BusinessConnect
A New Era of Smart

DevOps for the Mobile Enterprise:
Build and connect

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Mobile is the next evolution for connecting to the Data Center

91%
Mobile users keep their device within arm's reach 100% of the time

75%
Mobile shoppers take action after receiving a location based message

96%
Year to year increase in mobile cyber Monday sales between 2012 and 2011

90%
Users use multiple screens as channels come together to create integrated experiences

900%
Increase of global machine-to-machine connections by 2022 (2 billion in 2011 to 18 billion at the end of 2022)
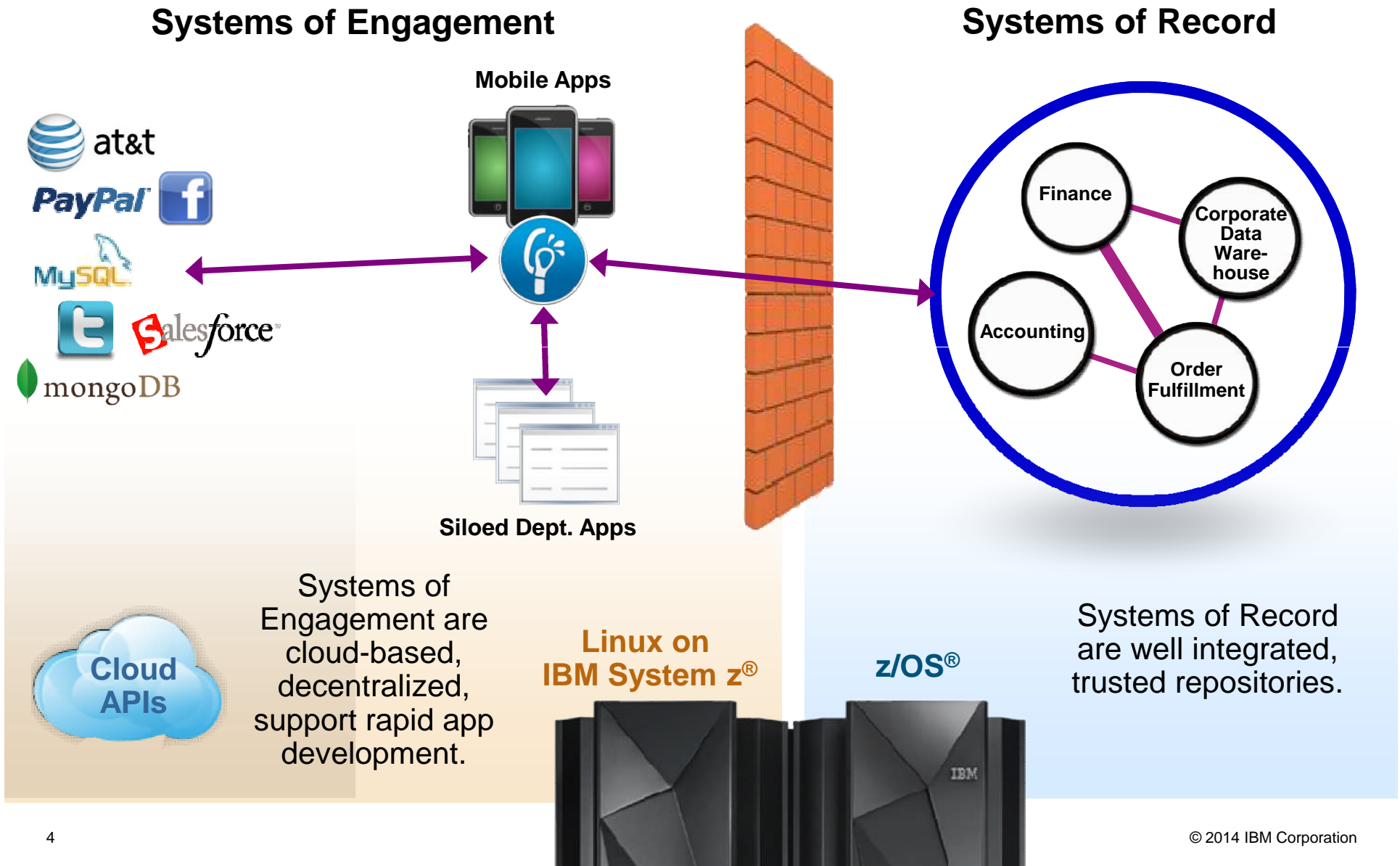
Mobile is changing the way information is used

Information developed and controlled by users for mobile devices

Information developed using multiple platforms and transformed into web services

Information restricted and developed in the data center

JAVA

System z bridges Systems of Record and Systems of Engagement

Systems of Engagement

Systems of Record

Mobile Apps

Finance

Corporate Data Ware-house

Accounting

Order Fulfillment

Siloed Dept. Apps

Cloud APIs

Systems of Engagement are cloud-based, decentralized, support rapid app development.

