



Unifying Development and Operations to Deliver Smarter Products and Services

Davyd Norris – Senior IT Architect, IBM Rational

PulseANZ2010

Meet the people who can help
advance your infrastructure



Agenda

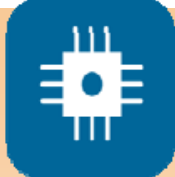
- Smarter Products and Services
- Unifying Development and Operations
- Questions and Discussions

Businesses are facing an unparalleled rate of change





Welcome to the Decade of Smart



Our world is becoming
INSTRUMENTED



Our world is becoming
INTERCONNECTED



All things are becoming
INTELLIGENT



SMALLER. FLATTER. SMARTER.



Unique customer value is derived increasingly from services delivered by intelligent “systems of systems”

Analysis & Diagnostic Services



- Drug interaction
- Symptom-based diagnoses
- Immunization histories
- Radiologic pattern recognition
- Lab test results trending

Electronic Health Records

- Both patient and physician controlled
- Secure
- Network accessible; universally available
- Interconnected with payer systems
- Includes medicine & allergy lists, laboratory test results, radiology, billing



COMMUNITIES



Social networks

PHARMACEUTICALS AND DEVICE MANUFACTURERS

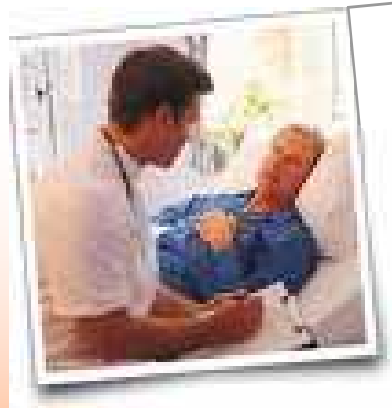


Mobile diagnostic client

PAYERS AND HEALTH PLANS



Secure medical treatment servers



Drug outcome reporting

GOVERNMENT



CARE DELIVERY ORGANIZATIONS



Bedside treatment devices

DOCTORS AND OTHER CAREGIVERS



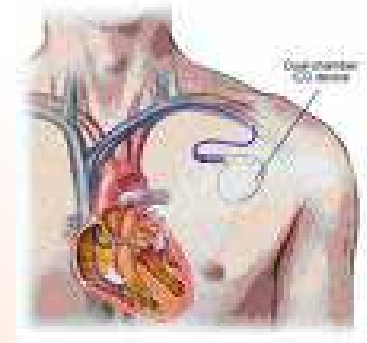
Teleradiology



Fueled by Smarter Products & Services



**Operating Room
Navigation Systems**



**Implantable
Defibrillators**

**Remote
Diagnostics**



Infusion Pumps



**Next Generation
CT Scanners**



IT Systems



***...the building blocks of
transformational innovation***



Smart Products and Services – Delivering Client Value

Merge Healthcare



- Collaboration across globally distributed development teams
- Change management across the end-to-end software lifecycle

What's Smart?

- Provides medical professionals access to complex medical images on mobile devices
- Helps facilitate prompt access to medical imaging data– anytime or anywhere*

Smarter Business Outcomes

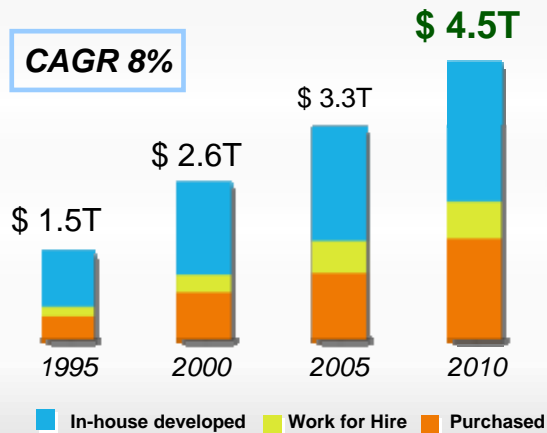
- Reduced hospital operations costs
- Reliable, secure, scalable delivery of medical images and reports

“We rely on Synergy and Change to manage the complexity of the software and to ensure that our global development teams operate as one, for the best result to our customers. This software from IBM is part of our livelihood; it's our DNA.”

Software is the “invisible thread” in today’s innovation

Investment

Cumulative Value of Software Investments



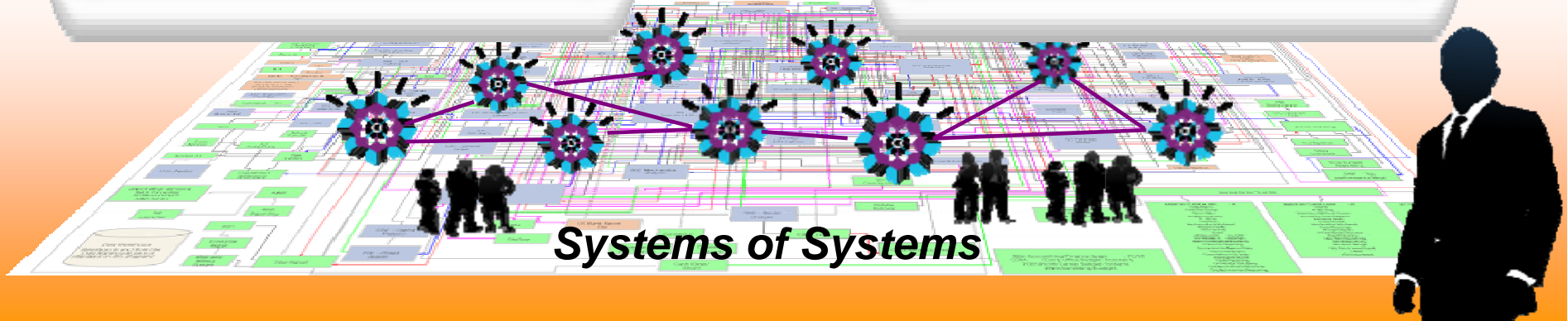
Challenge

Only **37%** of stakeholders are satisfied with the speed of development & deployment..

