



Pulse2011



Agile Operations

How businesses are achieving successful business outcomes through Integrated Service Management

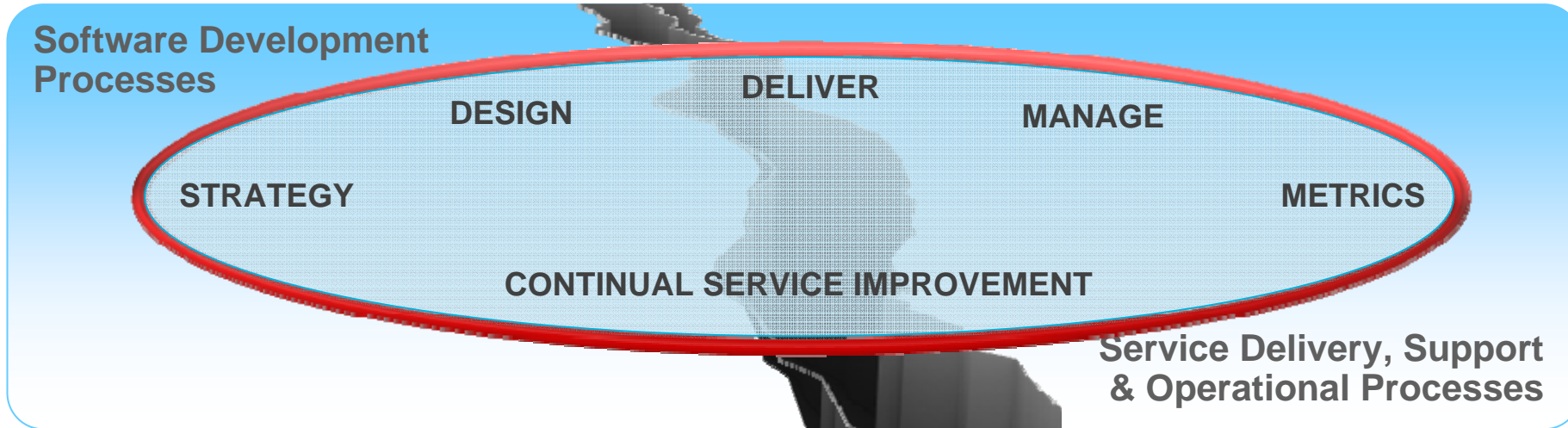
Jamie Thomas, VP Tivoli Strategy and Development

Agenda

- ❑ Why Collaborative Development and Operations?
- ❑ Enabling Service Innovation
- ❑ New and Enhanced Lifecycle Integrations
- ❖ Case Studies Along The Way



Design, Delivery and Management Model Challenges



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



Had to test your own code while waiting for appropriate environments to be available ?



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



IBM Collaborative Development and Operations enables Smarter Products and Services

- **Optimize** application performance in production
- **Trace** problems from operations into development
- **Link & synchronize** development and operational data
- **Utilize** operational data to **validate** new architecture
- **Automate** solution lifecycle process and testing

Software Development Processes

Define *Design & Build* *Test* *Deliver*

Managing the lifecycle of software assets



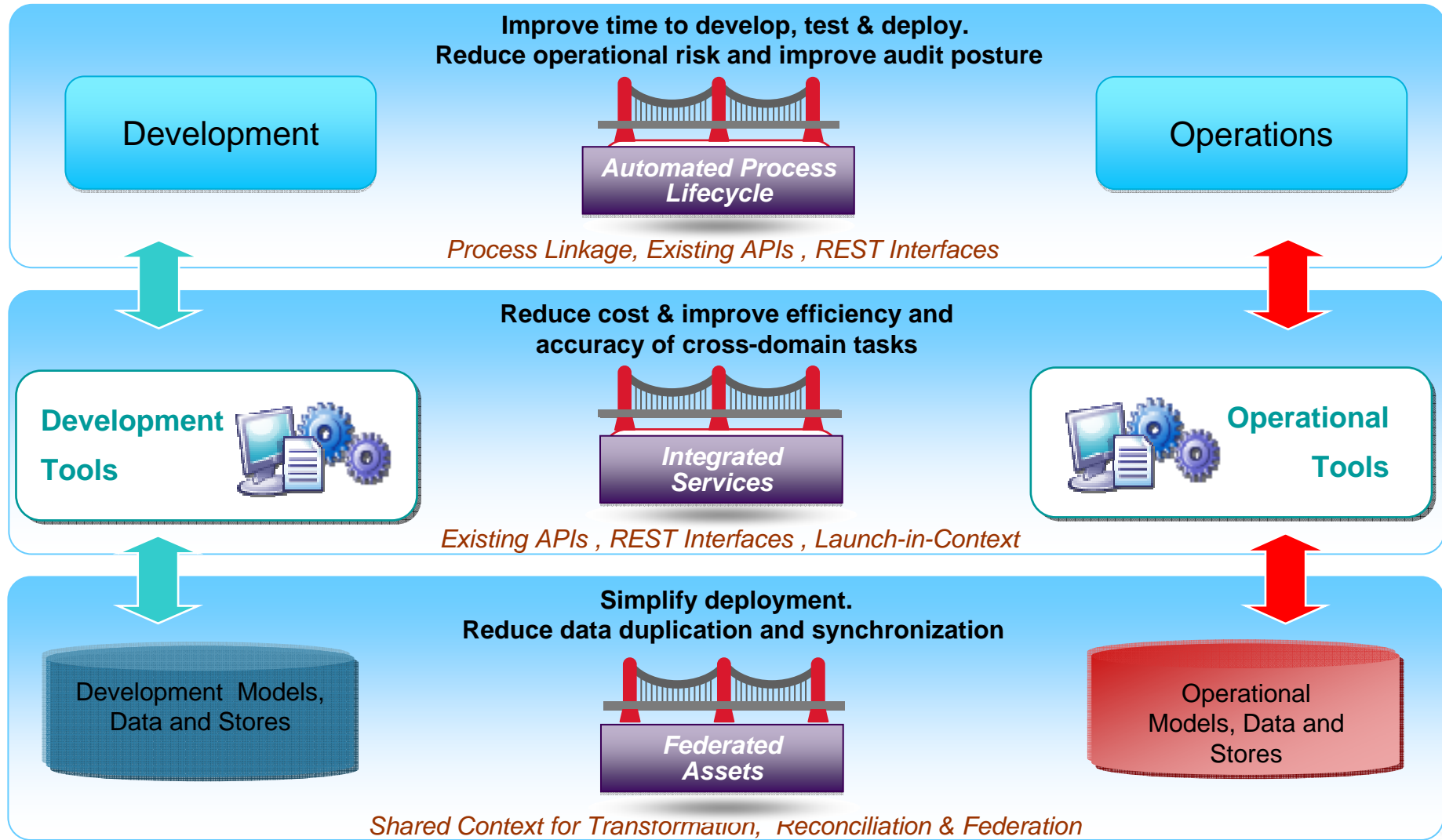
Service Delivery, Support and Operations Processes

