Overview of new Rational Enterprise Modernization Solutions and Product Updates for System z

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Rational. software

"Enhancing IT value by leveraging the past, adopting the present, and transforming the future"

October 1, 2008

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Today's Agenda

- **IBM Rational Software Strategy**
  - *Delivering applications on the System z platform*
- **Building New Applications and Services on the Mainframe – What's new for System z Rational products**
  - *Leveraging the past*
  - *Adopting the present*
  - *Transforming the future*
- **Getting started**

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IBM Rational Software Delivery Platform

What we offer

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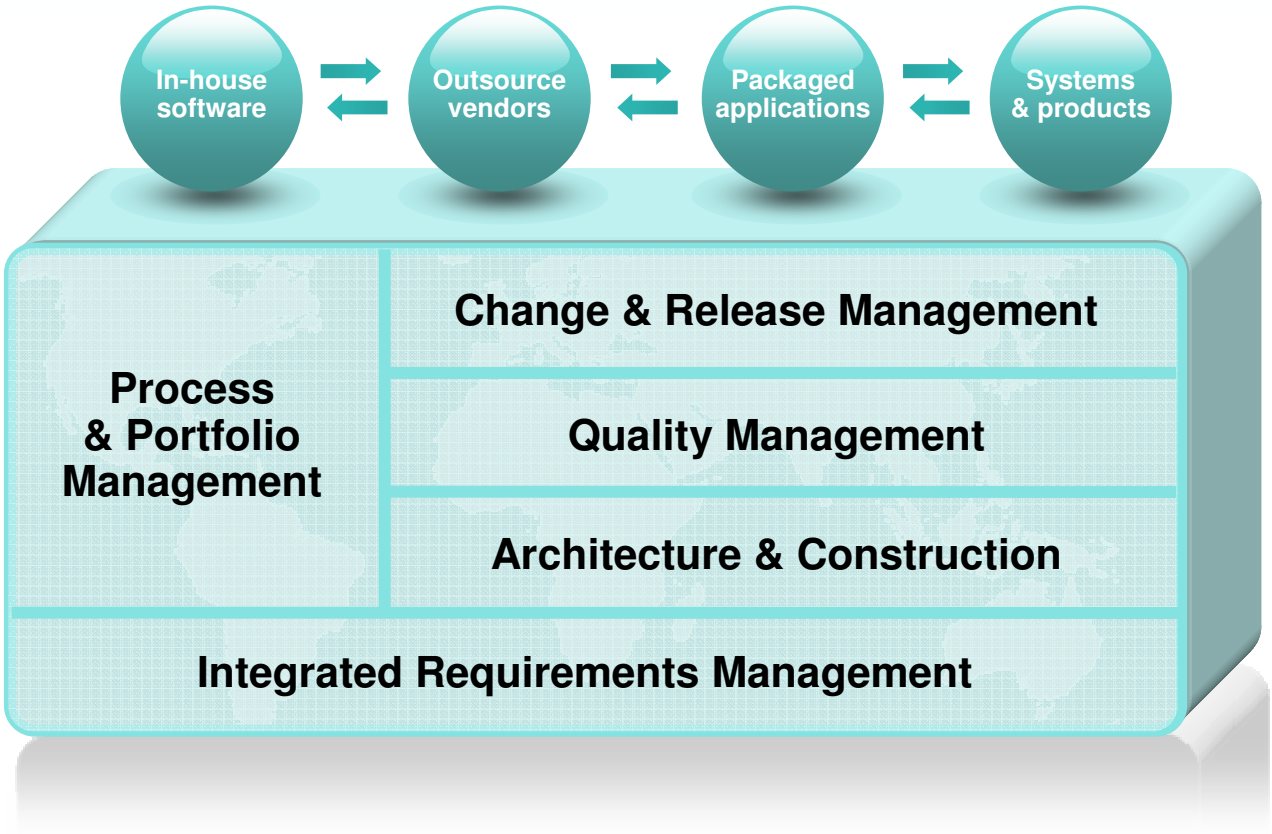
***Solutions** to help accelerate multi-platform application development for System z*



- ***Enterprise Modernization and Transformation***
- ***Organizational Governance***
- ***Skill Development and Community***
- ***Implementation Services***

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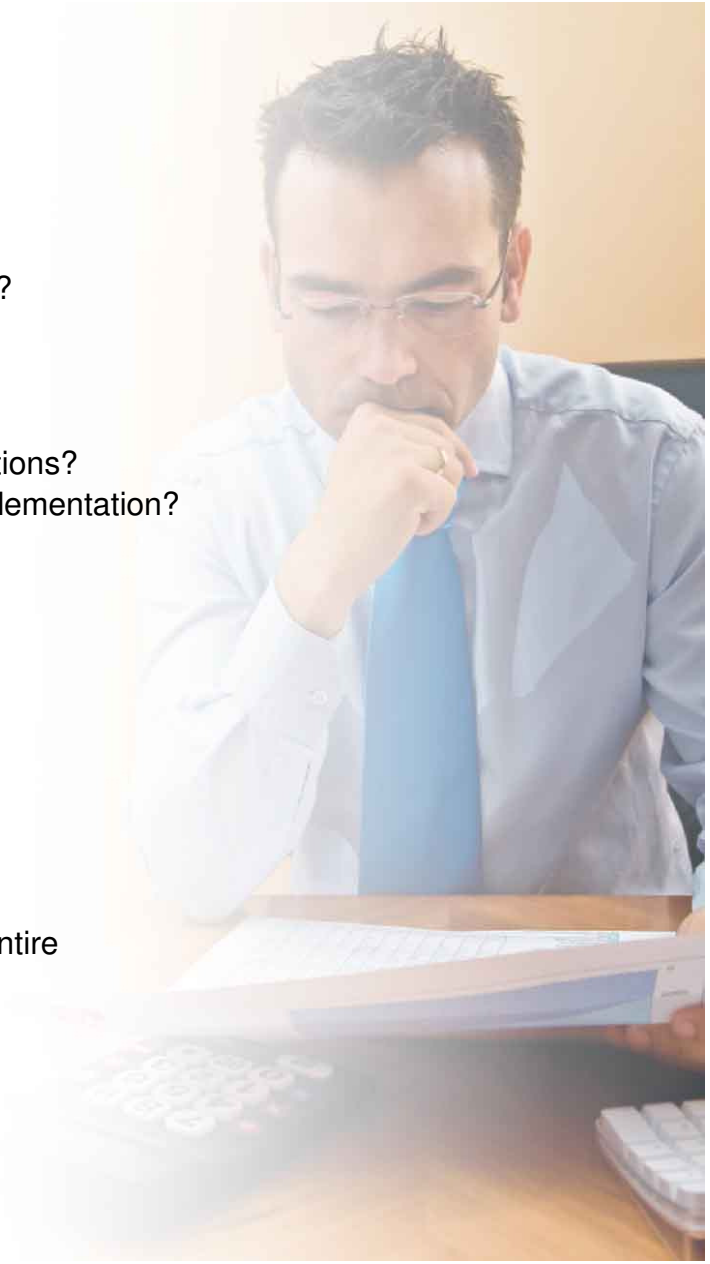
We're being asked, "*can we…*"

- *Leverage existing assets?*
  - Discover and gain control over our existing enterprise application portfolio?
  - Identify assets for reuse in a Service Oriented Architecture?
- *Leverage modern architectures?*
  - Create services easily from existing code, including 3270 terminal applications?
  - Define new services for all deployment platforms from initial design to implementation?
- *Leverage existing skills and attract new skills?*
  - Exploit new technologies and innovation without retraining existing staff that knows the business?
  - Utilize new employees on any project independent of target platform?
- *Leverage a common development environment for all development teams?*
  - Lower costs due to elimination of duplicate tools and processes?
  - Realize improved end-to-end communication and traceability across the entire lifecycle?
- *Leverage my development spending better?*
  - Reduce maintenance costs, freeing resources to work on new projects?
  - Improve application performance without expensive code changes?