Only **42%** are satisfied with the quality¹

50% of applications deployed are rolled back².

30% of project costs due to rework





Yet, most businesses are challenged to deliver innovation while successfully managing cost & risk

80%

CEOs anticipate turbulent change and bold moves.



64%

of CIOs work with senior business executives to drive innovation.



3x

increase in the gap between leaders' need and their ability to deliver it.

Silos of people, process, and projects

Geographic Barriers

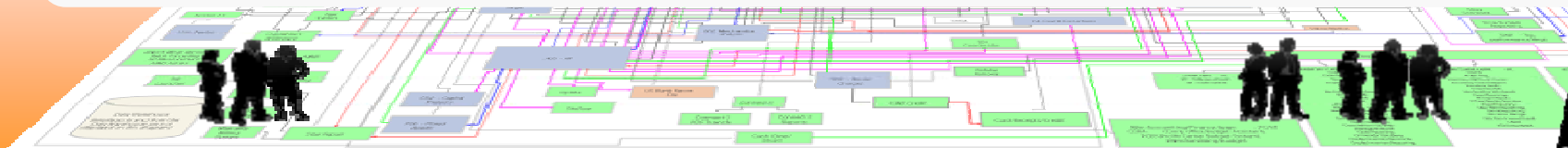
- Poor communication
- Language, culture, time
- Process gaps resulting in rework
- High degree of friction

Organizational Barriers

- Weak project governance
- Lack of domain expertise
- Poor LOB / IT collaboration
- Security of IP when outsourcing

Infrastructure Barriers

- Incompatible tools / repositories
- Unreliable access artifacts
- Lengthy on-boarding
- Inflexible tooling integration



The design and management of complex systems and services must be treated as a core business process

DESIGN

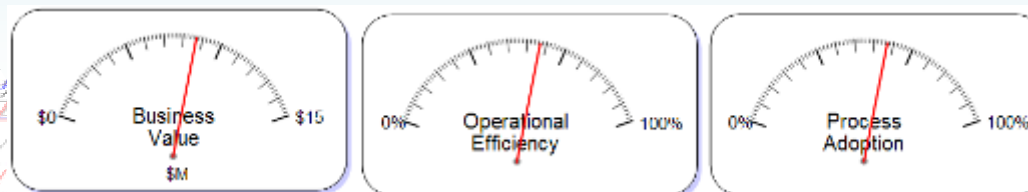
and build smarter products & services to speed innovation and integrate with unique client ecosystems

DELIVER

Innovative new value by integrating smarter products & services into "intelligent" systems of systems

MANAGE

risk & cost across the ever-evolving lifecycle of next generation solutions (biz → dev → ops)





Best-in-class product companies are those that build a strong competency in software delivery

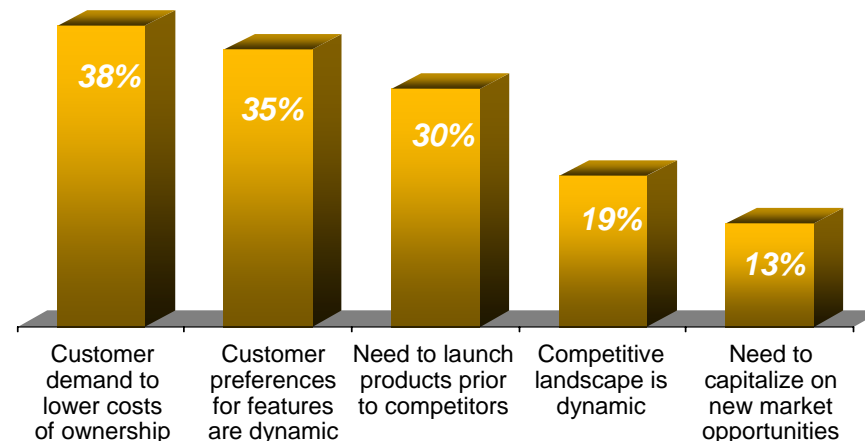
Best-of-class produce results:

- **19%** more likely to meet revenue targets than the industry average
- **4.4x** more embedded software than competitors
- **50%** fewer defects in embedded software
- **25%** decrease in product development time

“Software has evolved to become the keystone of product differentiation and end-user experience.”