Relate *Control* *Automate* *Govern*

Managing the lifecycle of operational assets



Integrated Architectural View




Agenda

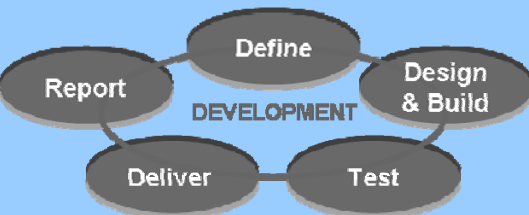

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Lifecycle Integration Challenges



Manage service delivery through cross functional teams – improving coordination, communications and collaboration




Manage service delivery as a global process - reducing operational risk, improving visibility and audit posture



Dev Tools
Development Models, Assets, Data and Stores

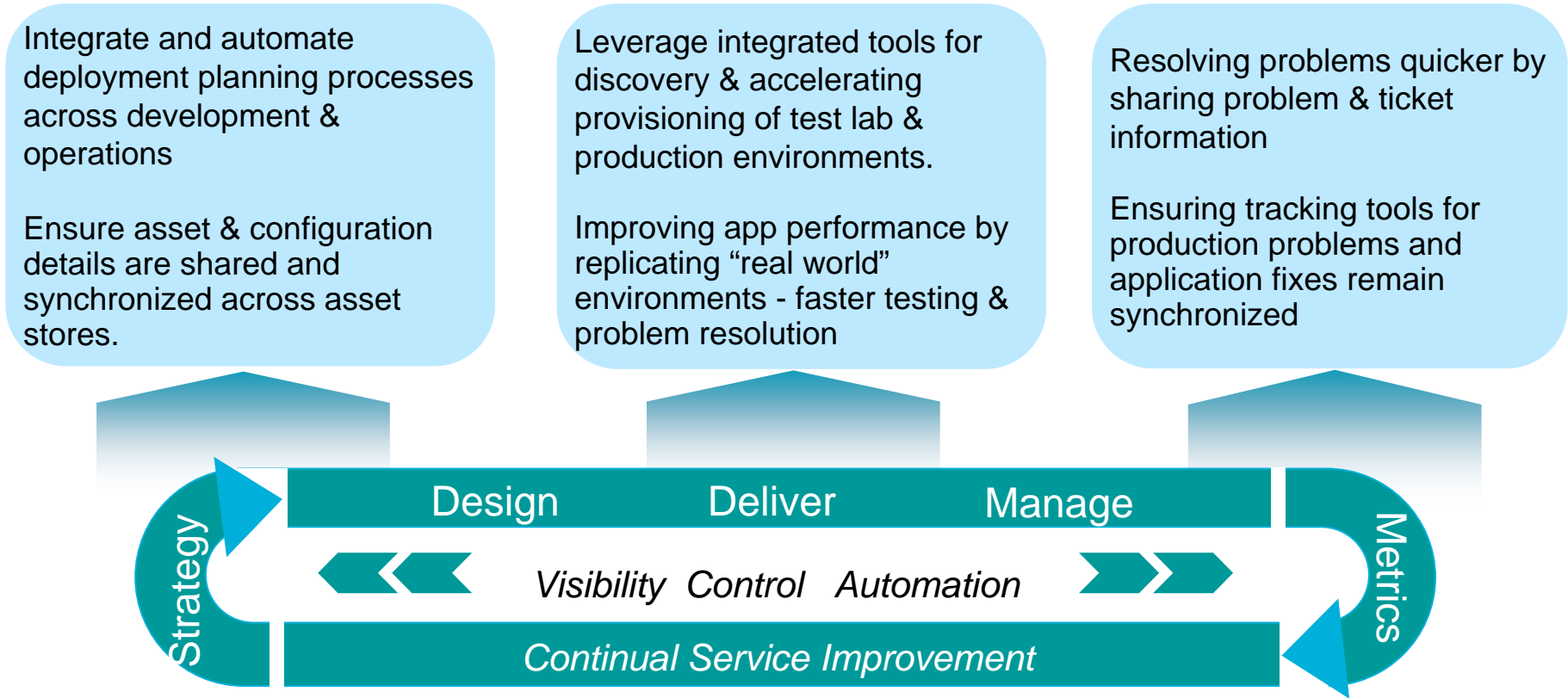
Manage service delivery through coupled tooling and federated data access. Leveraging open interfaces, and standard taxonomy to improve quality, deployment efficiency and eliminate duplication and synchronization challenges



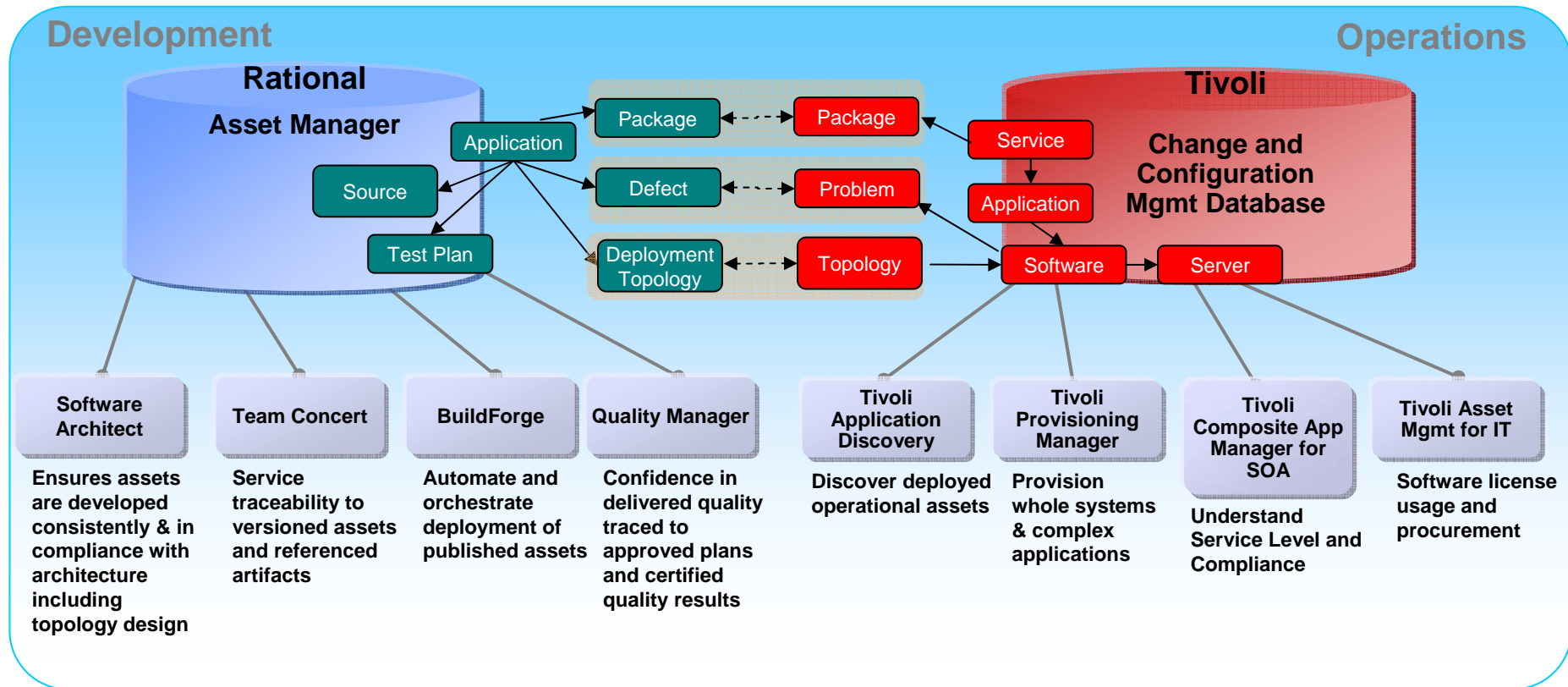
Ops Tools
Operational Models, Assets, Data and Stores