Linux on IBM System z®

z/OS®

Systems of Record are well integrated, trusted repositories.

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

Line-of-business
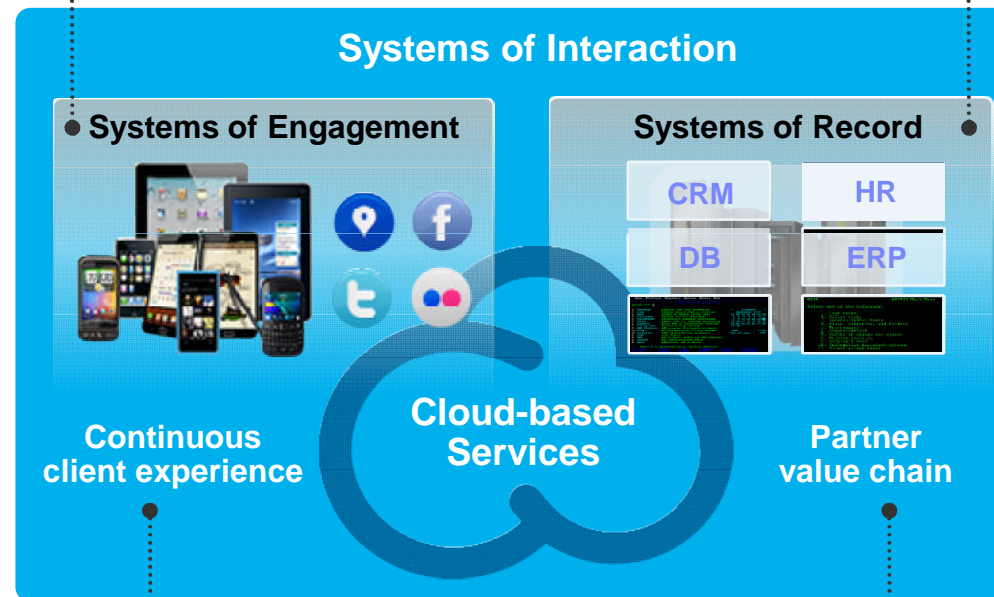Takes too long to introduce or make changes to mobile apps and services

