



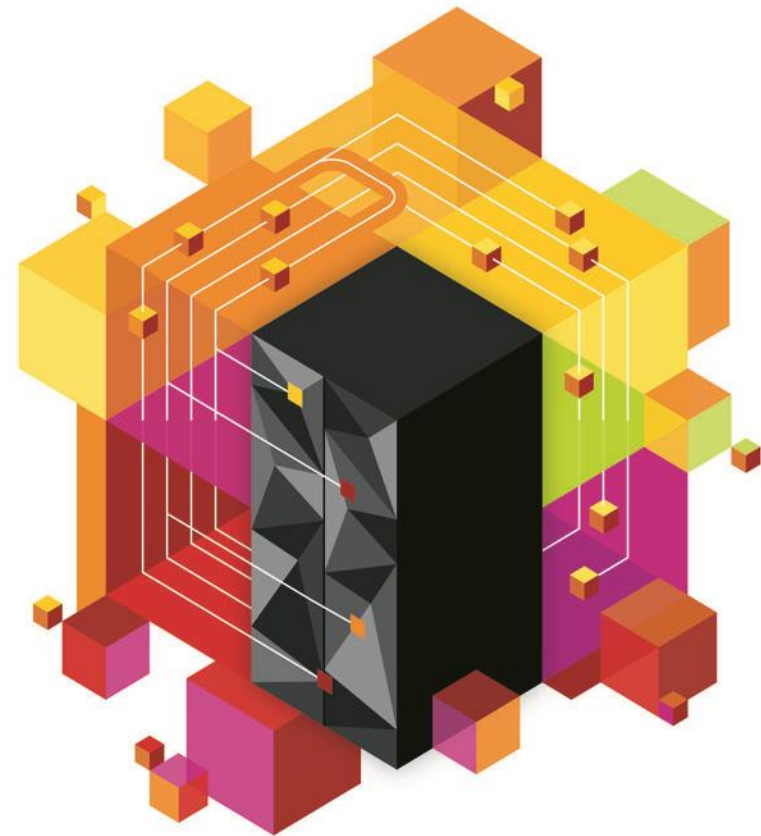
Enterprise Modernization: Enabling IT to Streamline Multiplatform Development

Hayden Lindsey

Vice President & Distinguished Engineer

**Rational Enterprise Modernization and Emerging
Technologies**

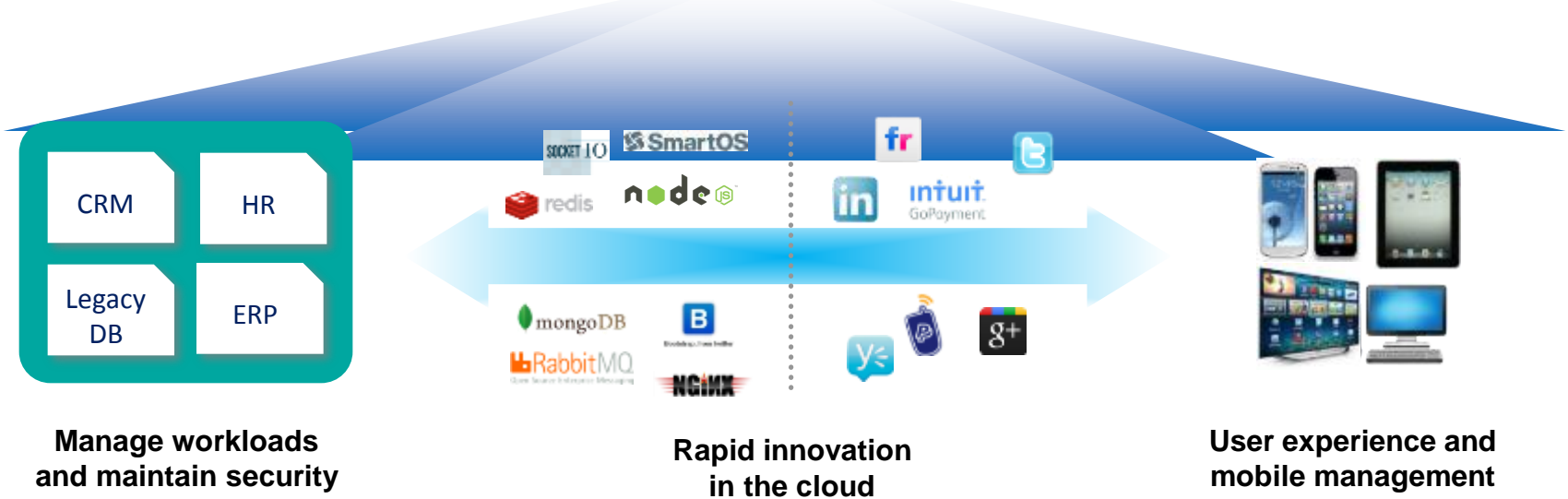
hlindsey@us.ibm.com



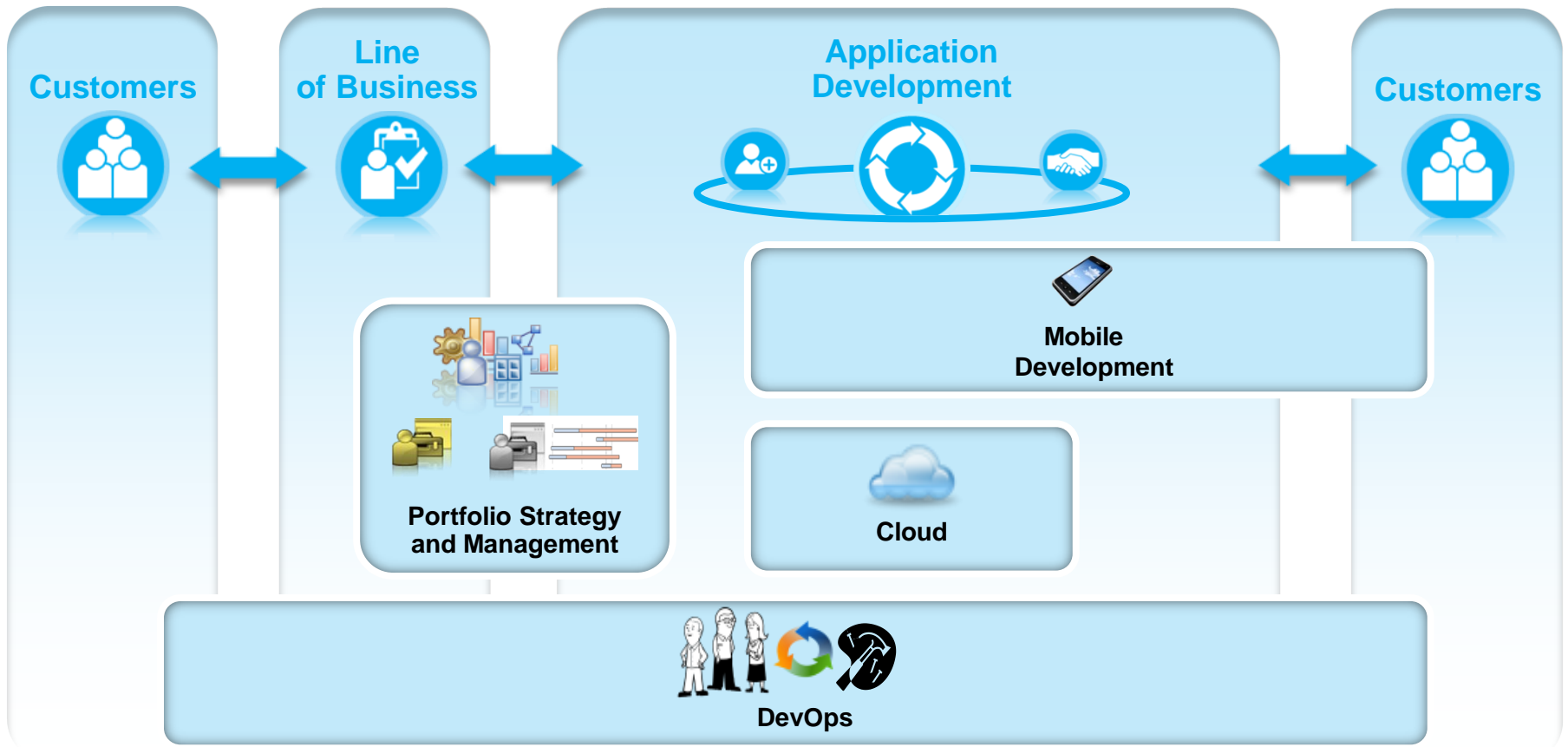
Mobility, big data, analytics, social collaboration, & cloud are creating a new wave of business opportunities & IT challenges



