

IBM Software Group

# Enterprise Modernization Sandbox for System z

*Unleashing enterprise software assets and skills*

**Saleem Padani**

*GTM Manager*

*Enterprise Tools and Compilers*

*IBM Rational software*



**Rational** software



## Enterprise Modernization Sandbox for System z

- Enterprise Modernization for System z
- New Sandbox for System z
- New and enhanced product offerings
- Summary
- Q&A

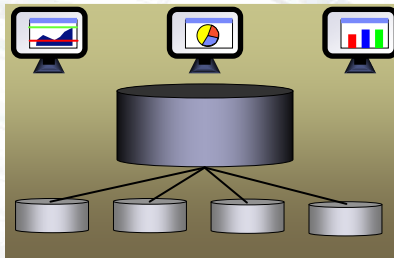


# New Projects Being Implemented on System z

**New self-service Web app**



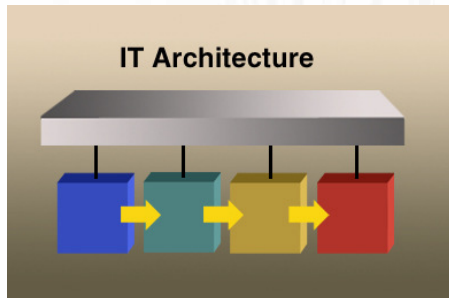
**New business intelligence project**



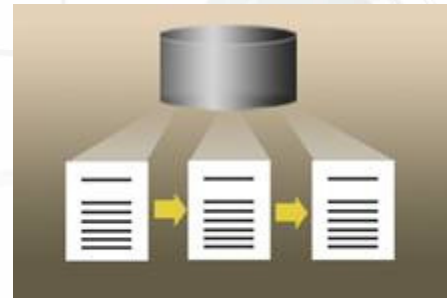
**Web portals**



**Updated IT architecture to ↑ flexibility, responsiveness**



**Automated forms processing**



**and others**



## Primary Forces Causing Acceleration to System z

### Customer forces

- Reduce TCO via consolidation of applications and data
- Provide quicker response to business requests
- Improve application performance
- Increase quality of service
- Ability to leverage modern skills on mainframe

### Supplier forces

- Modern middleware honed for the mainframe
- Cross-platform, integrated software development and delivery
- Optimized cross-platform IT management for System z
- Increased ISV support
- Investment in skills development for new generation



# Enterprise software delivery challenges



***“Whether designing an airplane, assembling a motorcycle [or delivering software] ... the ability to integrate the talents of dispersed individuals and organizations is becoming the defining competency for managers and firms.”***

***-- Tapscott & Williams, Wikinomics, Copyright 2006***

## Assets

Layer of disjointed, poorly understood enterprise assets, preventing reuse

## Architectures

Tightly-coupled architectures hindering IT flexibility

## Skills

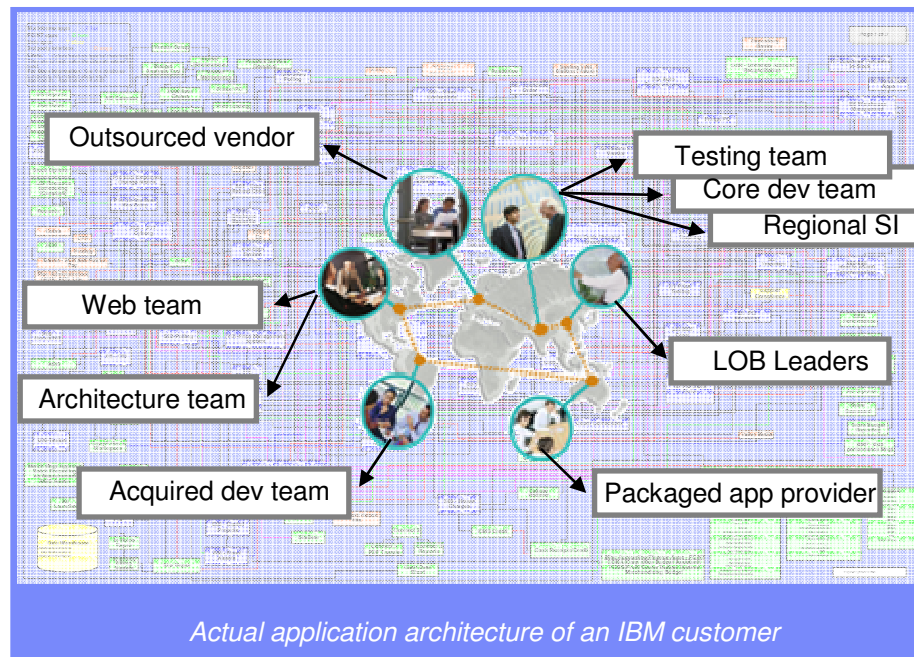
IT skills shortage and silos limiting staff productivity and mobility