IBM Rational & Tivoli have delivered integrations, helping bridge service delivery gaps and enabling innovation



Ensure asset & configuration details are shared and synchronized across asset stores.



- Link Operational assets and Development assets
- Understand compliance reporting across both silos
- Determine root cause of production problems more quickly
- Provide impact assessment



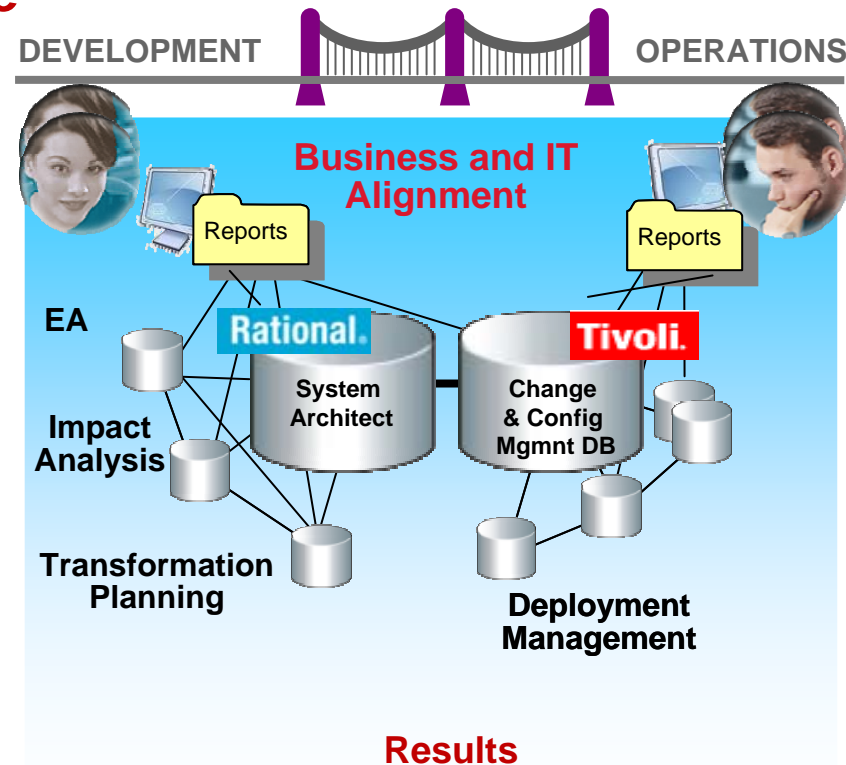
Global Petroleum Company Delivers Enterprise Asset Governance

Situation

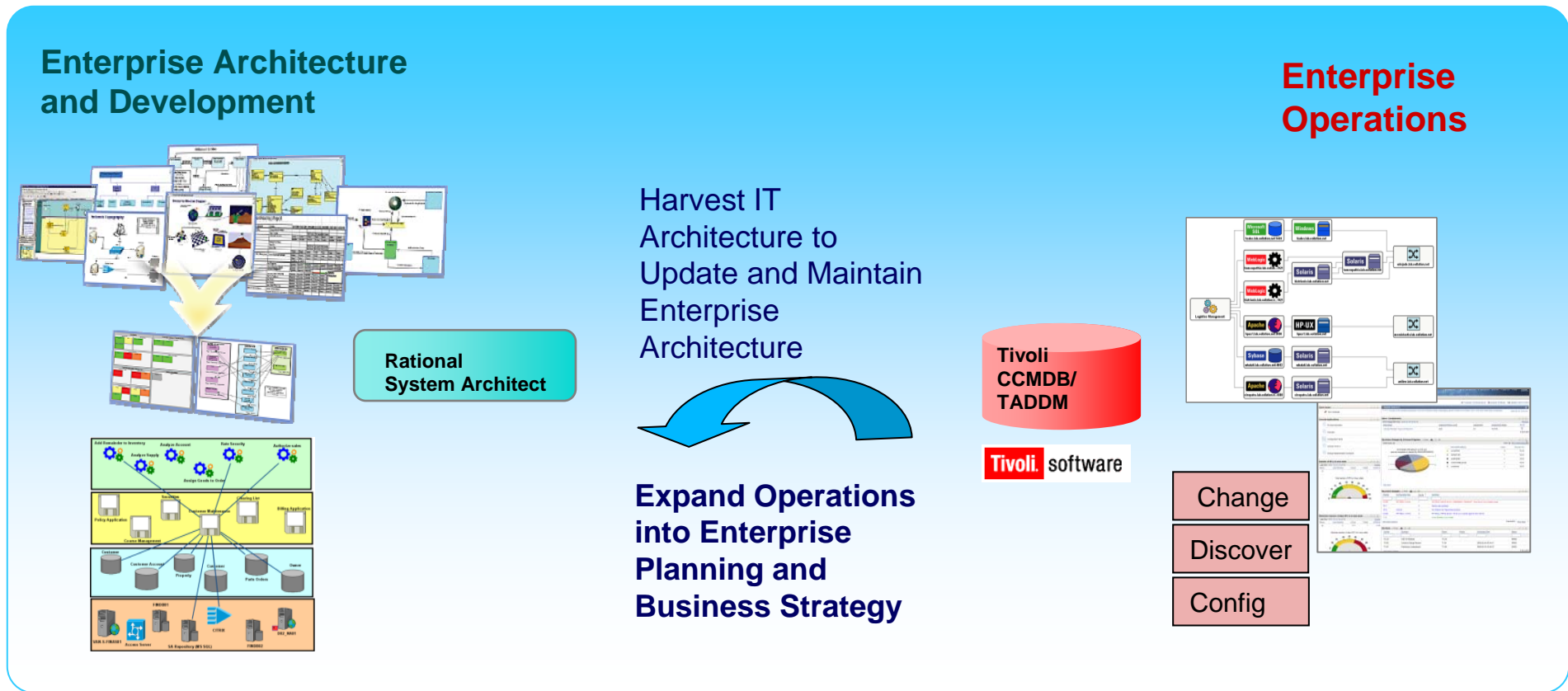
- Long service downtimes caused by problem diagnosis issues
- Inefficient access to resources and information impacting time to restoration
- Needed an enterprise wide view of application and service dependencies