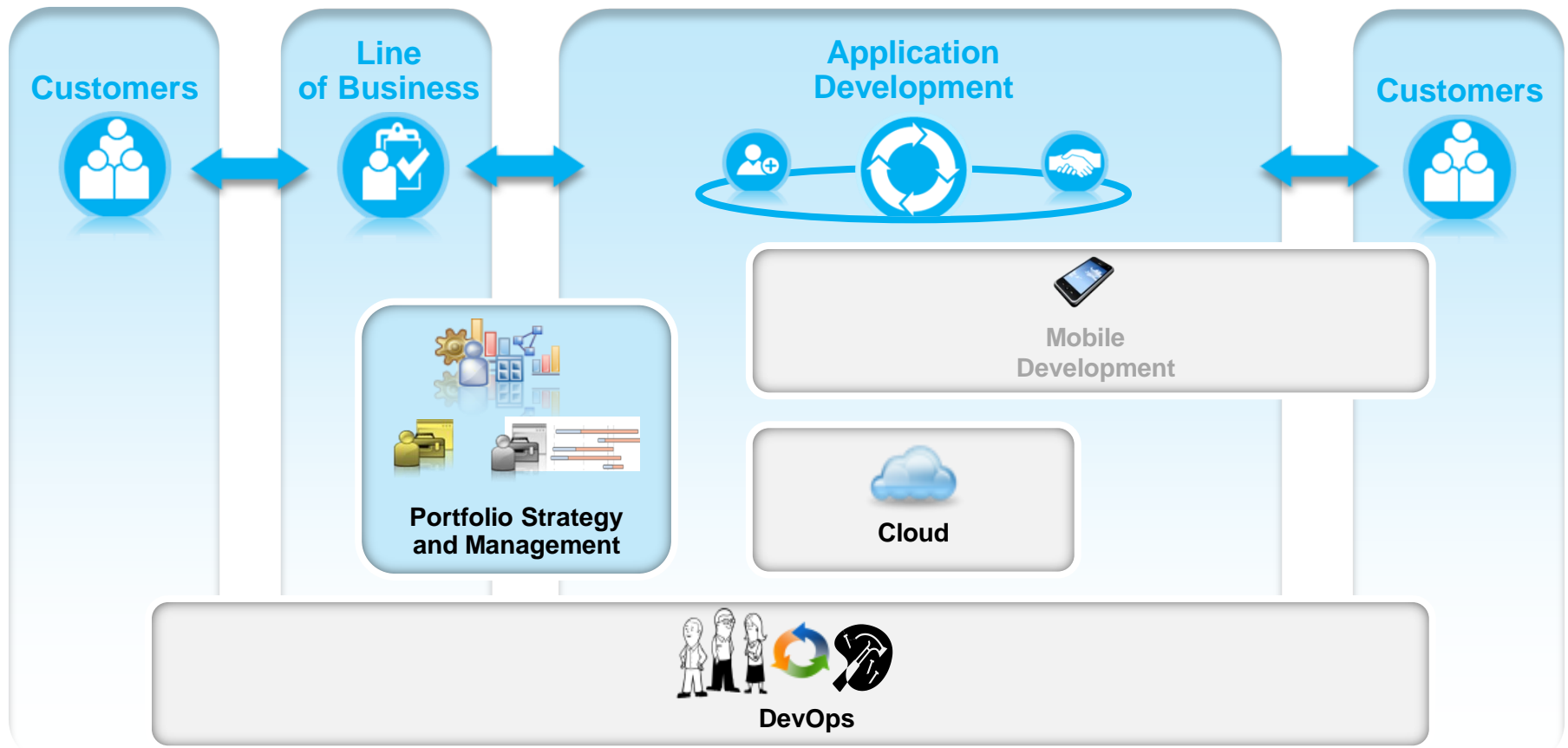
New era systems integrate existing operational systems with rapid delivery of new client-facing apps



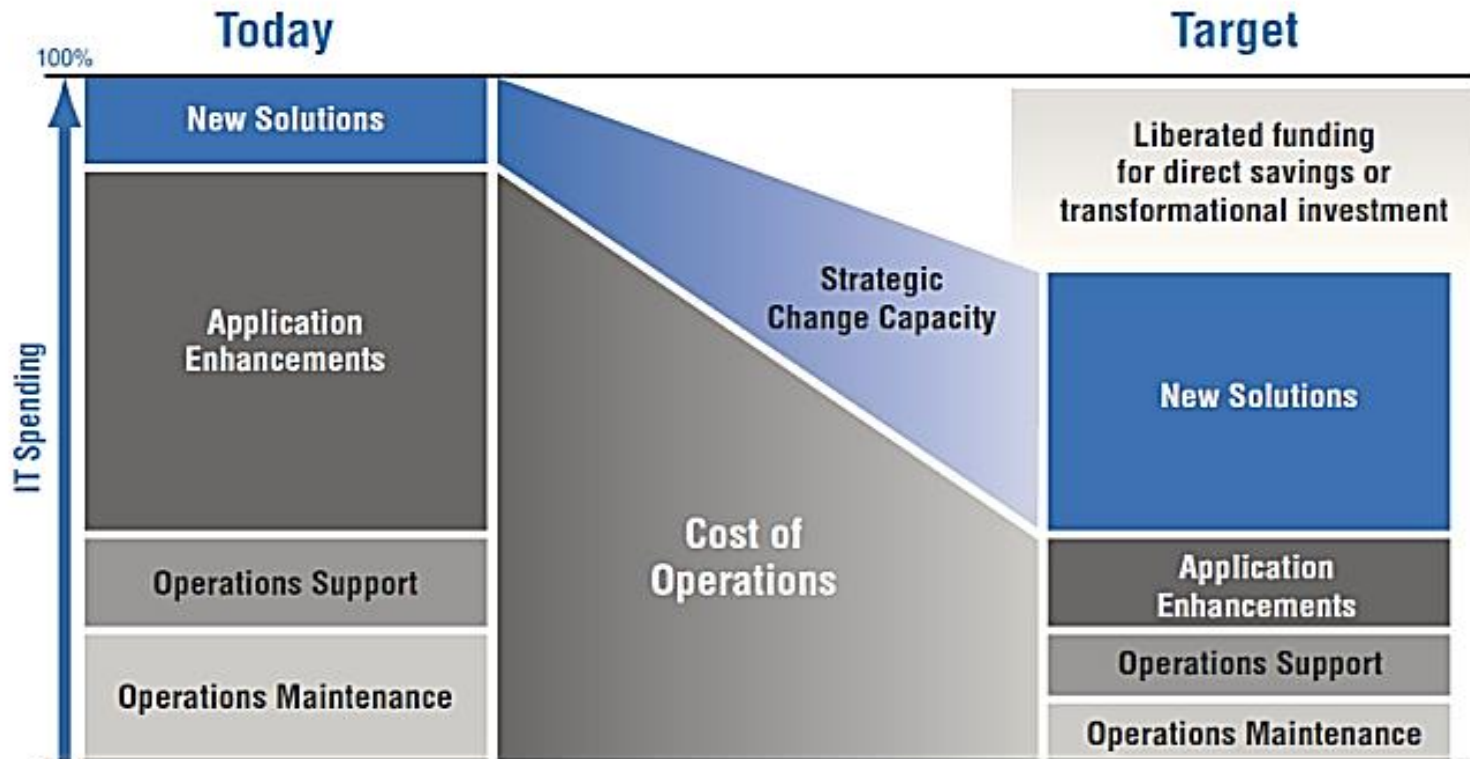
Some trends within application management, development, and delivery



Some trends within application management, development, and delivery



Enterprises want to ... *drive business innovation through software*



But...

- 70% of IT budget locked into maintenance and operations rather than enabling innovation
- Business and IT not aligned on how to prioritize work to maximize business value
- More than 75% of projects miss their target delivery dates

Solution: Portfolio Strategy and Management

Increase business value with better LOB and IT alignment, proactive portfolio evolution and delivery governance

**Mobile
Compliance
Consolidation**



**Cloud
Outsourcing
Modernization**

- **Application Portfolio Management:** Continuous assessment to improve agility and identify savings that can be targeted towards innovation
- **Demand Management:** Prioritize business needs and proposals, determine sourcing choice, and align with strategy to maximize value
- **Delivery Management:** Govern project delivery involving the business, development and operations, track status and manage change

“Making IT resource consumption transparent and understandable to business leaders enables healthy business discussions around how to shift resources to where they will do the most good for the whole business.”

– Define “Application” Based On Your Content To Avoid False Starts In Your Rationalization Efforts, Forrester Research, Inc., January 26, 2011

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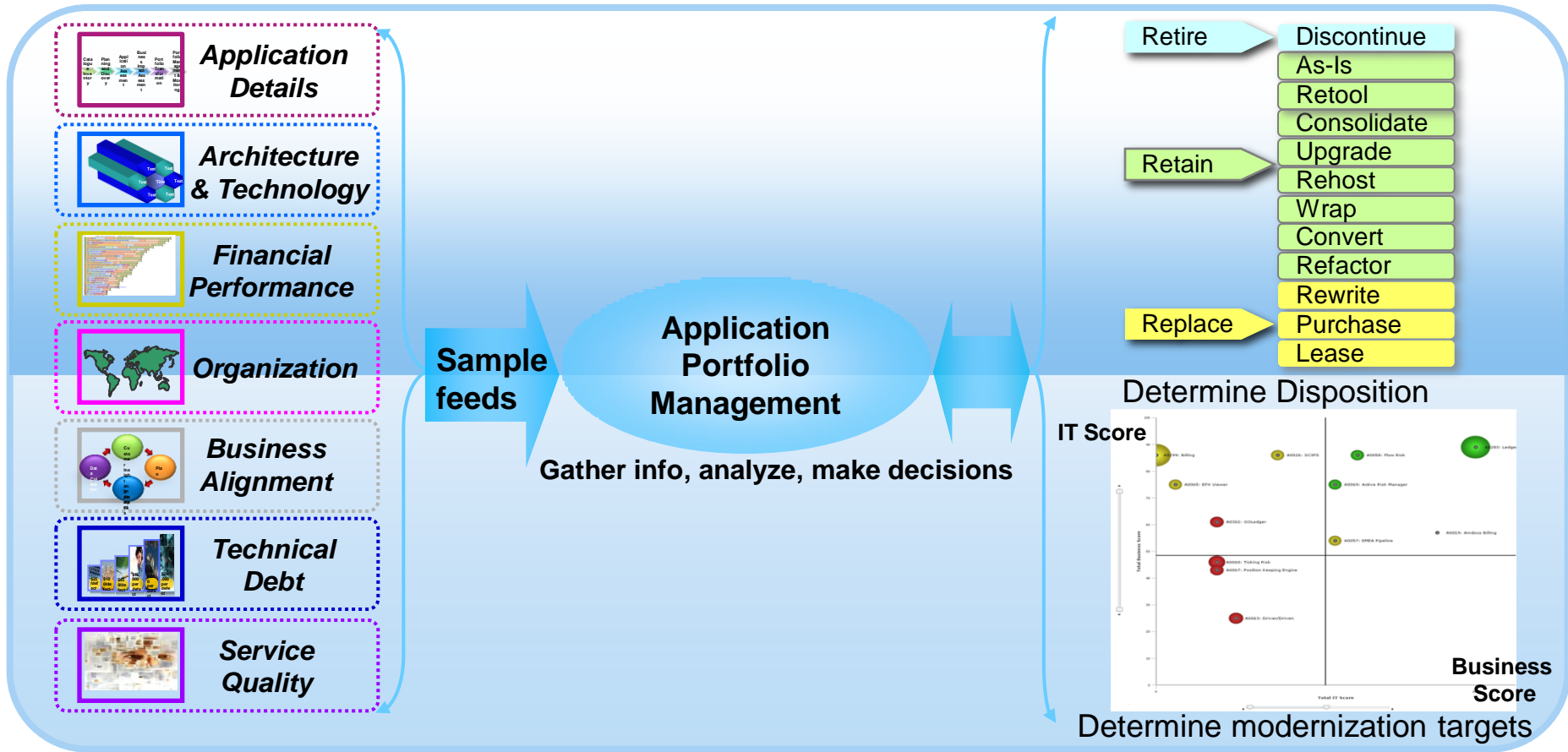
- Rational Focal Point 6.6
- Rational System Architect 11.4.2.4
- Rational Requirements Composer 4.0.3
- Rational Team Concert 4.0.3

“IBM raises the level of management information and control within our organization, and this has already made a significant contribution to the successful management of our core banking replacement program.”