## Processes and infrastructures

Duplicate processes, tools and infrastructures limiting collaboration

## Investments

Increasing maintenance costs limiting flexibility for new investments



*Actual application architecture of an IBM customer*

### Software archeology

Web 2.0

Palm / PDA  
Blackberry

Java / J2EE

VB / C++

MS.net

Packaged Apps

SAP / Oracle

Linux

System i

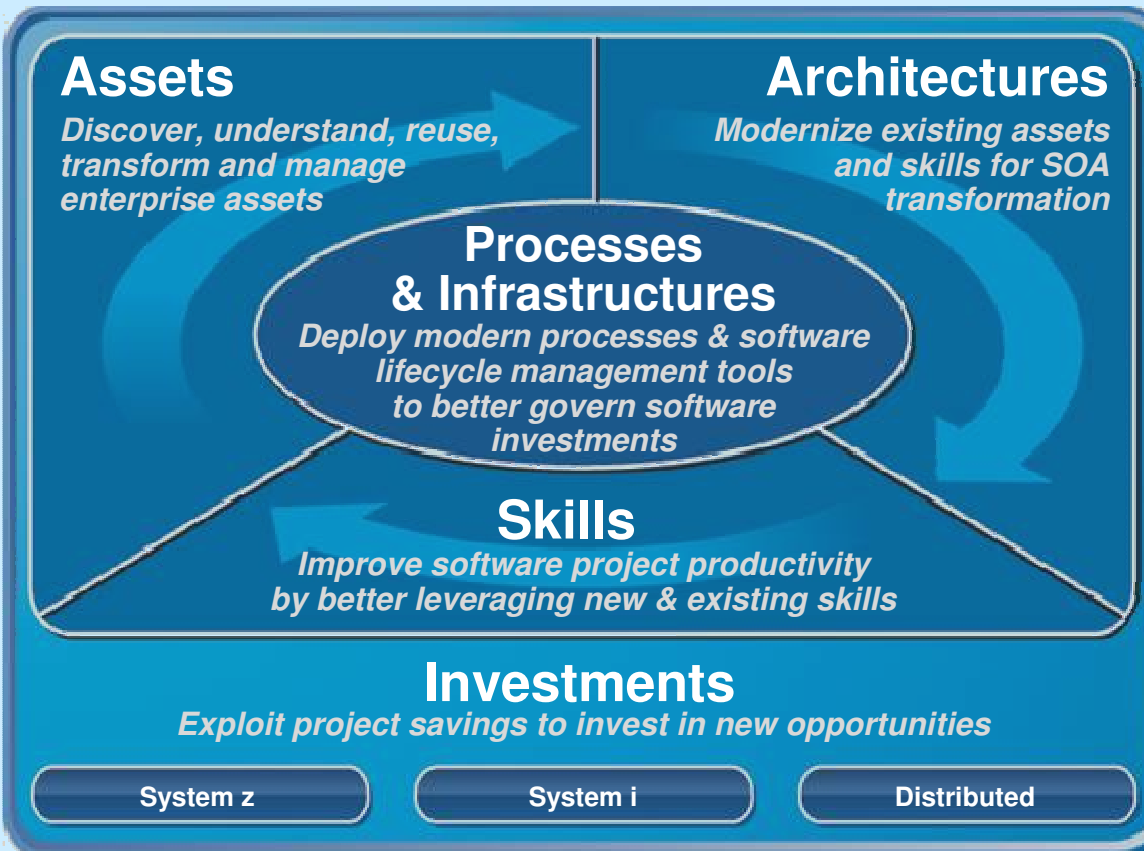
System z

CICS / IMS

# Accelerating software innovation on System z

## *Unleashing enterprise software assets and skills*

### IBM Enterprise Modernization Solution

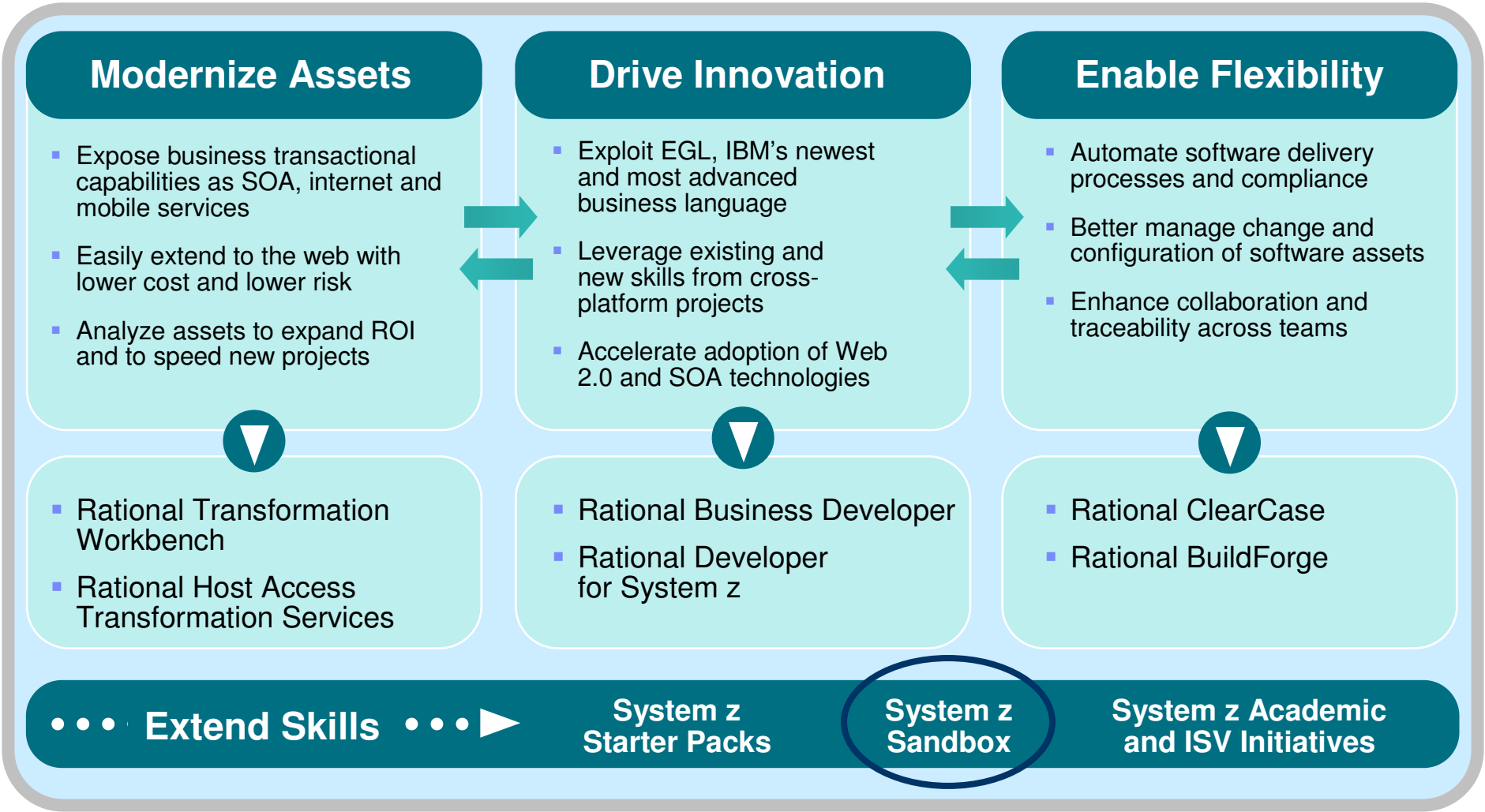


- ✓ Extend value of existing enterprise assets
- ✓ Leverage and modernize existing and new skills
- ✓ Drive innovation with technology advancements
- ✓ Improve team collaboration and responsiveness
- ✓ Enable business flexibility and change across the software lifecycle