Operations
Rapid app releases impact system stability and compliance

>70%

of budgets devoted to maintenance and operations

>45%

of customers experience production delays

Systems of Interaction

Systems of Engagement

Systems of Record

| CRM | HR |
| DB | ERP |

Cloud-based Services

4-6 weeks

to deliver even minor application changes to customers

Continuous client experience
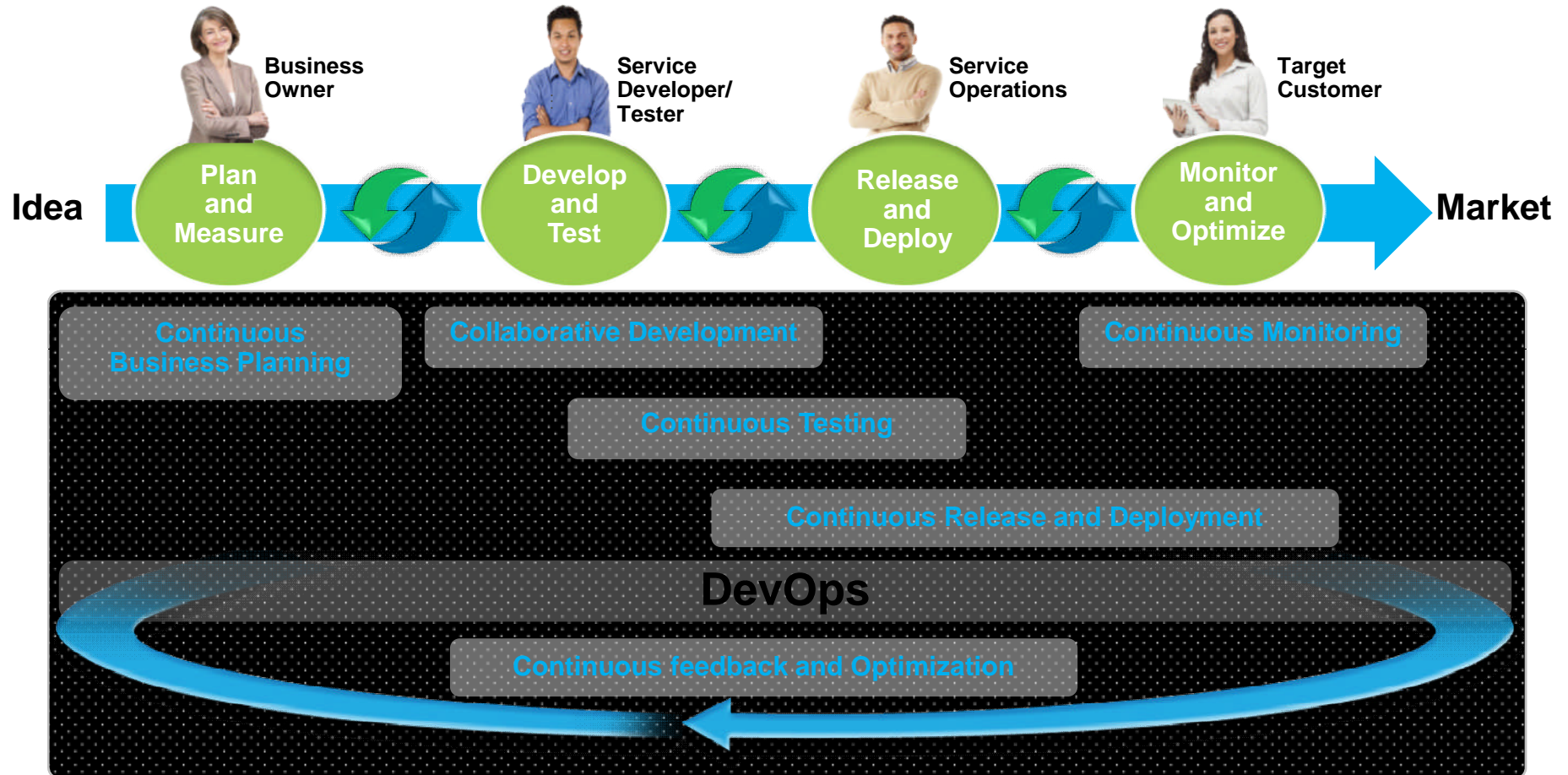
Partner value chain

>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
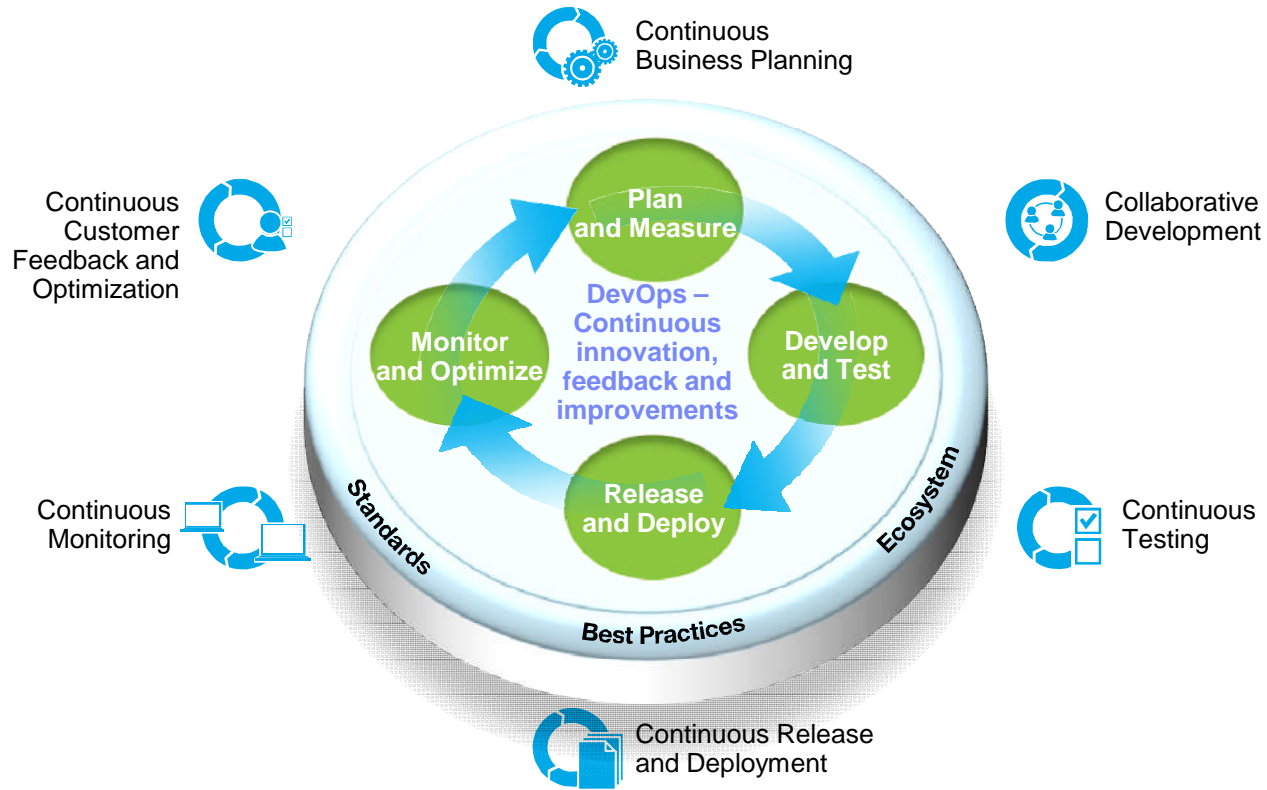
Suppliers
Delivery in the context of agile