– Jan Kühnel, CIO, Bank DnB NORD

Application Portfolio Management

Proactively manage application portfolio evolution



“APM and associated application revitalization has enabled IBM’s IT to cut maintenance costs by 20% and defects by 58%.”

— IBM Corporation

Demand Management

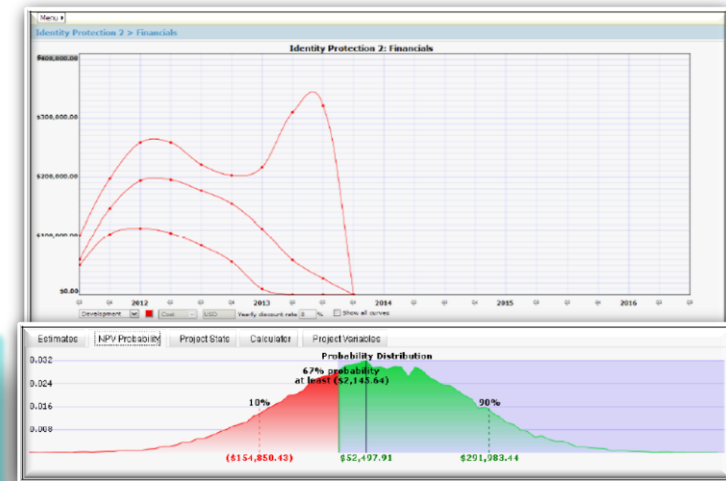
Evaluate and prioritize business needs and projects

Have business drivers determine priorities

The screenshot shows a project management interface. At the top, a Gantt chart displays various projects with colored bars representing their timelines. Below the chart, a dialog box titled "Which Project has higher 'Priority'?" compares two projects:

Project Name	ID	Priority	Description
Migrate applications to EGL/Java	010	0	This opportunity covers migrating applications from Natural / Adabas to EGL.
Consolidate Account Management Applications	004	0	Support arrangements for these applications are unclear - as these have been excluded from the scope of any current / future plans. Tactical Reprioritization is required to resolve support issues as it is unclear whether they have adequate support arrangements given their importance to the business. It is recommended that in the longer term they are strategically Replaced by industry standard applications.

At the bottom of the dialog, there are navigation buttons: "< Back", "OK", and ">>".



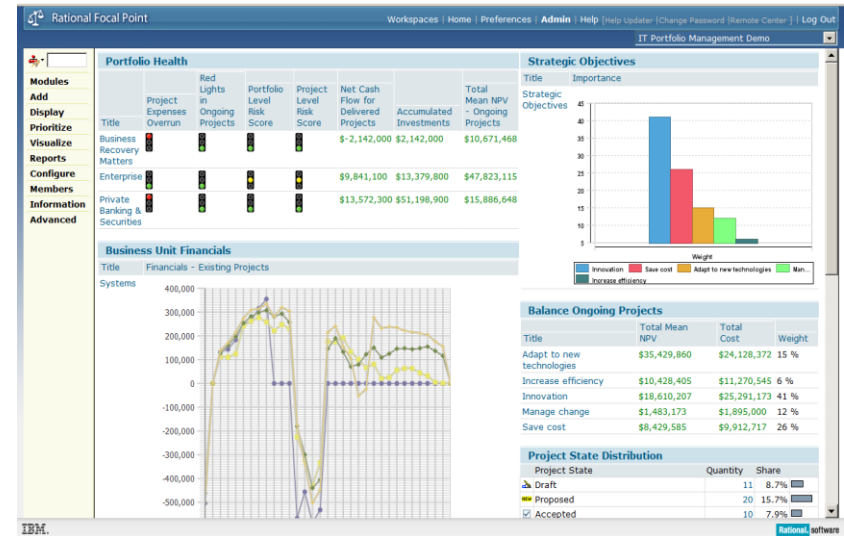
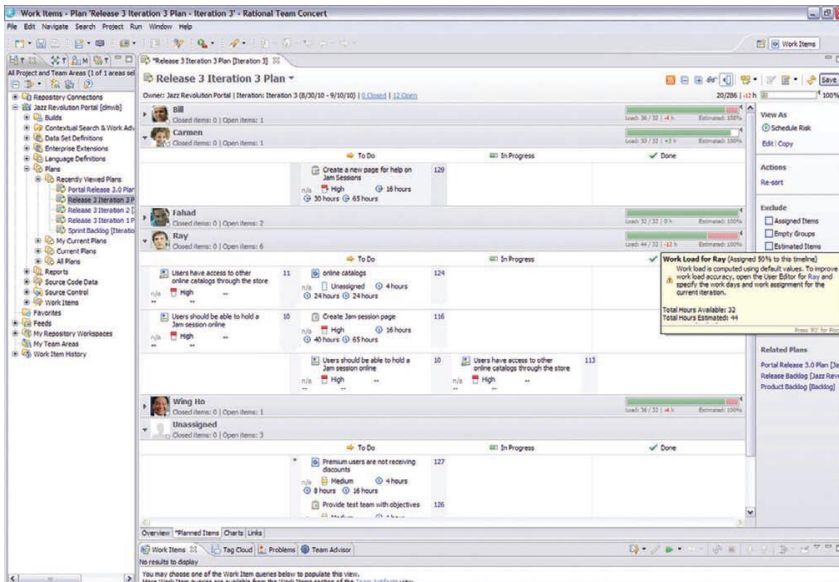
Assess value and uncertainty

Collaborate to choose between competing projects

Delivery Management

Govern project execution and make course corrections

- Define and approve business commitments, and link to RTC to enable execution and tracking
- Improve project success rates through milestone reviews with stakeholders from the business, IT and operations
- Manage project change and monitor value delivered



Track project status, and drill down into development artifacts as needed

Drive day-to-day development.
Identify and escalate delivery issues

Reduce risks and pitfalls of outsourcing while reaping the benefits

Provide a governance model adapted to multi-supplier sourcing structure

How?

Gain control of your application development initiatives by improving visibility and transparency across the project lifecycle multi-vendor supply chain

What's new?

- **Gain a competitive edge** with proven techniques, best practices to address near-shoring, outsourcing and off-shoring
- **Stay on budget** by creating front-end decision support to drive prioritization of ideas, applications, capabilities
- **Ensure “you get what you pay for”** by implementing controls and metrics to manage supplier performance; monitor health of outsourcing projects, contracts
- **Maintain alignment of business needs and software requirements** from definition to supplier assignment to requirements traceability in supplier contracts

“We can get our products to market faster and cheaper by engaging and carefully governing talent pools six time zones away!”



Business Owner

“We helped a global telecom company deliver a single web commerce platform for clients in 22 countries.”