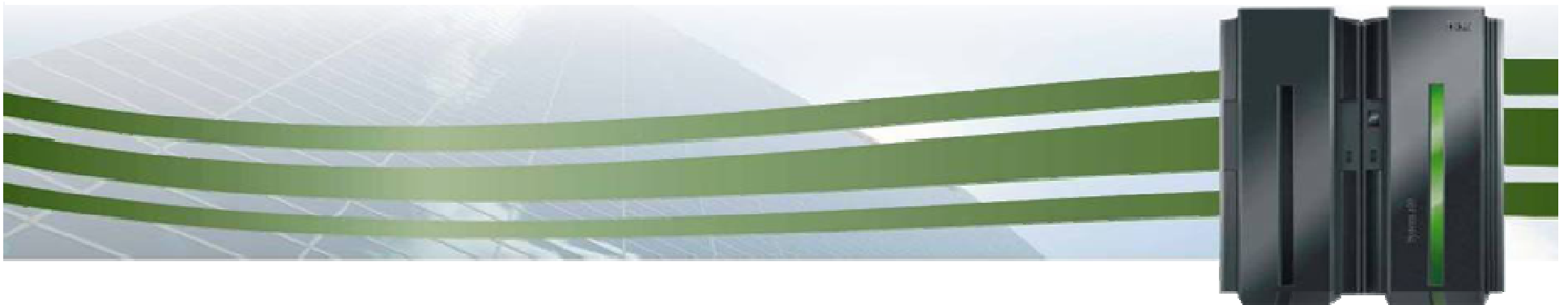
# Accelerating software innovation on System z

*Unleashing enterprise software assets and skills*



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# Enterprise Modernization Sandbox Offering on developerWorks

*Quickly try practical scenarios guided by self-paced exercises 24/7*

## System z Sandbox



*Launched 2/26*

*Examples and best practices provide low-risk, practical, hands-on path to understanding*

- Rational Developer for System z
- Rational Business Developer
- Rational Transformation Workbench
- Rational Host Access Transformation Services

## IBM i Sandbox



*Launched 05/06*

*Examples and best practices provide low-risk, practical, hands-on path to understanding*

- Rational Developer for System i
- Rational Application Developer
- Rational Developer for System i for SOA Construction
- Rational Host Access Transformation Services

Full version software trials

'Try online' hosted environments

Tutorials

Online Resources



Full version software trials

'Try online' hosted environments

Tutorials

Online Resources



<http://www.ibm.com/developerworks/downloads/emsandbox/>





# What's in the Enterprise Modernization Sandbox?

## Best Practices

- ✓ Based on common solution patterns derived from our customers using our EM offerings
- ✓ developerWorks portal provides easy access to best practices, tutorials, and one-stop shopping for resources for each EM entry point

## Hands-on experience

- ✓ Hosted EM Sandbox for immediate access to fully configured and running versions of the sandbox and tutorials
- ✓ Downloadable trial software for more in depth exploration

# Hosted Enterprise Modernization Sandbox for System z

*Instant hands-on experience through a 'ready to go' EM4z Sandbox and tutorials*

- ✓ Core System z Software pre-configured and running in an IBM z/OS environment
- ✓ Simple and more in depth tutorials provide a guided path to understanding for each EM Entry Point
- ✓ Access to multiple tools from a single hosted environment
- ✓ Integrated and cross-brand scenarios will be built out over time to provide a complete solution

The screenshot displays the IBM Rational Developer for System z environment. The main window shows COBOL source code for a program named 'REGIOO'. The code includes sections for Data Division, Working-Storage Section, and Procedure Division. A 'Remote Error List' window is open at the bottom, showing a table of error messages. A help window is overlaid on the right side of the interface, displaying a list of topics related to wrapping COBOL programs as web services.

**Wrap existing COBOL programs as Web Services with IBM Rational Developer for System z**  
Extend value of existing enterprise software assets

**All Topics**

- Introduction to Rational Developer for System z
- Developing z/OS applications and Web service interfaces
- Configuring Developer for System z tools
- Developing remote COBOL, PL/I, Assembler, and C++ applications
- Debugging COBOL, PL/I, Assembler, and C++ applications
- Full Analyzer Integration
- File Manager Integration
- Host Integration
- Using the SCML developer toolkit
- Enterprise Service Tools for Web services and SOA
- Using the Common Access Host Repository Manager
- Tools for z/OS application development tools
- Troubleshooting and support for z/OS application development
- Developer for System z reference documents
- Developing COBOL and PL/I applications for Windows
- Developing local COBOL, PL/I, and CICS applications
- COBOL for Windows
- Language Reference
- Programming Guide
- PL/I for Windows
- Installing, configuring, and migrating
- Developing Web sites and applications
- Developing J2EE enterprise applications
- Developing Java sites and applications
- Developing Java access applications
- Developing Java applications
- Developing JIP applications
- Working in a team environment
- Debugging applications
- Testing applications
- Detecting and analyzing runtime problems
- Publishing and testing applications on a server

an help speed te applications. The y reusing and user interfaces.

ng the business value in your raft modular and by assembling our IT for rapid will show you s into business is CICS Web

of it.

Page 1 of 40

# Hosted Enterprise Modernization Sandbox for System z

## Quick and easy access to the 25/7 hosted environment from developerWorks site

**1**

Select the Sandbox z or i

**2**

Pick your entry point...(Assets, Architecture, Skills, Processes, or Investments)

**4**

Review Sandbox trial requirement, how to start the trial, how to use this sandbox, where to go for support etc...Start your engine!!!