DevOps takes a closed-loop feedback approach to software delivery

Extending Lean and Agile practices across the entire software value chain

Business Owner — **Plan and Measure**

Service Developer/ Tester — **Develop and Test**

Service Operations — **Release and Deploy**

Target Customer — **Monitor and Optimize**

Idea → Market

Continuous Business Planning

Collaborative Development

Continuous Monitoring

Continuous Testing

Continuous Release and Deployment

DevOps

Continuous feedback and Optimization

IBM DevOps point of view

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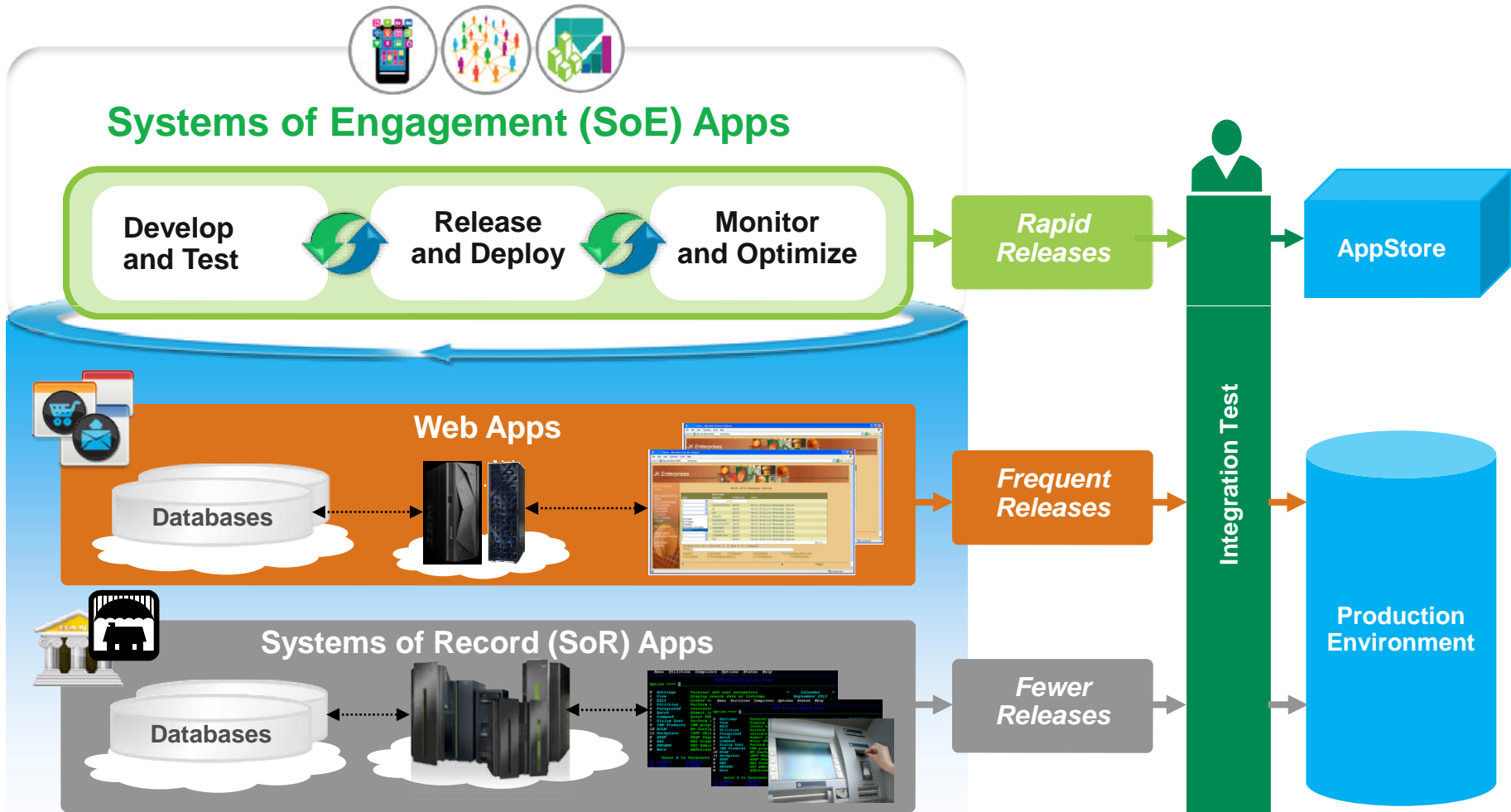

