agile practices, such as continuous integration and delivery, help ensure rapid delivery of quality software

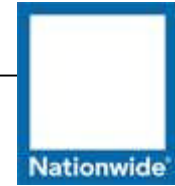




OBJECTIVE

Improve the agility of mainframe development through replication of the pattern used in distributed (e.g. Java) development that allows the incremental development and deployment of code in an agile environment

- How can what we have learned from distributed development be applied?
- What are the challenges faced by mainframe teams in becoming agile?
- How can DevOps & RD&T address these issues?



Challenges - Agility

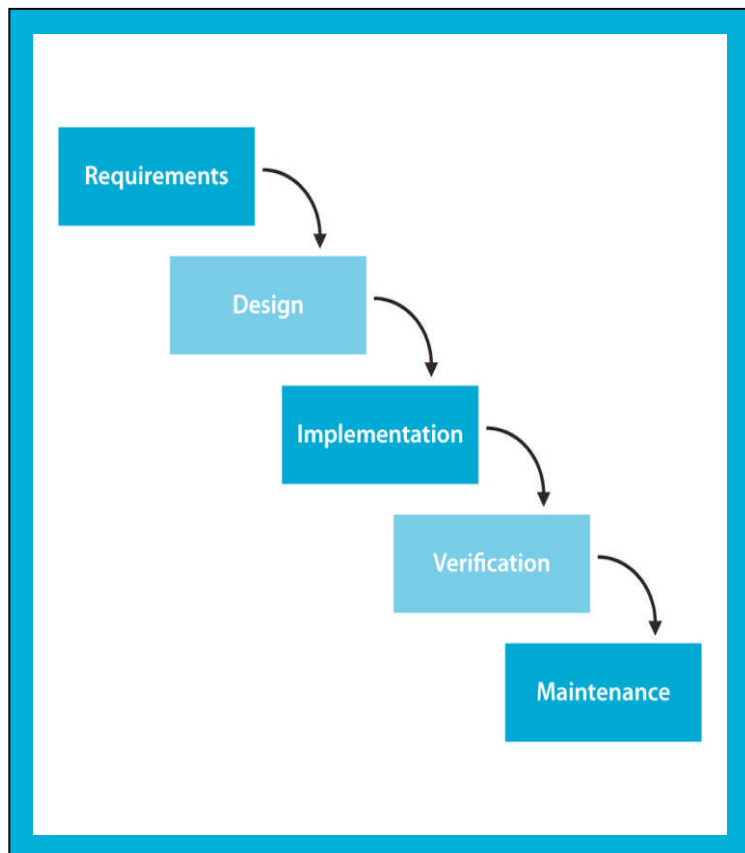
Agility requires the ability to develop code in a number of short iterations (generally 2 weeks) within a release where in each iteration:

- 1. A number of user stories are implemented and acceptance tested in an environment completely under the control of the development team
- 2. Unit tests are run every time code is checked in to ensure there is no breakage with more extensive unit/integration tests run nightly as part of a continuous integration process
- 3. Code is built and deployed into the development environment generally once or twice a day
- 4. At the end of the iteration, the code is promoted to more tightly managed and controlled Integration or System Testing environments which have a more complete set of data and interface connectivity as required for IT/ST testing