**3**

Register

Learn, Try, Buy and Support pages...Entry point overview, scenarios documentation, products covered, links to key content supporting entry point



# Enterprise Modernization Sandbox for System z – Scenarios

## Assets

**Discover, understand, reuse, transform and manage enterprise assets**

- ✓ Faster Application Change and Reuse with **WebSphere Studio Asset Analyzer** \*
- ✓ Analyze your applications at a technical and business level with **Rational Transformation Workbench**
- ✓ Discover, manage and govern enterprise assets with **Rational Asset Manager** \*
- ✓ Wrap existing CICS/COBOL programs as Web services with **Rational Developer for System z**
- ✓ Accelerate Web and SOA development with **Rational Business Developer**
- ✓ Wrap existing IMS/COBOL programs as Web Services with **Rational Developer for System z** \*

## Architecture

**Speed the development of traditional mainframe, Web and composite applications**

- ✓ Transform 3270 green screens to Web UI using **Rational Host Access Transformation Services for Multiplatforms**
- ✓ Transform 3270 green screens to Web services using **Rational Host Access Transformation Services for Multiplatforms**
- ✓ Explore local IBM z/OS application development with **Rational Developer for System z**
- ✓ Try remote IBM z/OS application development with **Rational Developer for System z**
- ✓ Use **Rational Business Developer** wizards to create a Web application
- ✓ Business Process Design and Integration with **WebSphere Business Modeler and WebSphere Integration Developer** \*
- ✓ Monitor, manage, debug, and analyze z/OS applications with **WebSphere Problem Determination Tools** \*



## Enterprise Modernization Sandbox for System z – Scenarios

### Skills

**Leverage new and existing skills to build cross-platform applications**

- ✓ Use **Rational Business Developer** wizards to create a Web application
- ✓ Create Web services with **Rational Business Developer**
- ✓ Accelerate Web and SOA development with **Rational Business Developer**

### Investments

**Adopt an integrated, open, modular software development platform**

- ✓ Use **Rational Software Delivery Platform** to optimize and modernize z/OS software delivery lifecycle

### Processes

**Automate application quality, change, and release processes**

- ✓ Manage and track z/OS and distributed software changes with **Rational ClearQuest & ClearCase z/OS extensions** \*
- ✓ Automate software delivery process with **Rational Build Forge z/OS agents** \*
- ✓ Speed up SOA & 3270 functional testing with **Rational Functional Tester for SOA Quality** \*
- ✓ Automate Web application performance analysis with **Rational Performance Tester** \*



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# Extend value of existing enterprise assets

## Transform user experience with IBM Rational Host Access Transformation Services for Multiplatforms

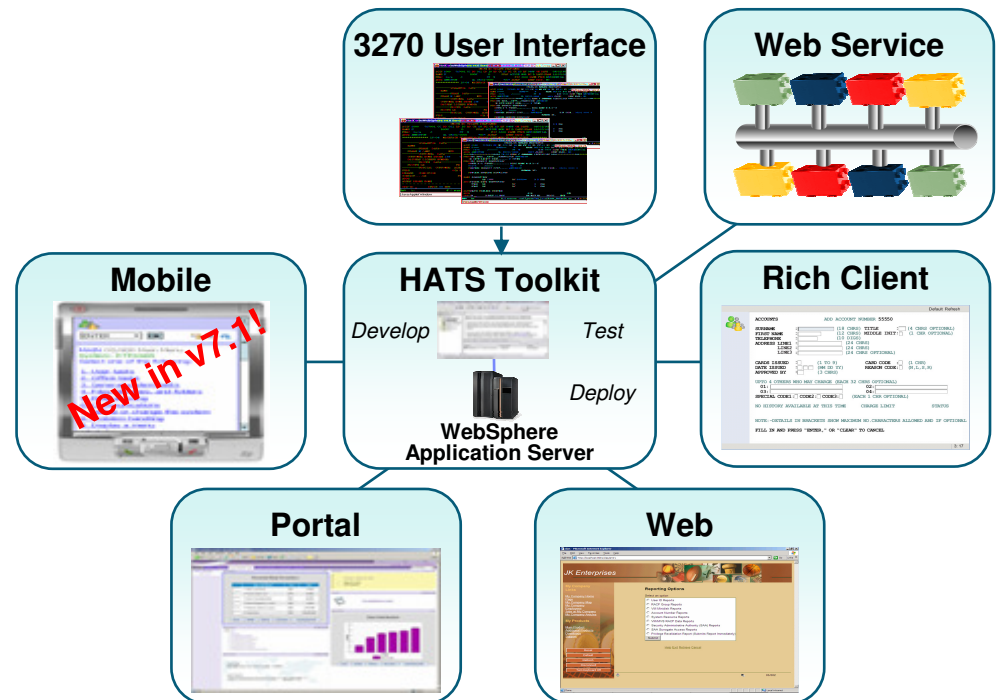
With **IBM Rational Host Access Transformation Services for Multiplatforms v7.1 (HATS)** customers can quickly improve the user interface of their existing System z applications and achieve integration with other business information with minimal development cost. The result is an easy-to-use Web interface to the application, which reduces training cost, simplifies the application, and makes it easy to understand for new users.

### Transform user experience

- Modernize and streamline “green screen” applications
- Combine data from multiple screens, applications and databases
- Non-invasive



- ✓ Immediate return on investment
- ✓ Shorten the learning curve for new employees
- ✓ Speed up and reduce risk in key transformation initiatives



## IBM Rational Host Access Transformation Services for Multiplatforms



## Extend value of existing enterprise assets

### *Accelerate your path to reuse and SOA with IBM Rational Transformation Workbench*

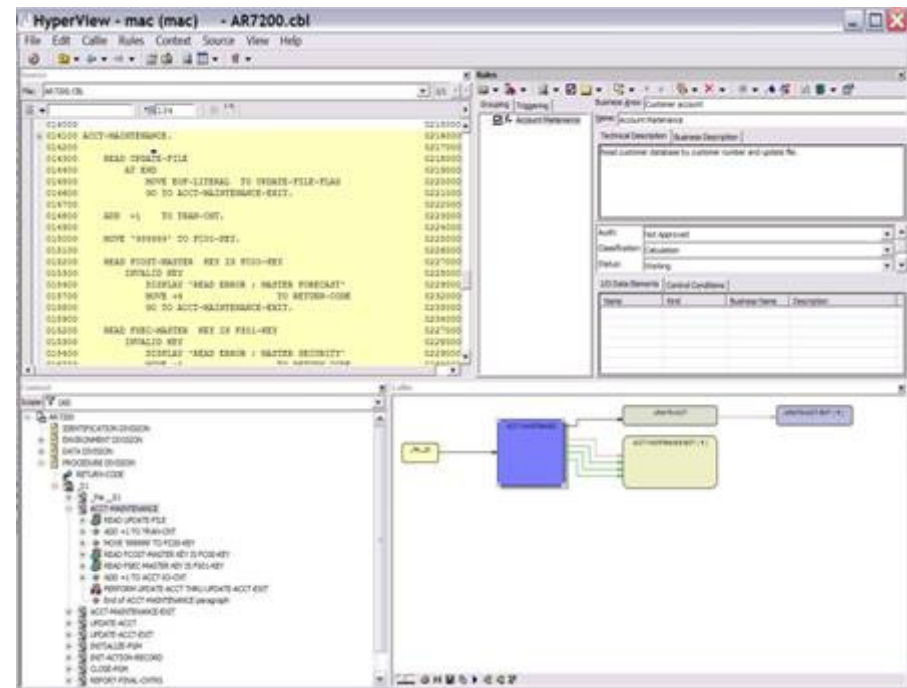
**IBM Rational Transformation Workbench v3.1 (RTW)** assists in restructuring monolithic applications to help reduce complexity and maintenance costs and speed development of SOA services. It provides deep project-level application analysis to complement the enterprise-wide application insight of IBM WebSphere Studio Asset Analyzer software.