Solution

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



Extending Lifecycle Integrations to Architecture Planning



- Drive operation “current state” toward a targeted “future state”
 - Guide operational decisions with a full enterprise planning perspective
- Maintain a consolidated and accurate view of your IT Architecture
 - Harvest and maintain Enterprise Architecture IT assets from CCMDB



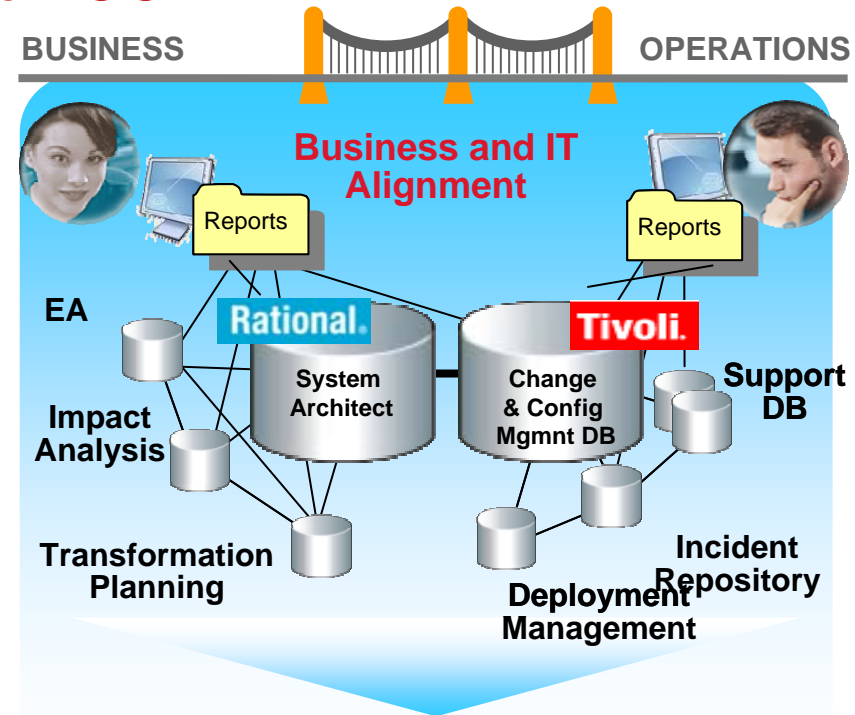
Large Financial Institution Rational System Architect / Tivoli CCDMB-TADDM

Situation

- Operational Infrastructure disconnected from Business Architecture
- Must manually document current IT infrastructure in Enterprise Architecture

Solution

- Business Planning and IT Alignment**
Connect live operations with enterprise architecture planning environment
- Synchronize IT Architecture**
Harvest and maintain CI assets into System Architect from CCMDB
- Impact Analysis and Transformation Planning**
Understand dependencies and business impact of operational transformation



- ✓ Automated linkage between business architecture and IT infrastructure
- ✓ Top-Down, Bottom-Up visibility and collaboration between enterprise architects and IT Operations
- ✓ Improved reuse and faster ROI



IBM Systems and Technology Group

Delivers Increased Quality Thru Test Lab Automation

Situation:

- Very large organization across many development sites and platforms
- Many test labs developing test management and automation infrastructures
- Significant time spent on setup and configuration
- Testing Complexity

Solution:

- Automated Test Lab Management** leveraging Rational Quality Manager, Tivoli Provisioning Manager, and Tivoli Monitoring putting the Engineering back in test!

TEST

OPERATIONS



Results:

- Have eliminated 10 – 20 % duplication of testing between groups
- Have reduced total hardware required by better sharing
- Teams have better view of what other teams are doing

Global Staffing Company

Driving Service Innovation via Performance Testing

Situation:

- Global roll out of portal
- Performance and quality issues

Solution: *Dev/Ops Collaboration*

- ✓ Increase visibility of application development process from requirements to deployment
- ✓ Solution Store
- ✓ Improve quality of Direct Talent Portal application
- ✓ Reduce implementation costs by reducing re-work
- ✓ Increase distributed development capability



- **Business Predictability** – predict growth with better accuracy via analytics into process bottlenecks across development and deployment
- **Cost Savings** – by optimizing their infrastructure and driving more business from the rollout of the Direct Talent Portal.

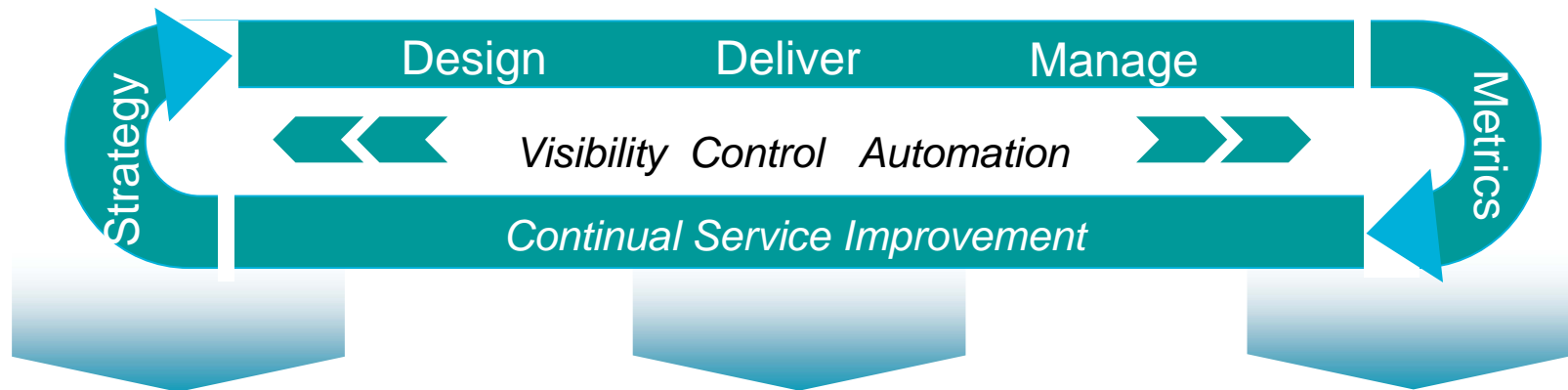
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Next Generation Lifecycle Integrations



