Enterprise Modernization: Revolutionizing the economics of enterprise application development and maintenance



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Today's Agenda

- Introductions Why are you here? What would you like to know?
- Enterprise Modernization Strategy and Overview Mark Boyd
- A System z Developer's Day in the Life, Scenario-based Demonstration, Part 1 - Mark Boyd
- A System z Developer's Day in the Life, Scenario-based Demonstration, Part 2 - Wilbert Kho
- Why WebSphere Application Server on System z? Fatima Otori
- SOA Connectivity and Integrated Solutions on System z Fatima Otori
- Finding and Managing You Business Rules Using iLog and Rational Asset Analyzer - Wilbert Kho



Adjourn

Challenges to achieving greater value from your IT investments

Applications

"We don't understand the effort, risk and impact of modernizing our legacy applications."

People

"Our skills gap keeps growing. How do we stay current with all the language and technology changes?"

Teams



"Our teams on different platforms are struggling to communicate. How do we collaborate in the context of our work?"

Infrastructure



"We need a cost effective way to improve our infrastructure efficiency and free up capacity to handle more volume"

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IBM Rational Enterprise Modernization solutions can help Optimize your applications, people, team and infrastructure investments



- Increase flexibility by revitalizing existing application portfolios
- Boost productivity and accelerate innovation with modern skills
- Maximize business agility by bridging organizational silos
- Increase system utilization by leveraging hardware capabilities



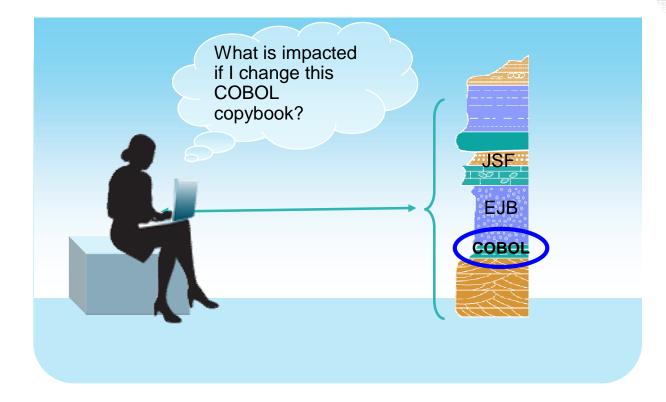
Increase flexibility by revitalizing existing application portfolios



Business intelligence for applications Enterprise architecture and portfolio management SOA tools for all platforms and languages Operational reuse User interface modernization Application transformation tools and services Quality across the organization



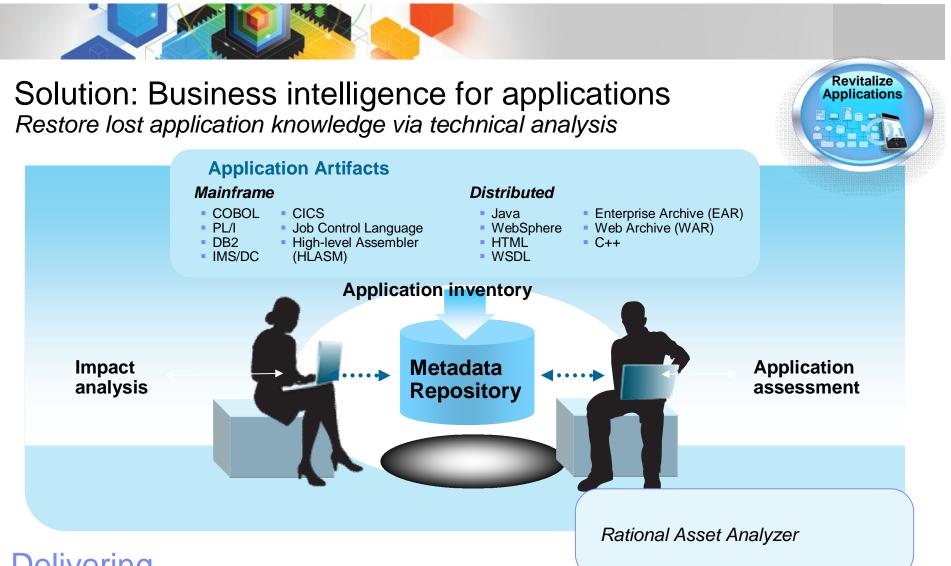
Enterprises want to... Understand the impact and cost of change to their IT systems



But...