#### Accelerate your path to reuse and SOA-readiness

- Demystify enterprise applications and their inter-and intra-relationships
- Gain intellectual control; make fact-based decisions; develop transformation roadmap
- Identify key assets and restructure for reuse in SOA; Reduce cost and time of modernization projects



- ✓ Reduce cost and time of maintenance activities
- ✓ Faster response to business needs resulting in better customer experience
- ✓ On-time and on-budget project delivery



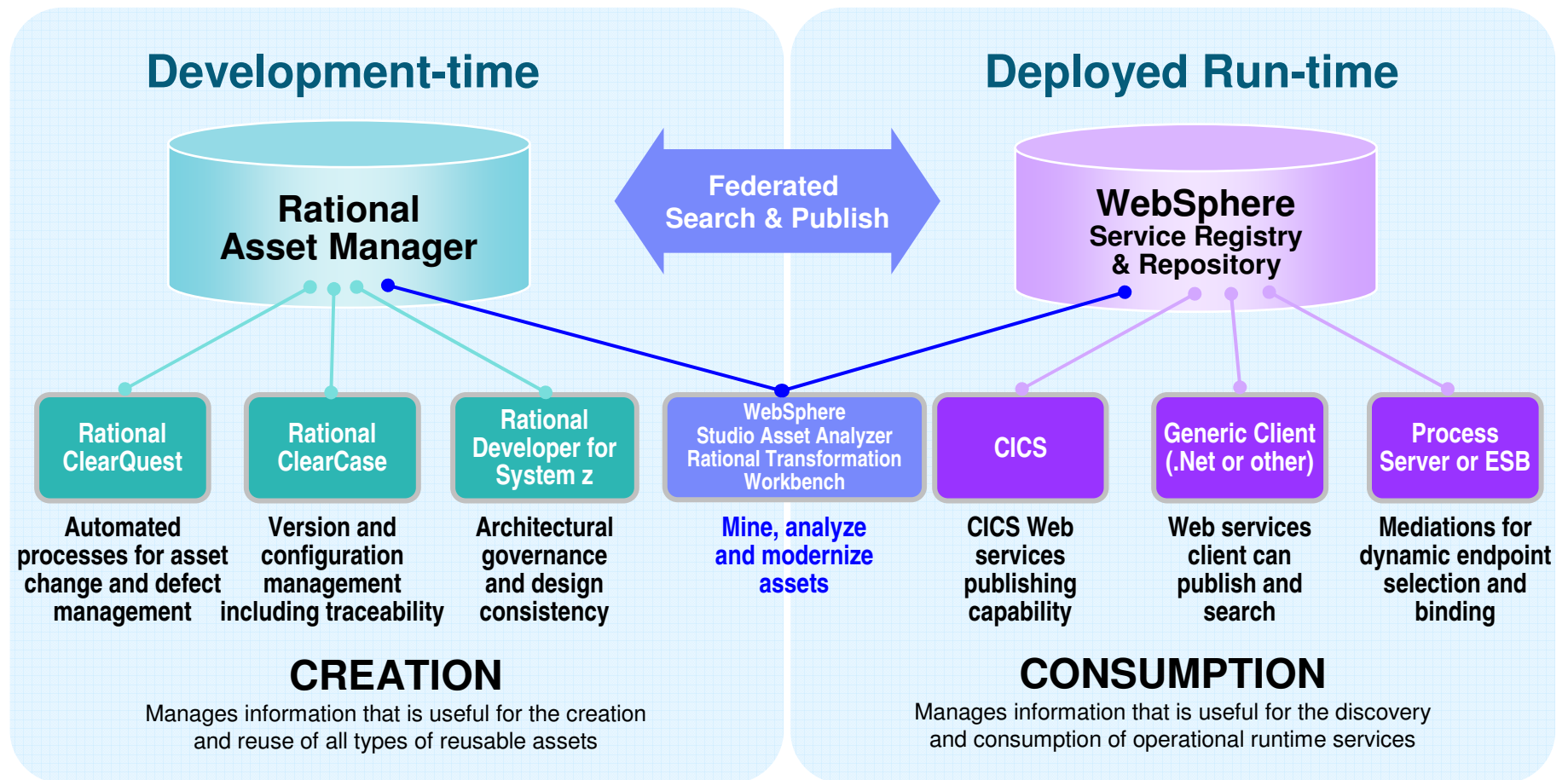
[IBM Rational Transformation Workbench](#)





## Extend value of existing enterprise assets

*A comprehensive IBM solution to SOA asset discovery, transformation and management*



# Drive innovation with technology advancements

*Build traditional and composite applications with Rational Developer for System z*