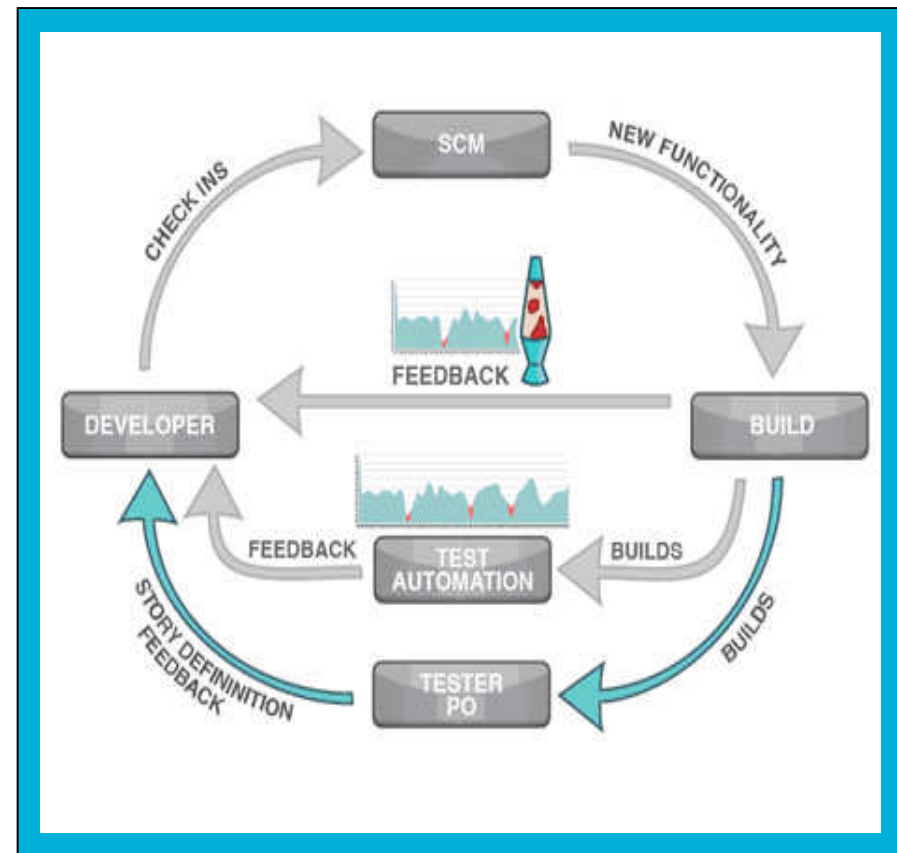
Challenges – Continuous Integration

On z/OS

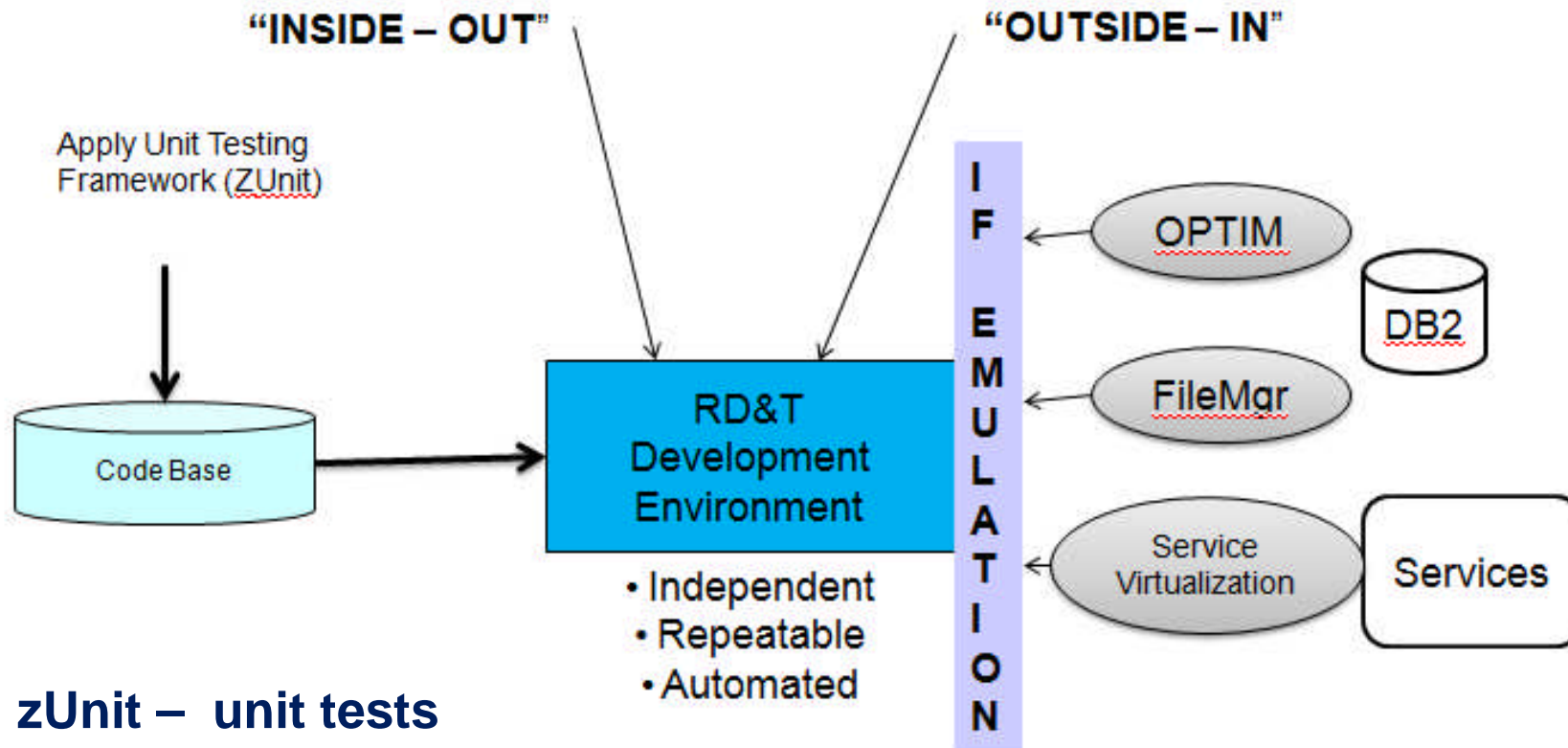
How do we get from *this*?