Top 5 pressures driving improvements in embedded product / IT software



Source: “Embedded Systems Development”, Aberdeen Group, March 2009



IBM Rational & Tivoli are delivering new capabilities required for service and product innovation

Connect multiple products and services into a *“system of systems”* to deliver unique value



Leverage *systems engineering and ALM* to accelerate time to market, improve quality and reduce costs

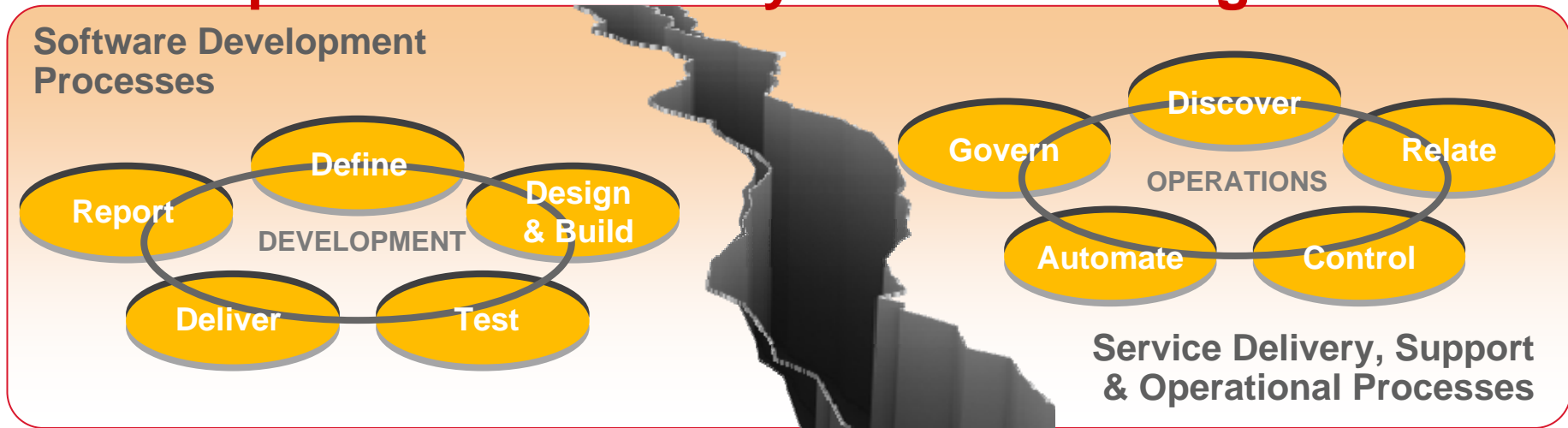


Develop a core competency in *software design, development and deployment* to produce products and services that are differentiated

Agenda

- Smarter Products and Services
- Unifying Development and Operations
- Questions and Discussions

Development and Delivery Model Challenges



Had an application fail the first day of rollout after six months of intense testing ?



Found out that a recent production outage was caused by a 'known problem' in development ?



Had a performance problem reported in production that can't be reproduced in development?



Experienced a production security breach due to a poor application design ?

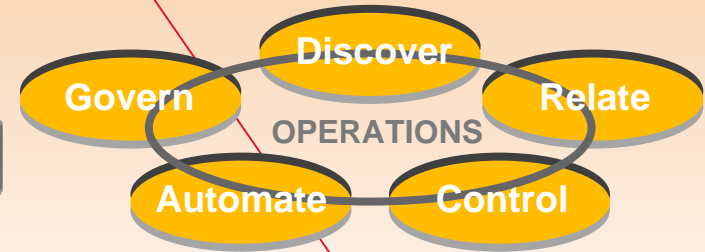
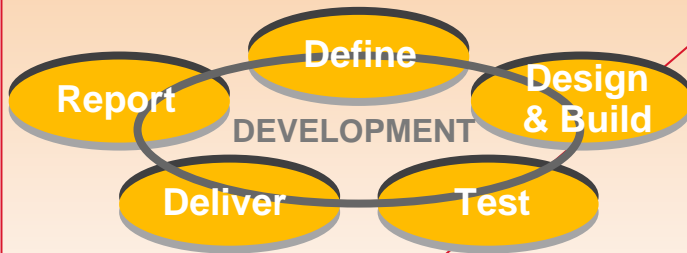


Bridging service creation, delivery and management

**Enterprise Level Business Planning
& Infrastructure Alignment**

Software Development
Processes

Service Delivery, Support
& Operational Processes



**Lifecycle Process
Automation**

**Integrated
Platform**

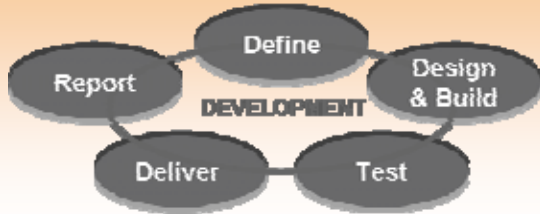
**Federated
Assets**

...to deliver sustainable product and service innovation

Unifying Development and Operations

An Integrated Architectural View

Improve time to develop, test & deploy.
Reduce operational risk and improve audit posture