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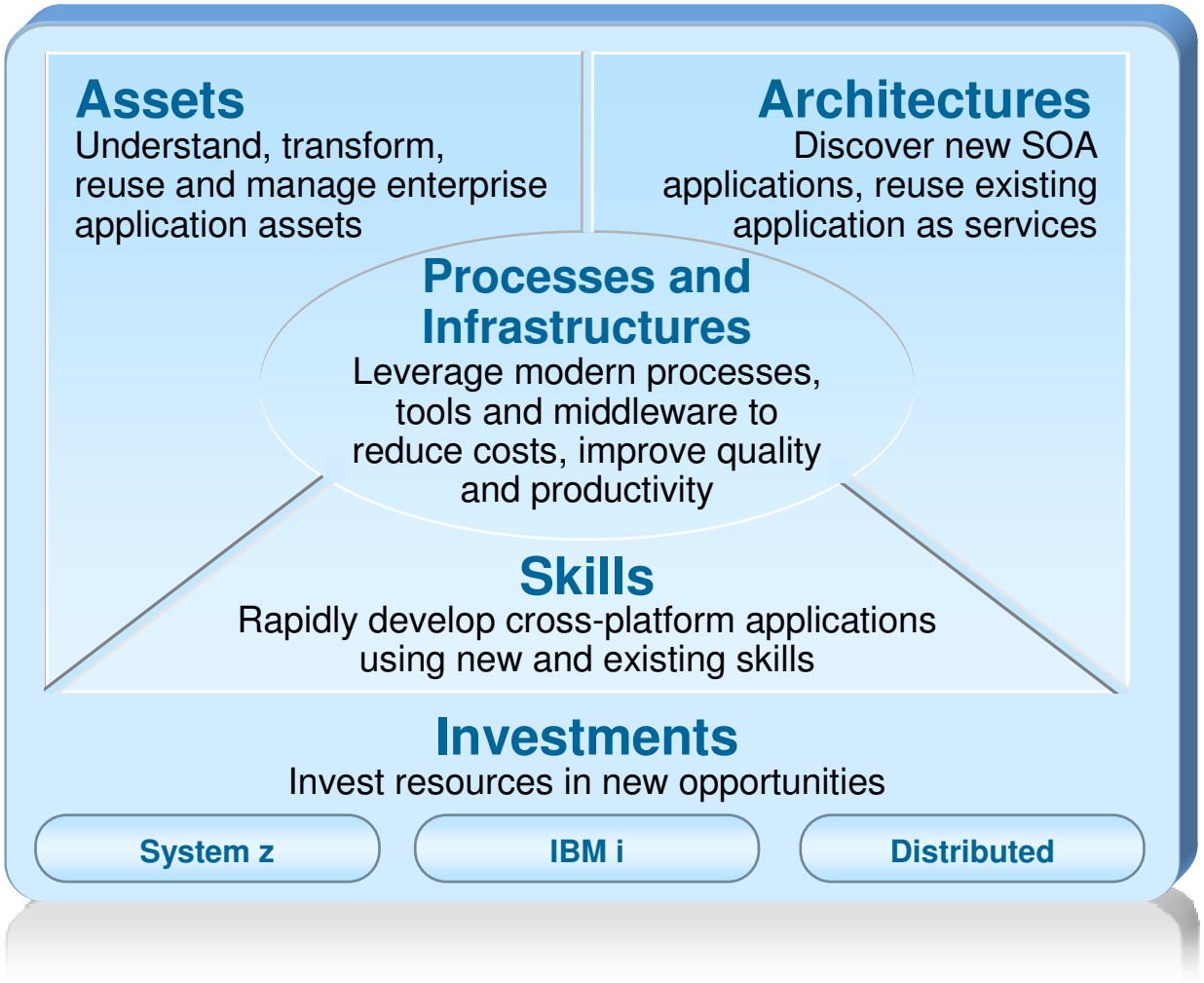
Rational Enterprise Modernization Solutions

Key to improving IT flexibility



- ✓ Leverage value in existing assets
- ✓ Drive innovation with SOA and web technology advancements
- ✓ Leverage existing and new staff on multi-platform projects
- ✓ Improve quality and flexibility with a consolidated team infrastructure
- ✓ Reduce maintenance costs

For more information, visit:

http://www.ibm.com/rational/modernization

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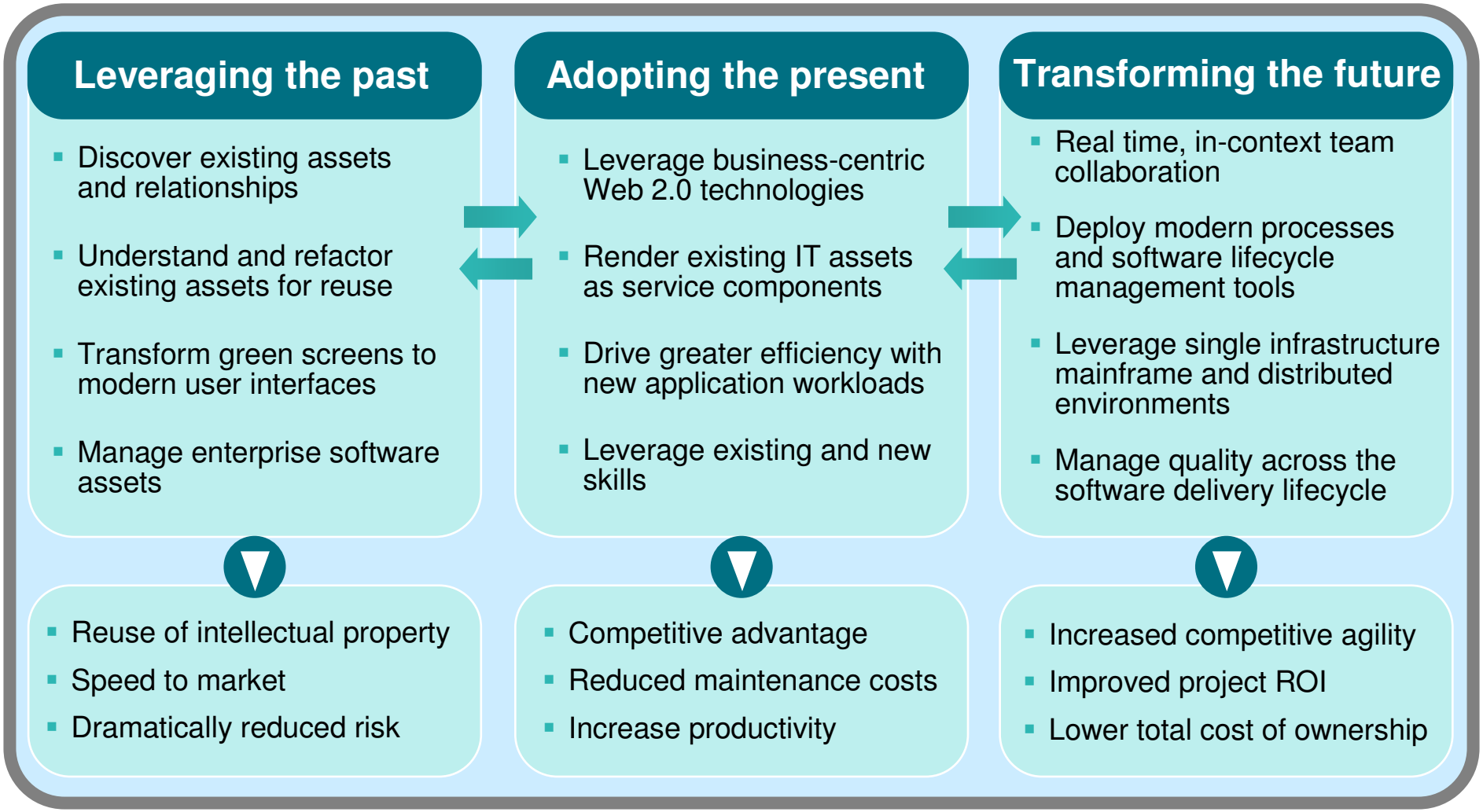
Building New Applications and Services on the Mainframe

