DevOps on the Cloud with IBM Solutions

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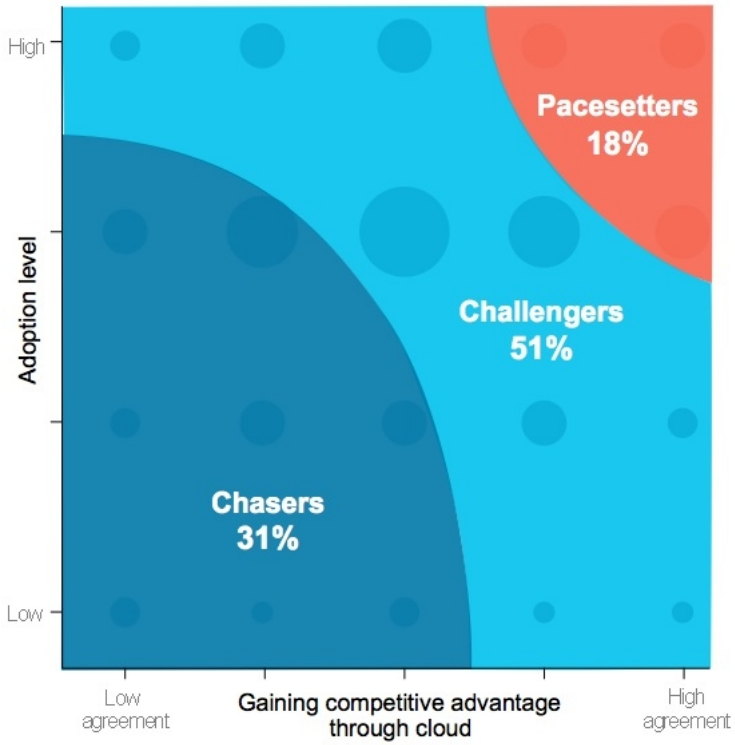
Cloud is a Competitive Advantage: IBM Global Cloud Survey revealed 3 groupings of cloud adoption and leverage: Pacesetters, Challengers and Chasers



We surveyed more than 800 cloud decision makers and users spanning 13 countries and 24 industries

Pacesetters have deployed cloud on a broad scale and are gaining competitive advantage through cloud.
Top cloud driver: Market responsiveness

Challengers are on par with Pacesetters in achieving greater efficiency through cloud, but still lag on differentiation and market responsiveness.
Top cloud driver: Collaboration

Chasers are more cautious about cloud. They're in early stages of adoption and are not yet using cloud to drive competitive advantage.
Top cloud driver: Workflow optimization

Source: IBM Center for Applied Insights *Under cloud cover: How leaders are accelerating competitive differentiation*
For more info, visit: **ibm.com**/ibmcai/globalcloudstudy

Pacesetters use cloud to differentiate – through strategic reinvention, better decisions and smarter engagement

Competitive advantage through cloud
(% using cloud to achieve)

		Chasers	Challengers	Pacesetters	% Pacesetters surpass Chasers
Strategic reinvention	Reinvent customer relationships	25%	46%	59%	+136%
	Innovate products/services rapidly	30%	51%	52%	+73%
	Build new/improved business models	30%	44%	51%	+70%
Better decisions	Use analytics extensively to derive insights from big data	20%	44%	54%	+170%
	Share data seamlessly across applications	27%	51%	59%	+119%
	Make data-driven, evidence-based decisions	30%	62%	65%	+117%
Deeper collaboration	Make it easier to locate and leverage knowledge of experts anywhere in ecosystem	34%	51%	61%	+79%
	Improve integration between development and operations	34%	49%	59%	+74%
	Collaborate across organization and ecosystem	34%	45%	58%	+71%

But what's different about their cloud approach?

Source: IBM Center for Applied Insights *Under cloud cover: How leaders are accelerating competitive differentiation*
For more info, visit: **ibm.com**/ibmcai/globalcloudstudy

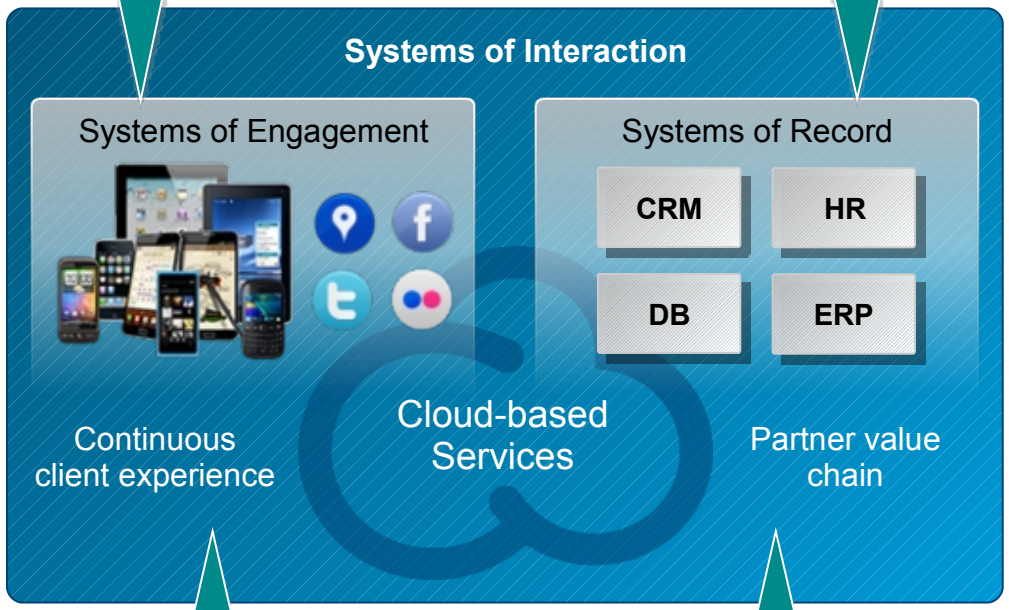
Inefficient Software Delivery Impacts the Entire Business

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



4-6 weeks
to deliver even minor application changes to customers

>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

Organizations that Effectively Leverage Software Delivery Outperform Their Competitors