Rajan Kumar Jha
Program Manager
Infosys

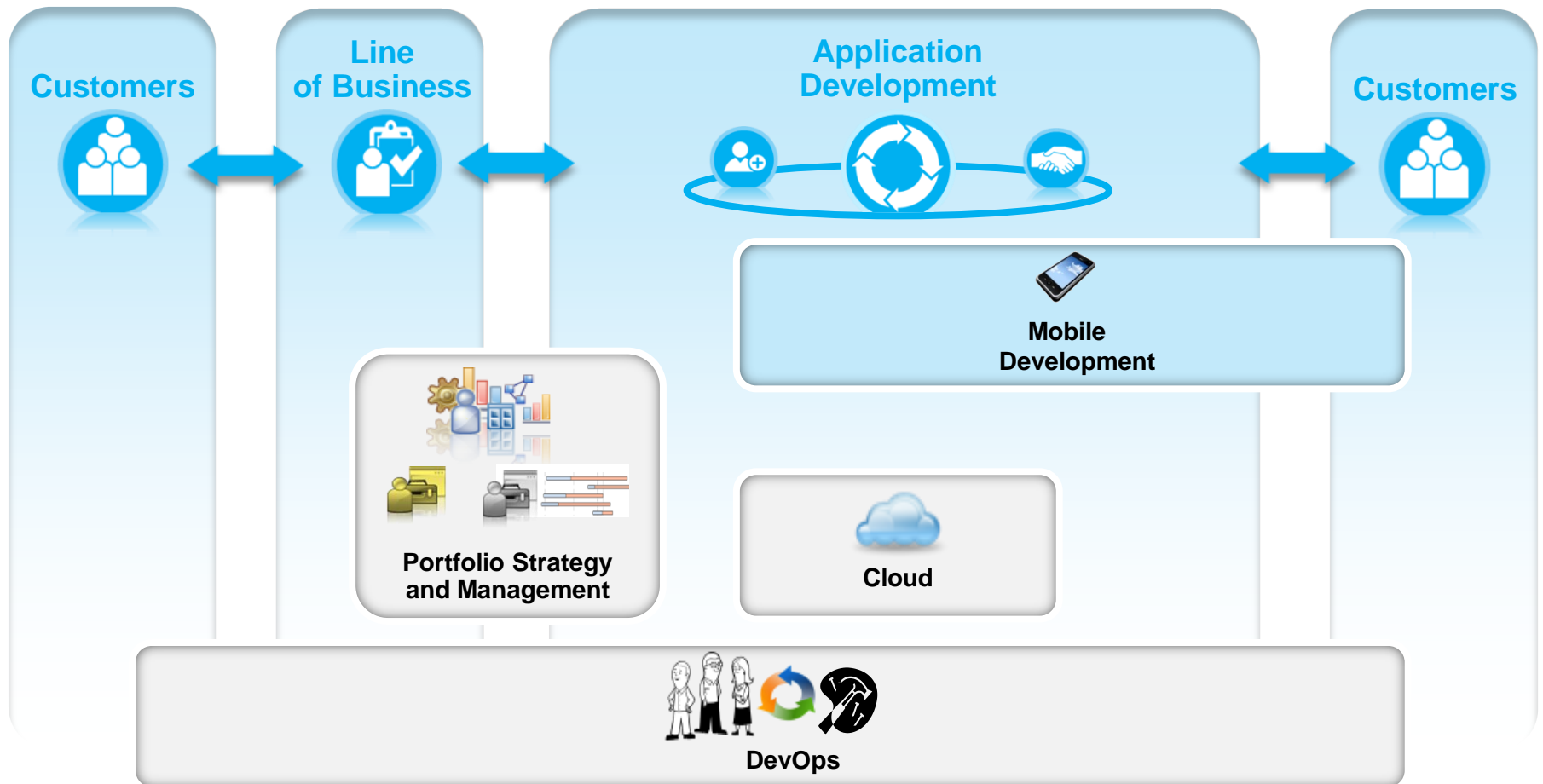
ENHANCED

- **IBM Rational Governance of Application Development Outsourcing (GADO)**
 - GADO, Focal Point QuickStart service

“Application development is outsourced by 58% of the organizations in our study”

IT Outsourcing Statistics 2011/2012
Computer Economics

Some trends within application management, development, and delivery



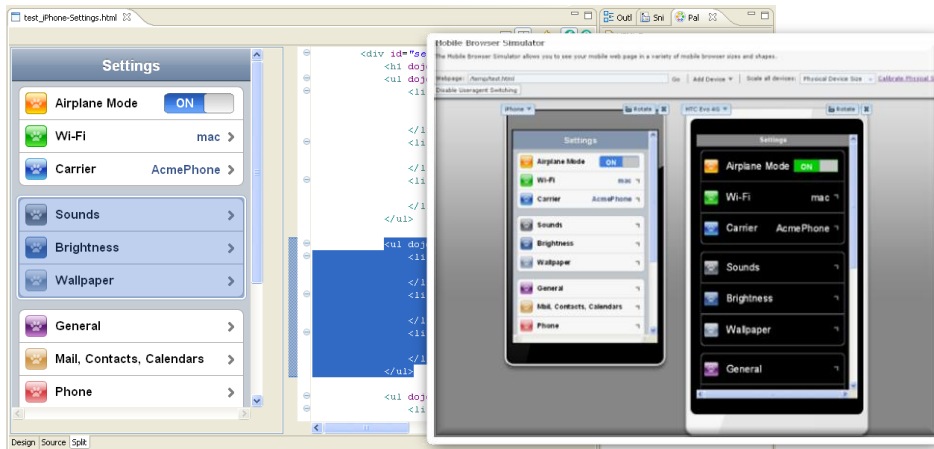
Enterprises want to... *extend existing services and information to customers and employees on their smart phones and tablets*



But... *They lack the skills and time to re-write their existing applications, and they cannot afford to develop natively for multiple mobile platforms and devices*

Solution: End to end mobile development

Design, code, build, test, and deploy mobile apps that run on a wide variety of mobile platforms; Quickly refactor and extend existing back-end services and data to new mobile UIs



Construct, debug, and test mobile UIs

- Quickly deliver to the most popular mobile platforms (iOS, Android, Windows Phone, Blackberry) by
 - leveraging portable standards like HTML5 & JavaScript
 - supporting native functions like camera and GPS from a single code base with hybrid approaches
- Refactor and extend existing back-end services to provide an optimal mobile experience



Refactor and extend existing logic as mobile-consumable services

Over 60% of respondents indicate mobility spend in the range of 10–40% of total IT spend and nearly 80% of organizations plan to spend the same or more on mobility in the next 12–18 months

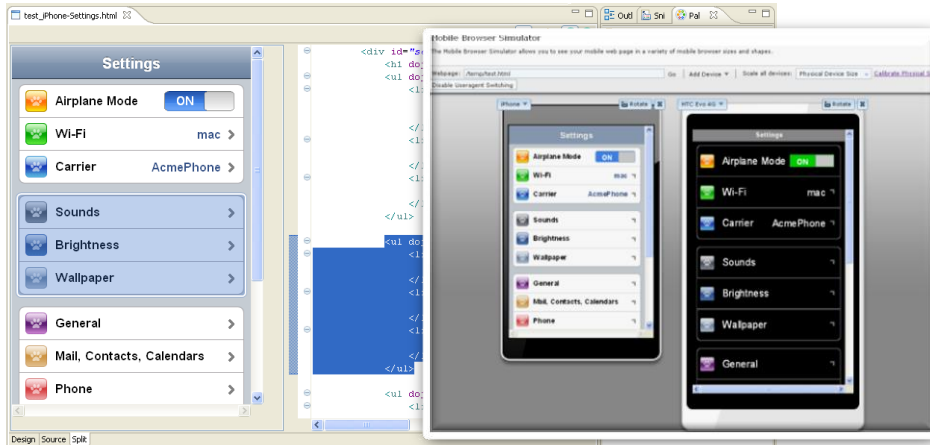
— The State of Mobile Enterprise Software in 2011:

An IDC Survey of Applications, Platforms, Decisions, and Deployments



Solution: Rational IDEs including IBM Worklight

Design, code, build, test, and deploy mobile apps that run on a wide variety of mobile platforms; Quickly refactor and extend existing back-end services and data to new mobile UIs



Construct, debug, and test mobile UIs



Refactor and extend existing logic as mobile-consumable services

- Rational Developer for zEnterprise v9.0*
- Rational Developer for Power Systems v9.0*
- Rational Application Developer v9.0*
- Rational Business Developer v9.0

* Includes IBM Worklight

“We chose IBM Worklight because it was the best technology for Lotte to consolidate application development, enhancement and maintenance, while ensuring cost savings and timely delivery to our customers.”

— Kang, Chang Nam, IT Planning Director, Lotte Credit Card

Mobile application styles

Web

- HTML, JavaScript, CSS
- Accessed from a mobile web browser
- No device-specific capabilities



Mobile Web

- HTML, JavaScript, CSS
- Accessed from a mobile web browser; mobile-optimized UI
- Limited access to device capabilities



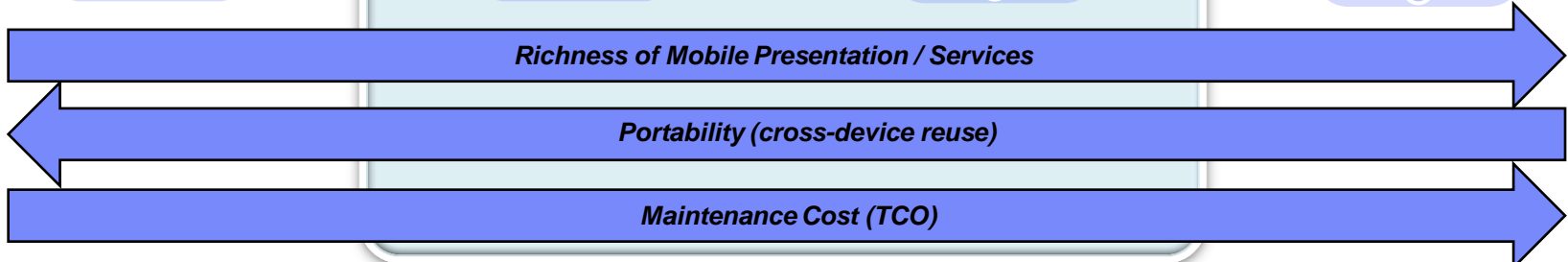
Hybrid Mobile

- HTML, JavaScript, CSS, with optional native code
- Installed and run like a native mobile app; mobile-optimized UI
- Access to most device capabilities



Native

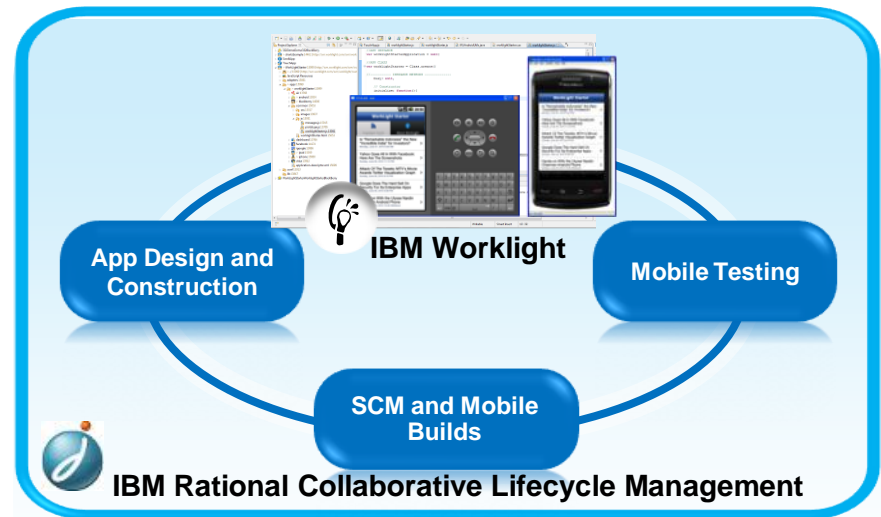
- Native code
- Access to full set of device capabilities