Agile & ITIL Process Linkage, Existing APIs, REST Interfaces

Reduce cost & improve efficiency and accuracy of cross-domain tasks

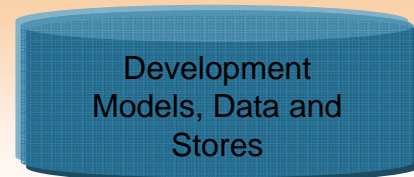
Development Tools



Operational Tools

Existing APIs, REST Interfaces, Launch-in-Context

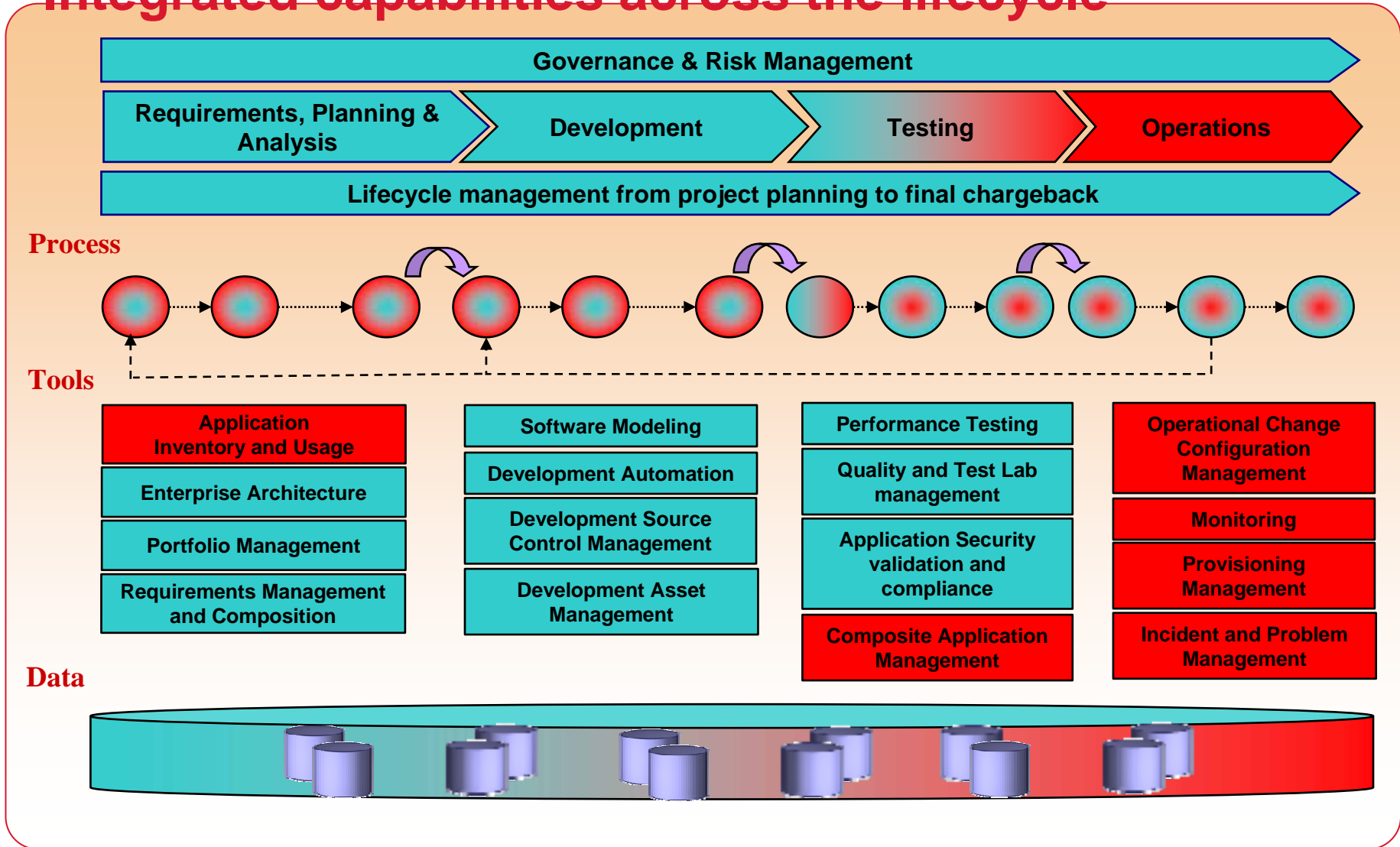
Simplify deployment.
Reduce data duplication and synchronization