… yet few are able to deliver it effectively

86%

of companies believe software delivery is important or critical

But only…

25%

leverage software delivery effectively today

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

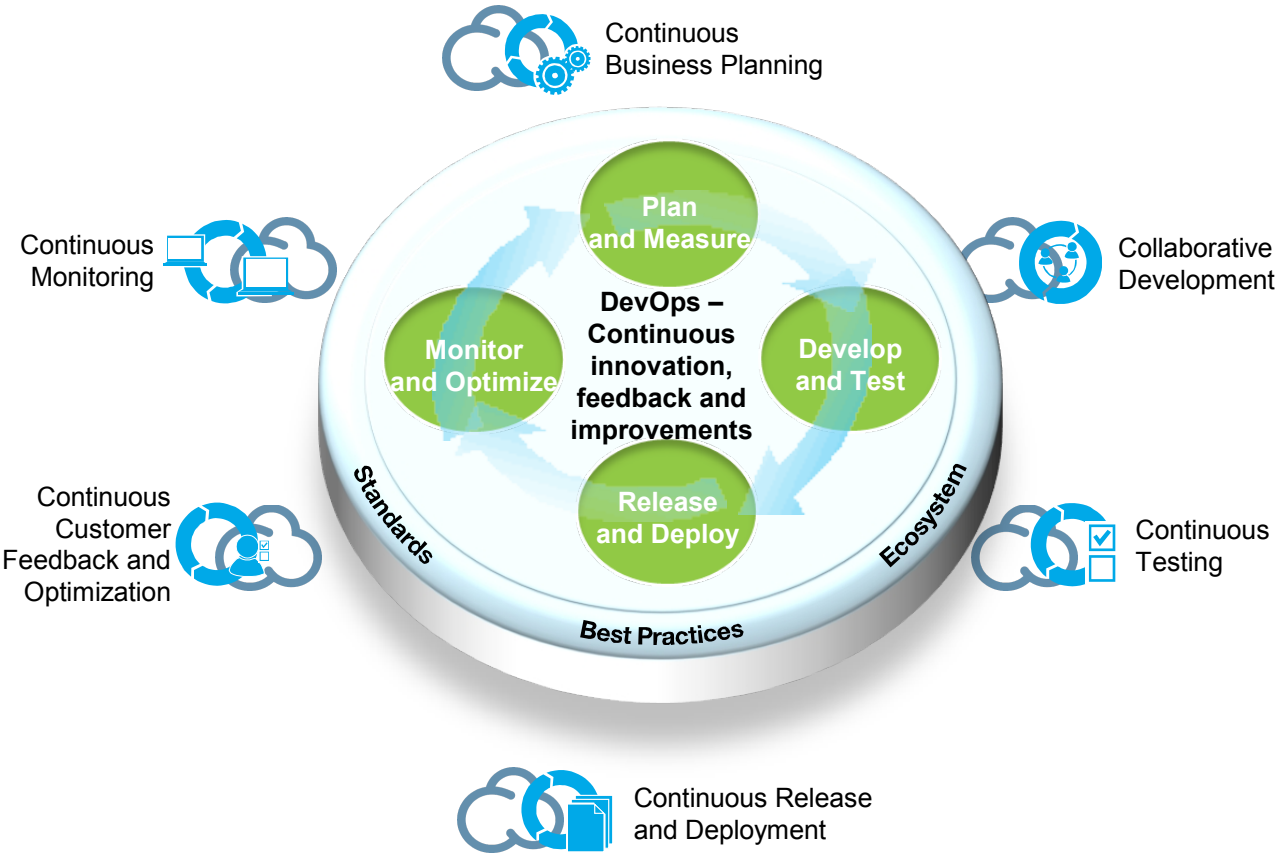
IBM DevOps point of view

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

Accelerate software delivery – *for faster time to value*

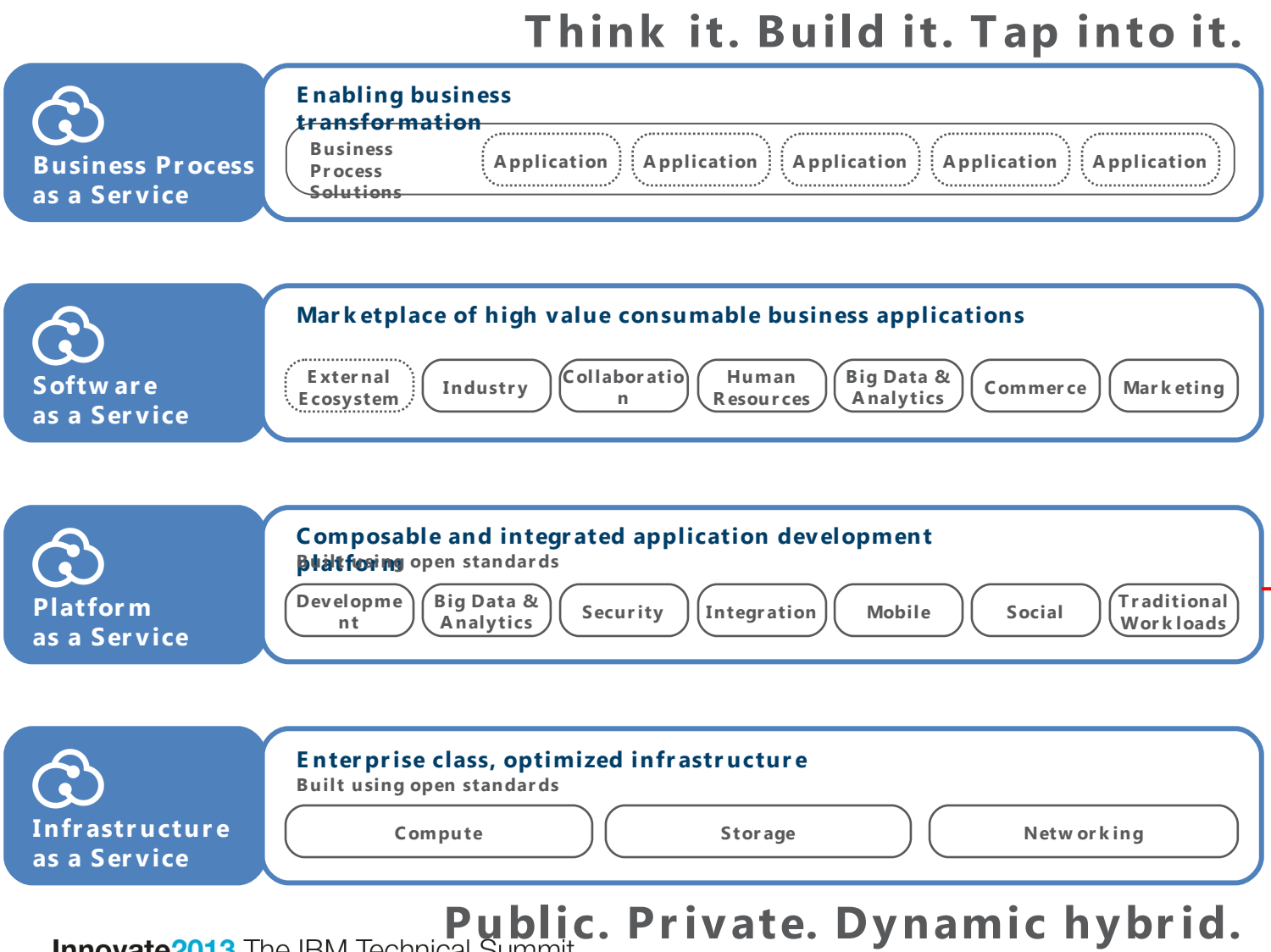
Balance speed, cost, quality and risk – *for increased capacity to innovate*