To *this*?



Mainframe tooling approach



zUnit – unit tests

RAA – identify test code base & dependencies

OPTIM & File Manager – manage test data

Service Virtualization – emulate services



Current status and next steps

Developer Testing

- Utilize zUnit as code is re-factored based on frequency of change and dependency with other units

Data Virtualization

- Expand the use of OPTIM for data masking and sub-setting
- Also utilize File Manager when appropriate for bringing data into RD&T environment

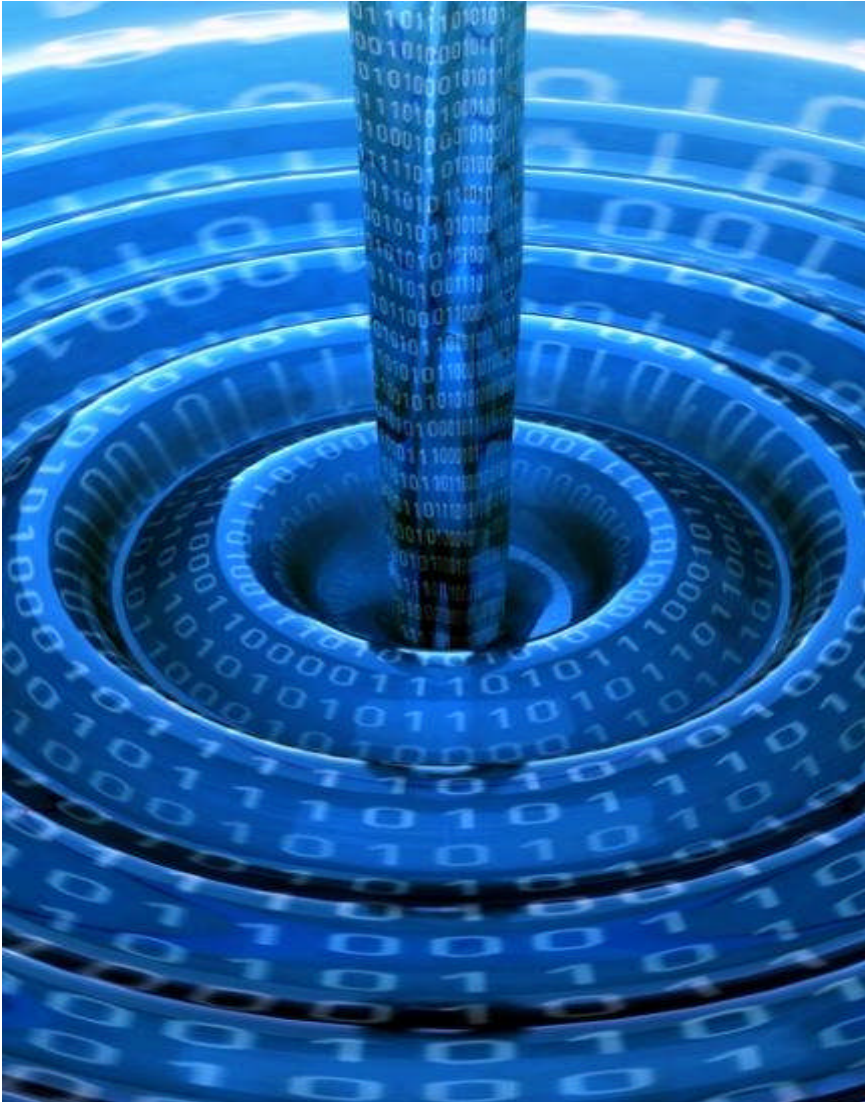
Service Virtualization

- Utilizing service virtualization tooling to provide necessary interfaces in RD&T environment

Continuous Integration

- Continue to address gaps with code deployment, automated builds and reporting using DevOps capabilities

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 System z as it is for distributed environments



For more information

New study - The software edge: how effective software development and delivery drives competitive advantage

• <http://www-935.ibm.com/services/us/gbs/thoughtleadership/softwareedge/>

What's new in System z Software

• <http://www-01.ibm.com/software/os/systemz/announcements/applications/index.html>

IBM DevOps solution overview

• <http://www.ibm.com/ibm/devops/us/en/>

Short Video: IBM DevOps - Continuous delivery of software-driven innovation

• <http://www.youtube.com/watch?v=v5omfd2E5eQ>

Hayden Lindsey interview: Making DevOps Real for System z

• <http://public.dhe.ibm.com/common/ssi/ecm/en/ra112346usen/RA112346USEN.PDF>

CICS Showcase

• <http://ibm.com/software/htp/cics/showcase/>

CICS Social Media Aggregator

• <https://www-304.ibm.com/social/aggregator/cics>

Webcast series: IBM DevOps for System z

• <http://www.ibm.systemsmag.com/mainframe/marketplace/webinars/devops/>

Questions



Thank You

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