



## DevOps for z Systems Is Essential To Deliver Real Business Outcomes

New IBM DevOps capabilities help enterprises deliver significant improvements to transform your software delivery capability



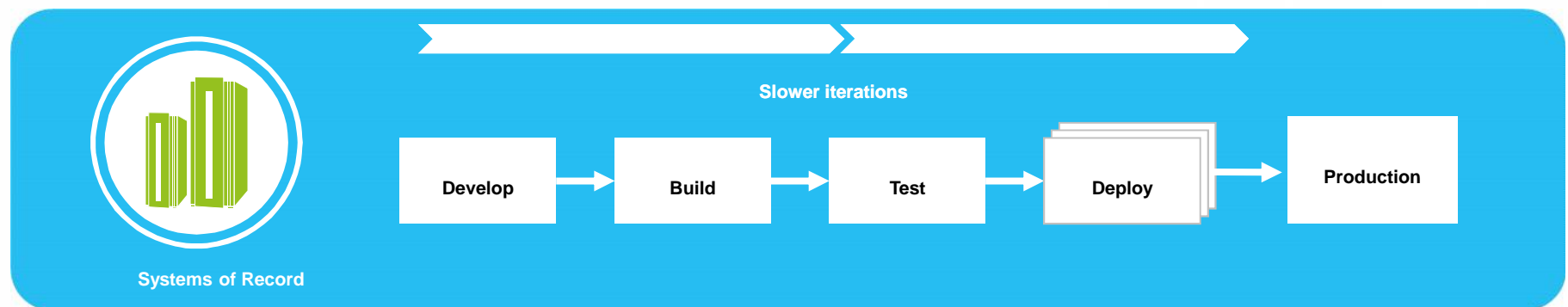
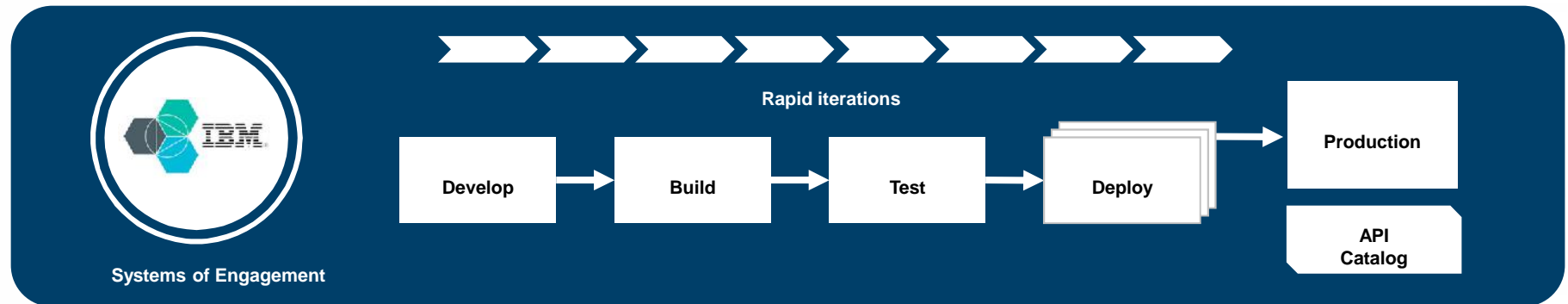
- Executive Summary
- Why DevOps for z Systems
- Monetizing your DevOps ROI
- Recent product announcements
- New DevOps Innovation Services
- What you can gain from the rest of the day

- Businesses are under tremendous pressure to create new value for their customers, with all business innovation is now delivered through software.
- Market speed has increased dramatically and fast-moving adopters of technology are disrupting entire industries with rapid-fire, digital innovations that leverage Cloud, Big Data and Engagement (Mobile & Social).
- IBM is helping clients transform their software delivery capability in order to achieve faster innovation and deliver measurable business outcomes – addressing culture, process and technology.
- Recent announcements coupled with **new IBM DevOps Innovation Services**, provide a complete enterprise capability for accelerated and continuous delivery of software that goes beyond current DevOps and agile practices.

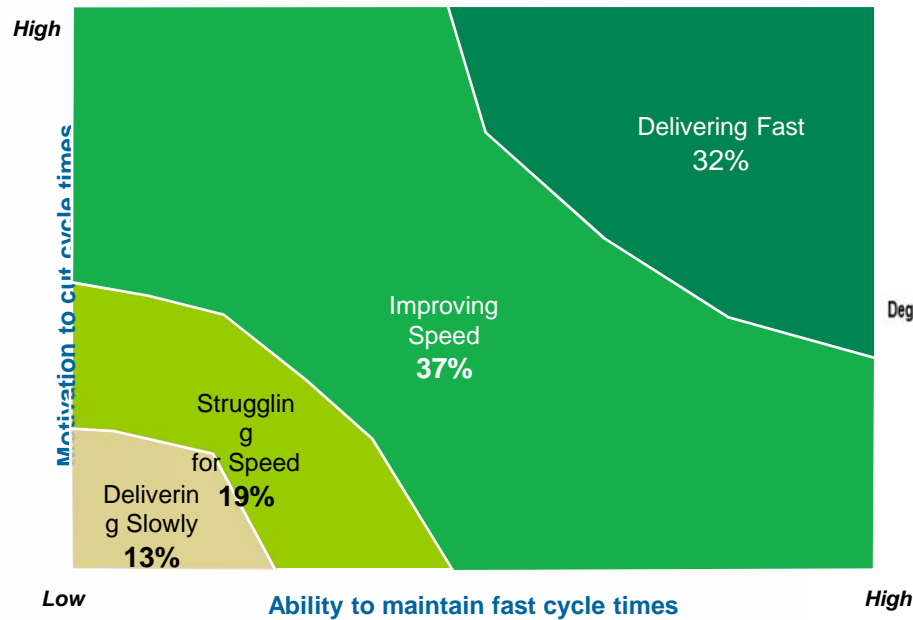
... in the words of our clients and partners