Shared Context for Transformation, Reconciliation & Federation

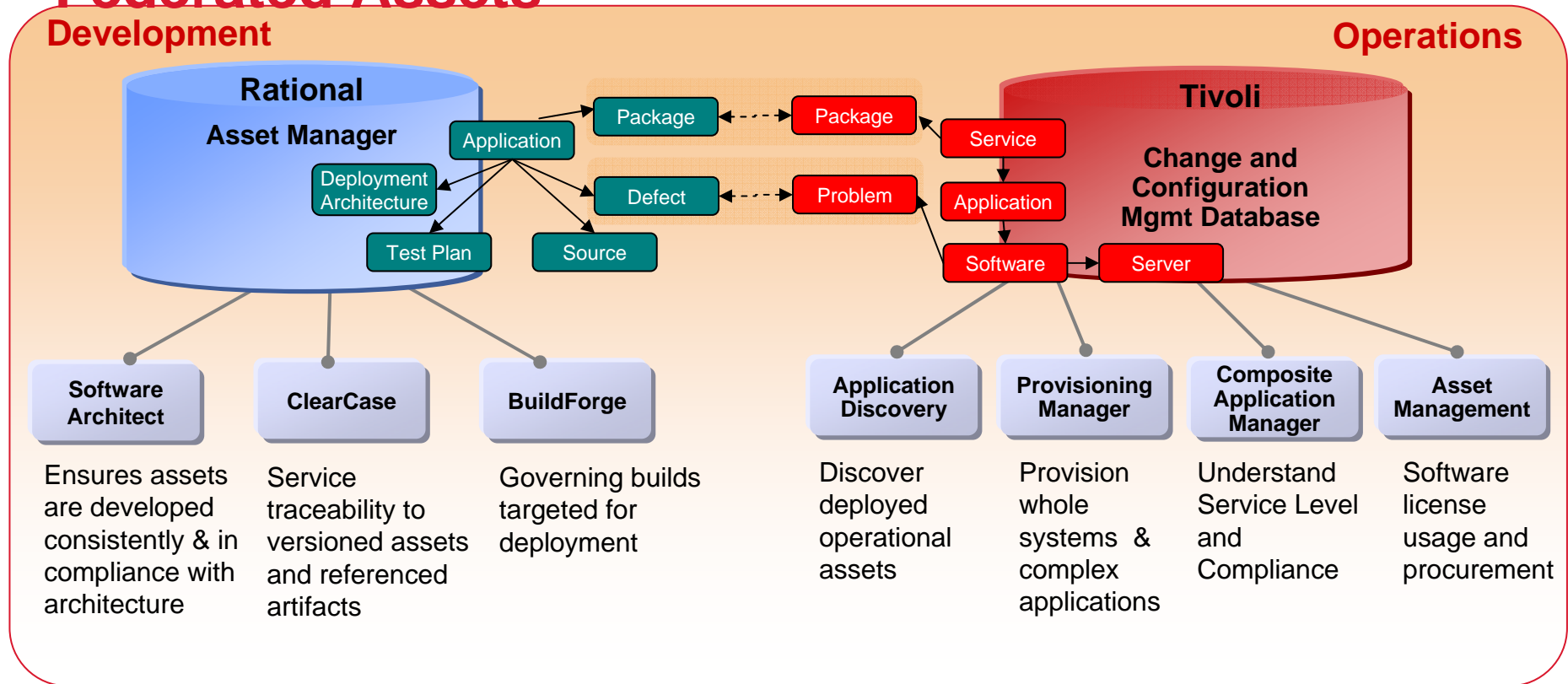
Unifying Development and Operations

Integrated capabilities across the lifecycle



Unifying Development and Operations

Federated Assets



- Link Operational assets and Development assets
- Use operational data during application and deployment design to build and configure services
- Reduce unexpected outages with operational impact analysis of business and technical assets

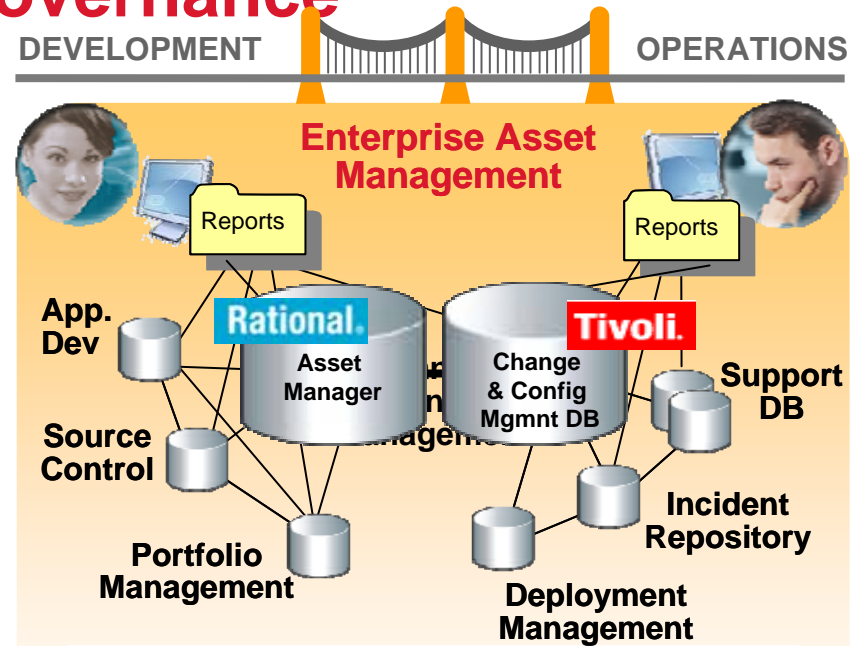
Delivers Enterprise Asset Governance

Situation

- Long service downtimes caused by problem diagnosis issues
- Inefficient access to resources and information impacting time to restoration
- Needed an enterprise wide view of application and service dependencies

Solution

- **One single source of truth**
Enterprise Asset Governance
- **One common workflow**
Solution integration with requirements, change and configuration management