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



Leveraging the Cloud can accelerate an organization's adoption of DevOps practices and processes, and reduce software delivery risk

DevOps delivered as part of a PaaS solution accelerates delivery



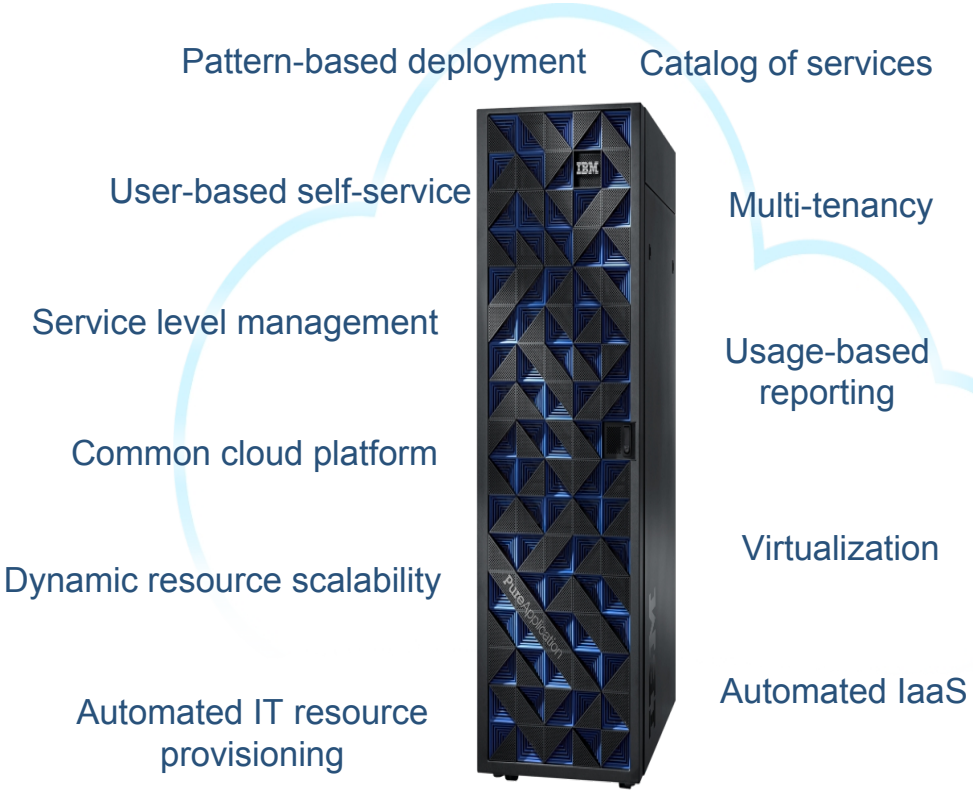
- Increased business agility and speed
- Reduced cost of application development
- Based on open standards
- Integrated DevOps

IBM PureApplication System: Ideal Cloud Application Platform

Expert integrated:

- Platform for applications
  - Application server
  - Database services
  - Compute (x86 or POWER)
  - Storage
  - Networking
- Platform management
- Built-in expertise – Infrastructure, platform, and application patterns

Built-for-cloud platform system simplifying lifecycle deployment and management of applications



PureApplication

Cloud Application Platform
(PaaS)

DevOps on PureApplication System

Expert integration accelerates software delivery

Reduce cost and speed delivery with an integrated IBM Cloud solution

- Integrated IaaS, PaaS, Application Lifecycle Management tooling, Service Management and Monitoring provide an instant platform for DevOps
- Control operating costs with Token licensing while offering practitioners easy access and flexibility to IBM DevOps capabilities

Streamline software delivery and reduce time to value

- **Rapid provisioning** of virtual private/hybrid clouds environments with Patterns
- **Continuous deployment and release** across environments and all SDLC stages with IBM UrbanCode Deploy and IBM UrbanCode Release.
- High-quality achieved with **early and continuous testing** with IBM Rational Test Virtualization Server and IBM Rational Test Workbench.

Accelerate software delivery!

Leading diversified Financial Services company in the U.S.