Continuous Business Planning

Continuous Customer Feedback and Optimization

Collaborative Development

Continuous Monitoring

Continuous Testing

Continuous Release and Deployment

Plan and Measure

Develop and Test

Monitor and Optimize

Release and Deploy

DevOps – Continuous innovation, feedback and improvements

Standards

Ecosystem

Best Practices

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*

The need: Integrate systems of engagement with systems of record

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

Systems of Engagement (SoE) Apps

| Develop and Test | Release and Deploy | Monitor and Optimize | *Rapid Releases* | AppStore |

Web Apps

Databases

Frequent Releases

Integration Test

Production Environment

Systems of Record (SoR) Apps

Databases

Fewer Releases

Leverage common tools to build multiplatform apps

Boost developer productivity

MOBILE   .NET   JEE   COBOL   PL/I

Continuous Delivery

Open Lifecycle and Service Management Integration Platform

IBM MobileFirst

**Rational Developer for the Enterprise
IBM Worklight for MobileFirst platform
CICS Transaction Server V5**

Enabling you to…

- Leverage common Eclipse-based IDEs for all types of development

- Access broad coverage of runtimes, languages, compilers, and platforms

- Access via cloud-based environments like SmartCloud Enterprise+ (SCE+)

- Create agile services from new and existing mainframe assets

Refactor and extend back end services to provide an optimal mobile experience
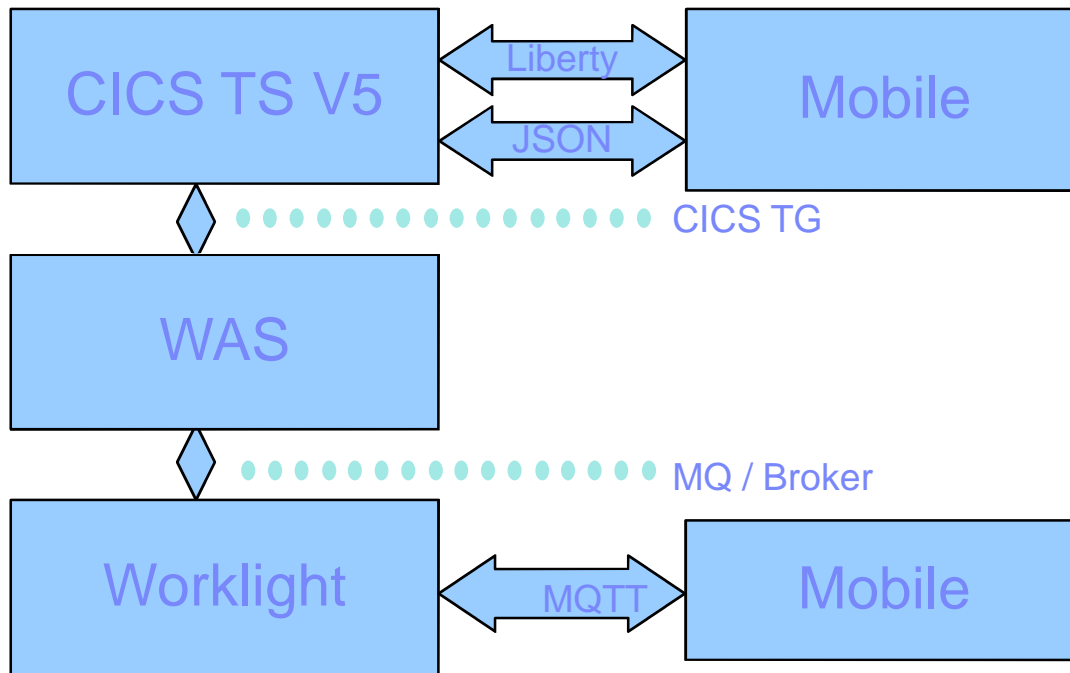
CICS TS Feature Pack for Mobile Extensions
CICS TG Mobile support
CICS TS WAS Liberty support
CICS TS Cloud enablement support