Leveraging the past, adopting the present, and transforming the future



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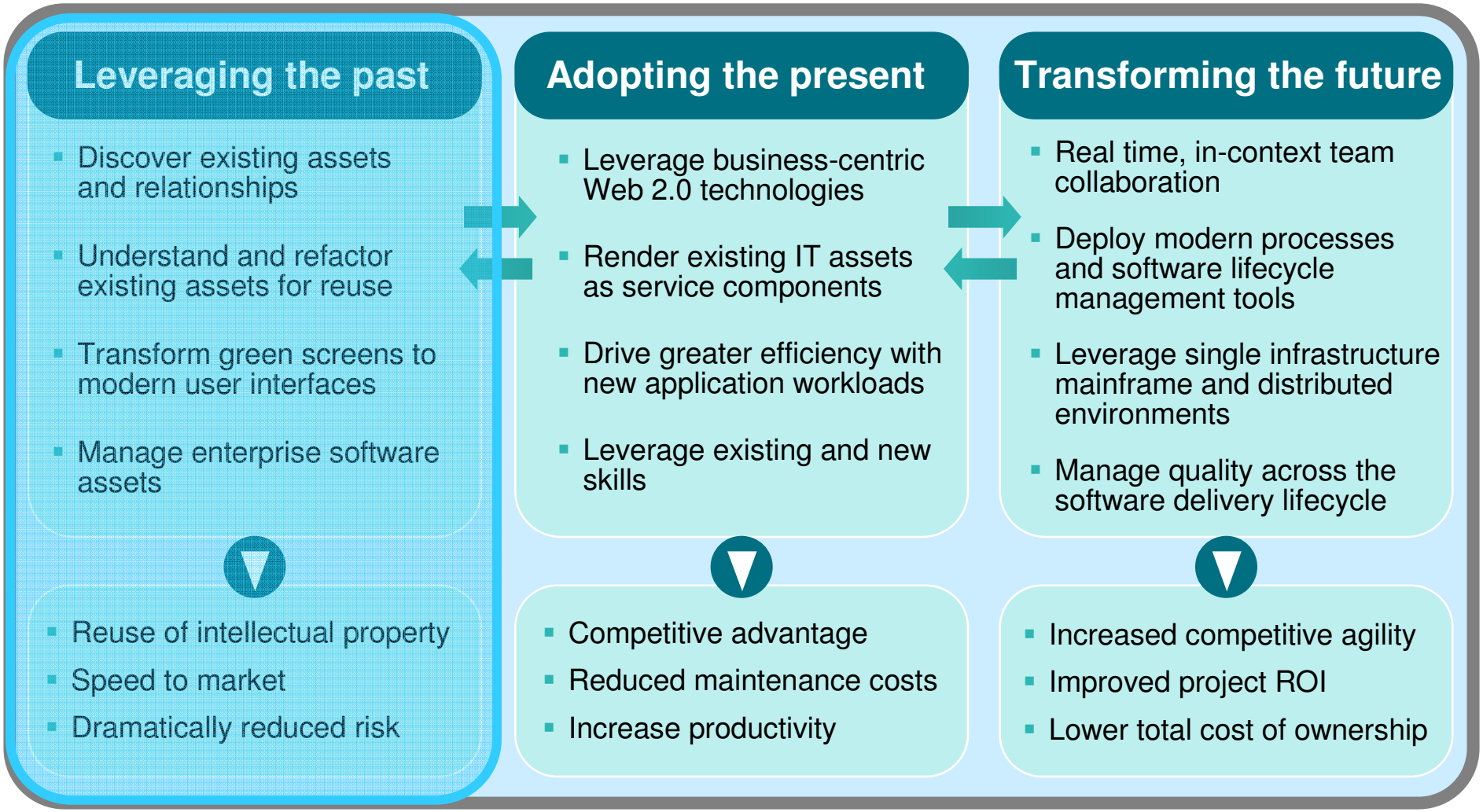
Extend value of existing enterprise assets

Leveraging the past



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Customer Speak: **What they would like to see possible**

Reduce the cost of ongoing application modernization and maintenance projects

Encourage reuse of existing application assets, avoid duplication of efforts

Discover and analyze mainframe and distributed application assets

Automate discovery and analysis of enterprise application portfolio

Empower team members to discover, understand, transform and manage enterprise software assets

Govern asset discovery, transformation and management

Asset Repository

Enforce application quality assurance throughout the modernization projects

Transform green screens into modern web-based interfaces

Extract and document business rules embedded in our core IT applications

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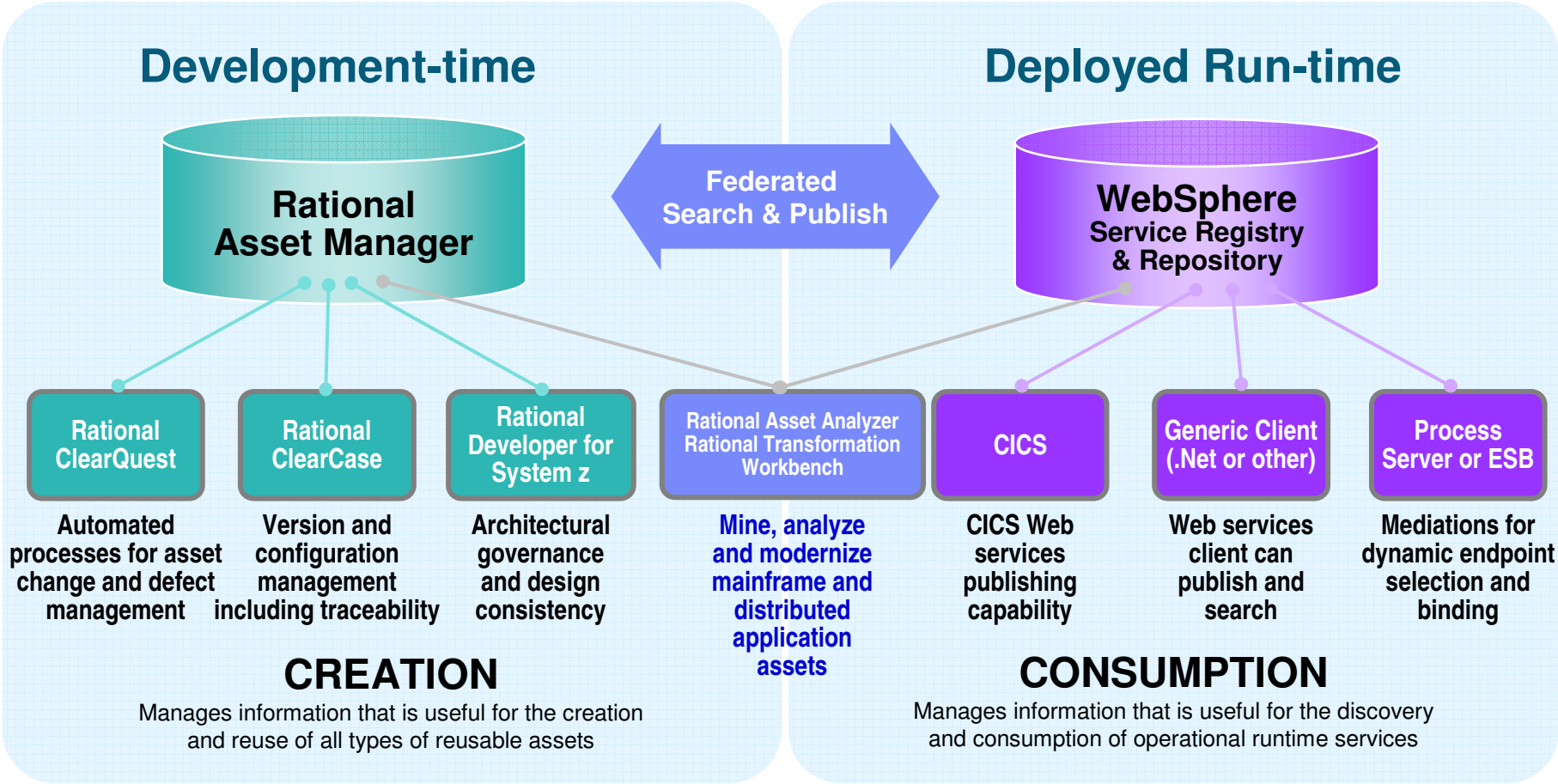
Extend value of existing enterprise assets

Solution: A comprehensive IBM solution for asset discovery, transformation and management



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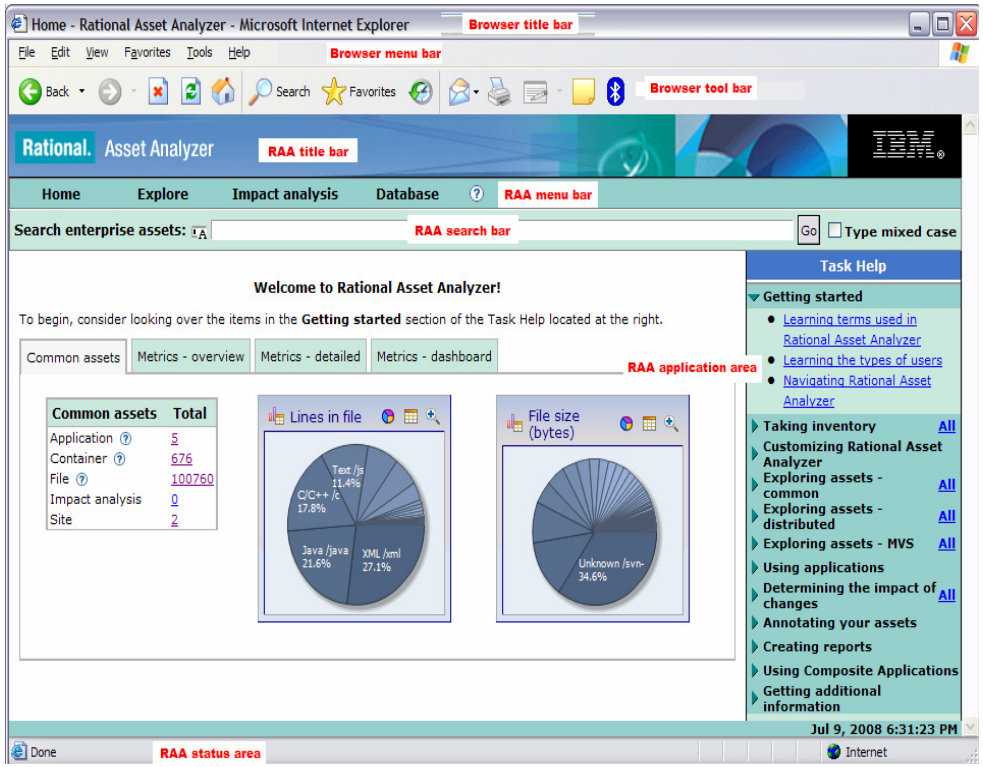
Extend value of existing enterprise assets