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

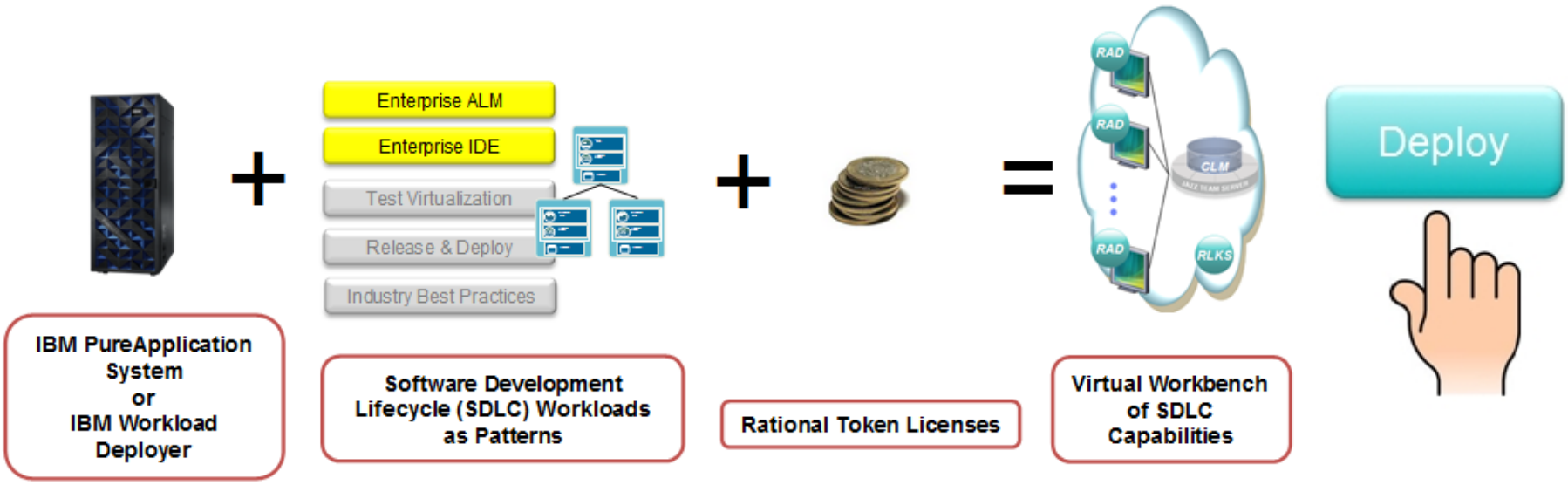
Reduced costs and virtually eliminated the risk of middleware upgrades

"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

IBM Software Delivery and Lifecycle Patterns

Simplified deployment of project lifecycle and delivery tooling

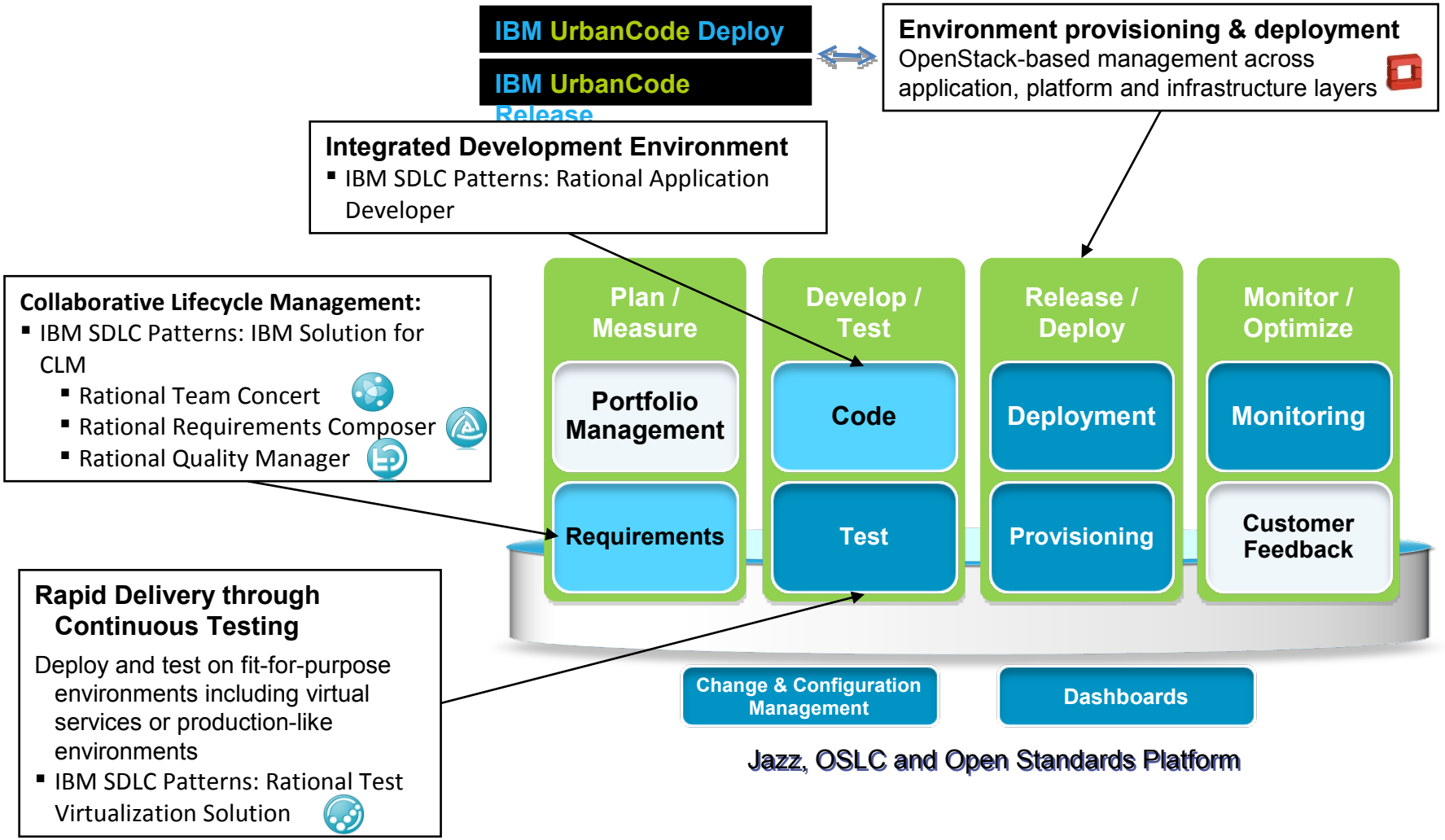


- SaaS/PaaS catalog of integrated SDLC capabilities to exploit based on need and lifecycle stages
- Fully automated deployments *at the push of a button*
- Flexible 'single currency' to float your entitlements among the required capabilities
- Fully functional continuous delivery pipeline