CICS TS V5 ⟷ Liberty ⟷ **Mobile**

⟷ JSON ⟷

◆ ·············· CICS TG

WAS

◆ ·············· MQ / Broker

Worklight ⟷ MQTT ⟷ **Mobile**

Enabling you to…

- Expose new and existing back-end services to mobile applications in an easily consumed format

- Modernize your existing interface with Liberty in CICS

- Accelerate agile adoption on the mainframe

University of Florida goes mobile

Enabling 50,000 students, 5,400 faculty members and staff access to online features anytime, anywhere

Data provided to students real time

Mobile formatted information of class schedules, textbooks, academic dates, grades, emergency information and campus map

IBM Solution

Accessing CICS with System z information via smartphones

Up to 1M transactions/day

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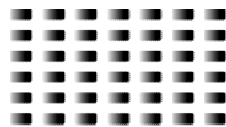
HALKBANK

25 years of continuous operation
On CICS®, DB2®, and System z®

Mobile

"*Mobile banking* is a fast growing channel for Halkbank. As for all other channels, *we run the transactions themselves on our CICS and DB2 for z/OS systems*, which helps *to ensure the highest levels of performance, availability and security*"

Ayhan Yalkut, System z Manager, Halkbank.

Scalable

The Turkish state pays most of the government salaries through the bank, causing a once-monthly peak in daily transactions, increasing from 25m to 50m

Reliable

"In more than 25 years of continuous operations, we have never had any unplanned downtime"

FORRESTER

"Core enterprise applications process transactions — lots of transactions — and so can't be scaled by adding load balancers and spawning new copies of services. They scale by adding capacity to the transaction processing engine"

Break down silos by moving to an Agile team environment

Maximize team productivity

Project Managers / SCRUM Masters

Quality and Test

Administrator

Agile Teams

LoB / Business Analyst

Developers

Continuous Delivery

Open Lifecycle and Service Management Integration Platform

Jazz
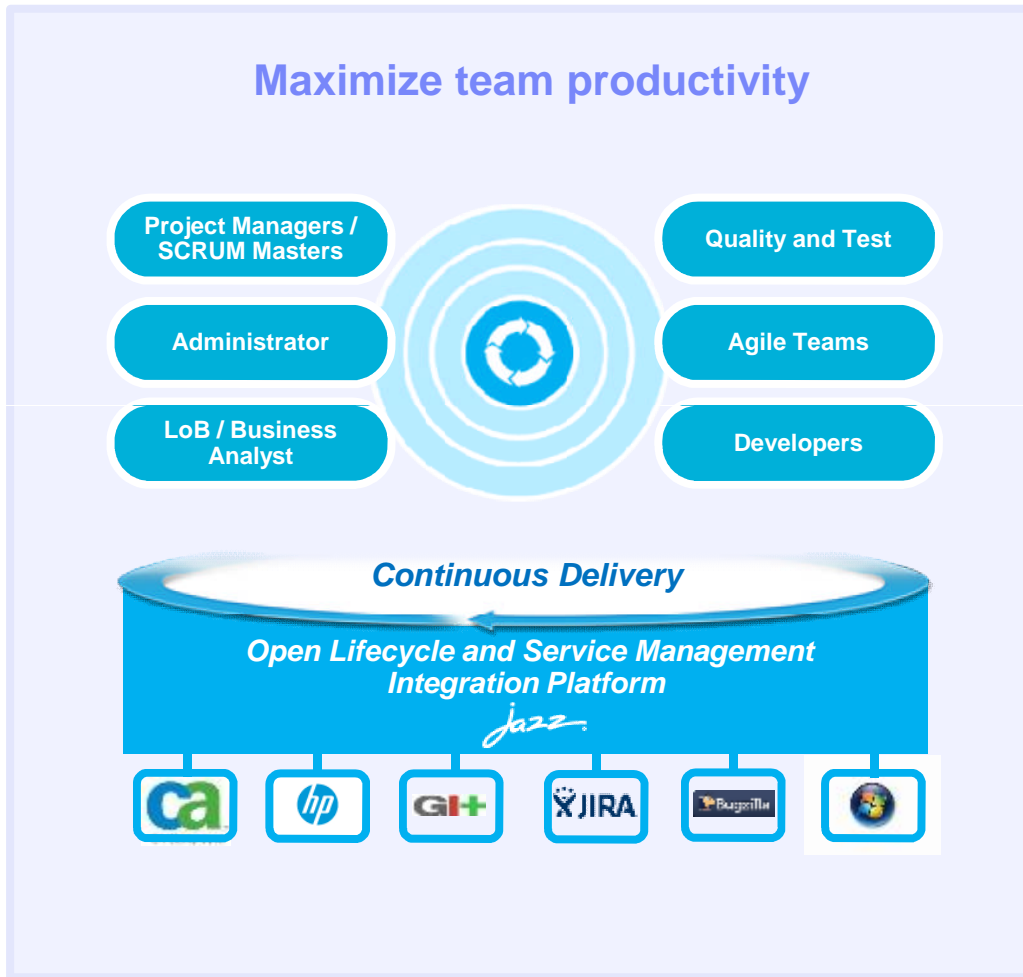
**Rational Team Concert
Rational Doors Next Generation
Rational Quality Manager
CICS Configuration Manager**