Accelerate application understanding, change and reuse with IBM Rational Asset Analyzer V5.5

Discover and Analyze

- Understand the quality and complexity of application assets
- Make changes more quickly and with less risk
- Improve requirements definition processes

- ✓ Lower maintenance costs
- ✓ Shorten the learning curve for new developers
- ✓ Speed up change and reduce risk in key transformation initiatives



IBM Rational Asset Analyzer

http://www.ibm.com/software/awdtools/raa/

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Extend value of existing enterprise assets

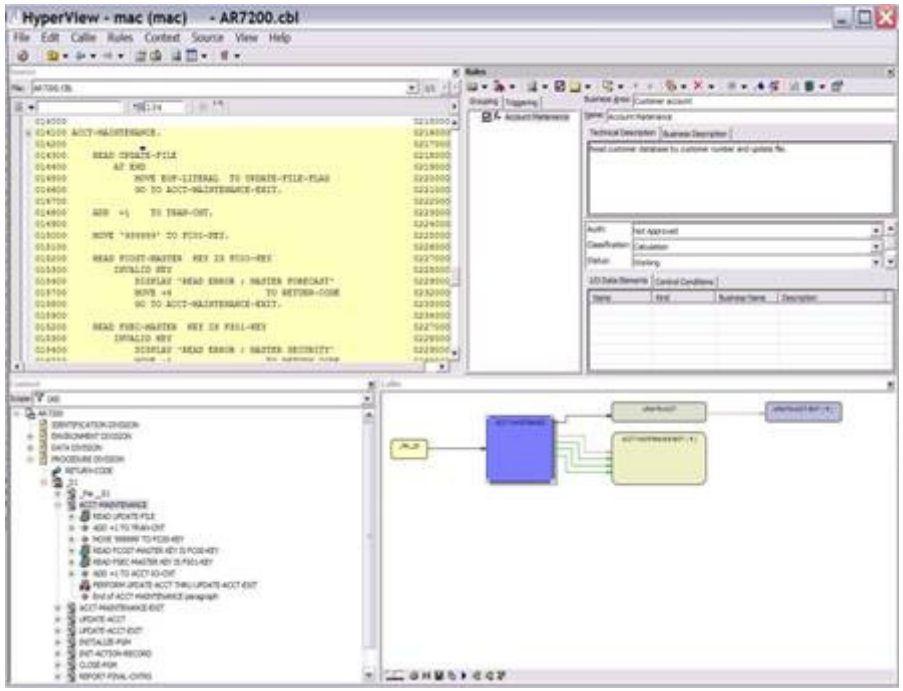
Accelerate your path to reuse and SOA with IBM Rational Transformation Workbench

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

http://www.ibm.com/software/awdtools/rtw/

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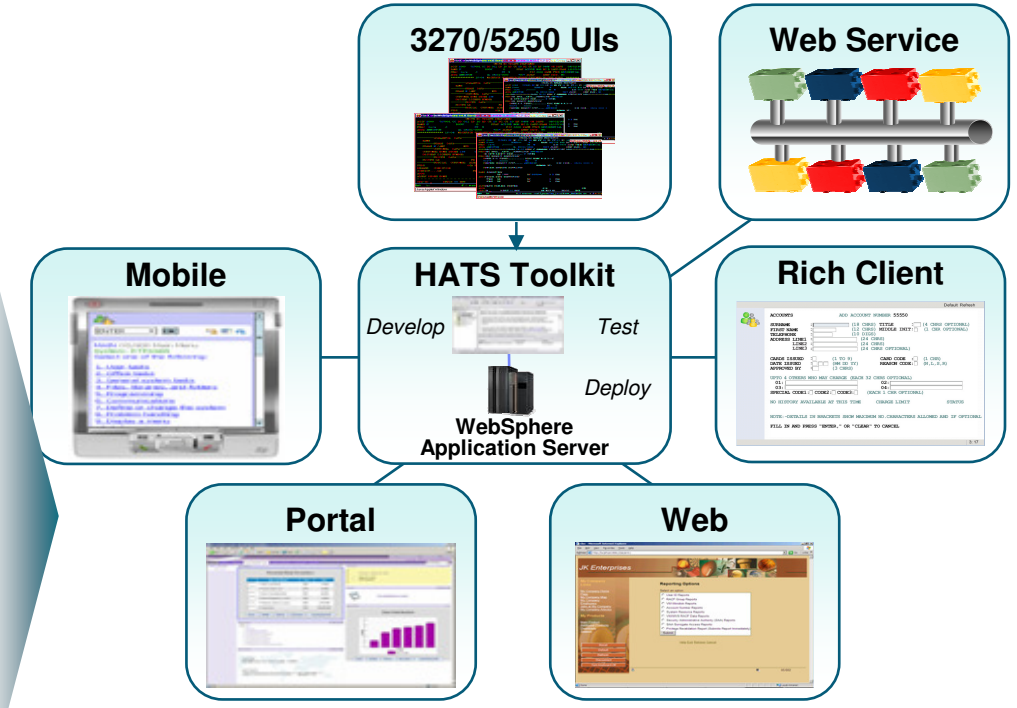
IBM Rational Host Access Transformation Services (HATS)

With **IBM Rational Host Access Transformation Services (HATS) V7.5** customers can quickly improve the user interface of their existing System z and IBM i 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.

New in HATS 7.5

- Enhanced visual tooling for exposing existing green screen data and business logic as Web services
- Support for latest version of WebSphere Application Server (7.0)
- Support for the latest Rational IDEs, including Rational Application Developer V7.5 and Rational Developer for System z V7.5
- Support for WebSphere Portal V6.1

- Enhance 3270 and 5250 green screen applications with a GUI interface
  - Combine data from multiple screens, applications and databases and deploy to Web, Portal, and rich client
- Use HATS as on ramp to your SOA environment
  - Extends terminal applications tasks as Web Services and insert them in business processes



IBM Rational Host Access Transformation Services for Multiplatforms

http://www.ibm.com/software/webservers/hats/

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Drive innovation with technology advancements *Adopting the present*

Leveraging the past

- Discover existing assets and relationships
- Understand and refactor existing assets for reuse
- Transform green screens to modern user interfaces
- Manage enterprise software assets

- Reuse of intellectual property
- Speed to market
- Dramatically reduced risk

Adopting the present

- Leverage business-centric Web 2.0 technologies
- Render existing IT assets as service components
- Drive greater efficiency with new application workloads
- Leverage existing and new skills

- Competitive advantage
- Reduced maintenance costs
- Increase productivity

Transforming the future

- Real time, in-context team collaboration
- Deploy modern processes and software lifecycle management tools
- Leverage single infrastructure mainframe and distributed environments
- Manage quality across the software delivery lifecycle

- Increased competitive agility
- Improved project ROI
- Lower total cost of ownership

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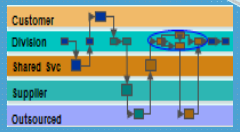
Customer Speak: **What they would like to see possible**

We must increase value to customers, attract new business, and contain costs

Reduce long cycle times introducing new products and services

Leverage industry best practices and modern, viable technology on System z

Rapidly build high-quality Web, Web services, portal and SOA applications for IBM CICS®, IBM IMS™, and IBM WebSphere Application Server on System z



Reduce infrastructure costs by moving applications to more efficient platforms

Breakdown skills islands and team silos hindering collaboration and sharing

Create new business processes and services, in particular, for global consolidation