Benefits

- *Use PureApplication System for development and test → Squeeze more value out of the private cloud investment*
- *Faster time to value → Deploy fully configured solutions in minutes…not weeks*
- *Better software license and capacity planning → Control over Dev and Operations costs*
- *Rapid on-boarding, mobility and better desktop utilization → Higher developer productivity, more self-sufficient teams and lower operational costs*

DevOps Solutions for PureApplication System

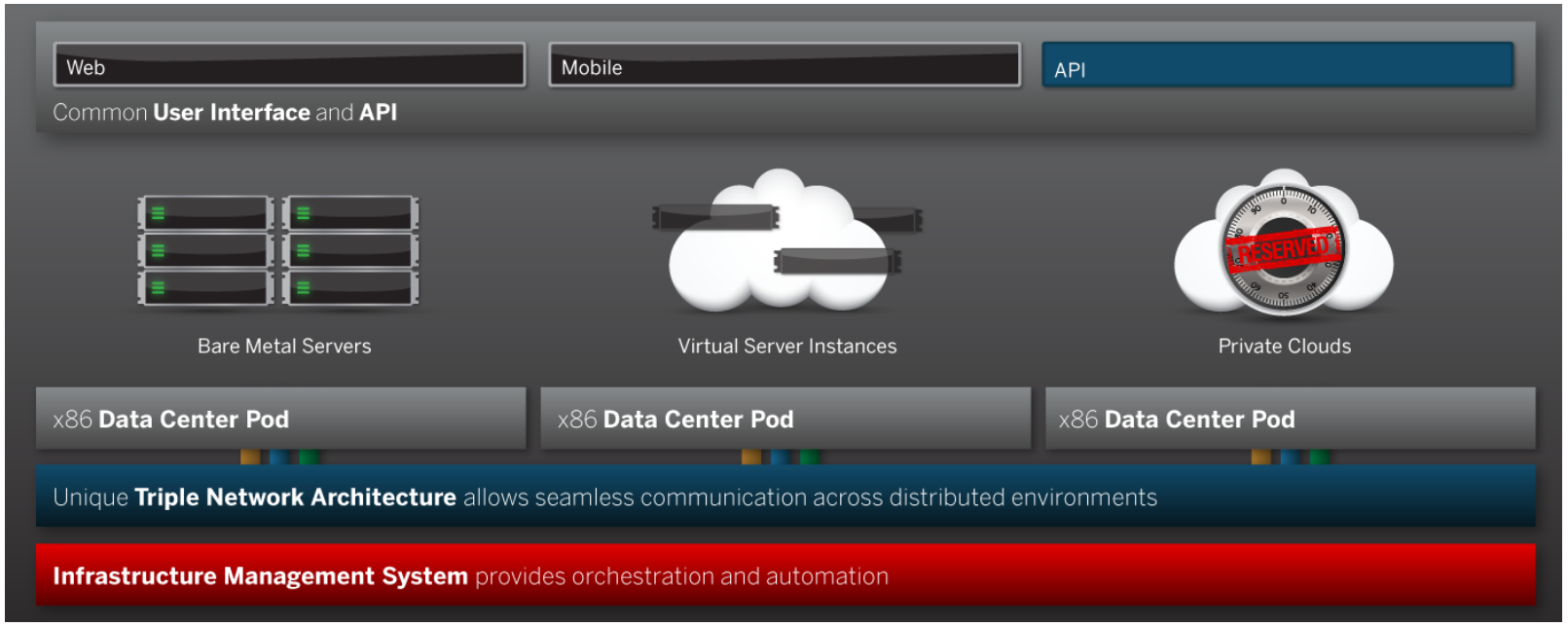


SoftLayer - A better platform

SOFTLAYER® an IBM Company

Unified architecture with common management and programming interfaces

- Common command and control interface across a unified architecture
- Combine bare-metal servers, public cloud instances and private cloud deployments into distributed hybrid architectures and manage from a single control pane and API
- All deployed on-demand and provisioned in real-time
- Ideally suited to big data deployments, high I/O and latency-sensitive apps



SoftLayer supports the delivery of high-value platform and application services

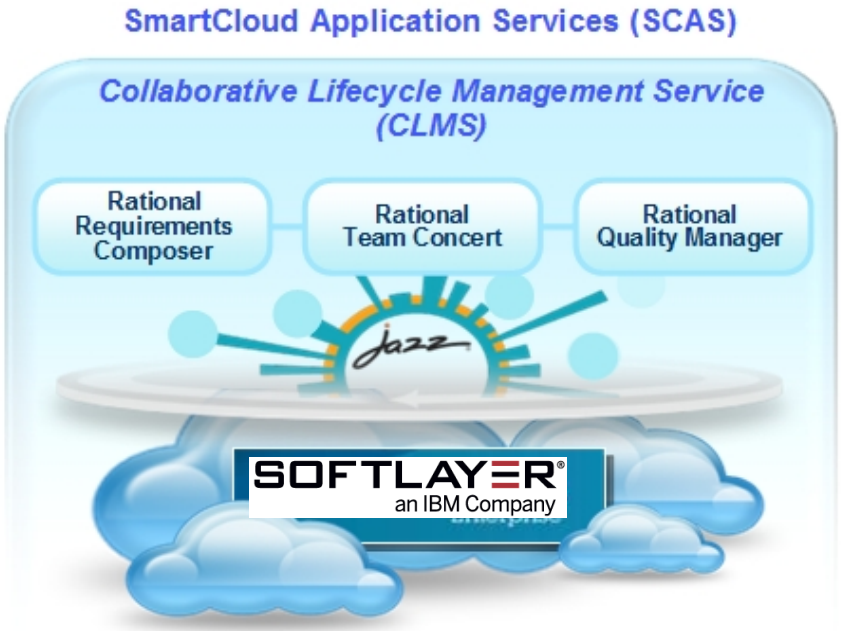
IBM

Collaborative Development on the Cloud – as a Service

Rapidly activated team-based agile development capabilities powered by IBM Rational Jazz solutions