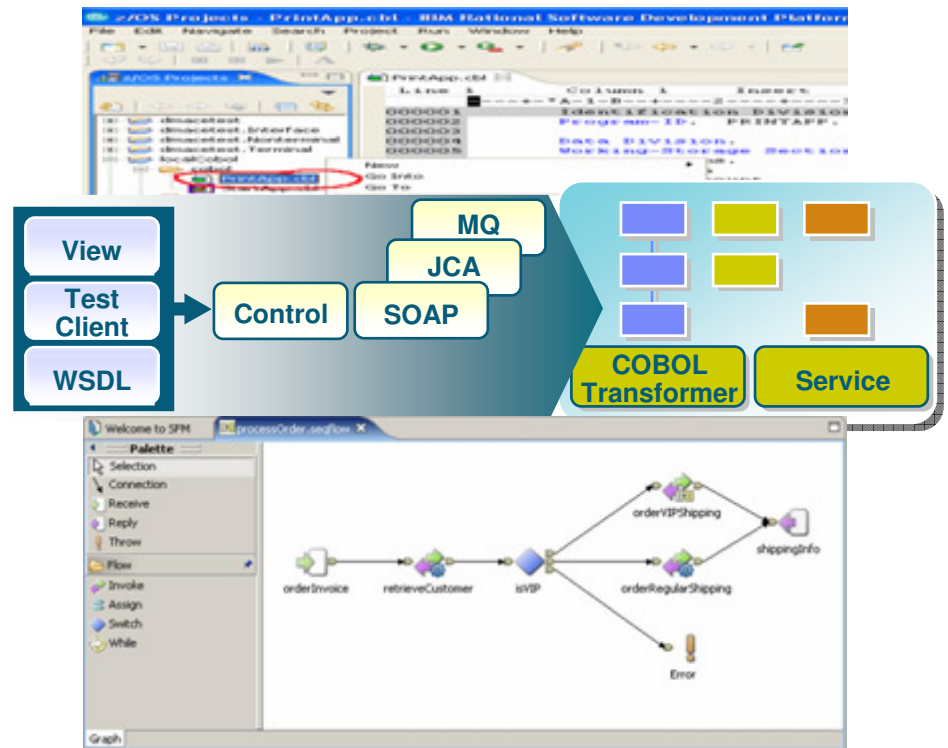
**IBM Rational Developer for System z v7.1 (RDz)** provides powerful eclipse-based tools for building COBOL, PL/I, C/C++, Java, CICS, IMS and batch applications. RDz is designed to optimize and simplify application development for traditional processes, and for the SOA you're building to address your needs today and in the future—through best practices, visual tools, templates, code generation and a comprehensive development environment.

## Achieve business innovation and transformation objectives

- Leverages service flow modeler to automate development of CICS services
- Develop z/OS applications and CICS and IMS Web services more productively than ever
- Manage core and composite artifacts from z/OS
- Speed software delivery with integrated, automated end-to-end processes



- ✓ Reduce cost and time of maintenance activities
- ✓ Faster response to business needs resulting in better customer experience
- ✓ On-time and on-budget project delivery



[IBM Rational Developer for System z](#)



# Drive innovation with technology advancements

## Accelerate adoption of Web 2.0 and SOA with IBM Rational Business Developer\*

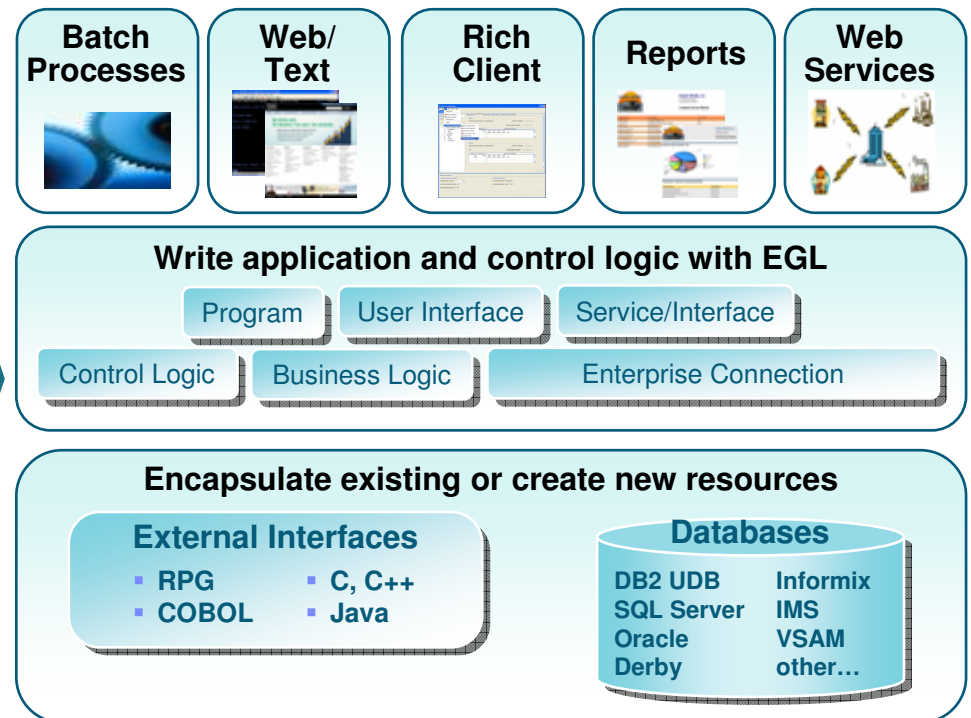
**IBM Rational Business Developer v7.1 (RBD)** helps business developers build cross-platform Web and service-oriented applications through “EGL”, The solution helps reduce complexity of the legacy systems by accelerating the delivery of key business transactions as services. COBOL developers with business application knowledge can use “**EGL**” – **IBM's newest and most powerful business language**”, to design, develop, deploy and test the new solutions in record time.

### Accelerate adoption of Web 2.0 and SOA technologies

- Exploit EGL the newest and most advanced business language
- Update and extend mission-critical applications as services, leveraging their core value in new ways
- Apply existing “business-knowledgeable” and new staff on multi-platform projects



- ✓ Rapidly exploit latest middleware and emerging application architectures to deliver new solutions
- ✓ Shorten the learning curve for new and existing developers
- ✓ Reduce time to market and increased responsiveness



[IBM Rational Business Developer](#)

\* GA 03/25



## Improve team collaboration and responsiveness

*Manage change and automate software delivery across the lifecycle with IBM Rational ClearCase and IBM Rational Build Forge*