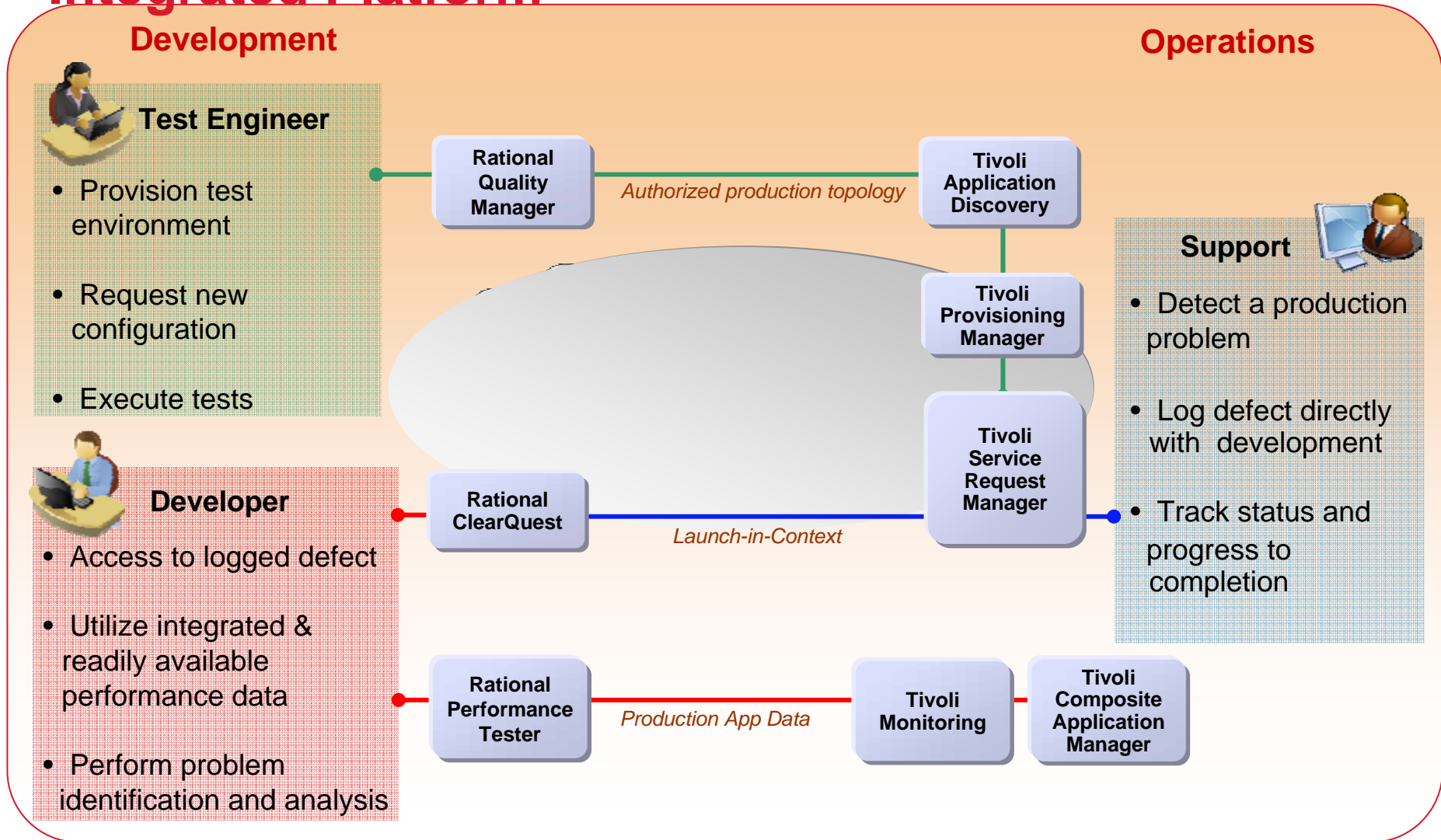


Results

- ✓ Significantly reduced downtime
- ✓ Faster root cause analysis
- ✓ Simplified asset synchronization and traceability between development and operations