Develop and Test

- **Secure & resilient deployment**
  - on the enterprise-class IBM SmartCloud Enterprise IaaS (hosted on SoftLayer) for **Small to medium sized teams** seeking a solution that is **up-and-running, quickly**
- **Easy to Purchase**:
  - Pay per-user-per-month charge metric – all inclusive of licensing and infrastructure
  - Self-service provisioning with No upfront investment to get started
  - Incrementally adoptable – pay only for what you choose to use
- **Unique benefits as a cloud service**
  - **Full Privacy** – your deployment and your data are fully isolated; additional cloud security options are available
  - **Full Access** to your data – take your own snapshot to meet your data retention requirements
  - **Full Control** over updates and deployment of new service features



IBM SmartCloud Application Collaborative Lifecycle Management Service

Collaborative Development on the Cloud – JazzHub

"No hassle" collaborative development capabilities on the cloud for continuous delivery

Develop and Test

Free in 2013

- Enable the team to achieve collaborative development now!

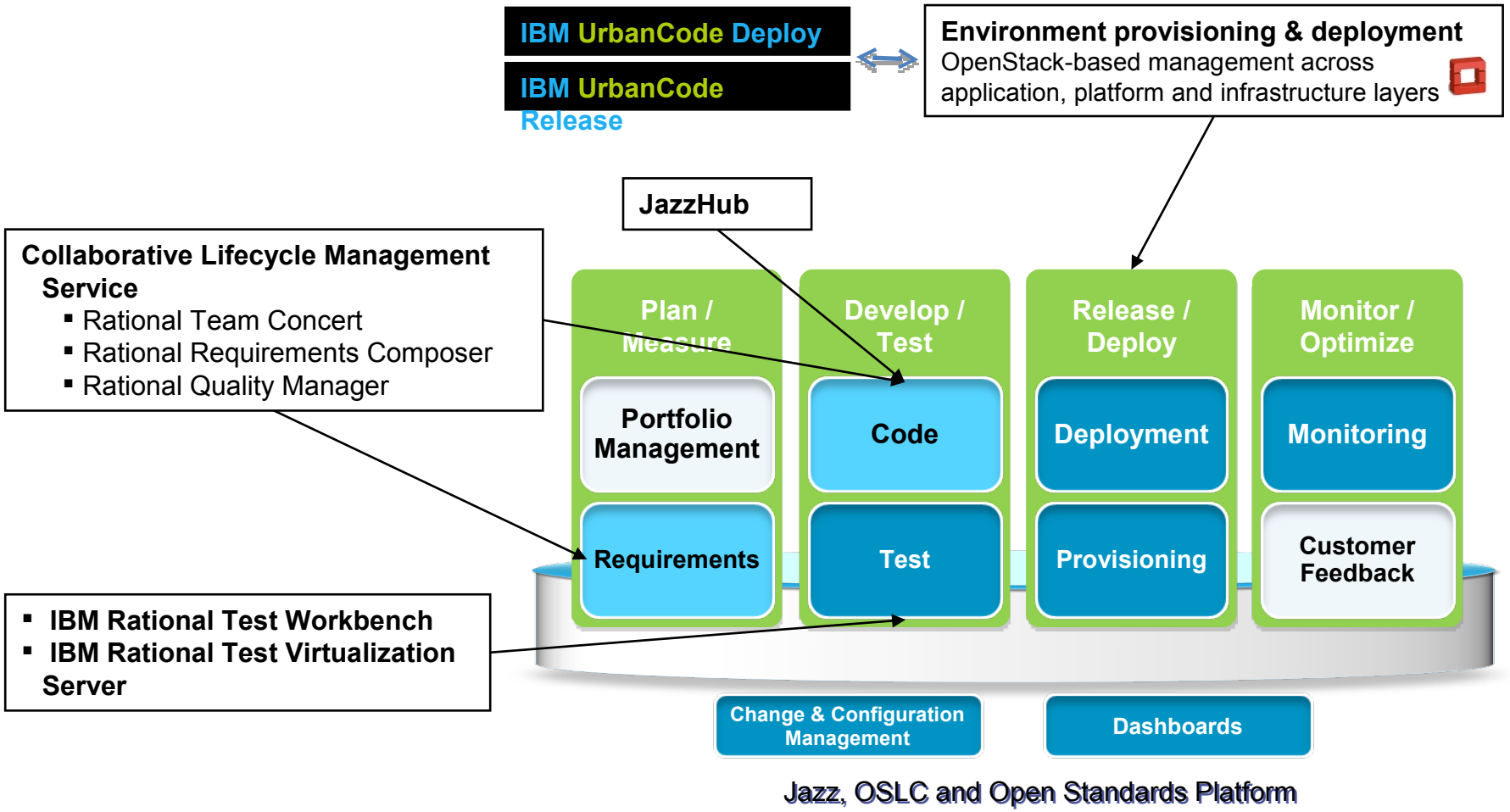
Easily enable stakeholders

- From plan to delivery of better software and systems in the context of daily work
- Code in the cloud with your choice of IDE, Eclipse, Visual Studio or built-in editor
- Runs on SoftLayer Infrastructure

Easily fork projects

- From where teams may already be working already – like GitHub

DevOps Solutions for SoftLayer



Introducing IBM Mobile Quality Assurance (beta)