**End to End
Deployment Planning,
Automation and
Governance**

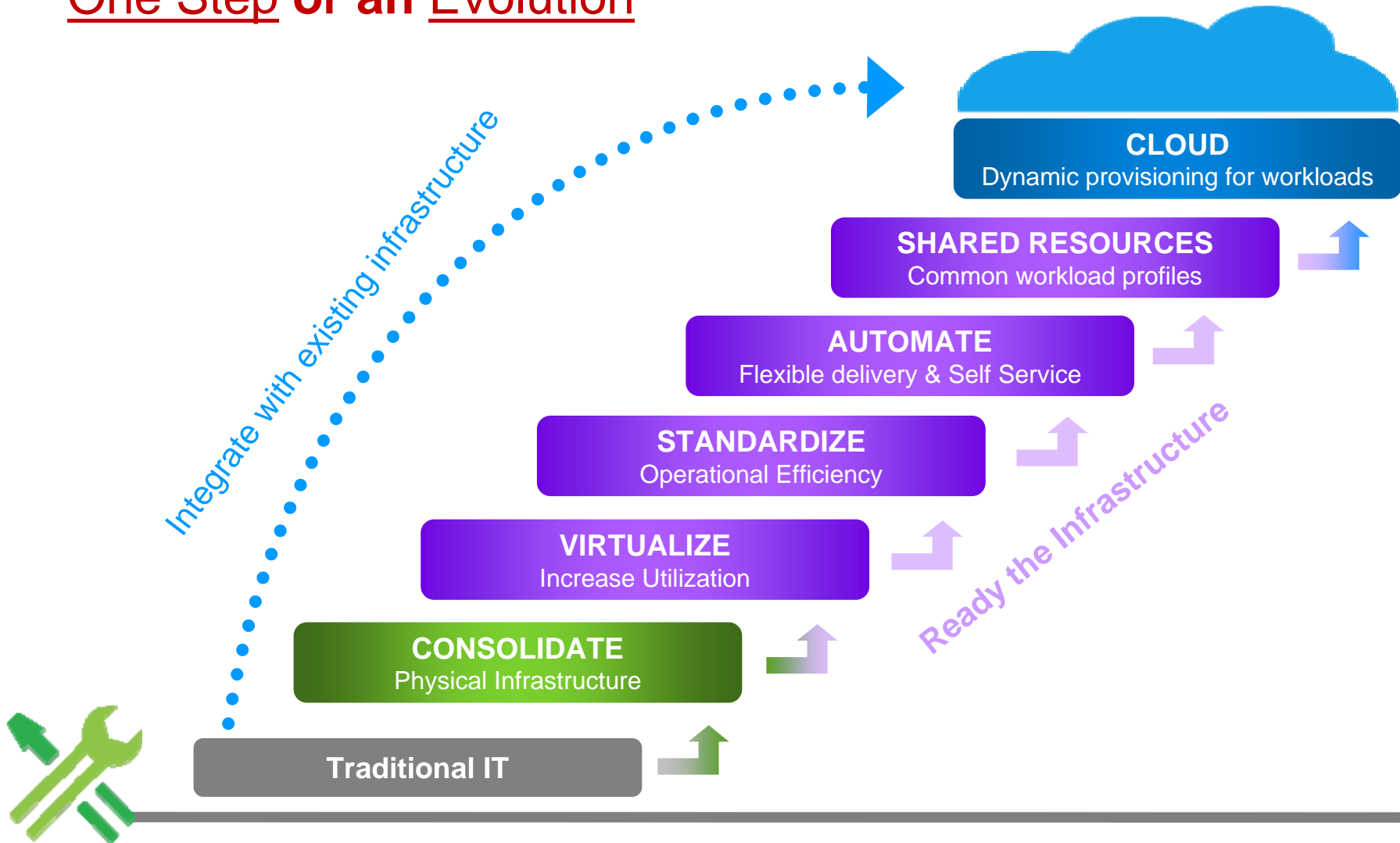
**Product Planning and
Asset Management
Integration**

**Architecture
Integrations through
Open Services for
Lifecycle
Collaboration**



Movement from traditional environments to Cloud

One Step or an Evolution



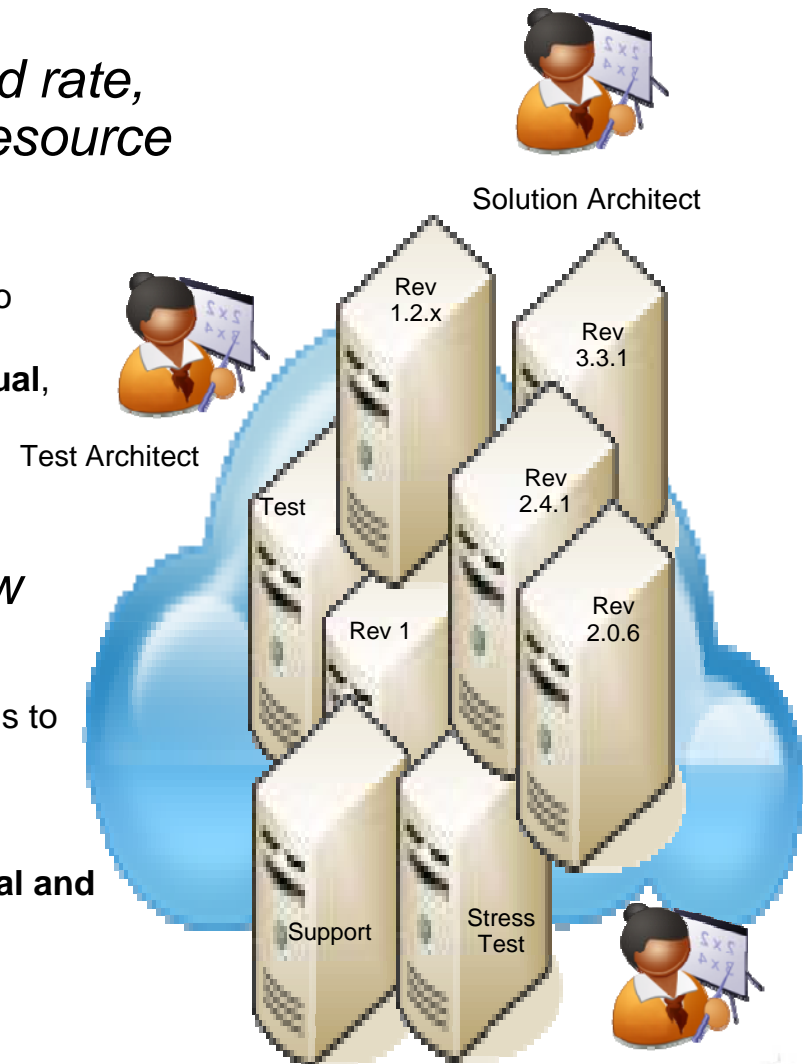
Virtual Environment Challenge

Virtualization adoption is growing at a rapid rate, offering great opportunity for capital and resource savings :