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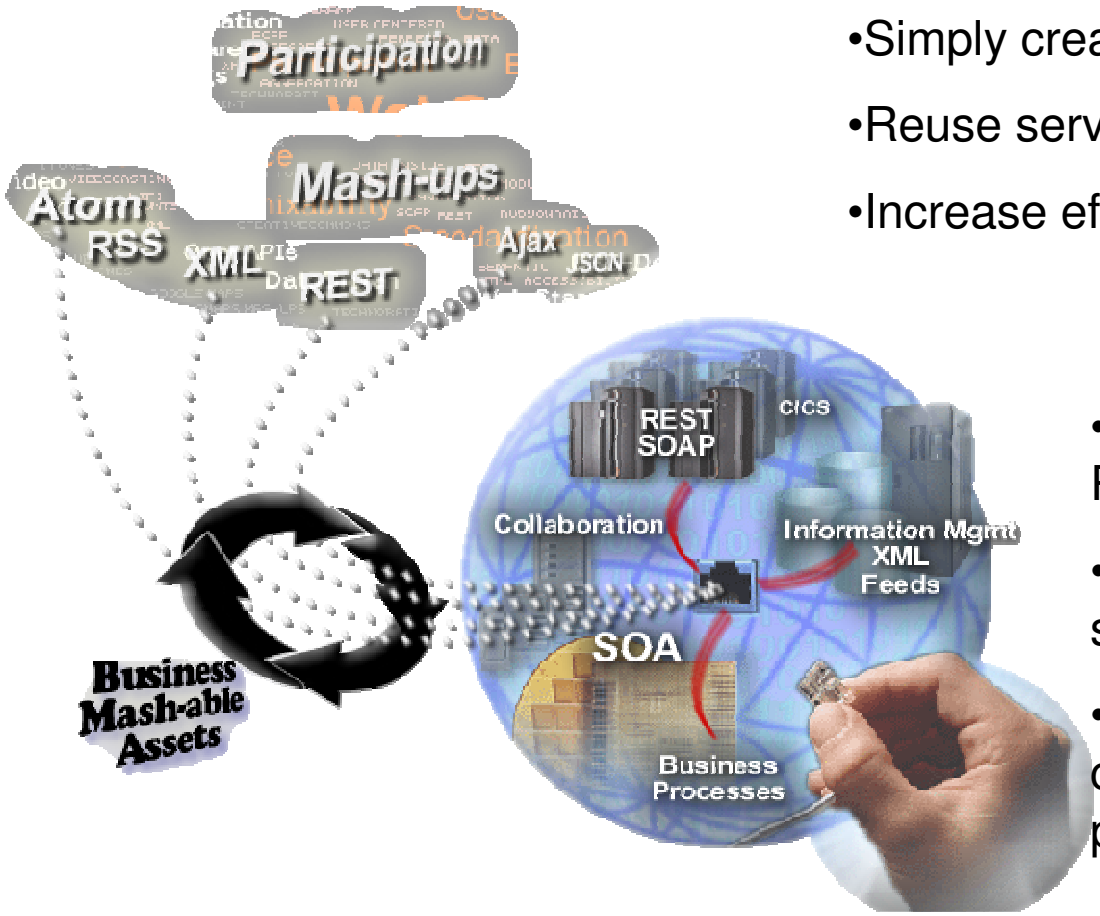
Drive innovation with technology advancements

Extend Mainframe Applications with Web 2.0 for speed, simplicity and agility…



- Rapidly assemble mashups
- Simply create widgets, feeds
- Reuse services in new applications
- Increase effectiveness with rich interfaces

- Access resources with simple REST calls
- Lower development time and skills needed
- Wider access from a variety of consumers (web apps, outside partners, etc.)

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Drive innovation with technology advancements

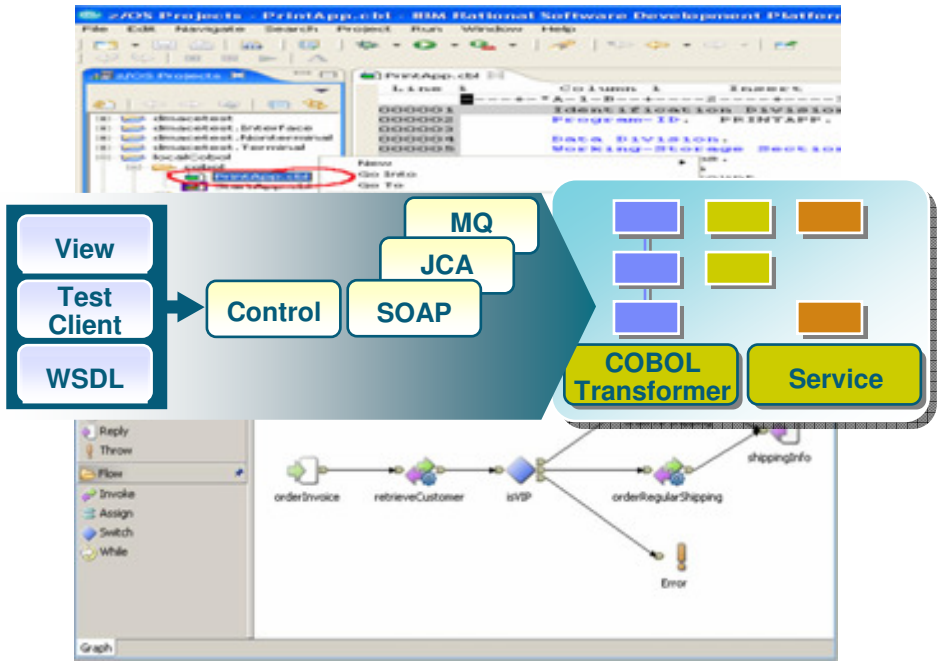
Build traditional and composite applications with Rational Developer for System z with Java and Rational Developer for System z for with EGL

IBM Rational Developer for System z (RDz) provides powerful eclipse-based tools for building COBOL, PL/I, C/C++, Java, EGL, 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

http://www.ibm.com/software/awdtools/rdz/

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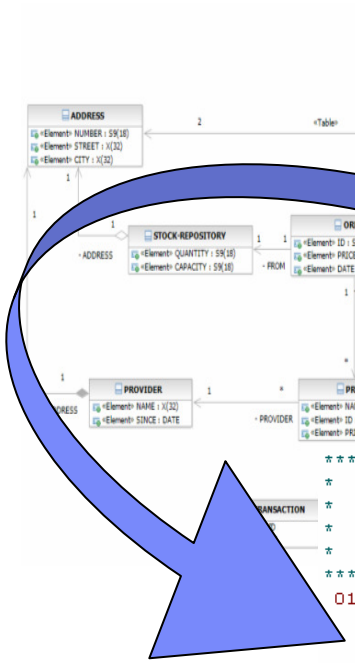
Rational Developer for System z V7.5

- **Improved developer productivity**
  - Simplified deployment tooling (ADM)
  - Real-time syntax check without requiring code compile or save
  - Refactoring wizards to simplify code maintenance and changes
- **Mainframe application modeling**
  - Ability to model mainframe applications as UML and generate source code
- **Improved integration with other Rational and IBM tools**
  - ClearCase/Clearquest
  - BuildForge
  - WebSphere Service Registry and Repository
  - Rational Team Concert (Jazz)
  - Improved File Manager / Fault Analyzer integration
- **Tooling performance**
- **New packaging**
  - RDz with EGL
    - Along with Web 2.0 support soon from RBD
  - RDz with Java

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Drive innovation with technology advancements

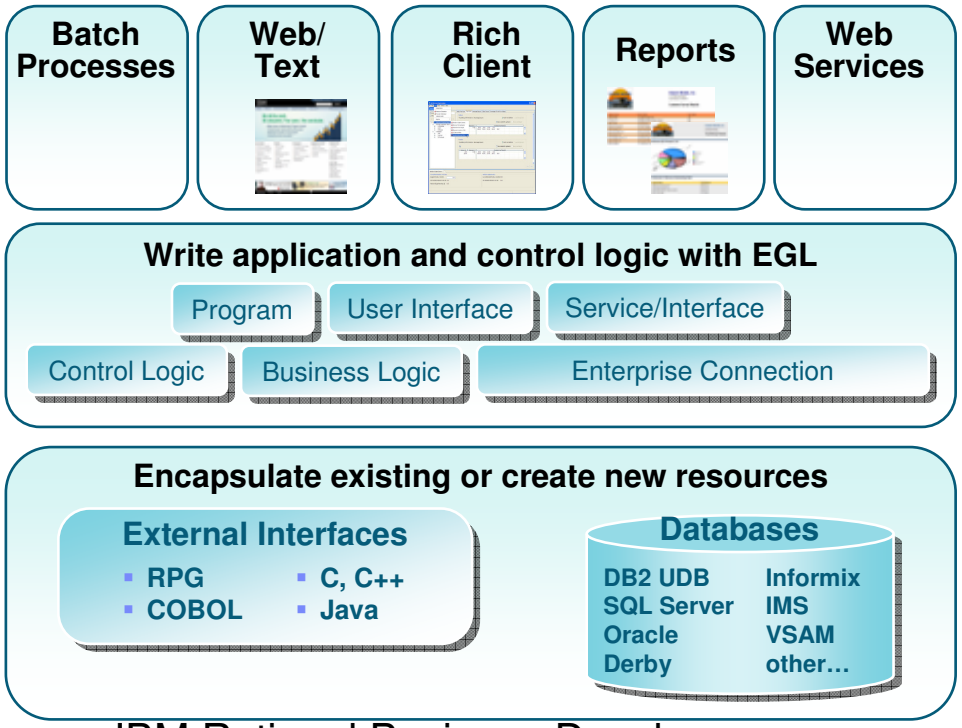
Accelerate adoption of Web 2.0 and SOA with IBM Rational Business Developer