Accelerating the mobile development lifecycle

- Enterprise-grade, standards-based mobile application platform supporting native, hybrid and mobile web programming models
- Best-of-class collaborative mobile application development lifecycle capabilities

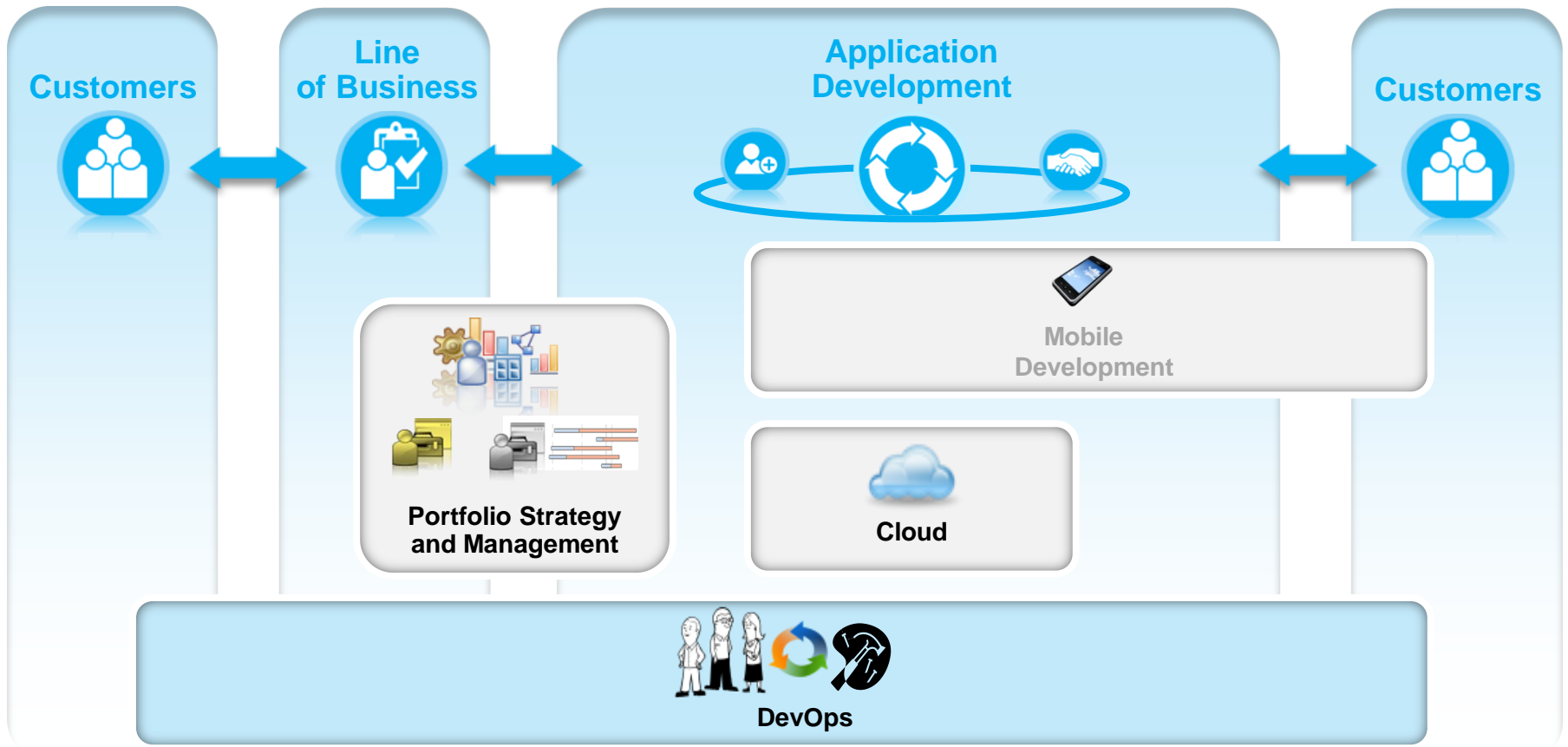
IBM Integrated Solution for Mobile Development and Delivery Enact a collaborative, multi-platform mobile development lifecycle



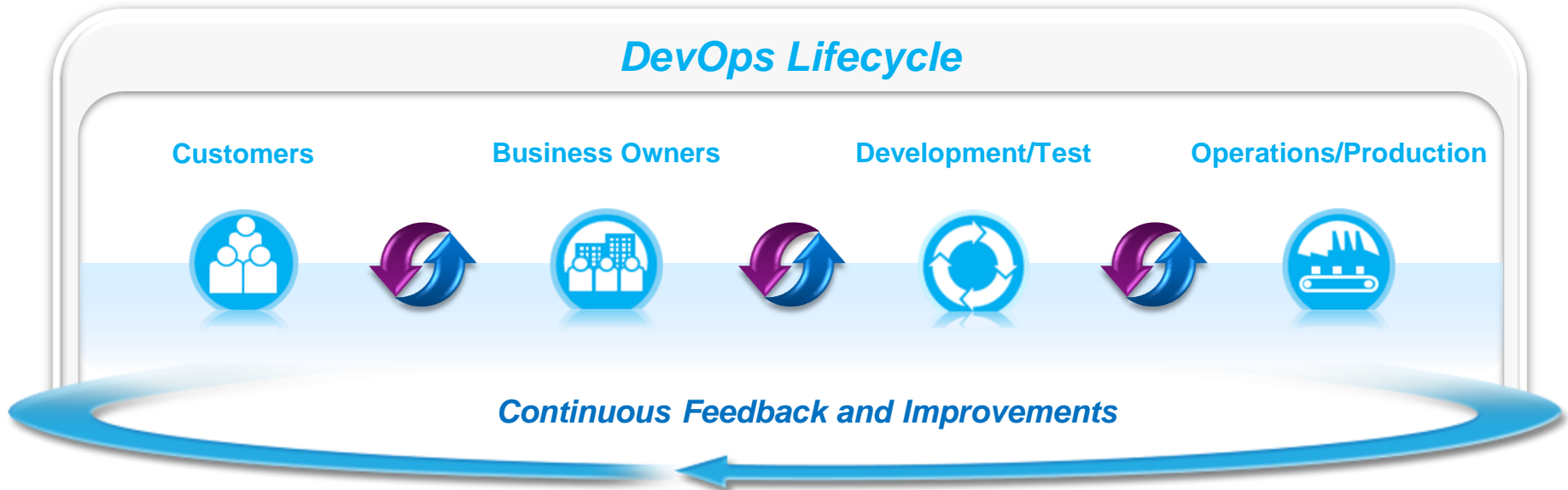
NEW

- Advanced IDE (Worklight Studio) for native, hybrid and mobile web applications
- Distributed team build and test integrations with the IBM Mobile Platform
- “Mobile device-cloud” service integration for on-device testing
- Mobile development best practices and tested integrations to accelerate productivity
- Support for Agile methodologies for dealing with fast-paced development for mobile

Some trends within application management, development, and delivery



Enterprises want to... *establish a core capability to rapidly and continuously evolve deployed business services with improved cross-discipline collaboration and enhanced governance, while balancing quality, cost, and risk*

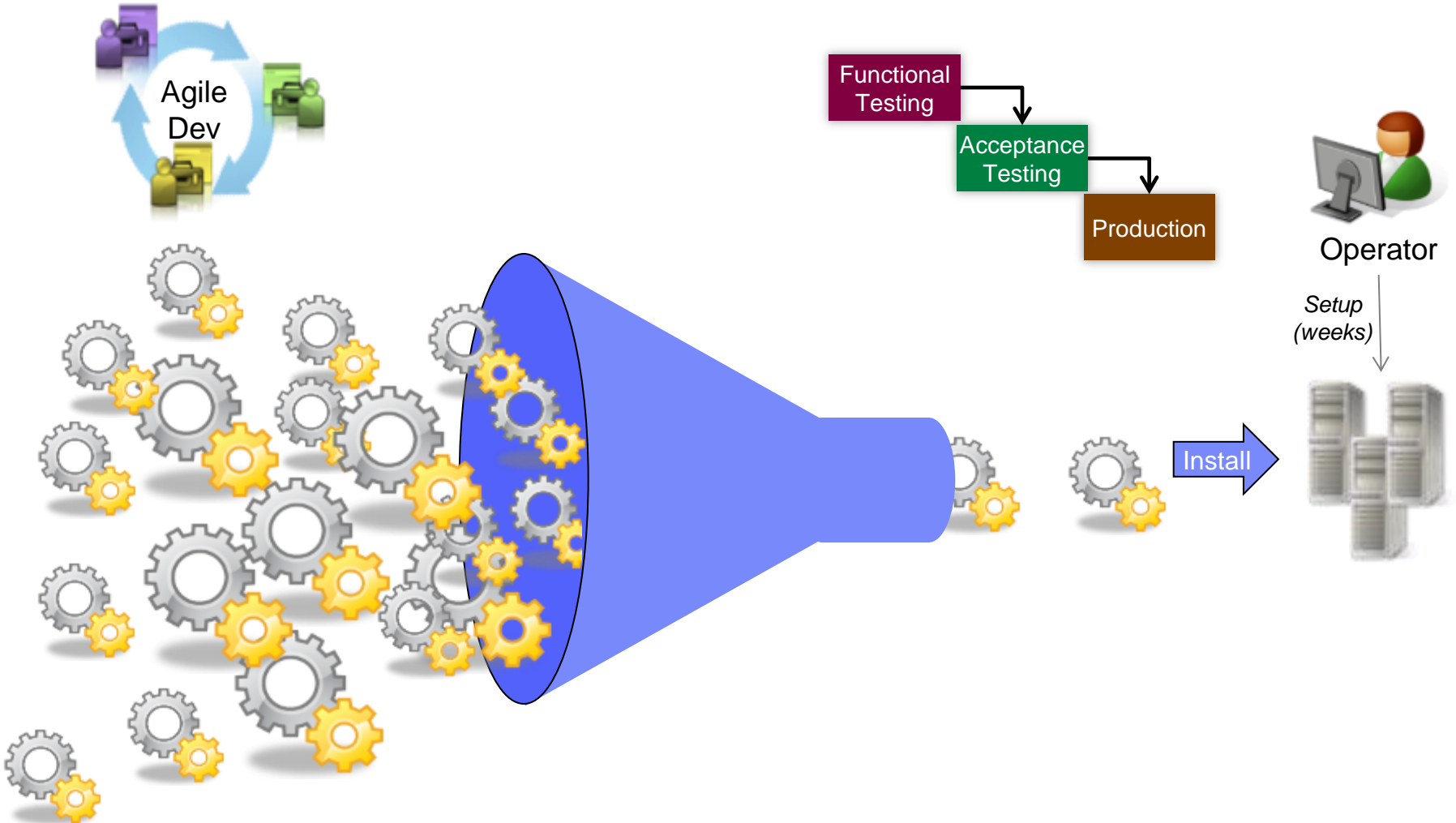


- Accelerated software delivery
- Reduced time to gather and analyze customer
- Improved governance across the lifecycle
- Balanced quality, cost and speed

But...