Continuously deliver high quality mobile applications

What's New

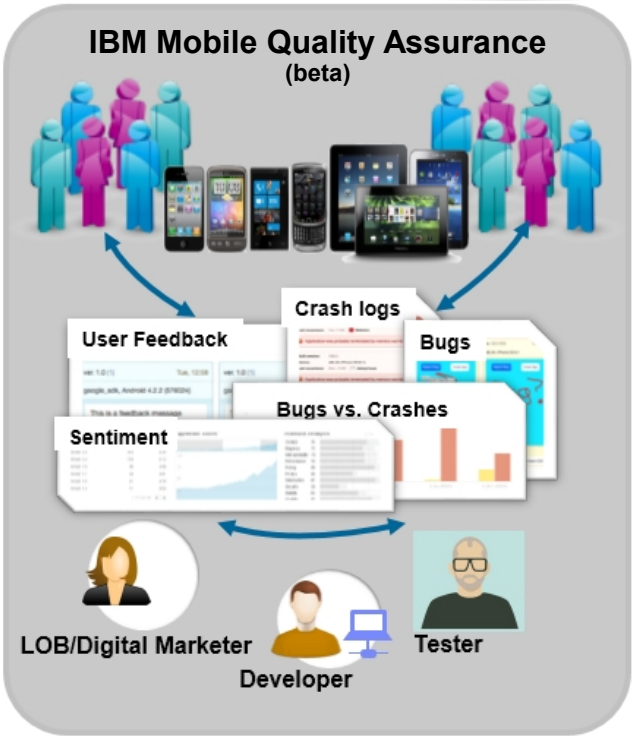
- End user feedback and quality metrics available at every stage of development
- App quality assurance in a fragmented and complex environment

Features/Business Value

- **Evidence-based prioritization –** enable business and IT to collaborate on mobile strategy and user experience
- **Over the air app distribution** – get the latest in the hands of testers as soon as it is available
- **Frictionless bug reporting –** spend every minute on testing latest and greatest builds, not the hassles
- **In-app crash reporting** – rapid understanding of why an app fails
- **Sentiment analysis –** mine app ratings and reviews to extract actionable feedback before they go viral (coming soon)

Client Benefits

- **Improve mobile app quality** with holistic visibility into user experience, including bugs, crashes, feedback, and user sentiment
- **Proactively manage quality risks** through rapid assessment of issues and reduced cycle time



"What you are talking about doing is fantastic. You have a very powerful approach here and it will drive a lot of what people will want to do in the market"

Sign up for the MQA Beta at developerWorks Labs

Rational on Cloud through Certified Business Partners

- **Rational Monthly SaaS Offerings**
  - Certified business partners offer value-added hosted services including Rational tools
  - Flexible pay-as-you-go usage model (monthly) enables customers to ramp up and down as demand changes, with no perpetual license commitment

- **Key offerings include:**
  - Software Development Platform as a Service
  - Test as a Service (TaaS)
  - Virtual Desktops as a Service

- **Worldwide Partners**
  - Corso – United Kingdom, United States
  - Accenture – worldwide
  - CloudOne – worldwide
  - Quality Kiosk - India
  - Fujitsu – Japan
  - Test Pro – Australia
  - Capgemini – The Netherlands, Poland
  - Object Valley – Hong Kong

corso from ideas to delivery

testpro

Capgemini CONSULTING.TECHNOLOGY.OUTSOURCING

CloudOne

accenture

IBM

Nationwide embraces DevOps to drive continuous delivery across platforms and improve speed to market

50% increase
in software **quality** over the last three years

90% on-time delivery
vs. 60% previously

70% decrease
in user downtime

58% of developers moved to industry top quartile in **productivity measures**

"We're more agile as a business and more responsive to our customers. Collaboration has become an expected part of our culture."

— Steve Farley, Vice President, Application Development Center, Nationwide

Nationwide® On Your Side™

IBM

Deploy applications on Cloud with IBM DevOps

IBM DevOps solutions for cloud

- Get started instantly with integrated development environments hosted on IBM SoftLayer and IBM PureApplication System platforms
- Reduce cost and time to market with automated deployment and release automation
- Increase quality through test automation
- Collaborate with your colleagues across teams and around the world with application lifecycle management

www.ibm.com/devops

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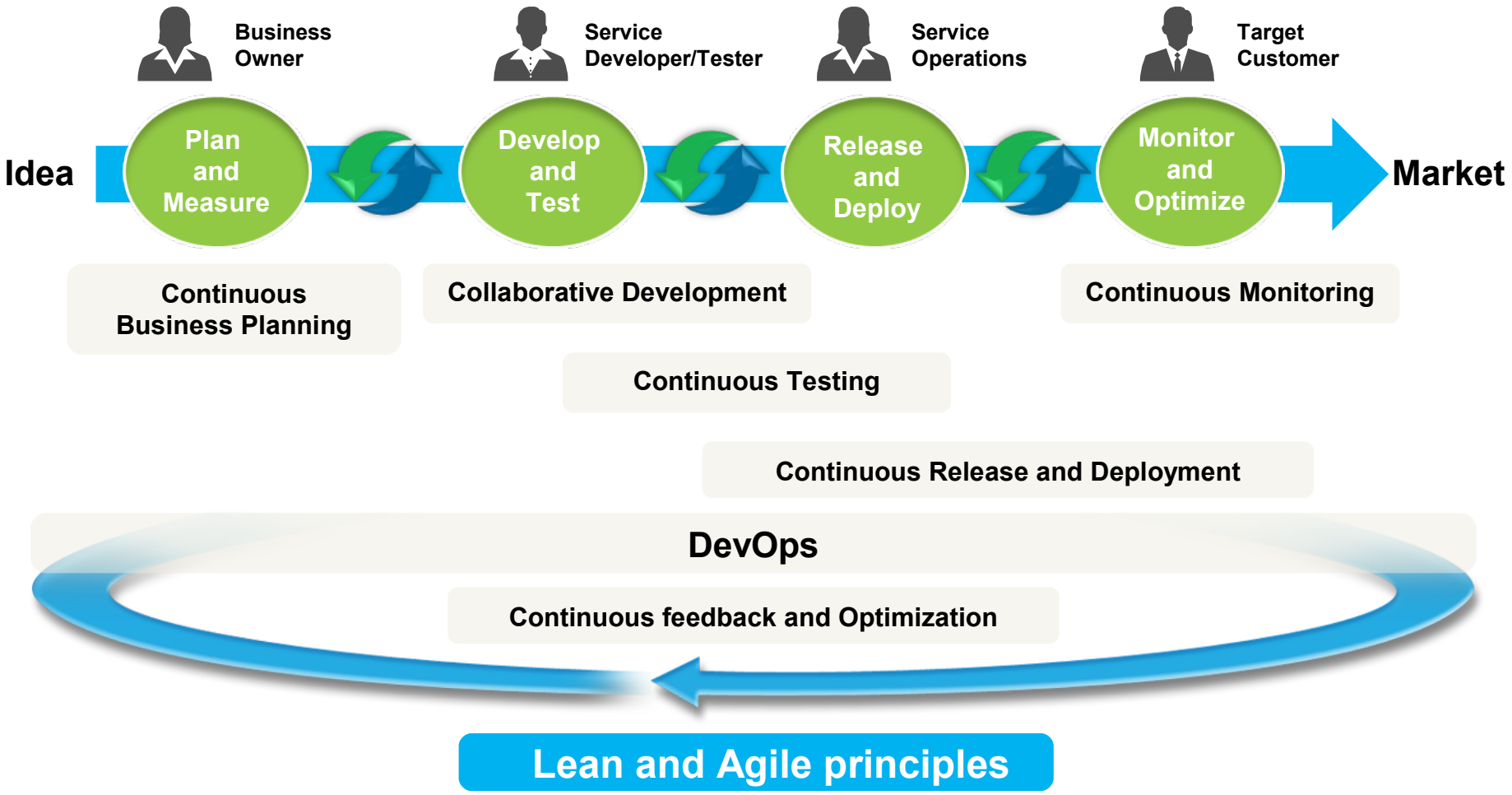
DevOps takes a closed-loop approach to application delivery