IBM Rational Business Developer (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

http://www.ibm.com/software/awdtools/developer/business

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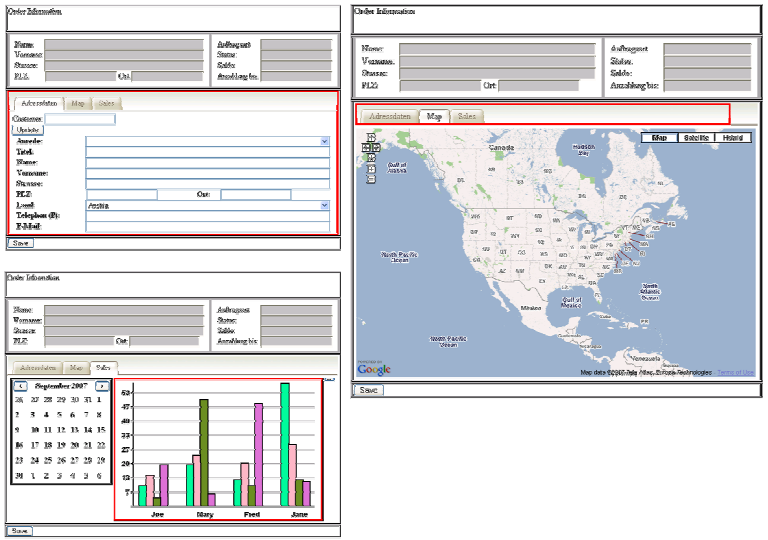
Rational Business Developer EGL Rich UI Support

Planned for 4Q08

- New EGL notation and tools to support development of Rich Internet Applications (RIA)
- Consistent with EGL philosophy, hides all Ajax complexities with a higher level abstraction
- Includes WYSWIG and scripted composition tools, and libraries of Rich UI widgets (EGL basic widgets, plus some EGL rendering of DOJO, YUI, EXT, etc)
- Fully open and extensible: JavaScript experts can easily create EGL rendering of any JS widget and enrich the library
- Easily integrate/consume any service (REST or SOAP, external or created in EGL)
- Single language end-to-end, simpler and more productive

Brings an innovative, simpler way to do Web 2.0



- Single language approach for RIA-to-mainframe solutions
- EGL legacy interoperability and RDz Web Services tools easily extend legacy to Rich Web

Brings Web 2.0 to RDz

*** Forward-looking statements – may change without notice**

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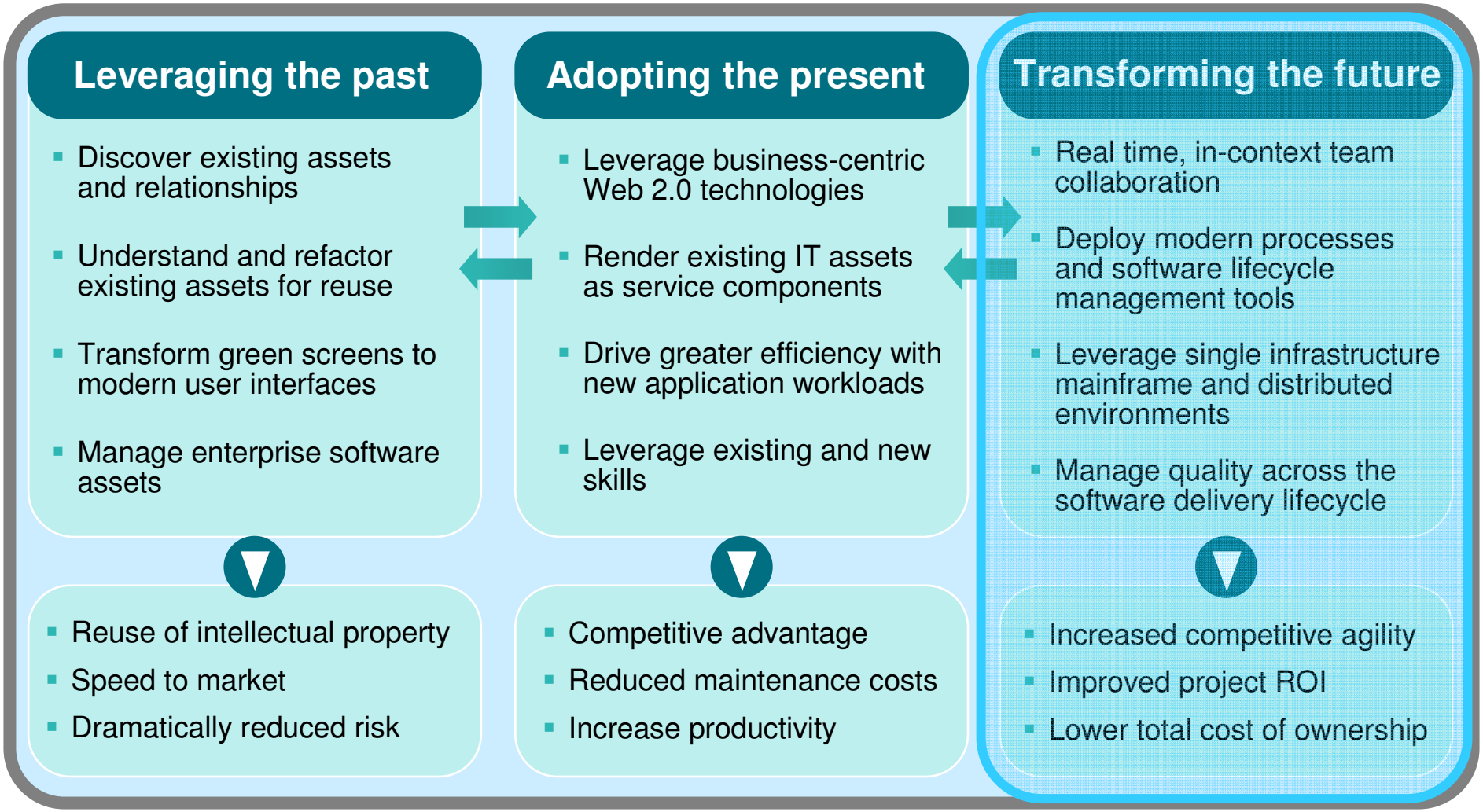
Software innovation through team collaboration

Transforming the future



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Customer Speak: **What they would like to see possible**

Lower costs due to elimination of duplicate tools and processes

Easily extend core IT systems to meet hot business needs

Leverage new technologies and innovation without retraining our existing staff

Agile work flows automating and smoothing execution

Empower team members to innovate and collaborate using up to date information "in context" of the work they are doing