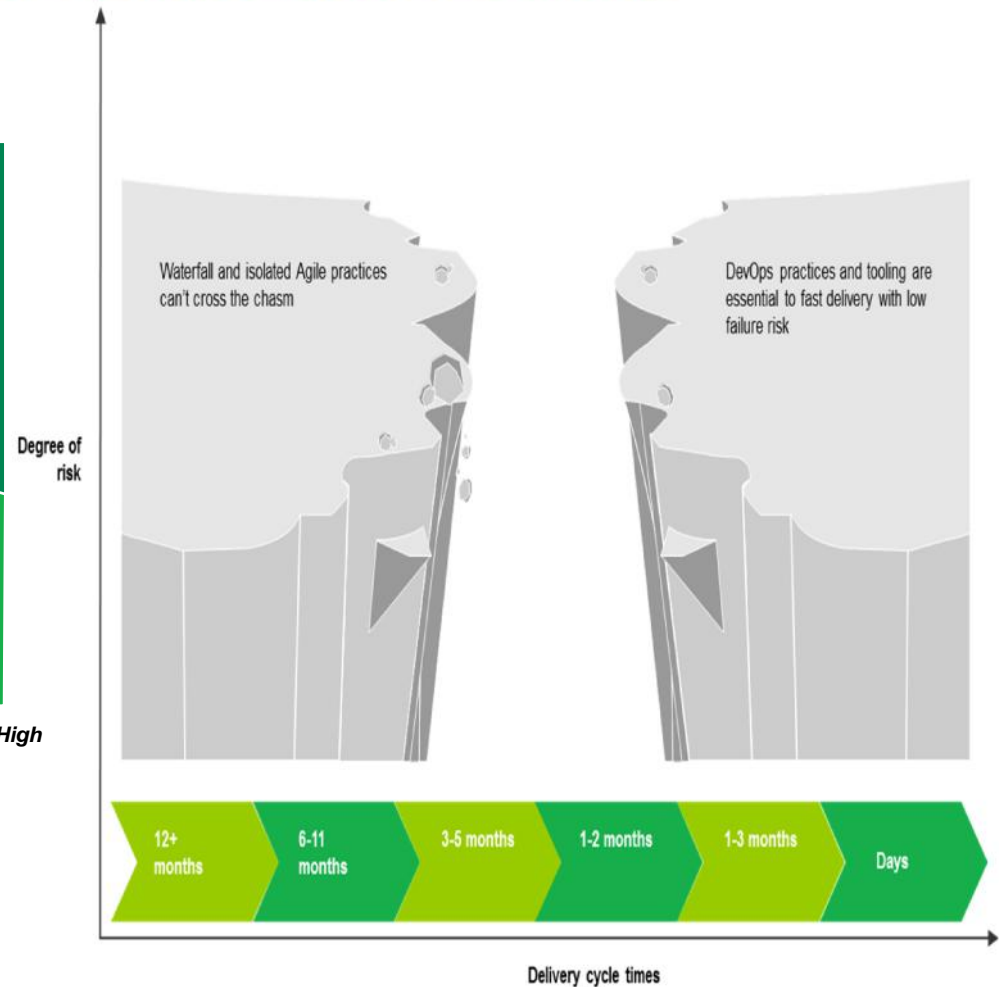
# Application Development Realities in a Hybrid world: 2 Speed IT



1/3rd of companies are delivering with speed with quality



## How do we speed up software delivery?



## Inaction – Status Quo



- Status quo – don't change
- FUD: “millennials can't code COBOL”, “manual processes exist for a reason”, “SoR dev can't be as nimble as dist'd”



- Slow – SoR dev the bottleneck
- High cost – “inhibitor to innovation”
- High risk – business becomes uncompetitive

## Action – Embrace DevOps



- Change agent – accept the mission!
- New reality - make a radical shift with DevOps...and lean, and MVPs, and...



- Fast - client feedback incorporated
- Low cost – incremental deliveries, new client value
- Low risk – better quality, holistic dev / delivery