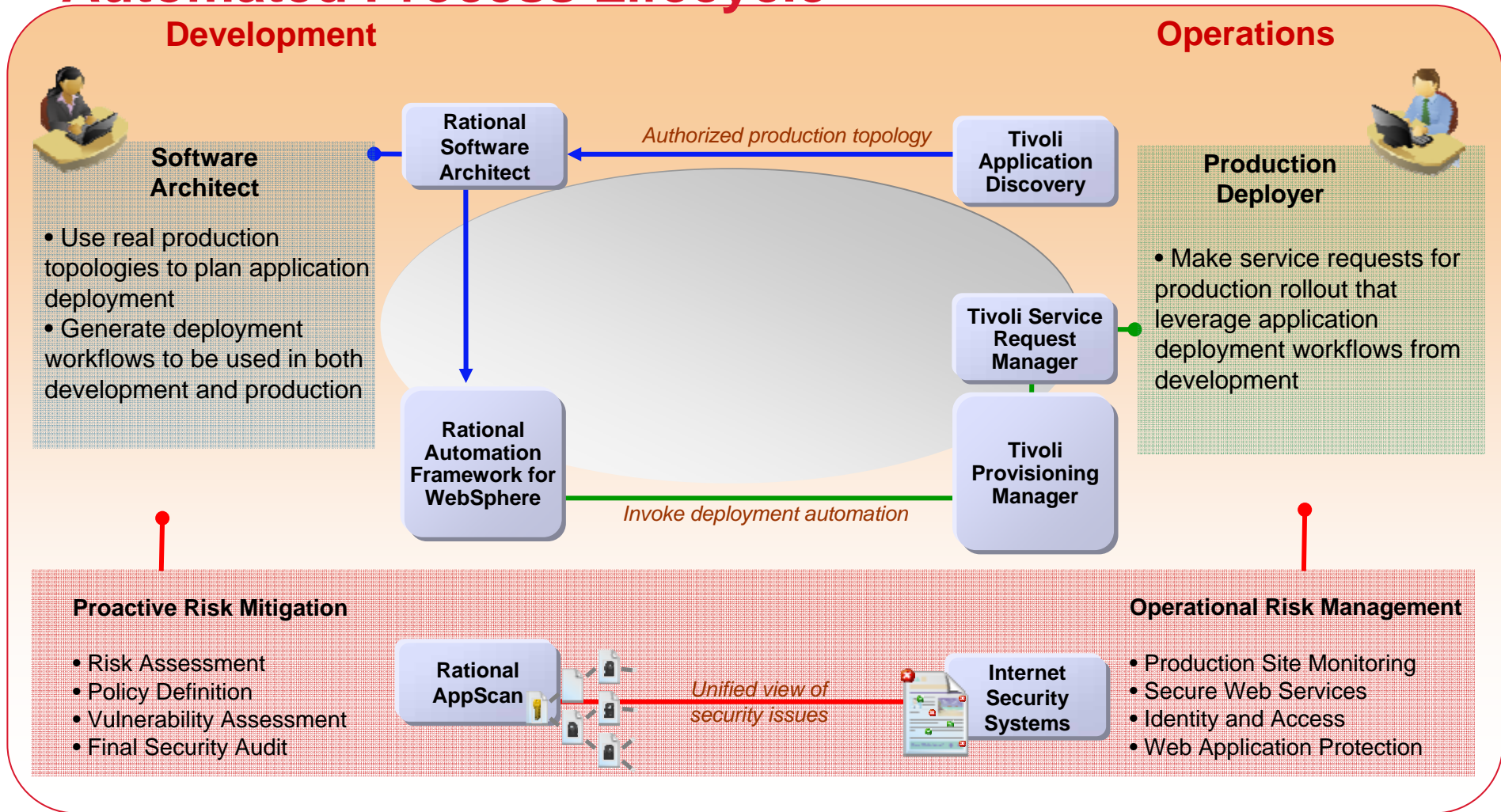
Unifying Development and Operations

Integrated Platform



Unifying Development and Operations

Automated Process Lifecycle



Deploys Service Automation Framework

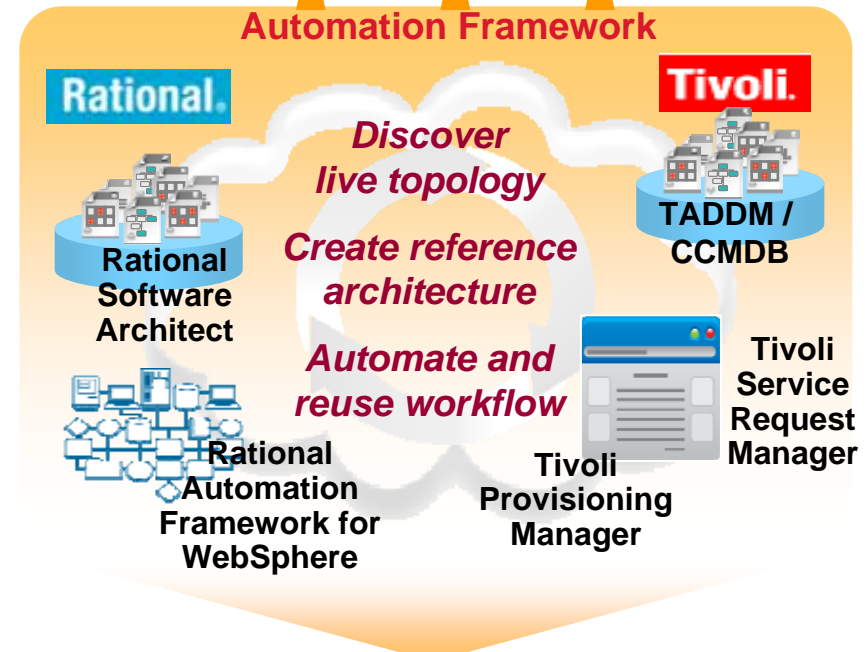
Situation

- 8K applications including 3K acquired
- Constant stream of change requests
- Fixed IT operations staff, frozen budget
- Communication and accountability problems across **25 application teams**
- Separate “layered” one-off approach to OS, data center and application deployment
- Numerous deployment errors, manual workarounds
- Backlog of **2500 priority one requests**

Solution

- **Repeatable consistent automation**
- **Deployment Reference Architecture**

DEVELOPMENT  OPERATIONS



Results

104% ROI

- ✓ Reduced backlog
- ✓ Cost savings through consistent deployment
- ✓ Compliance and traceability
- ✓ Best practices capture



Software Delivery Lifecycle Management

Innovation Journey Continues – Cloud Services

Rational Software Delivery Services ON the cloud

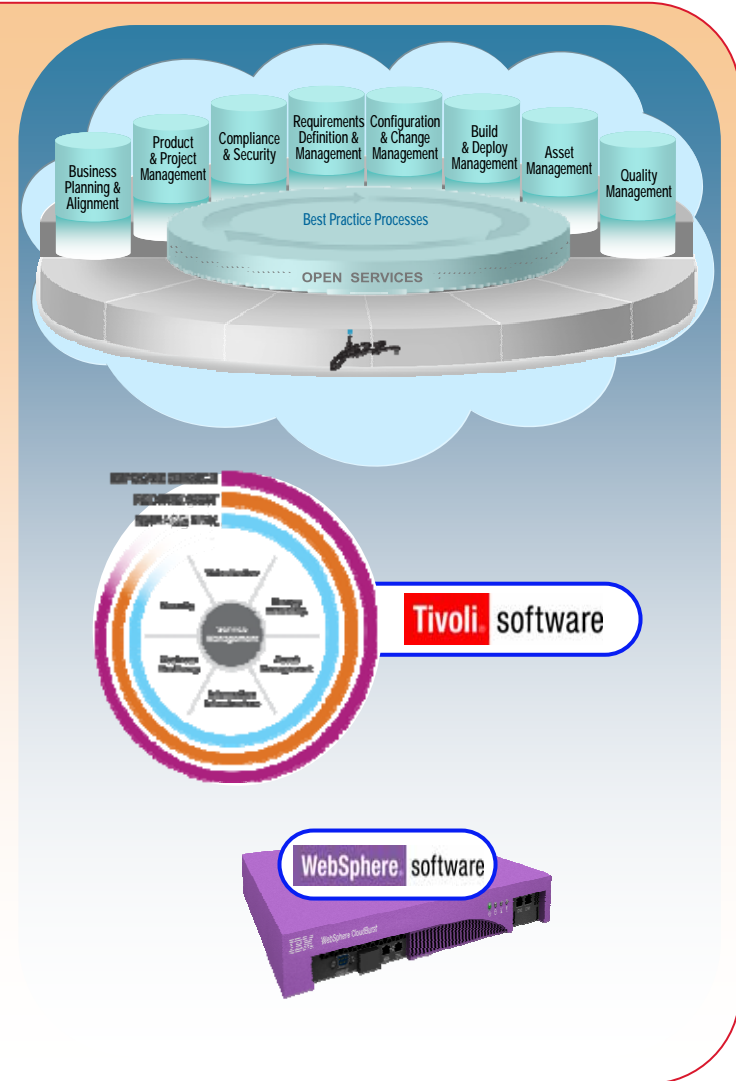
- Rational Team Concert, Quality Manager, Requirements Composer, Rational Asset Manager and Build Forge hosted in the Cloud
- Support for GTS private test Cloud