- **10X growth** of VMs from 2008 to 2012
- Virtualized workloads will grow from 12% of total in 2008 to 50% of total in 2012
- The majority of **new servers deployed in 2010 were virtual**, not physical

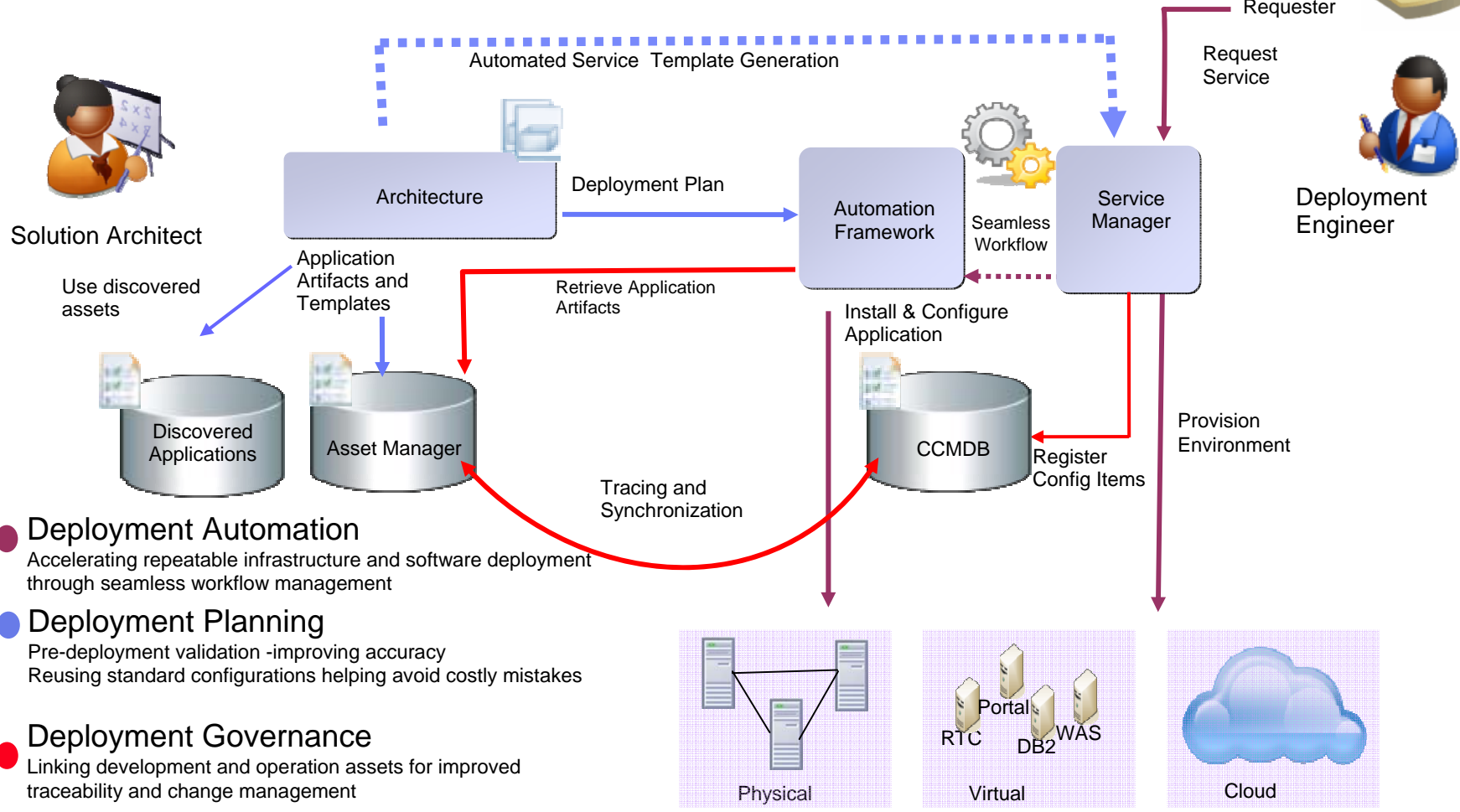
However, Virtualization also introduces new challenges :

- **Anyone can easily create new virtual servers**, and tends to proliferate them
- Virtual server sprawl and management **challenges risks offsetting virtualization benefits**
- **Virtualization reduces capital costs, but not operational and management costs**





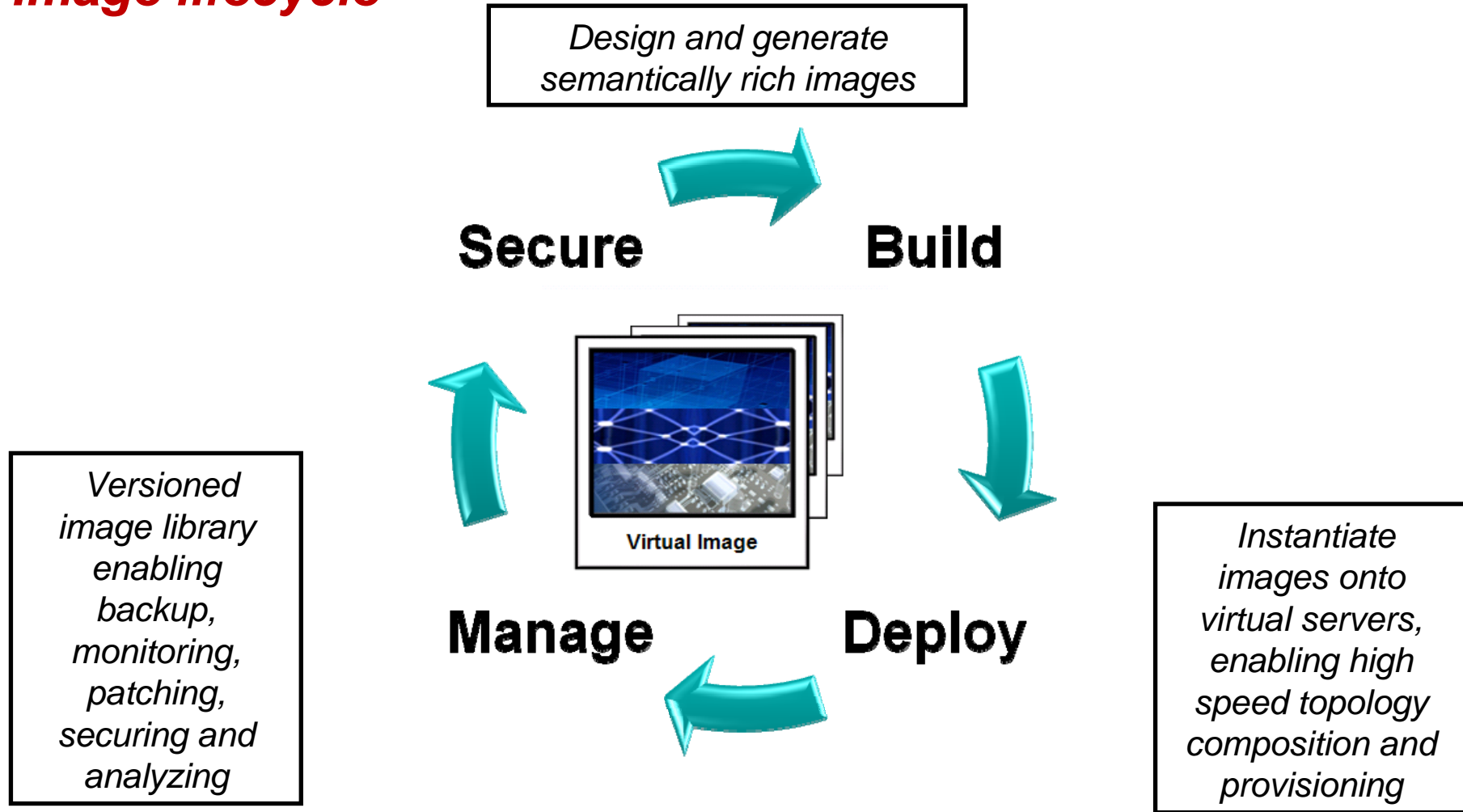
Deployment Planning, Automation and Governance