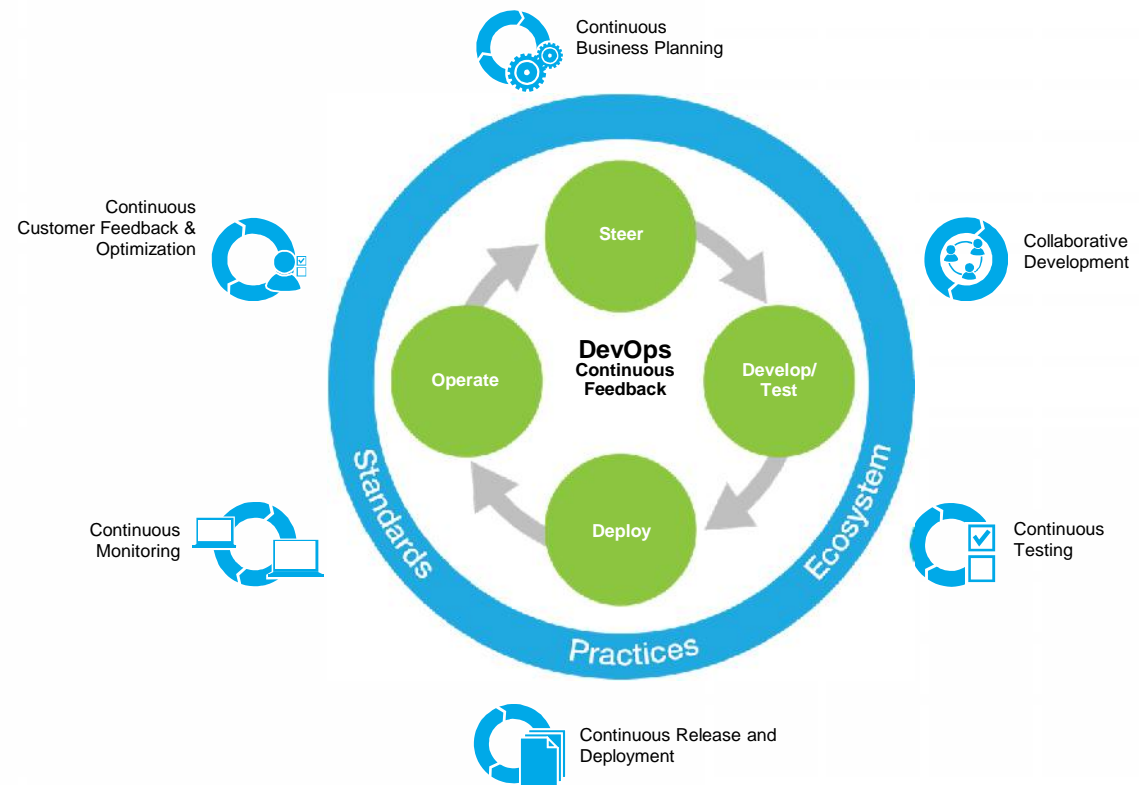
# IBM DevOps point of view

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

**Accelerate software delivery –  
for faster time to value**

**Reduce time to customer feedback –  
for improved customer experience**

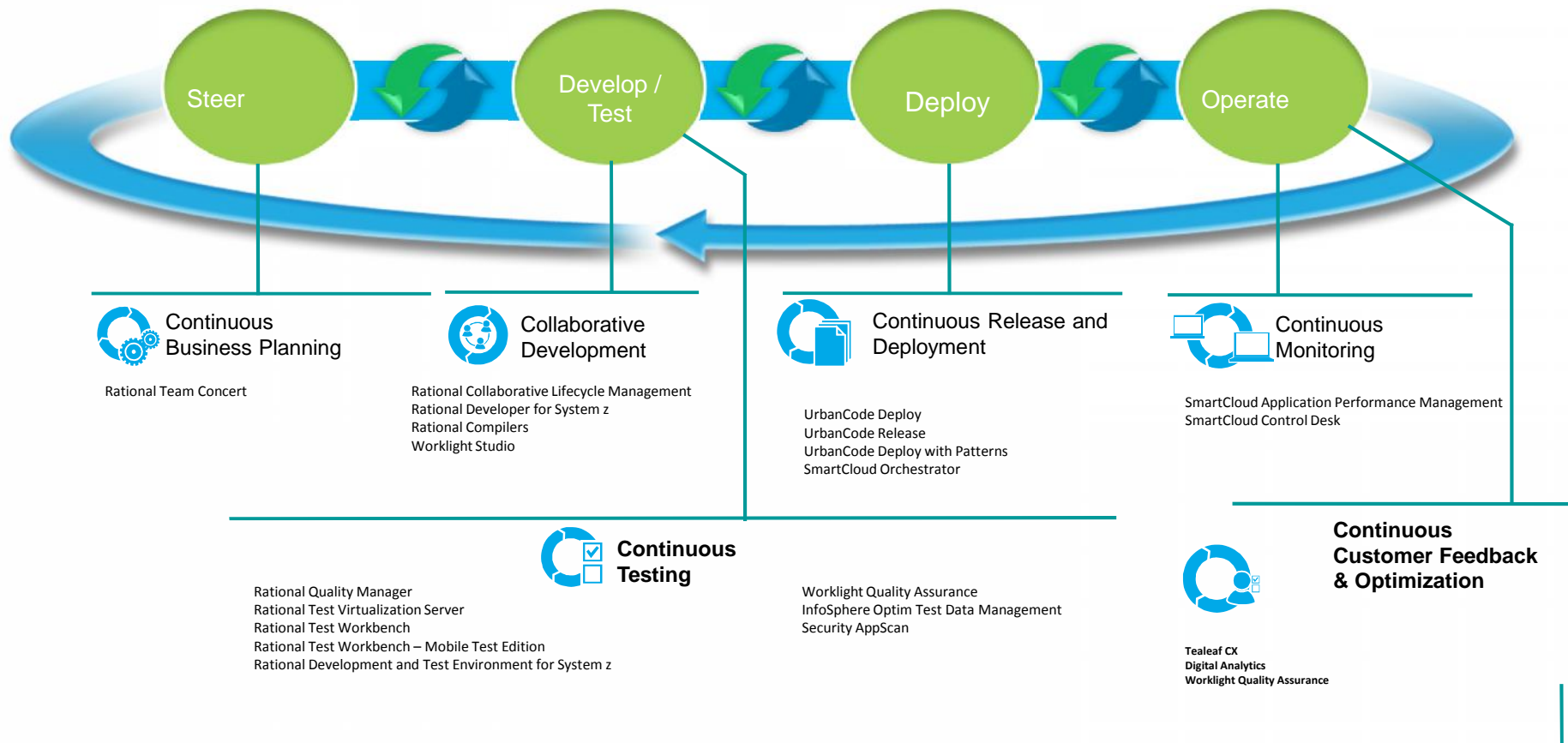
**Balance speed, cost, quality and risk –  
for increased capacity to innovate**



Clients are achieving **measurable business outcomes with DevOps**

# IBM DevOps – Broad set of DevOps capabilities

Address bottlenecks across the application delivery lifecycle



**Bluemix DevOps services**

- Agile planning and tracking
- Application auto-scaling
- AppScan mobile analyzer
- Continuous delivery pipeline
- Git hosting
- Mobile application security
- Mobile data
- Mobile quality assurance
- Monitor & analytics
- Push
- RapidApps (beta)
- Server-side code
- Web IDE



- **Monetizing the Value of Enterprise DevOps**
  - **Productivity**
  - **Quality**
  - **Operating Expense**
  - **Capital Expense**

## Rational Enterprise DevOps solutions save money in many dimensions

- By increasing staff capacity through productivity improvements
  - Examples include:
    - Faster code development and maintenance
    - Faster and improved impact analysis and testing
    - Build automation
    - Quality Management and Test Automation
    - Configuration Management
    - Time to market
- By discovering defects earlier in the lifecycle thus reducing the repair costs
  - Examples include:
    - Improved Requirements Analysis and Management
    - Code Analysis
    - “Shift Left” strategy. Using transparency, continuous integration and testing to identify issues early
- By Reducing Operating Expenses
  - Examples Include:
    - Reduced MIPS
    - Reduced Labor costs
- By Reducing Capital Expenses
  - Examples Include:
    - More effective use of existing resources.





## Monetizing the Value of Productivity Improvement

- **Problem:** How do you measure value?
  - **Lines of Code (LOC)** and **Function Point (FP)** – a lot of baseline data available, but poor indicators of value.
  - **Story Points** – used by agile teams, often no baseline data exists...
  - **Business Points<sup>1</sup>** – few measure it, but focus on value. Often, no baseline data exists...
- **Solution:**
  - Measure **Velocity**, that is, how much faster is the team working now relative to before adoption.
  - To calculate velocity of your agile team, simply add up the estimates of the features, user stories, requirements or backlog items successfully delivered in an iteration.

<sup>1</sup>While Story Points reflects the size of the implementation effort, Business Points reflect the business value associated with each story / epic / scenario / ...



## Monetizing the Value of Quality Improvement

Two key drivers:

1. Fewer defects found post deployment
    - A result of better test coverage, automated and frequent testing
  2. The average defect is found earlier in the lifecycle, when the cost of finding them is lower
    - A result of iterative and agile development, enabled through improved lifecycle continuous integration and test
- Problem: How do you know the cost of a defect
  - Solution: If you have collected your own baseline data, use it. If not, we make it easy to select relevant industry data