Enabling you to…

- Manage all types of source - 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 Endevor

- Use Lifecycle integration adapters for third-party tools

Offload development and testing to reduce MIPS

Improve development flexibility

RDz

COBOL, PL/I, C++, Java, EGL, Batch, Assembler, Debug Tool

IMS   DB2
CICS
WAS   MQ

z/OS

x86 PC or HX5 Blade running Linux

RDz & ISPF

Continuous Delivery

Open Lifecycle and Service Management Integration Platform

Jazz.
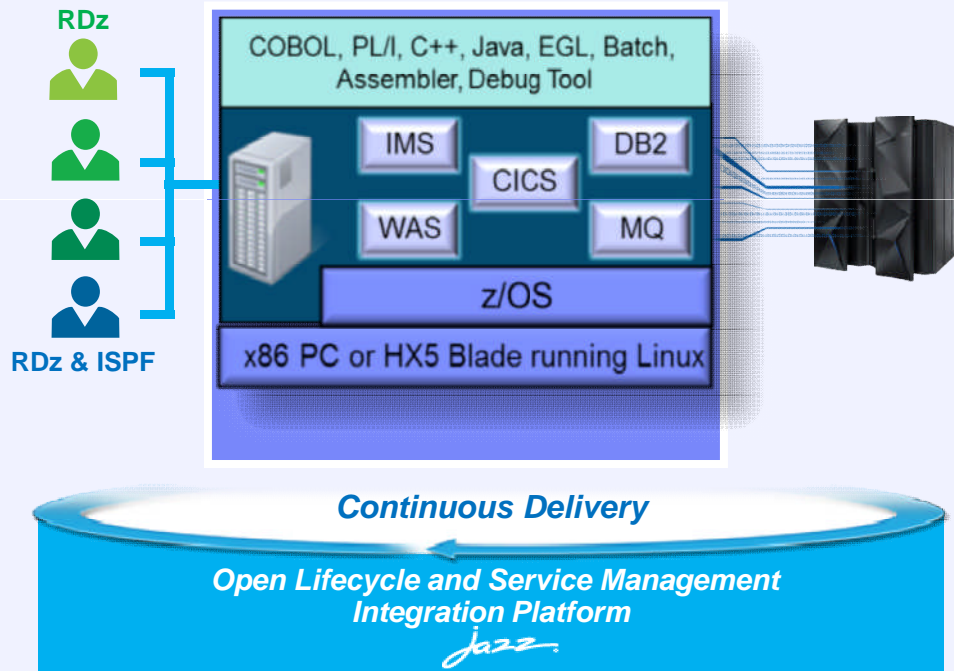
Rational Developer and Test Environment for System z

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

New Try latest middleware, including CICS 5.1, IMS 12.1, and WebSphere 8.5

- System z Development and Test Solution

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.

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Develop and test capabilities for mobile applications