It takes days or even weeks to test and fix changes, applications are regularly rolled back due to quality issues escaping into production, and best practices for frequent builds and tests are cost prohibitive on the mainframe

And ... agile is not enough...



Agile builds are piling up

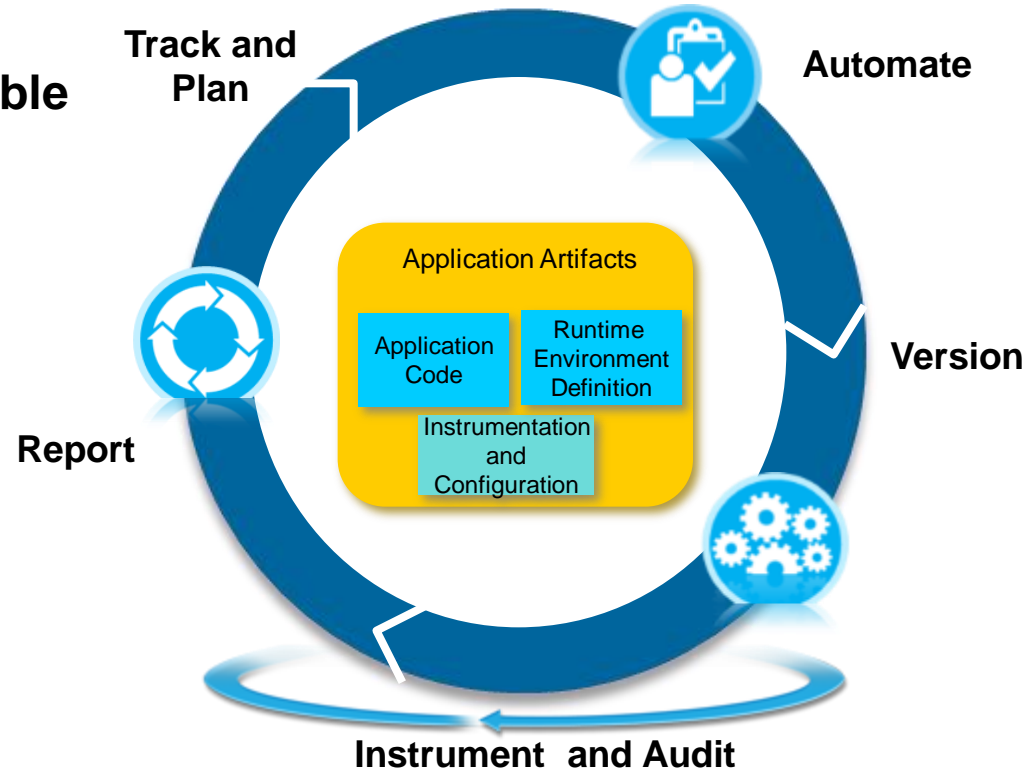
Solution: DevOps

Reduced delivery time, end-to-end visibility of test activities, safer and faster V2V migrations, and breaking down the barriers between operations and development

As much as is feasible and affordable

- ✓ Automate
- ✓ Version
- ✓ Test
- ✓ Track and Plan
- ✓ Instrument and Audit
- ✓ Report

everything that you can!



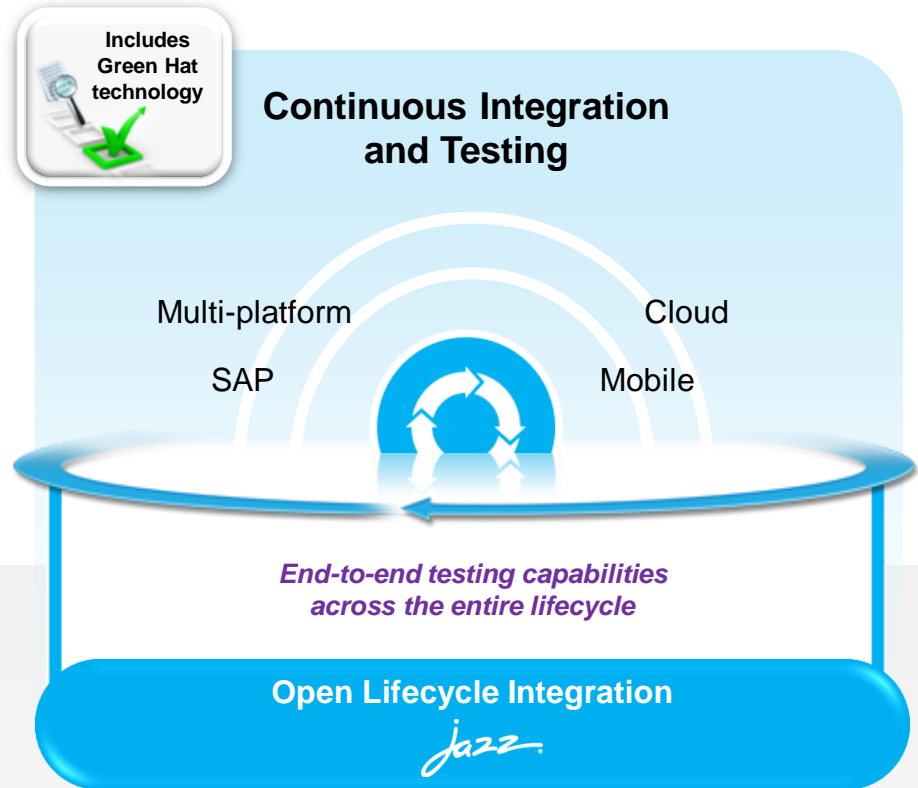
- Speed time to market through an agile, automated, continuous delivery model
- Improve quality via frequent builds and automated testing
- Reduce cost with better governance and collaboration and by offloading mainframe dev workloads
- Increase customer satisfaction by obtaining and responding to feedback faster

Deliver software quality at the speed your business demands through continuous integration and testing

- Simplify testing across mainframe and composite application layers
- Avoid late stage, big-bang integration issues
- Automate regression testing throughout lifecycle
- Validate system functionality, scalability and stability continuously

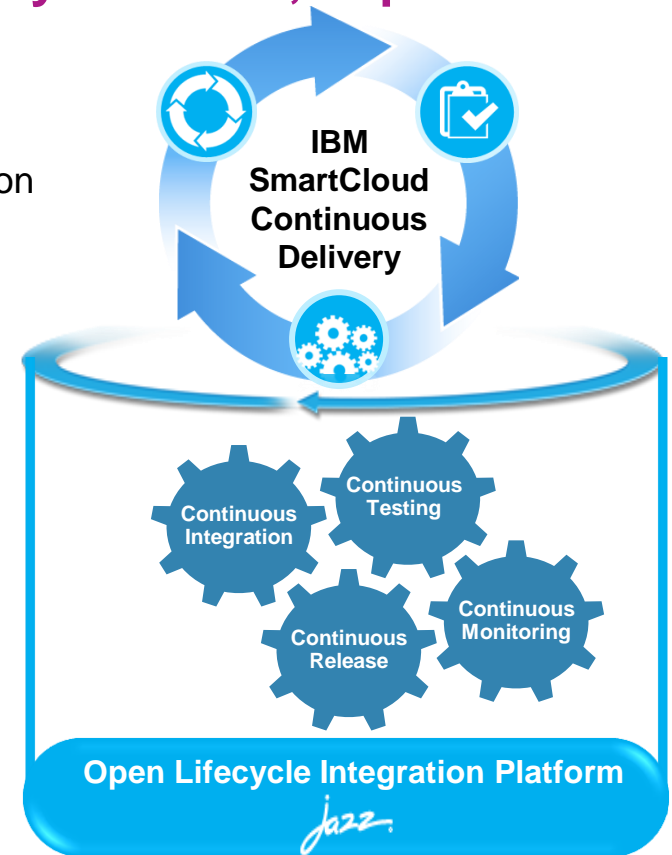
ENHANCED

- IBM Rational Test Workbench v8.5 – powered by GreenHat Technology
- IBM Rational Performance Test Server v8.5
- IBM Rational Test Virtualization Server v8.5
- IBM Rational Team Concert v4.0.3
- IBM Rational Quality Manager v4.0.3
- IBM Rational Development and Test Environment for System z v9.0
- IBM Rational Developer for System z v9.0



Leveraging the Cloud and DevOps to reduce cycle times, improve quality, and simplify delivery

- **Continuous Integration**
 - Deliver code changes faster via automated, repeatable execution of build processes
- **Continuous Release**
 - On-demand environment configuration
 - Continuously deploy code and configure middleware
- **Continuous Testing**
 - Automate testing in production-like environments
- **Continuous Monitoring**
 - Gain visibility into application performance
 - Trace and isolate product defects
- **Deployment Library**
 - Govern software delivery assets in the pipeline
- **Leverage existing investments**
 - Integration with IBM, third-party & Open source



"I tested earlier, reduced testing time by 99% from 2 weeks to 3 days"