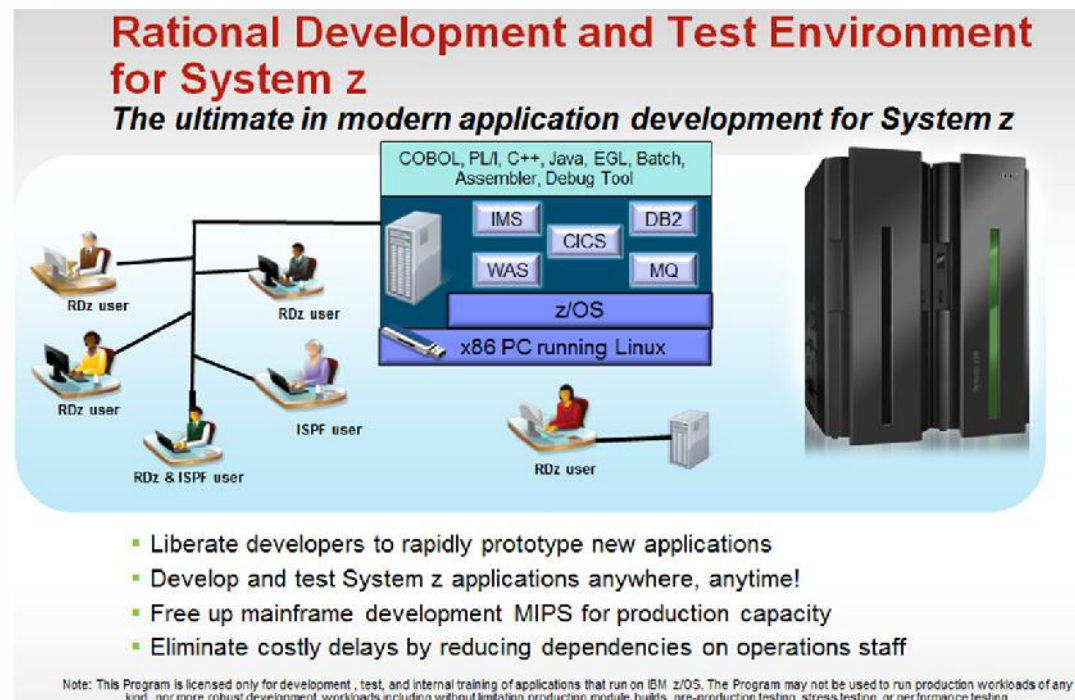
## Operating Expense Reduction

### 1. MIPS

- A result of transferring dev/test load to less expensive platform like RD&T

### 2. Labor

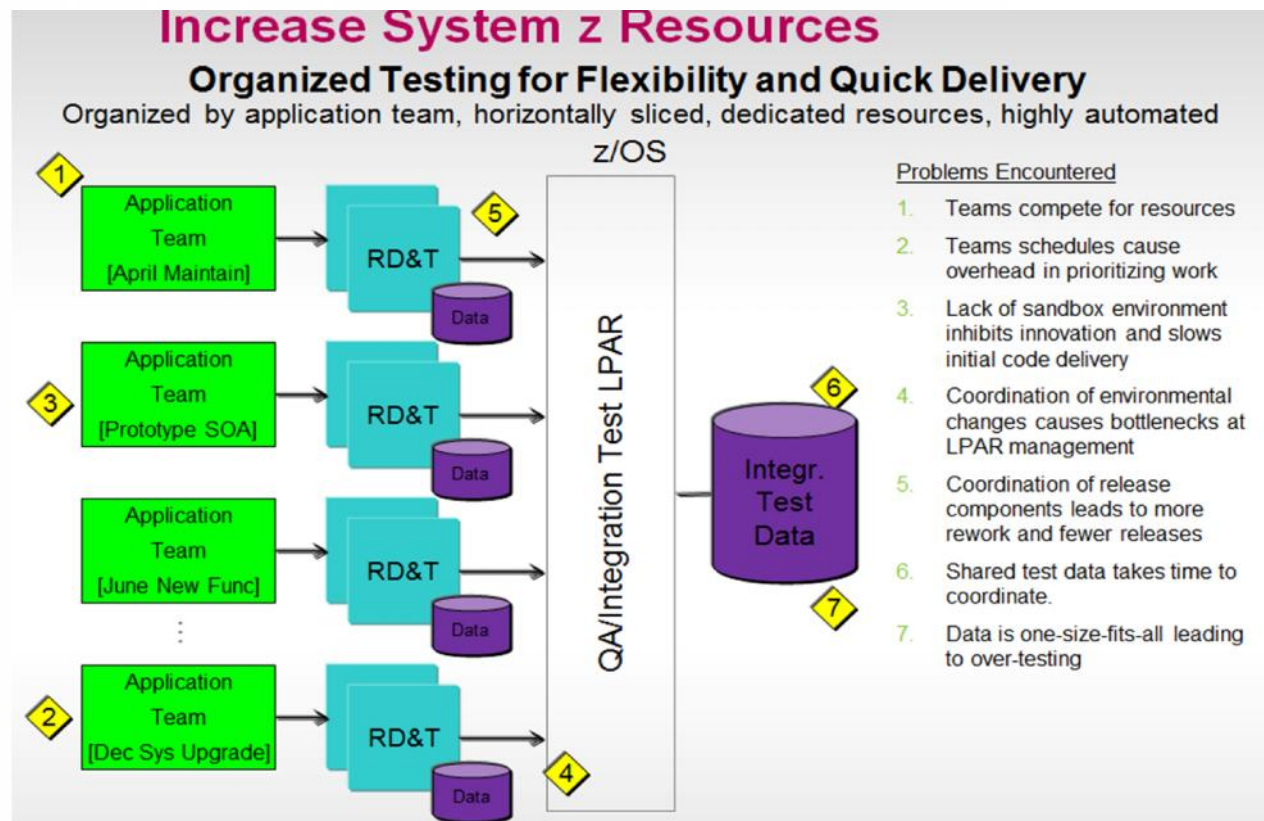
- A result of improved productivity and doing same or more work with less resources



# Capital Expense Reduction

## Hardware

- A result of better test coverage, automated and frequent testing
- Creation of more low cost test platform configurations through new technology like RD&T and Cloud





# DevOps delivers value across the software delivery lifecycle

IBM WATSON



Reduced delivery cycles from nine weeks to three weeks. – [IBM Watson team](#)

Reduced typical 6-month development effort to 15 days, from concept to running system. – [Bay Area Rapid Transit & Synchrony Systems](#)



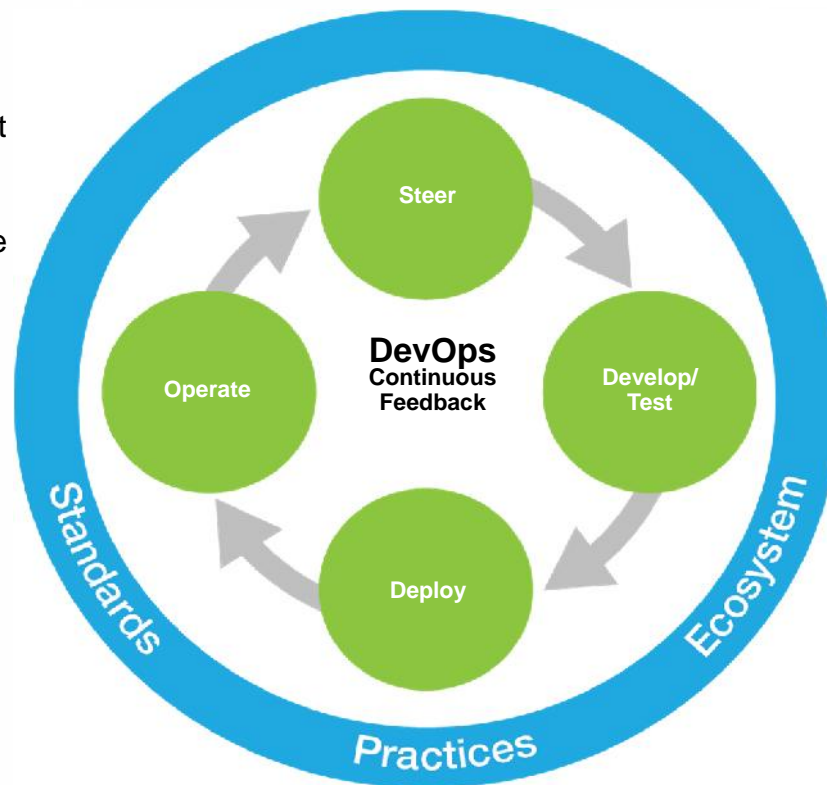
Tangerine

Reduced end-to-end development time from 6 weeks to 2 weeks; accelerated standing up an operational hardware and software stack to just 30 minutes.