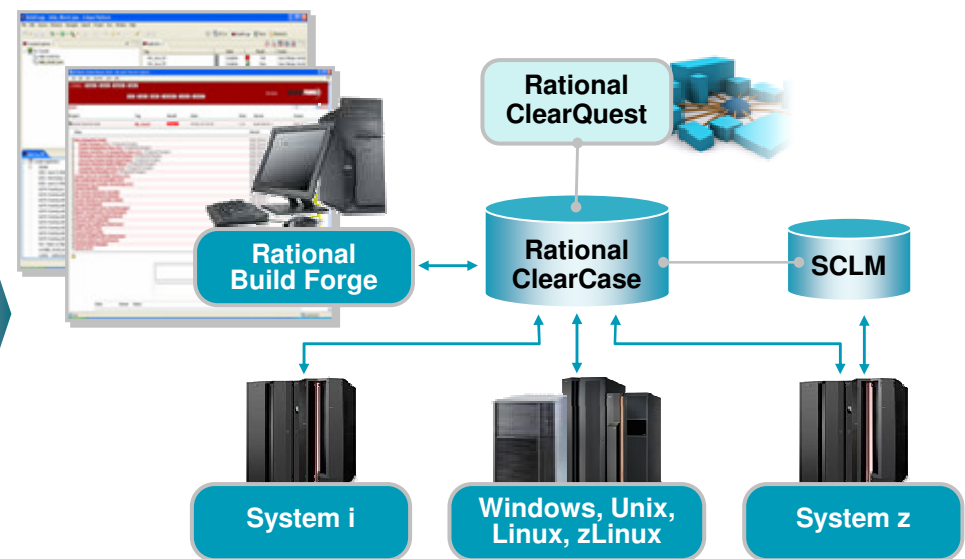
**IBM Rational Change Management Solution** provides sophisticated version control, automated workspace management, parallel development, and build-and-release management. It is designed to help improve productivity and operational efficiency with heterogeneous, cross-platform support for distributed, mainframe (IBM z/OS) and midrange (IBM i5/OS) development.

### Manage access and automate change across the lifecycle

- Manage core and composite artifacts from z/OS
- Common repository with z/OS extensions supporting deployment across developer communities
- Automate the process of creating a deployable application from source artifacts
- Eliminate manual handoffs between code, build, test, package, and deploy teams



- ✓ Increased productivity
- ✓ Faster response to business needs resulting in better customer experience
- ✓ On-time and on-budget project delivery



### IBM Rational Change & Release Management Solutions



## IBM Rational Enterprise Modernization Solution

### *Customer benefits*

- These offerings improve developer productivity in maintaining & enhancing existing z/OS-based applications and helps traditional developers understand new SOA architectures and deliver components for composite applications. They can also help developers not familiar with the code to deliver complicated applications by allowing them to focus on the business needs and not the underlying architecture.
  
- Benefits and Features
  - ✓ Better understanding of existing code by graphically showing application hierarchy as well as data movement through the application
  - ✓ Better understanding of impact of changes
  - ✓ Tools to harvest business logic from existing source, and easily rearchitect and refactor
  - ✓ Common tool base for both z/OS developers and J2EE / Web developers
  - ✓ Easier transition for developers from z/OS-based traditional development to SOA
  - ✓ Reuse of existing mainframe assets



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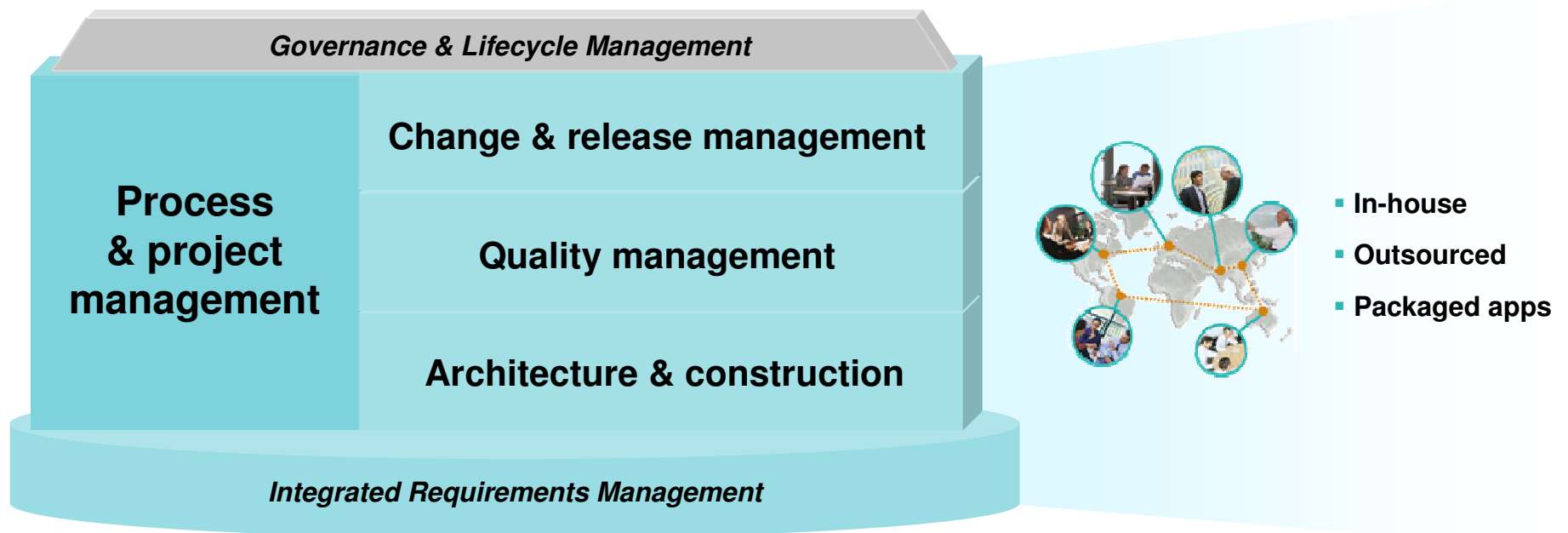