Automated synchronization of project artifacts

Eliminate inconsistent and mismatched versions across platforms

Seamless access to highest risks and security vulnerabilities

Onboard team members across the world across projects in a day not months

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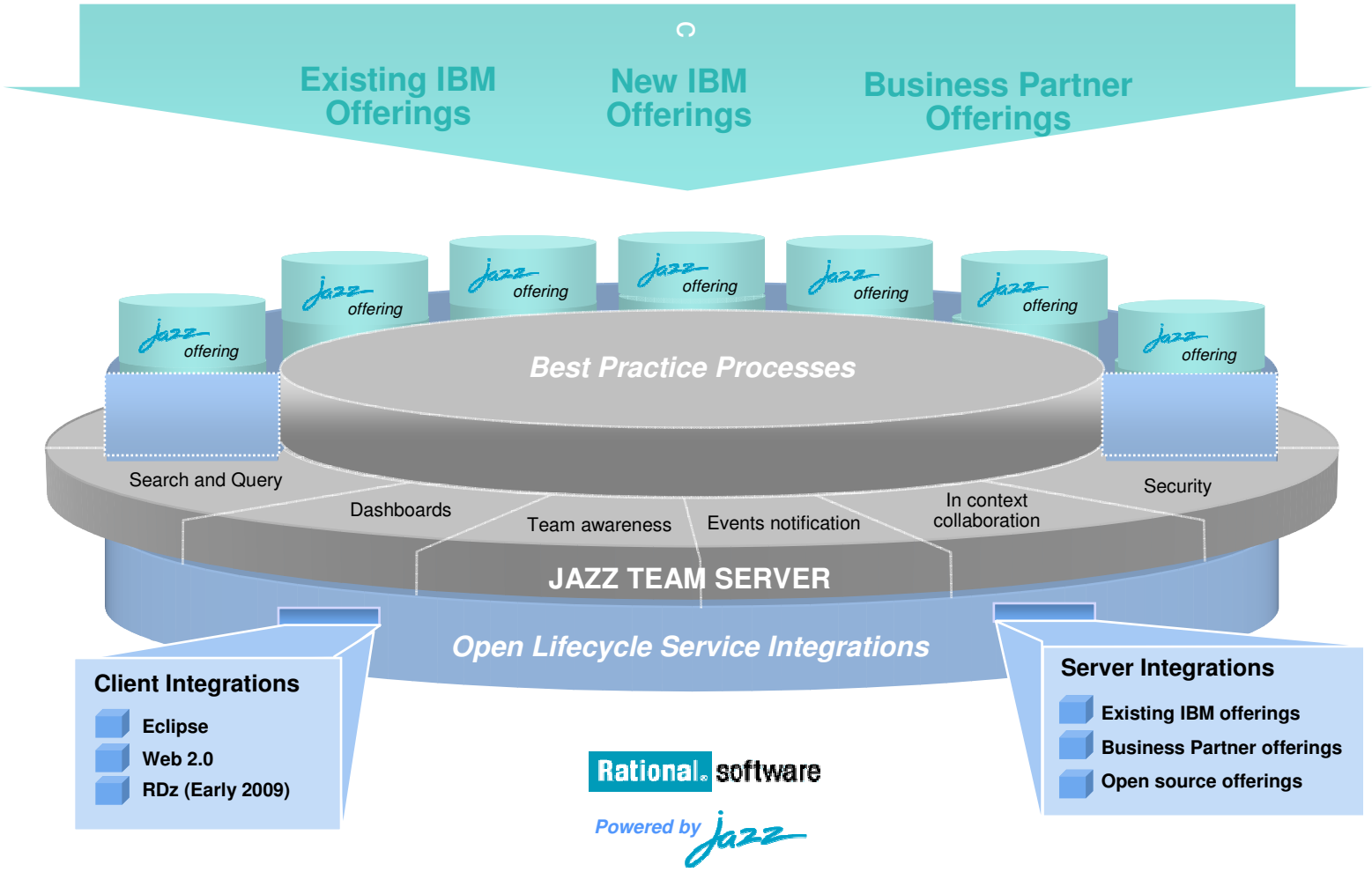
An evolution of value in collaborative environments bringing forward existing investments and delivering new innovative capabilities



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Software innovation through collaboration with IBM Rational Team Concert for System z V1.0.1

4Q08

- **Real time, in-context team collaboration**
  - Make software development more automated, transparent and predictive
- **"Think and work in unison"**
  - Integrated source control, work item and build management
- **Assess real-time project health**
  - Capture data automatically and unobstrusively
- **Automate best practices**
  - Dynamic processes accelerate team workflow
  - Out-of-the-box or custom processes
- **Unify software teams**
  - Integrate a broad array of tools and clients
  - Extend the value of ClearQuest and ClearCase
- **Exploit Quality of Service of z/OS**
  - Hosted on z/OS with z/OS middleware (DB2, WAS)*
- **z/OS development support** ***(* coming '09)***
  - COBOL support, EGL support, z/OS builds, RDz integration, existing SCM integration*

Open and extensible on Jazz

- ✓ Collaborate in context
- ✓ Right-size governance
- ✓ Day one productivity

*** Forward-looking statements – may change without notice**

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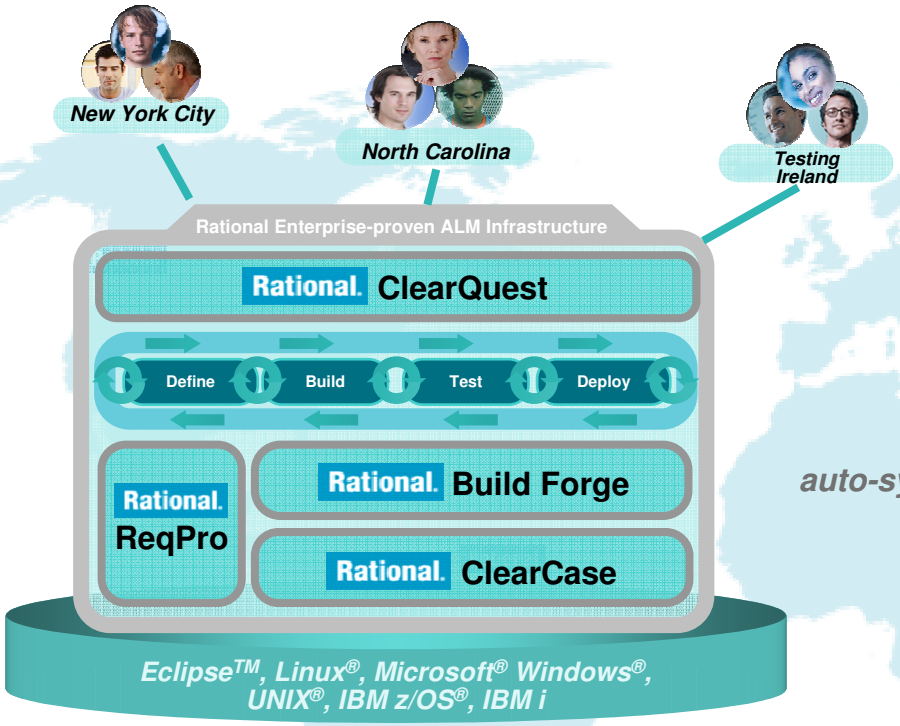
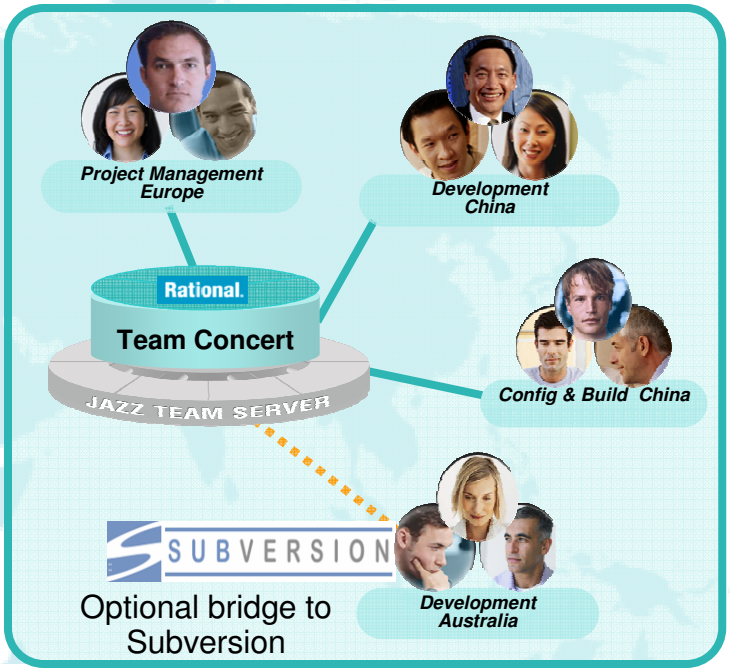
Solution: Unify distributed teams in mid-sized or enterprise settings with IBM Rational Change and Release Management



Bi-directional auto-synchronization

A complete, solution for departmental and medium-sized distributed teams



- Enables teams to reuse enterprise assets, process and investment in ClearCase/ClearQuest
- Take advantage of new collaboration in an evolutionary way with lower business risk
- Manage status/priorities in ClearQuest and develop with the right solution for your project.
- Use the “right-sized” governance solution for different projects needs.
- Developers can deliver work from “satellite” teams directly into enterprise ClearCase projects

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Improve team collaboration and responsiveness

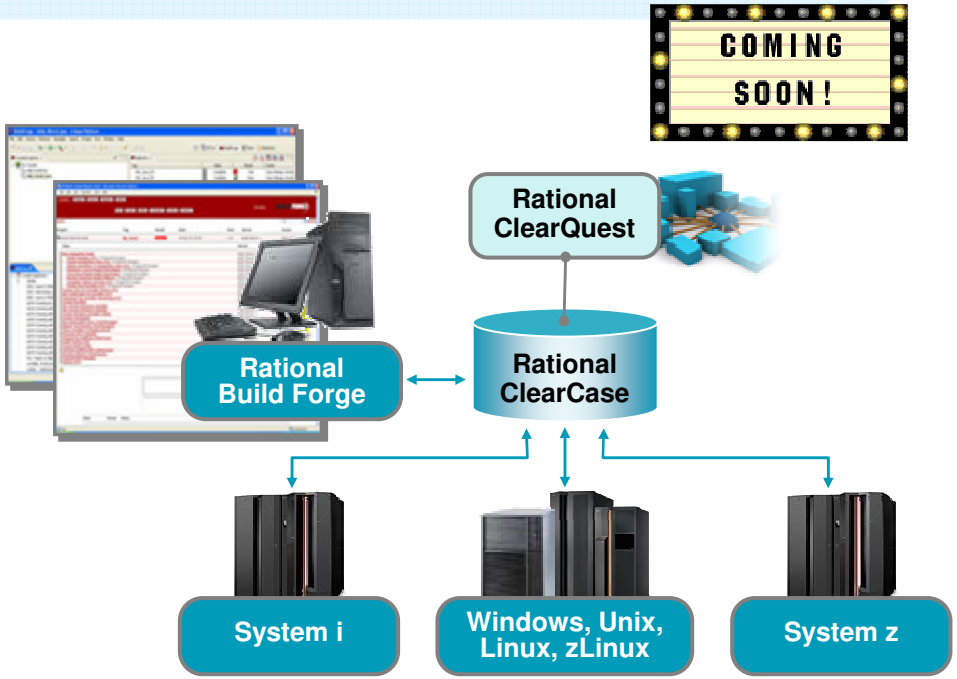
Manage change and automate software delivery across the lifecycle with IBM Rational ClearCase and IBM Rational Build Forge

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 i) development.