– [Tangerine](#)

Increased new product releases from 30-40 per year to more than 400.

– [cars.com](#)



h.h.gregg

appliances & electronics

Sped from concept to prototype in 1 week, in-market in 3 months

– [h.h.gregg](#)



80% reduction in critical defects over the last three years; 90% on-time delivery vs. 60% previously.

– [Nationwide Insurance](#)



Reduced the time required for software releases by 99%; achieved cost avoidance of more than USD2.3 million per year (for a single app). – [Fidelity Investments](#)

– [Fidelity Investments](#)



Shortened development time for products from months to days; gained 1.2 million new customers in just one year. – [RCBC](#)

40% reduction in overall testing costs; 80% productivity improvement. – [Large Government Agency](#)



## New Announcements



# Multiplatform Collaborative Lifecycle Management is now available as a Managed Service

Reduce Administration Costs



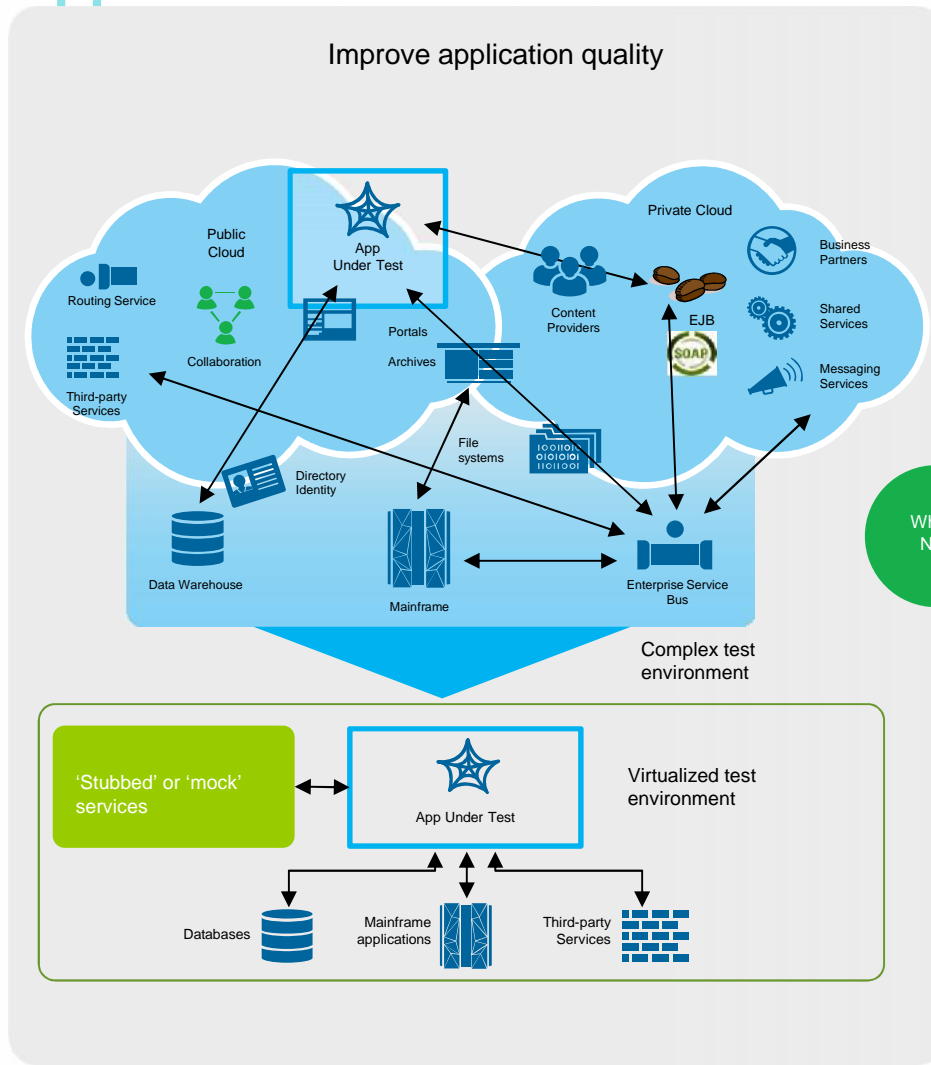
Provides on-going expertise to ensure that your CLM environment is taken care of so that you can focus on your business.

- Reduce costs with pay-for-use managed services
- Customized and configured for your unique needs
- IBM team remotely oversees and supports configuration, implementation, and monitors
- Scalable, single-tenant, Infrastructure
- 99.9% availability (SLO)
- Scale up and down the number of users monthly



IBM SoftLayer

# Continuously test the integrations for complex apps with Service Virtualization



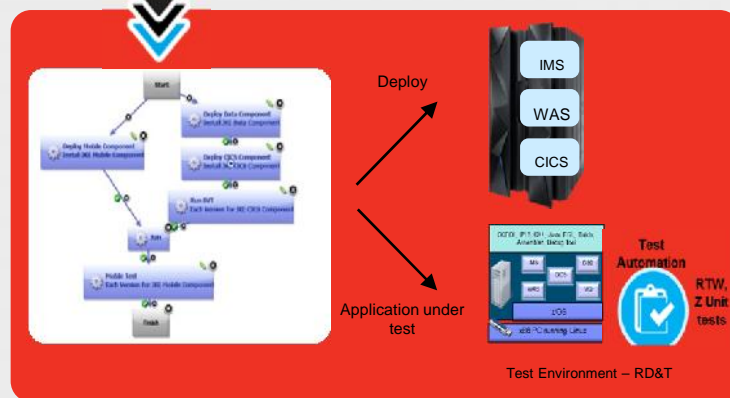
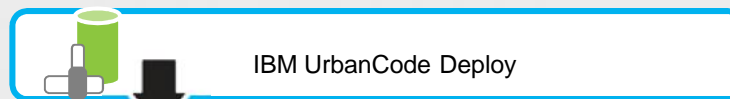
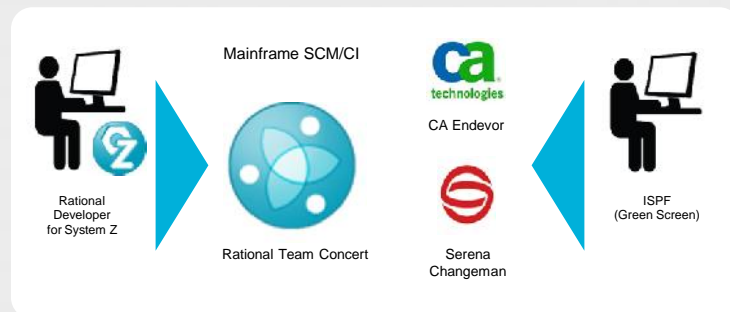
- Test in isolation with 'stubbed' or 'mock' services
- Reduce development dependency on operations
- Minimize subsystem dependency during testing
- Middleware support for SAP, MQ, IMS, CICS and usability improvements
- Gartner names IBM a Leader in 2014 Magic Quadrant for Integrated Software Quality Suites