- **Deployment Automation**
Accelerating repeatable infrastructure and software deployment through seamless workflow management
- **Deployment Planning**
Pre-deployment validation -improving accuracy
Reusing standard configurations helping avoid costly mistakes
- **Deployment Governance**
Linking development and operation assets for improved traceability and change management



Provision, Manage and Secure Image lifecycle

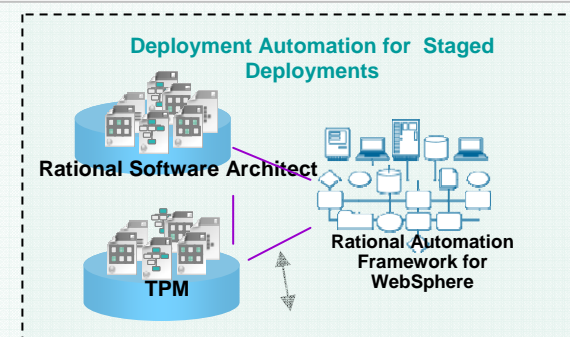


Provision, secure and manage *Image lifecycle automation*



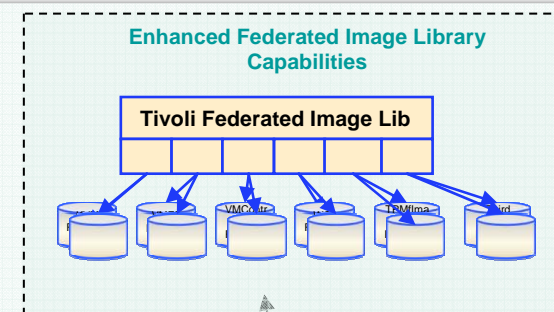
How can I automate and expedite deployment of my dev/test topology?

- Plan, automate, and govern deployment of composite applications as part of the application life cycle.
- Capture running composite services and build golden images



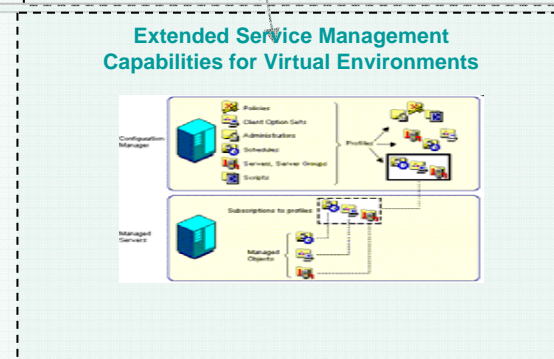
How to govern proliferation and deployment of images?

- Catalog & Index images with content across many repositories.
- Versioning, change management, provenance of images.
- Update and Patch images



How do I monitor, backup and secure my Virtual Environment? and link it to my mgmnt system

- High availability of applications through proactive monitoring, reduced labor cost for problem isolation
- Flexible, faster and frequent backups - granular, near-instant restore
- Multilayered intrusion prevention and firewall





SunTrust reduces costs and increases accuracy standardizing and automating deployments



Situation:

- Delays in onboarding
- Long build times with high rate of deployment errors

Solution:

- Automate deployment across development, test and production infrastructure
 - Tivoli Provisioning Manager used to lay down the foundation of OS on bare metal
 - Rational Automation Framework for WebSphere configure the middleware layer (WAS, IHS, MQ)
 - BuildForge used for deployment of application

Avg Onboard Time: 14 days to 4.5 days

Reduced build times 5x down to 14 min & reduced errors by 93%

Middleware provisioning reduced from 10+ days to under 10 min. for WAS, MQ

Fully life-cycle integration design for usage

“... we are excited to continue working with IBM, building on our success. Next steps are to adopt our DevOps framework on additional platforms, integrate our automated deployment and service request management processes, and increase our ability to create architecture designs based on current deployments and infrastructure”

Rob Thompson - Group Vice President of Enterprise Technology Infrastructure

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Automobile manufacturer

After-Sales Vehicle Design Maintenance and Tracking System

Challenge

- Vehicles are built on common platforms that increasingly contain electronic and software driven subcomponents – The Chevy Volt as example contains ~10M lines of code
- Existing systems lacked ability to assess scale and impact of design changes to on-road vehicles. This often resulted in mass recalls, service delays and expensive maintenance programs

Solution

- Utilize an individual vehicle update/recall system (based on VIN) to trace maintenance guidelines and procedures from manufacturer specs (DOORS) to after-sales dealership service programs (Maximo Asset Config Mgr)
- Improved delivery of software updates by implementing collaborative maintenance system using RTC and Maximo ACM

Results

- ✓ Close monitoring of updates completed in the field = Cost savings and Accelerated resolution
- ✓ Improved visibility, risk analysis, traceability and compliance



- **Coordinate and prioritize design change activities utilizing domain (electrical, mechanical and software) as well as maintenance information**
- **Schedule regular maintenance and upgrades to prevent outages, maintain safety and comply with standards**