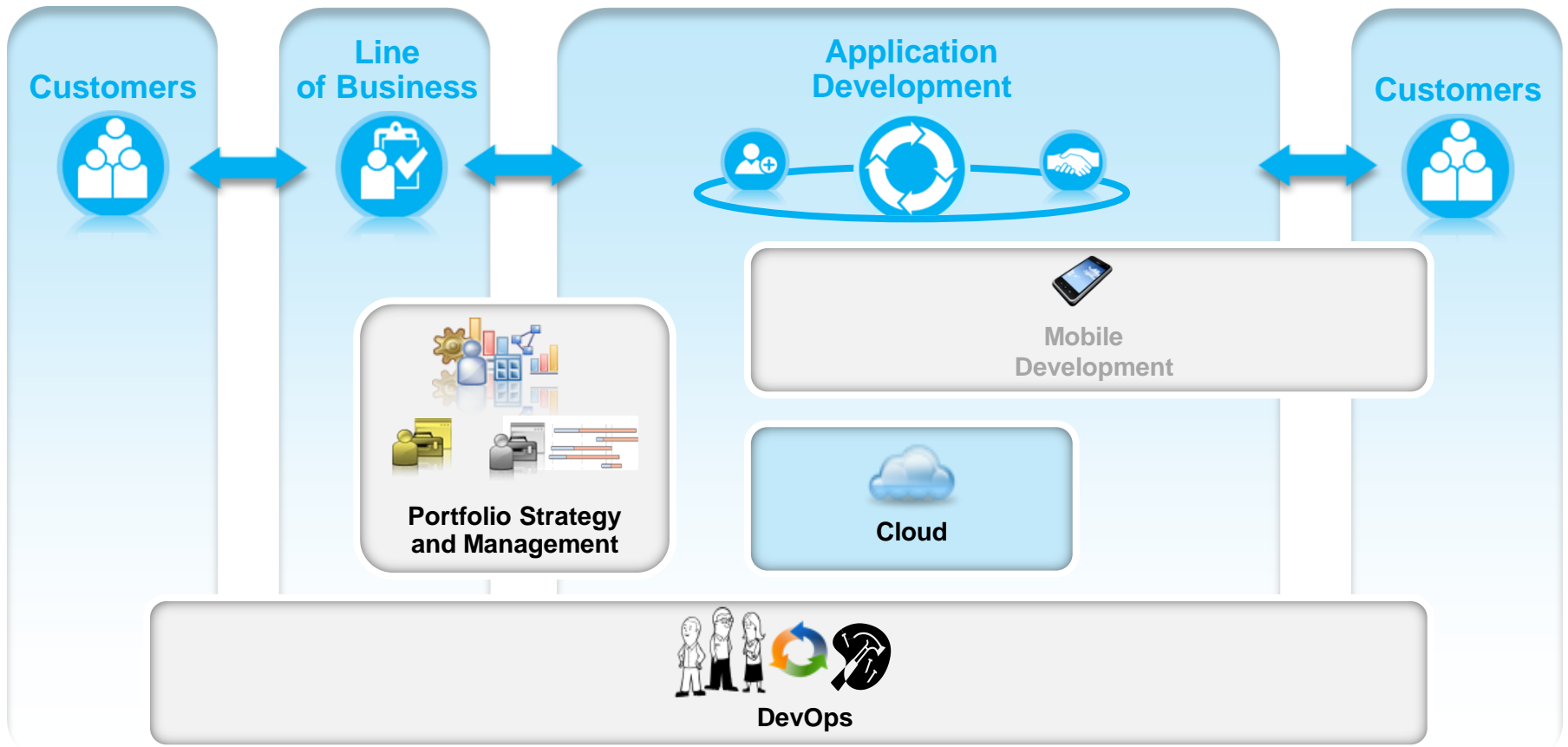


Testing Team
IBM Case study

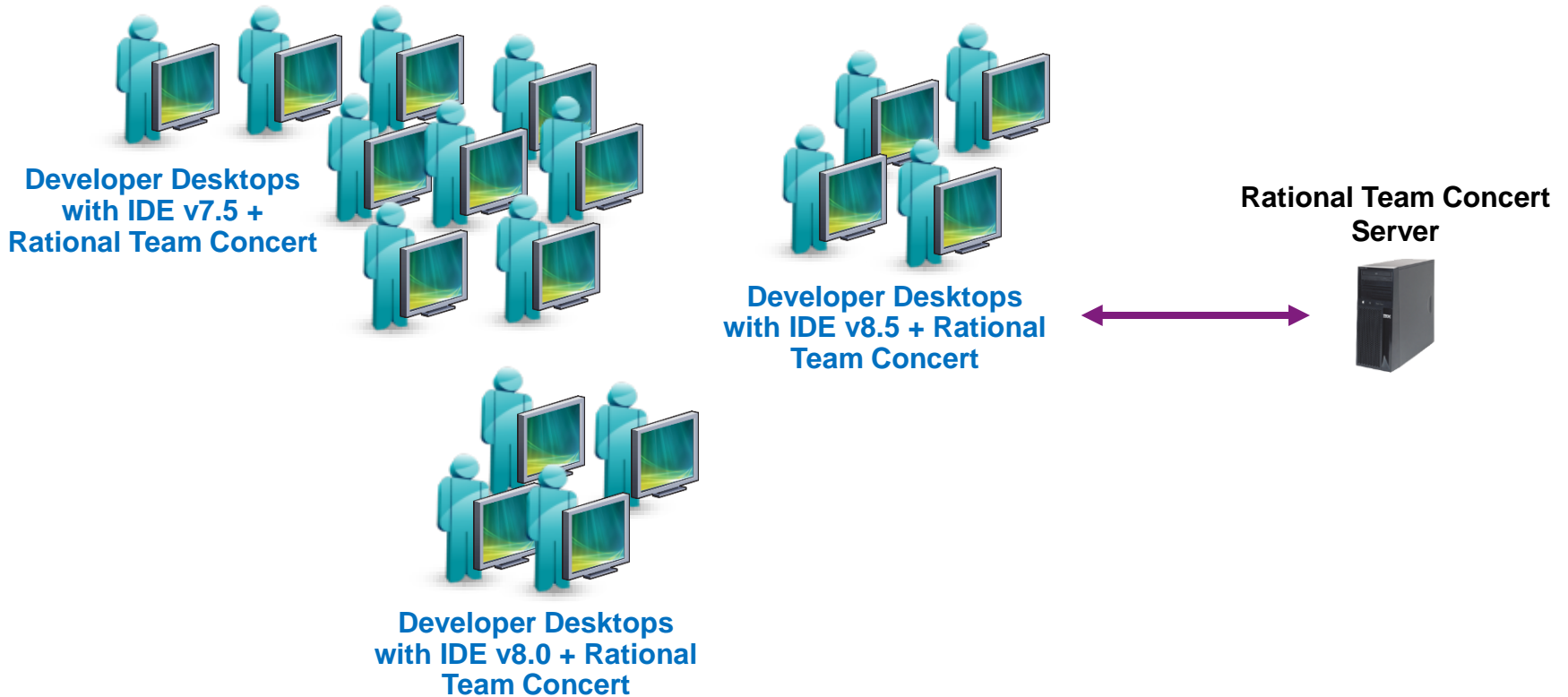
NEW

IBM SmartCloud Continuous Delivery 2.0

Some trends within application management, development, and delivery



Enterprises want to... *quickly, consistently and affordably equip practitioners with development tooling for entire teams and easily maintain the environment*

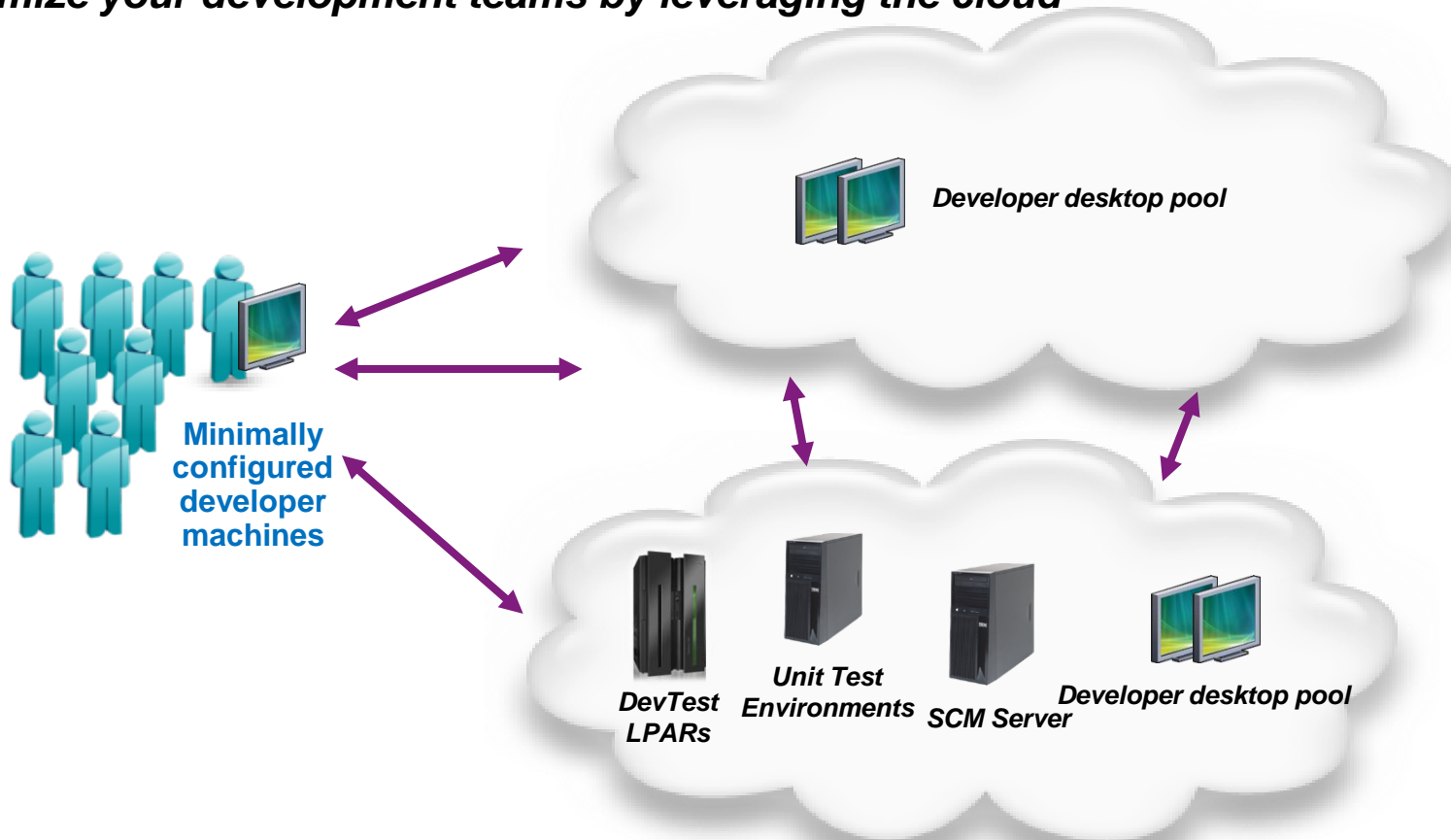


But...