A leading global financial services firm with assets of over \$2 trillion

Reduced manual testing from 10 days to 10 minutes, saving over \$7 million to date

# Automate provisioning of multiplatform applications, databases and configurations

Deliver test environments in minutes



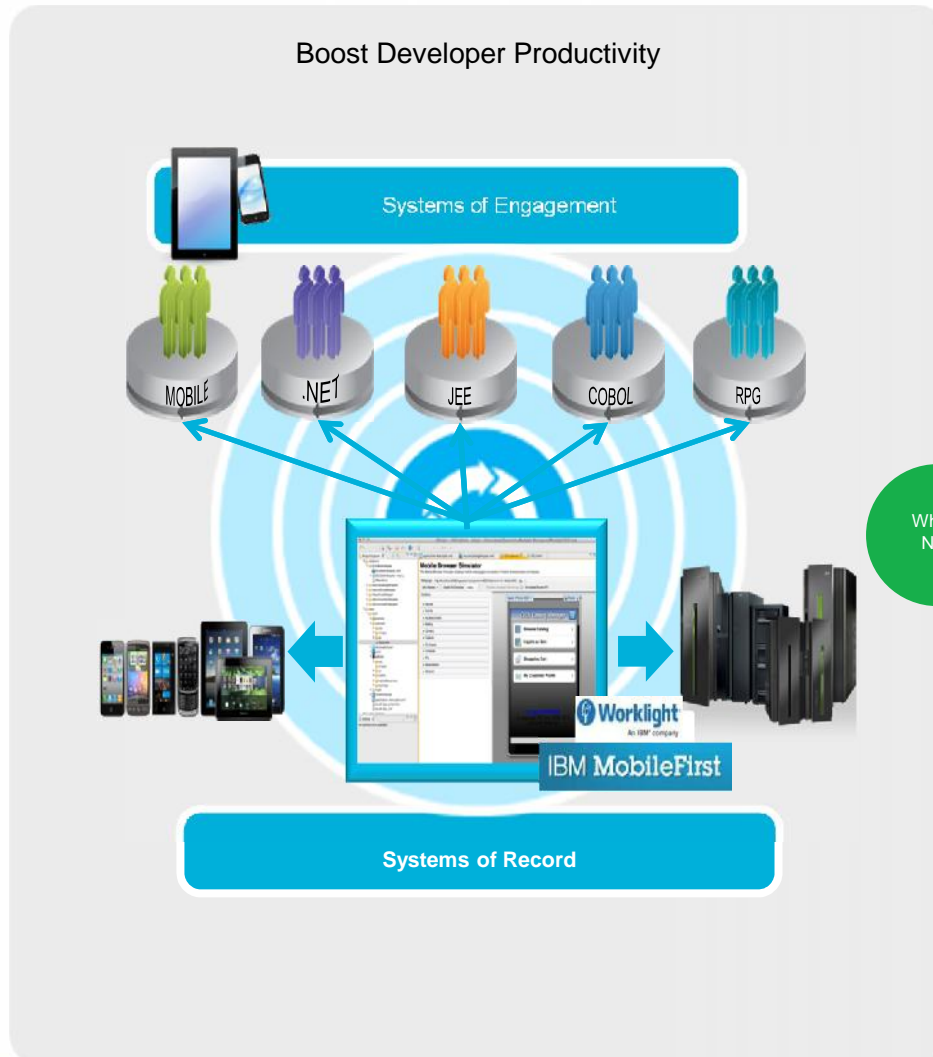
What's New

- Orchestrate and automate application deployment across multiple environments
- Quickly deploy multiple test instances in minutes versus hours or days
- Provide a continuous delivery pipeline that automates deployments to test and production environments
- Quantify change stability and measure transparently for compliance
- New Hybrid Cloud and z/OS support in v6.1 simplifies multiplatform application deployment