Extending Lean and Agile practices to the entire software value chain



Continuous Testing

Enhanced integrations and capabilities to synchronize software testing with deployment and operations

Develop and Test

Streamlined application delivery and monitoring

- Integration between IBM Rational Test Workbench and IBM UrbanCode Deploy to automate the provisioning of virtual components
- Integration with Smart Cloud Application Performance Monitoring to better identify and resolve performance issues

Expanded platform support for end-to-end testing, including mobile and mainframe

- Support for Dojo Mobile, web apps, cross platform Worklight hybrid tests
- Support for Parallel Sysplex and zEnterprise EC12, increasing test coverage of mainframe applications

IBM Rational Test Workbench
IBM Rational Test Virtualization Server
IBM Rational Quality Manager
IBM Rational Development and Test Environment for System z

What's New

Includes Green Hat technology

Continuous Release and Deployment

Greater delivery speed and frequency for complex applications

Release and Deploy

Simplified deployment automation of mobile and cloud applications

- New automated deployment directly to the Worklight Console and Application Center
- Continuously provision environments and deploy applications to virtualized environments

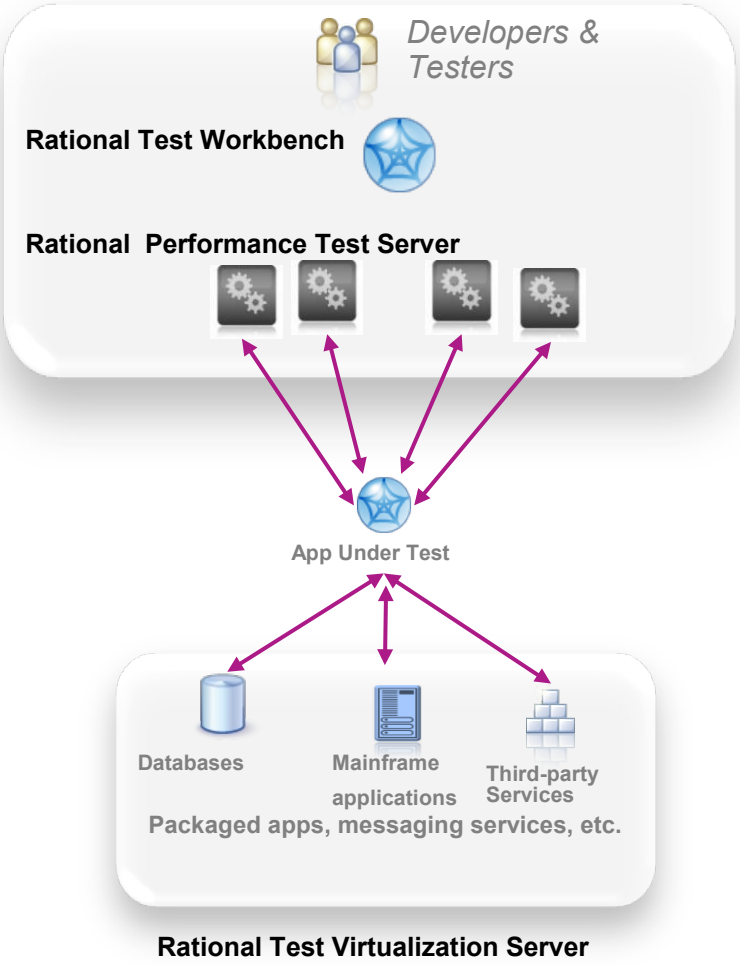
Making deployment an integrated part of the DevOps lifecycle

- New and improved integrations
  - IBM Rational Team Concert
  - IBM Rational Test Workbench
  - IBM Rational Test Virtualization Server
  - IBM Rational Asset Manager
  - IBM Rational Quality Manager

IBM UrbanCode Deploy
IBM UrbanCode Release
IBM SmartCloud Orchestrator

What's New

IBM Rational Test Virtualization Solution

A smarter solution to better quality

- **Rational Test Workbench** is a desktop solution that enables testers/developers to:
  - Capture and model virtual services
  - Test services and applications long before their user interfaces becomes available and do integration testing (SOA, BPM)
- **Rational Test Virtualization Server** is a server solution that:
  - Provides a central environment to virtualize heterogeneous hardware, software and services to provide 24x7 testing capabilities
  - Reduces infrastructure costs of traditional testing environments
  - Virtual Services can be built from the interface definition of the system for a wide variety of protocols, including HTTP, web services, SOA, JMS, TIBCO, IBM WebSphere MQ, Oracle, etc.
- **Rational Performance Test Server** enables Rational Test Workbench users to reuse test scripts to drive performance testing
  - Can be used in combination with Virtual Services
  - Probe for identification of system bottlenecks