Managing individual desktops is time consuming, costly, and error prone

Solution: Development on the cloud

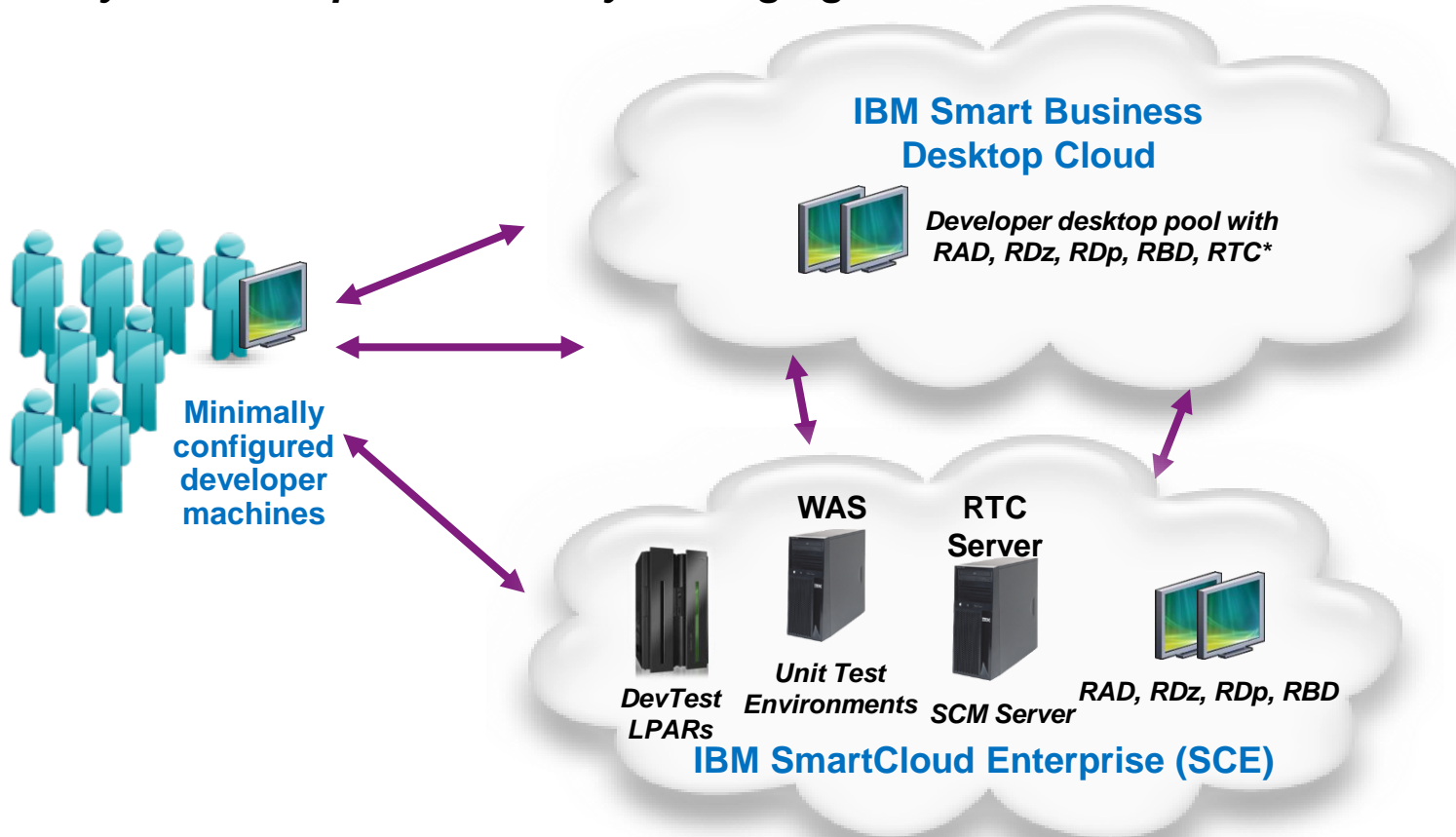
Optimize your development teams by leveraging the cloud



- Save capital expenses by providing your developers with powerful IDEs without high-end machines
- Quickly provision the right tools, in the right configurations for new projects
- Ensure consistent and accurate installs and updates via centralized management

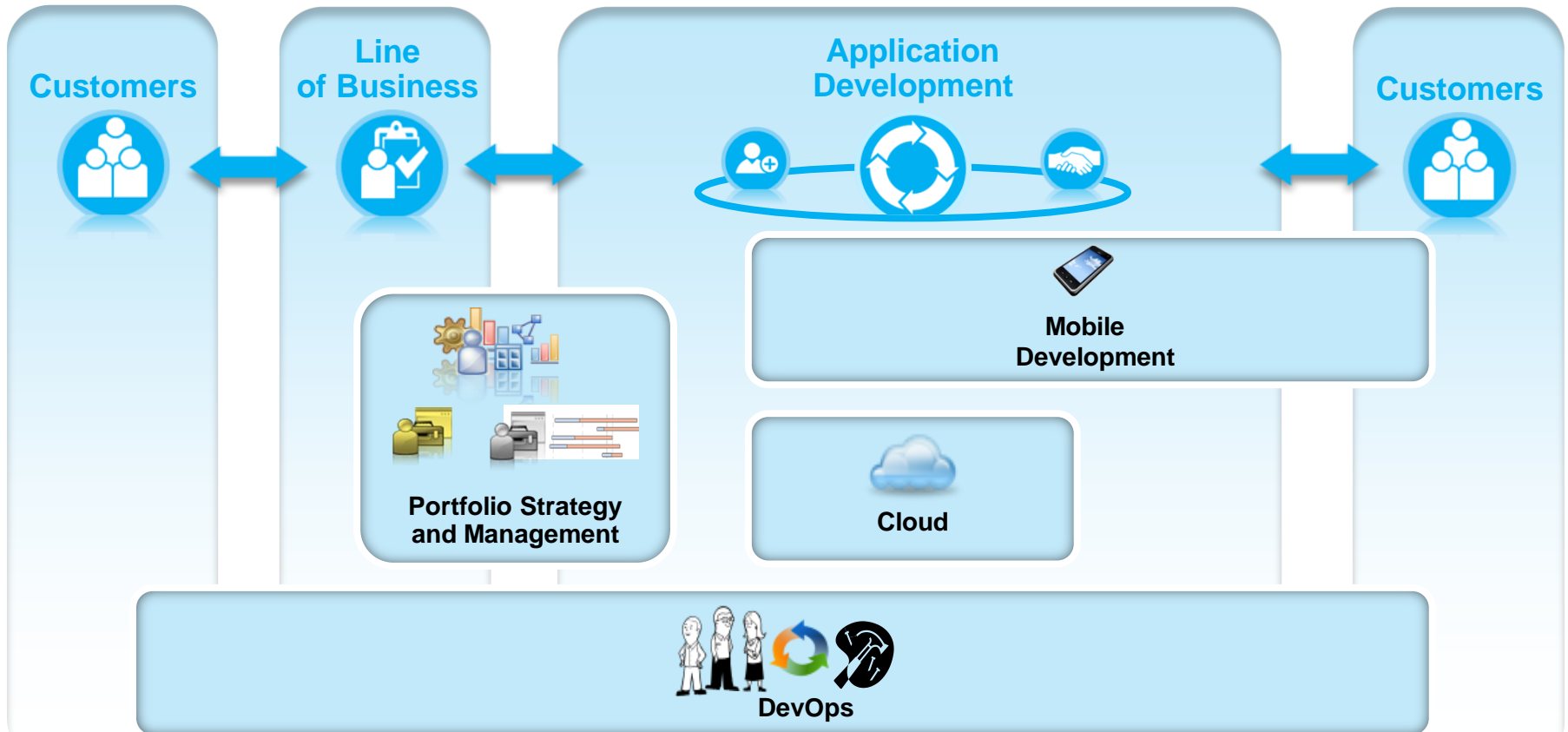
Solution: Development on the cloud

Optimize your development team by leveraging the IBM SmartCloud



- IBM Smart Business Desktop Cloud – private cloud offering providing custom desktop cloud implementations
- IBM SmartCloud Enterprise – public cloud offering providing pay per usage infrastructure

Some trends within application management, development, and delivery



- **Portfolio strategy and management** for application portfolio, demand and delivery management
- **End-to-end mobile development** to quickly extend existing services and information to mobile devices
- **DevOps** to enable cross discipline collaboration while fostering the rapid evolution of deployed business services with reduced risk, decreased cost, and improved quality
- **Cloud-based development environment** to reduce cost and speed delivery

Summary

**All of this is relevant to z,
and, in many ways, even
more critical on z!**





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