**Fidelity**  
WORLDWIDE INVESTMENT

99% decrease in release time

# Accelerate multiplatform development for IBM System z and Power Systems



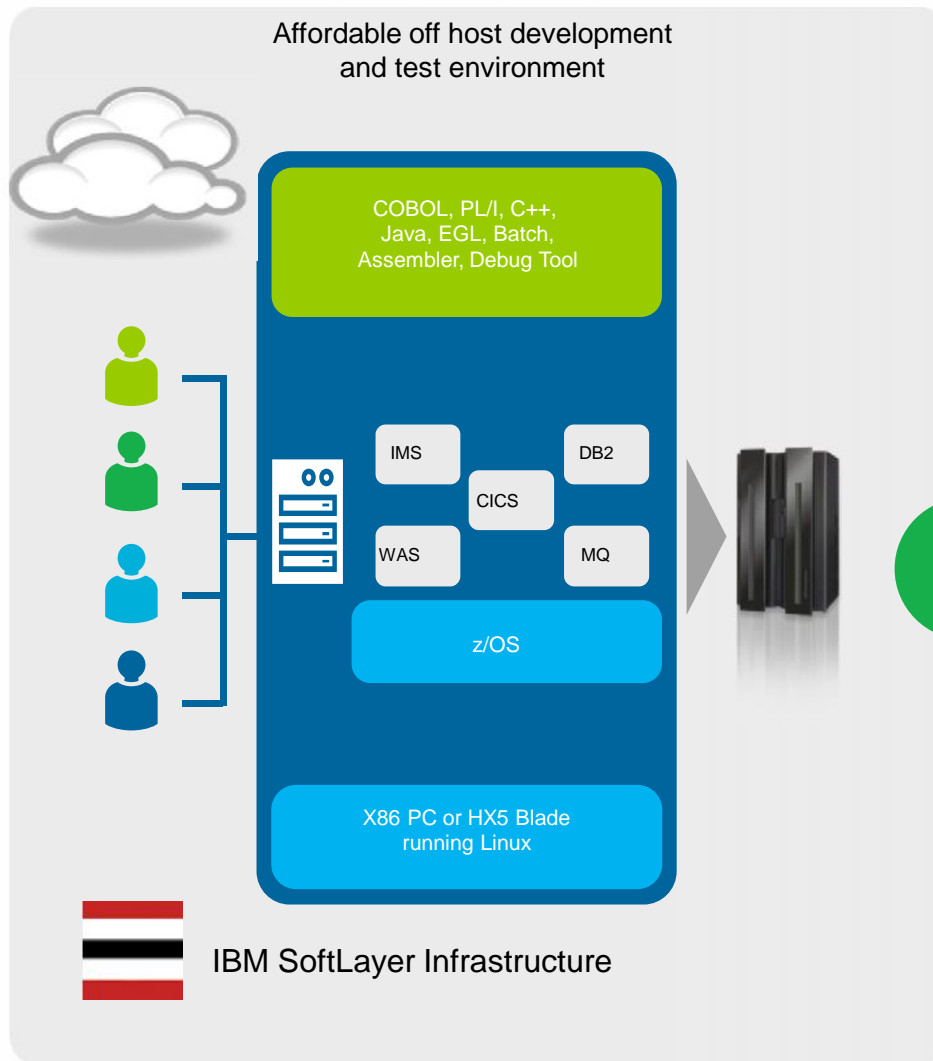
What's New

- Standardize on Eclipse-based IDEs for all types of development
- Refactor and extend back-end services and data for optimal mobile experience
- Use unit test and code coverage for improved quality
- Exploit fully integrated source level debugger for increased productivity
- zUnit test capability to test COBOL and PL/I apps at a module level, including ability to drive unit tests for continuous integration builds

**BBVA Bancomer** Achieved over 50% Improved Productivity

Research by TechValidate TVID: 073-CD0-5DB

# RD&T as a Managed Service provides the core RD&T offering on a virtual private cloud, without the setup and maintenance IT costs

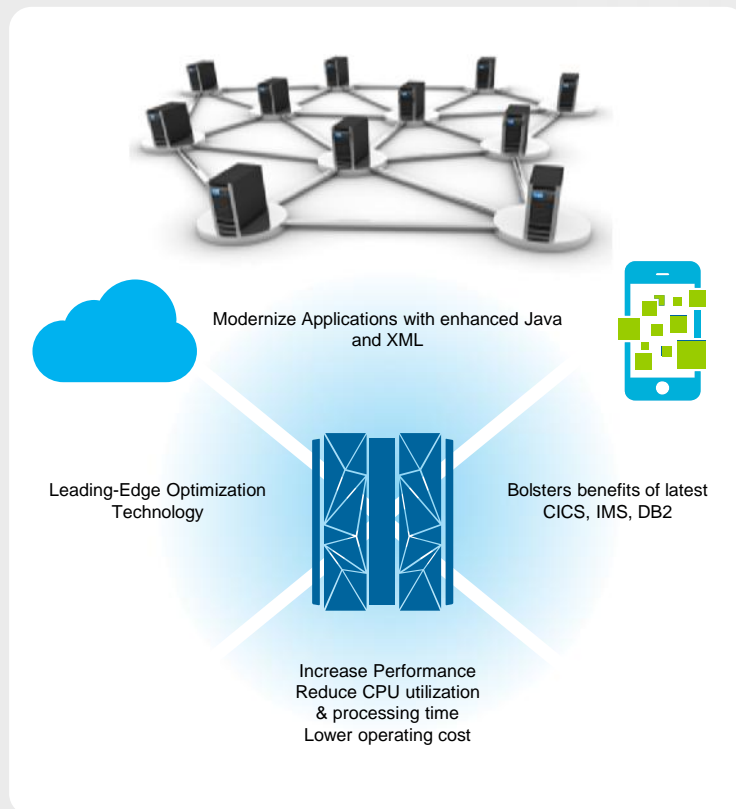


- Develop and test z/OS applications anywhere, anytime
- Free up mainframe development MIPS for production workload
- Eliminate costly delays by reducing burden on existing IT operations staff
- Exploit the latest z/OS software, including z/OS 2.1, CICS 5.2, IMS 13, and COBOL 5.1
- Includes Rational Integration Tester 8.6 z/OS components to minimize subsystem dependencies during unit testing
- New RD&T as a Managed Service provides the core RD&T offering on a virtual private cloud, without the setup and maintenance IT costs.

A leading provider of vehicle rentals increased developer productivity by 25% and decreased time to market