Manage access and automate change across the lifecycle

- **Enhanced ClearCase z/OS build script generation***
- **Enhanced ClearCase z/OS ISPF client***
- **Improved ClearCase z/OS performance***
- **ClearCase z/OS build dependency analysis & enforcement***
- **Build Forge support for Linux for System z***

- ✓ **Streamlined implementation**
- ✓ **Higher quality application builds**
- ✓ **Implementation flexibility**
- ✓ **Exploit Quality of Service of System z**



IBM Rational Change & Release Management Solutions

http://www.ibm.com/software/sw-bycategory/subcategory/SW750.html

*** Forward-looking statements – may change without notice**

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Product Highlights XL C/C++

z/OS XL C/C++ V1R10

- An optionally priced feature of z/OS v1R10
  - Improved exploitation of z10
  - Support exploitation of 64-bit instruction set in 32-bit code
  - Improved performance
  - Improved METAL C compiler option and Runtime Library
  - Improved middleware support
  - Usability enhancements

z/OS XL C/C++

http://www.ibm.com/software/awdtools/czos/

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Enterprise PL/I for z/OS v3.8

- Enterprise PL/I
  - Leading-edge IBM z/OS-based compiler
  - Delivers innovative and open solutions for rapidly exploiting network middleware while developing, extending and managing scalable business and web applications
  - Helps integrate PL/I and web-based business processes in Web services, XML, Java™ and PL/I applications
  - Provides access to IBM DB2®, IBM CICS®, and IBM IMS™ systems, as well as other data and transaction systems

- New in Enterprise PL/I V3.8
  - Improved hardware exploitation = Improved performance of applications
  - Integrated XML System Services (XMLSS) Parser Support
  - Improved Middleware support – Improve programmers' productivity
  - Usability Enhancements

Enterprise PL/I for z/OS

http://www.ibm.com/software/awdtools/pli/plizos/

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Enterprise COBOL for z/OS v4.1

- Enterprise COBOL for z/OS
  - Leading-edge IBM z/OS-based compiler
  - Helps create and maintain mission-critical, line-of-business COBOL applications targeted to execute on z/OS systems
  - Provides access to IBM DB2, IBM CICS, and IBM IMS systems, as well as other data and transaction systems
  - Integrates COBOL applications with web-oriented business processes
    - Supports Java-based object-oriented syntax to facilitate the interoperation of COBOL and Java programs.
    - Provides native XML Support
    - Integrates with RDz to support development of COBOL/CICS/IMS Web Services

- New in Enterprise COBOL v4.1 (Dec '07)
  - Enhanced XML support
  - Supports z10 processor[1]
  - Performance enhancements
  - Enhanced DB2 9 exploitation
  - Support higher data-item size limits
  - Support for Unicode and Chinese character standard

Enterprise COBOL for z/OS

http://www-01.ibm.com/software/awdtools/cobol/zos/

[1] Current release supports z10 processor. Exploitation of z10 instructions is targeted for future releases.

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- **Getting started**

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Want to learn more?

- **Get this complimentary kit for mainframe developers for a practical, how-to guide for making the most of an existing development environment, including the skills and infrastructure already in place at an established enterprise.**
  - Did you say mainframe? e-kit http://www.ibm.com/developerworks/integrate/kits/mainframe/
    - This kit contains the following:
      - **Podcast series**: Did you say mainframe?
      - **Webcasts**
      - **Tutorials**
      - **White and red papers**
      - **Demos**
      - **developerWorks articles and other resources**
- **Find more Enterprise Modernization System z resources**
  - http://www.ibm.com/software/info/developer/solutions/em/systems/z/
- **You can also find out more about other IBM Enterprise Modernization offerings at this site**
  - http://www.ibm.com/software/info/developer/solutions/em/

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Enterprise Modernization Sandbox for System z

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

System z Sandbox

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

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

- ✓ ***Launched on 2/26/08***
- ✓ ***Over 250 customer registrations to-date***
- ✓ ***13 hands-on tutorials are live***
- ✓ ***Additional scenarios coming soon***

New scenarios planned for 2H08

- Rational Asset Analyzer
- IMS, DataStudio, Info 2.0, Rational Data Architect
- WAS, CICS, PD Tools
- Rational ClearCase, ClearQuest, and BuildForge

Full version software trials

'Try online' hosted environments

Tutorials

Online resources

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

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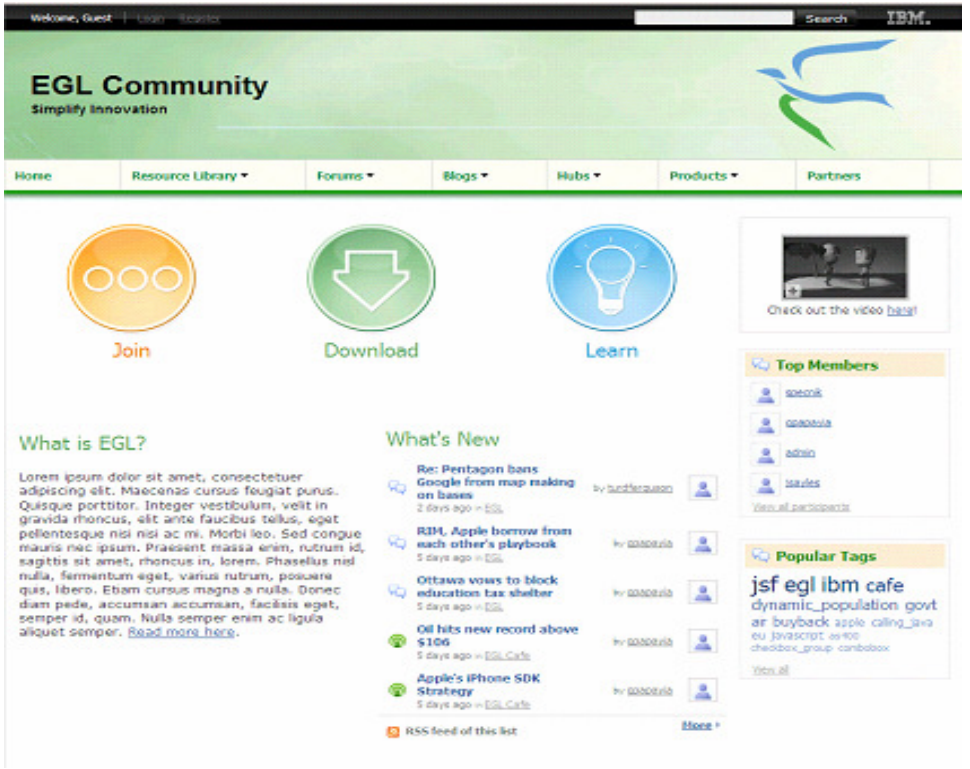
Rational Business Developer – EGL Café

Building a Community for Business Developers

- Attract participation with compelling experience – Partners, Users, Prospects
- Capture “Wisdom of the Crowd” – Experience knowledge base
- Sustainable Participation – Team, Users
- Leverage re-use to reduce effort
- Extending community to CICS, IMS, COBOL, and PL/I developers

http://ibm.com/rational/eglcafe



Resources: **Download, Learn, Presentations, Video/viewlet, Sample Code**

Community: **Clients, Partners, Influencers, Press, News and Events**

Collaboration: **Blogs, Forums, Tips and Techniques Comments, Ratings**

Testimonials: **Case Studies, Celebrations!**

Learn more at: IBM Enterprise Modernization Solution (http://www-306.ibm.com/software/info/developer/solutions/em/index.jsp)

- IBM Rational software (http://www-306.ibm.com/software/rational/)
- IBM Rational Software Delivery Platform (http://www-306.ibm.com/software/info/developer/index.html)
- Process and portfolio management (http://www-306.ibm.com/software/rational/offerings/ppm/)
- Change and release management (http://www-306.ibm.com/software/rational/offerings/crm/)

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And additionally learn more at:

- Quality management (http://www-306.ibm.com/software/rational/offerings/quality/)
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- Leading Innovation Web site (http://www-306.ibm.com/software/rational/leadership/leaders/)
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