Accelerate mobile application development

Construct, debug, and test mobile and Web applications

Design · Traceability · Code

Deploy · Traceability · Test

Refactor and extend existing logic as mobile-consumable services

Continuous Delivery

Open Lifecycle and Service Management Integration Platform

Jazz
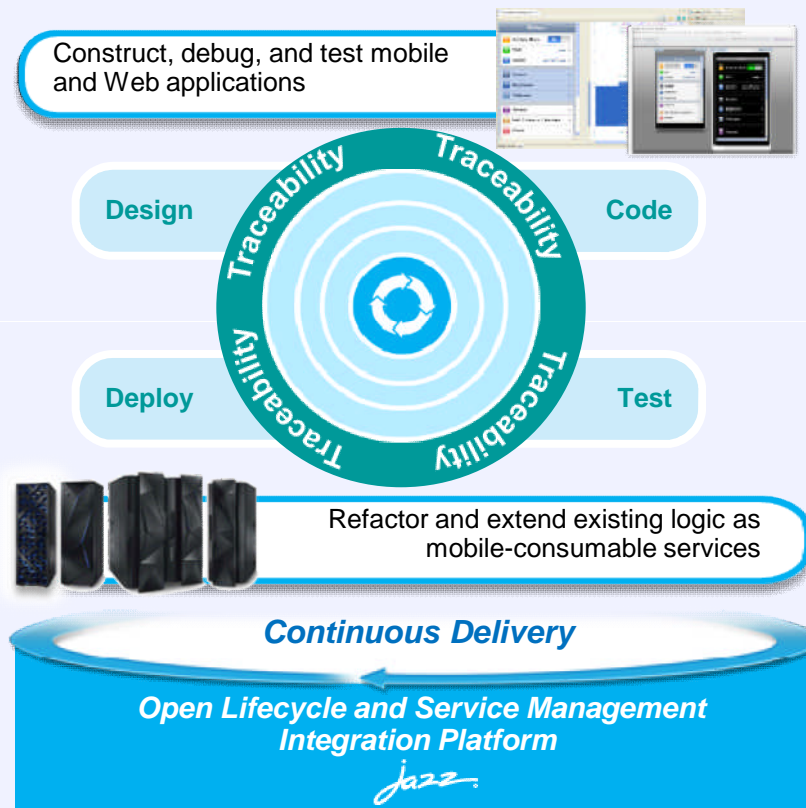
**Rational Test Workbench
IBM Worklight for MobileFirst platform
Rational Application Developer
Rational Developer for the Enterprise
CICS Interdependency Analyzer
CICS Performance Analyzer**

Enabling you to…

- Quickly design, code, build, test, and deploy mobile apps that run on a wide variety of mobile platforms

- Refactor and extend existing back-end services to provide an optimal mobile experience

New
- Stub out back-ends to simplify test and development

New
- Automate testing for native and hybrid mobile apps

Client Successes with DevOps

Plan and Measure → **Develop and Test** → **Release and Deploy** → **Monitor and Optimize**
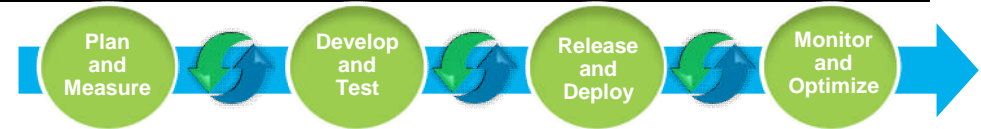
Laminar Medica reduced new product development time and costs by 25%, contributing to 10% increase in competitive wins

China Merchants Bank profits from a unified collaboration platform

INTER Versicherungsgruppe increases productivity in application development

SIBRA GmbH keeps a vital project within budget and on time

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

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

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

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

Aon Integramark establishes a dynamic SOA environment that automates data synchronization

A healthcare information provider cuts deployment time down to minutes

Sky Bet monitors the online customer experience to increase overall revenues

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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

From Mobile to Mainframe
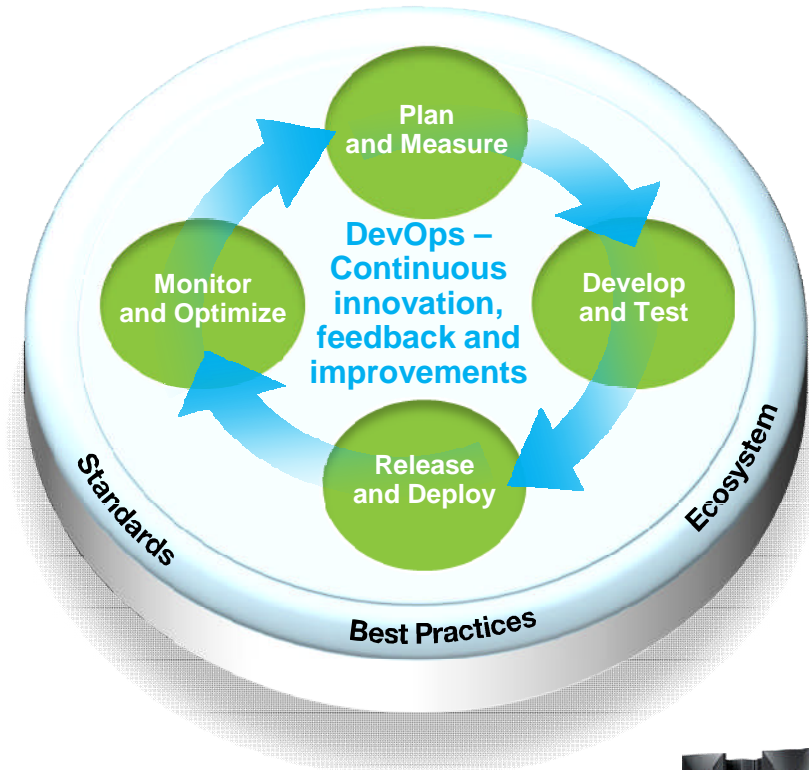
www.ibm.com/devops

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