# Boost performance, productivity and cost savings with IBM's latest Compilers

## Optimize Infrastructure



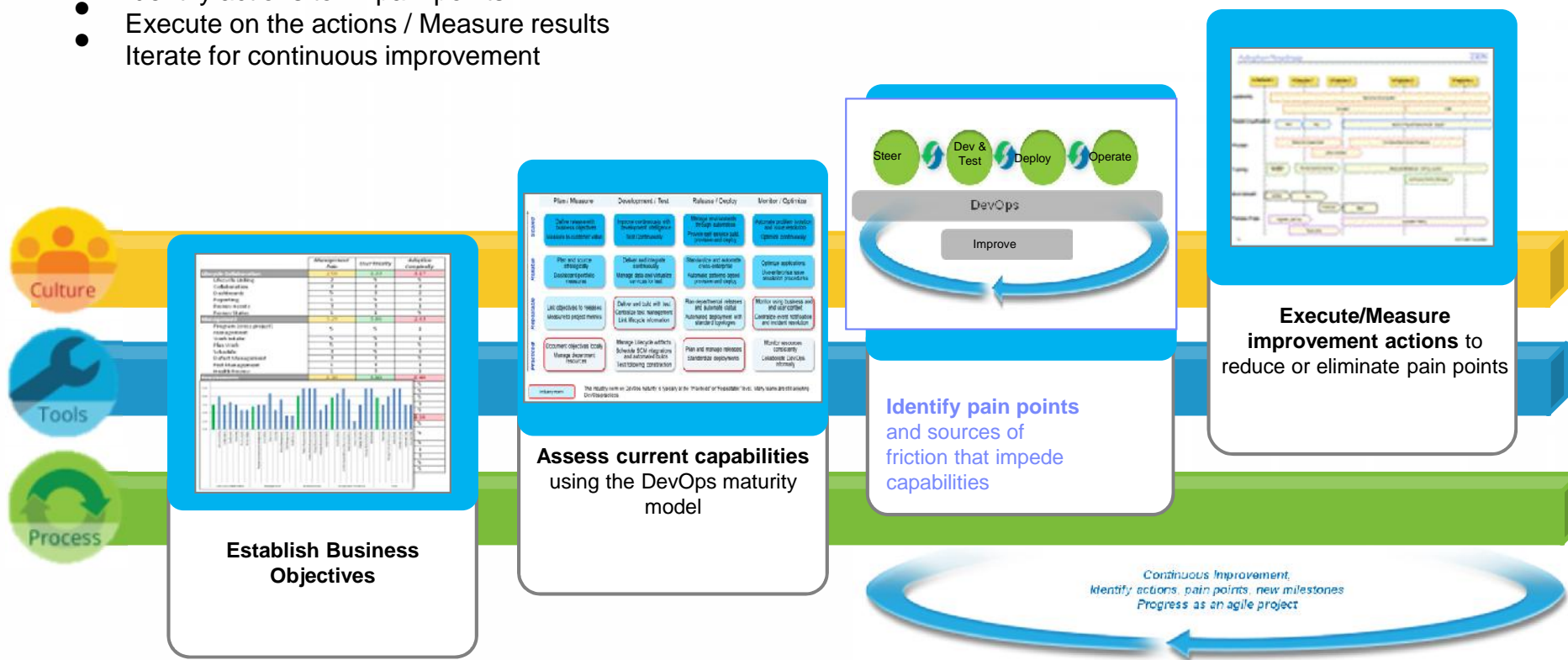
What's New

- Use COBOL, PL/I, and C/C++ compilers to exploit latest z architecture and middleware
- Gain 10+% performance improvement with new optimizations in Enterprise COBOL
- Recognize up to 17% performance improvement and exploit new 'Metal C' system programming capabilities in z/OS XL C/C++

A leading US brokerage firm achieved 10% - 20% CPU reduction in their Batch Application after migrating to Enterprise COBOL V5

## Prescription for DevOps adoption

- A progression starting with a business objective
- Identify actions to fix pain points
- Execute on the actions / Measure results
- Iterate for continuous improvement



### Second critical dimension:

- Stream line the process, and introduce new methodologies
- Leverage tools for consistency, Scalability to other teams, Traceability/Metrics
- Evolve the culture to continuously improving
  - Manage the transformation like a lean and agile project with economic governance



# IBM is announcing transformative capabilities to accelerate software delivery

Get started

- **NEW!** IBM DevOps Innovation Services – Assessment and Benchmarking Services

Steer

- **NEW!** IBM Collaborative Lifecycle Management (CLM) as a Managed Service

Develop/ Test

- **NEW!** IBM DevOps Innovation Services – Collaborative Development
- **NEW!** IBM DevOps Innovation Services – Continuous Testing
- **NEW!** IBM Rational Development and Test Environment (RD&T) as a Managed Service

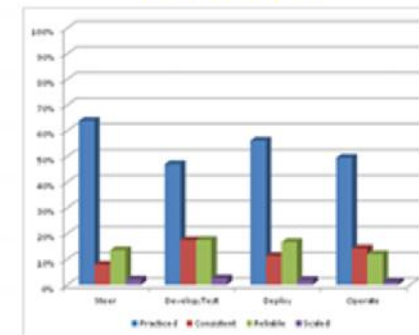
Deploy

- **NEW!** IBM DevOps Innovation Services – Continuous Release and Deployment
- **Enhanced for hybrid cloud:** IBM Bluemix DevOps Services – Continuous Delivery Pipeline
- **Enhanced for hybrid cloud:** IBM UrbanCode Deploy (inc. z/OS support)

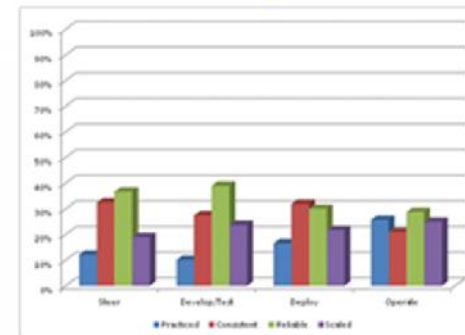
Operate

- **Enhanced for mobile:** IBM MobileFirst Quality Assurance v6.3 (Mobile Quality Assurance for Bluemix)
- **NEW!** IBM DevOps Innovation Services – Continuous Monitoring

Current Proficiency



Proficiency Goals

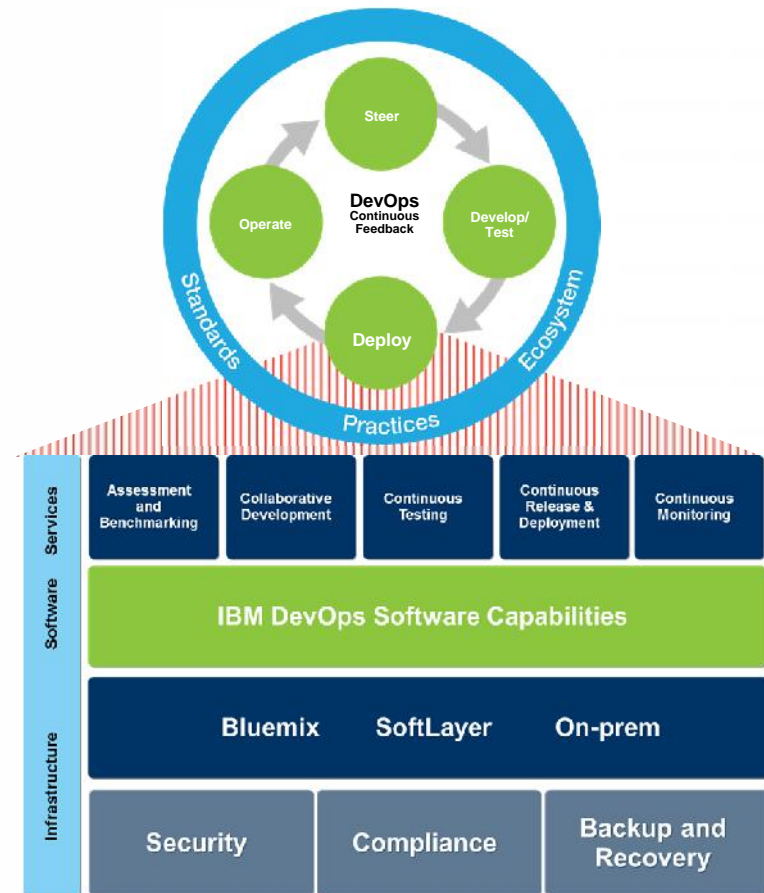




# Summary

**IBM DevOps Innovation Services** is an enterprise capability for accelerated and continuous delivery of software that goes beyond current DevOps and agile practices by bringing lean techniques and process automation together with cloud, analytics, social technology, and customer experience design into an integrated end-to-end family of services. These services transform our clients' application delivery to:

- **Deliver at Speed** – Innovate faster by accelerating software delivery across the enterprise
- **Respond at Speed** – Shorten feedback loops by making delivery process fast and efficient
- **Transform at Speed** – Create a culture of continuous improvement and trust



## IBM DevOps Innovation Services

INTEGRATED | FLEXIBLE | SCALABLE

To learn more visit: [ibm.com/devops](https://ibm.com/devops)

## What you will get from the rest of today's sessions

- **Use multi-platform IDEs to accelerate development and testing**
- **How can I shift left to achieve better business results?**
- **Managing source code and unifying development**
- **Bluemix to mainframe: deployment automation for hybrid cloud**
- **Why should I upgrade to the latest compiler?**

**THANK YOU!**