# IBM Rational Software Delivery Platform

*What we offer*

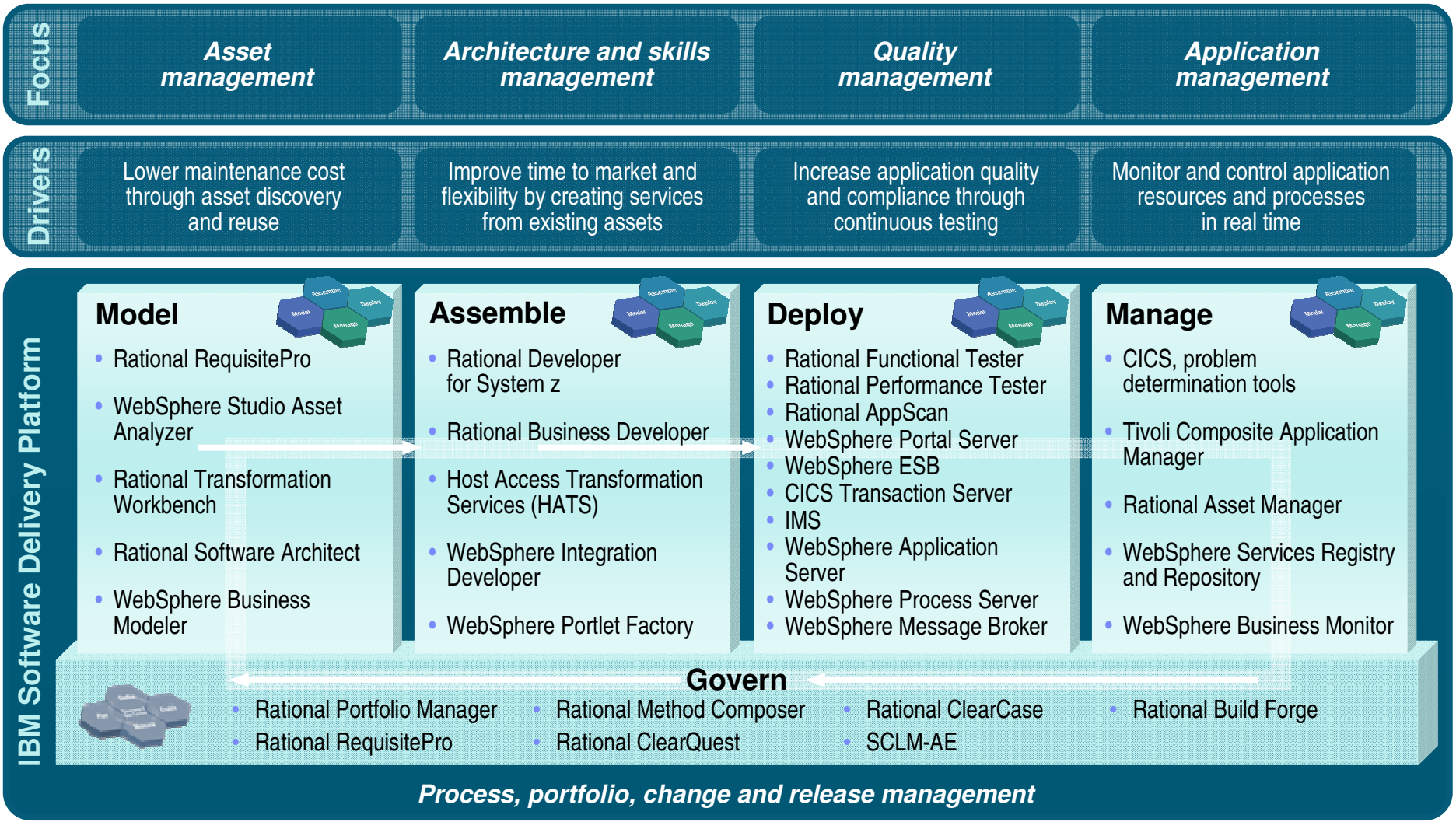
**Rational.** software

*Process design & implementation best practices based on a market leading solutions delivery platform*



# IBM Rational Software Delivery Platform

## Accelerating software innovation on System z





# Accelerating software innovation on System z

## Customer successes

### IT projects

- Integrate distributed applications with its z/OS® environment
- Identify business services to leverage across the enterprise
- Extending COBOL applications for SOA transformation
- Improving productivity by breaking skills silos
- Unifying enterprise and distributed teams

Rational. software



#### User interface modernization

- ✓ Decrease development cycle time from 11 to 6 months with HATS
- ✓ Speeds creation of new customer services
- ✓ Improved operational efficiency



#### Enterprise portfolio management

- ✓ Identify obsolete code within automotive systems, and begin “decommissioning”
- ✓ Perform impact across massive systems with WSA and RTW
- ✓ Communicate impacts to potentially affected development teams



#### Rapid application development

- ✓ New application framework based on IBM COBOL standard
- ✓ RDz to design new COBOL to provide online banking services



#### Cross-platform application development

- ✓ Standardize on RBDe and RAD to unify application development across all platforms and transaction managers (e.g., WAS, IMS)
- ✓ Rapid time to market



#### Unified change and release management

- ✓ Highly automated cross-platform solution using ClearCase to manage and support the software lifecycle for COBOL and Java development



**\* New!**

## How to get started?

*Resources to help you kick-start your System z software innovation*

### System z Sandbox

*Example assets and best practices providing low-risk, practical, hands-on path to leveraging IBM solutions*

- Full version software trials
- 'Try online' hosted System z environments
- Hands-on-exercises

### System z Starter Packs

*Solution to help you incrementally evolve core IT systems towards modern architectures and technologies*

- Discover, reuse and grow
- Develop and manage
- Test and track

*Jump-start your modernization projects!*

### Education Series

#### Modern Application Architecture for COBOL Developers

*Learn how to design and integrate composite applications across CICS and WebSphere – leveraging existing COBOL processes*



Learn more at:  
[www.ibm.com/rational/modernization](http://www.ibm.com/rational/modernization)



# IBM Rational Software Development Conference 2008

June 1 – 5, 2008; Orlando, Florida

The banner features a blue background with a grid pattern. On the left, the text 'IBM Rational Software Development Conference 2008' is displayed in white. Below it, a yellow banner reads 'WHERE TEAMS ARE R-HEROES'. Further down, it says 'June 1-5, 2008 • Orlando, Florida'. On the right, several circular frames contain illustrations of people in superhero costumes. A central speech bubble says 'RU READY TO SAVE THE DAY?'. A large yellow starburst on the left contains the text 'SAVE THE DATE!'.

## IBM Rational Software Development Conference 2008

WHERE TEAMS ARE **R-HEROES**

June 1-5, 2008 • Orlando, Florida

**SAVE THE DATE!**

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- Executive Summit 2008
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# QUESTIONS