Rational Software Delivery Services FOR the cloud

- Support WebSphere CloudBurst with Rational Automation Framework for WebSphere (RAFW)
- Leverage Cloud resources with Rational Software Architect and Rational Build Forge
- Manage Cloud assets with Rational Asset Manager and Tivoli Infrastructure Solutions

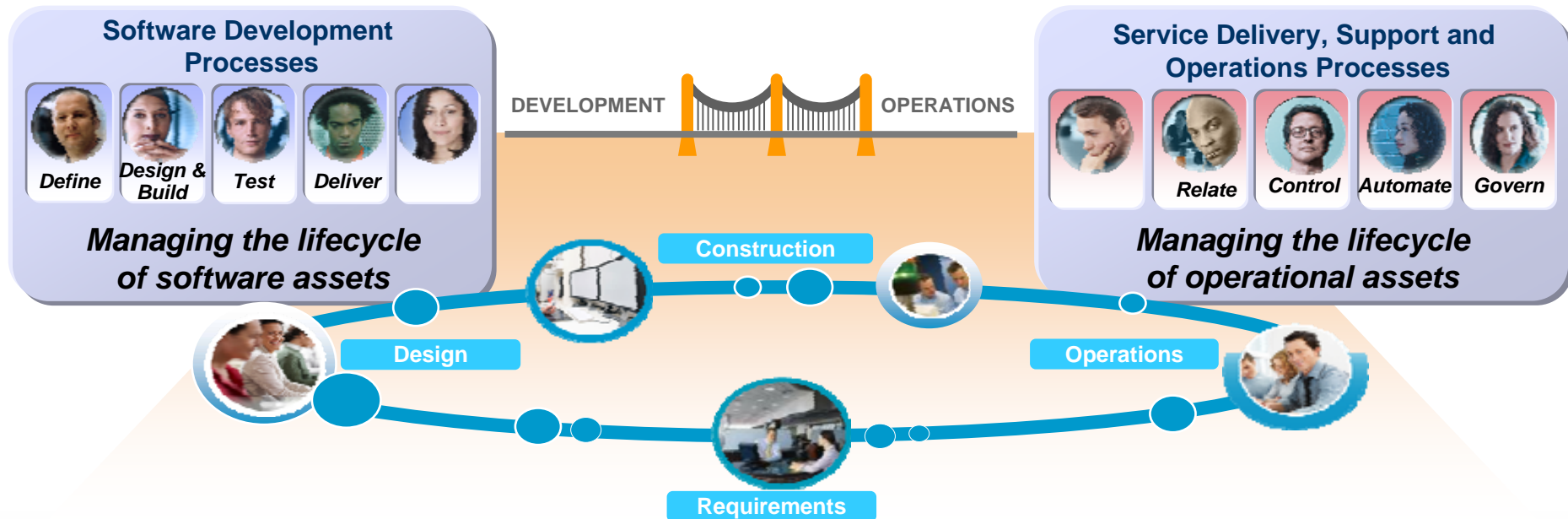
Rational Software Delivery Services managed BETA

- November 2009 – April 2010
- Learn more at : [Rational Software Delivery Services](#)
[Rational Early Programs](#)



Rational and Tivoli : Unifying Development and Operations to deliver Smarter Products and Services

- **Customer satisfaction** - Reduce system down-time caused by application deployment errors
- **Reduced costs** - Reallocate resources to more strategic initiatives by automating application deployment
- **Increase efficiency** - Track release deployments and cross functional assets and processes
- **Improve quality** - Create and enforce a repeatable process for deploying applications through a variety of test environments prior to going into production



Questions and Discussions

- Smarter Products and Services
- Unifying Development and Operations
- Integrated Services Management for Design and Delivery



THANK YOU

Learn more at:

- [IBM Rational software](#)
- [IBM Rational Software Delivery Platform](#)
- [Accelerate change and delivery](#)
- [Deliver enduring quality](#)
- [Enable enterprise modernization](#)
- [Ensure Web site security and compliance](#)
- [Improve project success](#)
- [Manage architecture](#)
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