Open Services for Lifecycle Collaboration (OSLC)

An initiative aimed at simplifying data linking and tool integration across the lifecycle

Open Services for Lifecycle Collaboration

Barriers to sharing resources and assets among tools

- ▶ Multiple vendors, open source projects, and in-house tools
- ▶ Private vocabularies, formats and stores
- ▶ Entanglement of tools with their data

- ▶ Community Driven – specified at **open-services.net**
- ▶ Specifications for ALM, PLM and DevOps Interoperability
- ▶ Inspired by Internet architecture
 - Loosely coupled integration with “just enough” standardization
 - Common resource formats and services
- ▶ A different approach to industry-wide proliferation

Accelerating the growth and adoption of OSLC

Cross lifecycle integration scenarios implemented to open specifications

- New version 2 specifications
 - For Change, Quality, Requirements, & Architecture Management
 - Aligning with W3C linked data
- New implementations
 - IBM Collaborative Lifecycle Management and Collaborative Design Management
 - Oracle, VMware, open source FusionForge projects and announcements
 - 10 Ready for Rational partner integrations
- New expansion into ALM and ISM integrations
 - Starting with integrations between help desk and lifecycle change management
 - Rational integrations with Tivoli Service Request Manager and Rational Team Concert
- OSLC SDK Project to create reference implementations, test suites, and code libraries and samples



Open Services
for Lifecycle Collaboration
Lifecycle tools integration
inspired by the web.

*“With OSLC’s open and scenario-based approach, **businesses benefit** from the ability to **tie disparate tools together**. This collaborative approach gives our consultants the **flexibility** to make lifecycle tool choices based on **specific client project demands**.”*

Randy Vogel, Accenture

- Growing number of published specifications for sharing and linking lifecycle data¹
- 426 registered community members from 127 organizations and growing¹

¹ Open-services.net





New - Collaborative Incident Management Using OSLC

Open Services for Lifecycle Collaboration
open community. open interfaces. open possibilities

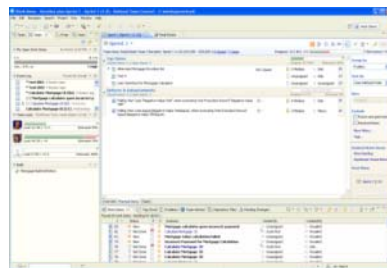


Development



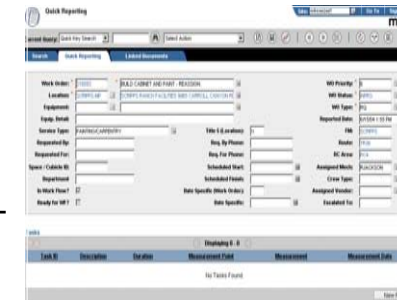
Data Center

Operations



Rational Team Concert

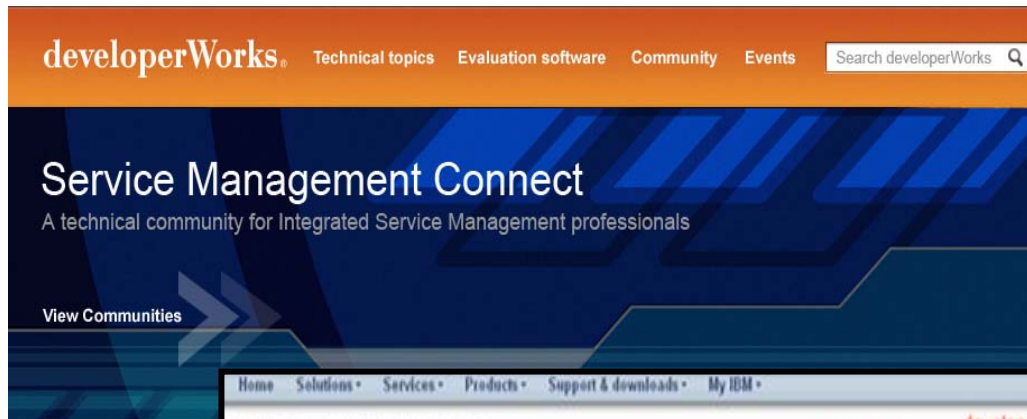
*Create Defect
Find Defect,
Display Defect*



Tivoli Service Request Manager



New Communities!



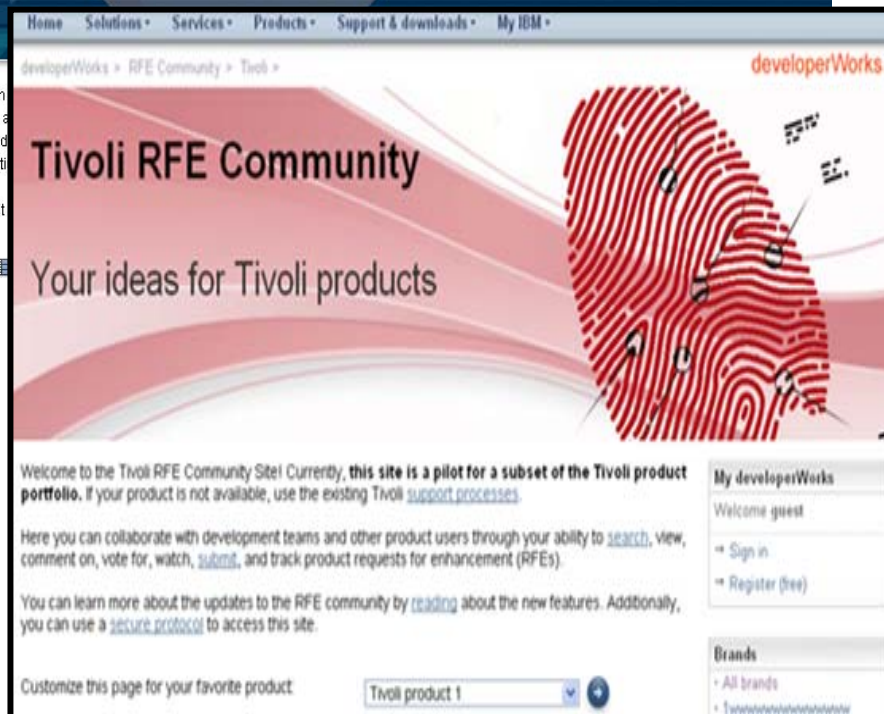
Service Management Connect

- New community for Integrated Service management practitioners
- Connects you with the technical experts
- Provides best practices for using service management products
- Now supporting 1,500+ members
- Over 200,000 active pages views

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 Meet the Expert



RFE Community

- New tool for requesting product enhancements
- Interact directly with product management
- Improved ability to manage and monitor requirements
- View and vote on other enhancement submissions



Questions



Thank You

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