They have no business intelligence inventory of their application assets, relying instead on manual and error-prone processes and incomplete knowledge. They must compensate with more extensive planning and extra testing.

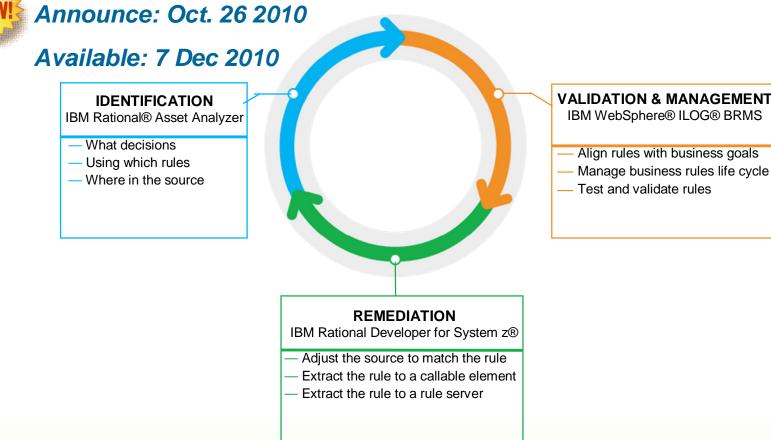
Revitalize



Delivering...

Reduced risk by quickly determining the full impact of proposed changes and lowered costs via dead code elimination, optimal planning, focused testing and faster development





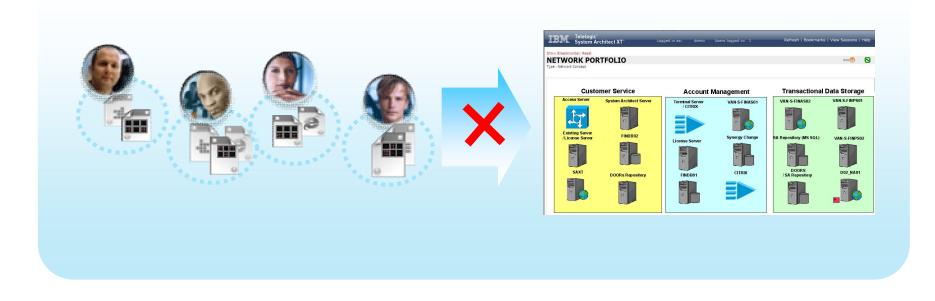
Delivering...

The essentials for business rule mining of existing software assets enhancing the ability to capture, maintain and take advantage of application knowledge that can provide insight into an application's structure and its interactions with business data.



Enterprises want to... Better align IT activities and investment

Better align IT activities and investments with their business goals and objectives

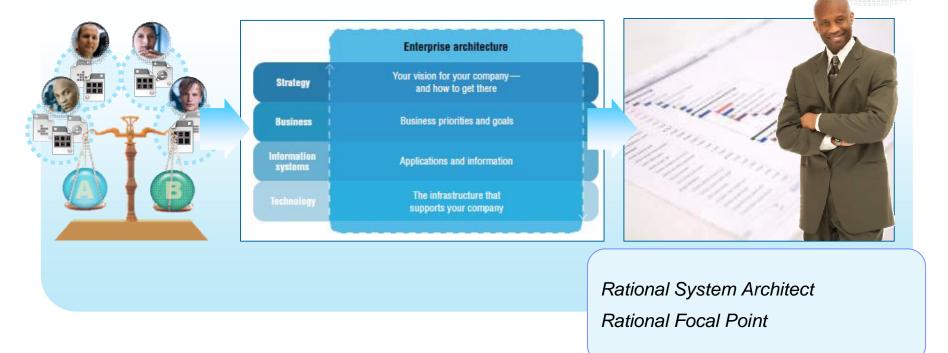


But...

They do not have a tool or process for capturing business goals or prioritizing projects, nor for linking them to the associated IT efforts. They rely instead upon less rigorous verbal discussions and difficult-to-maintain documents.

Revitalize





Delivering...

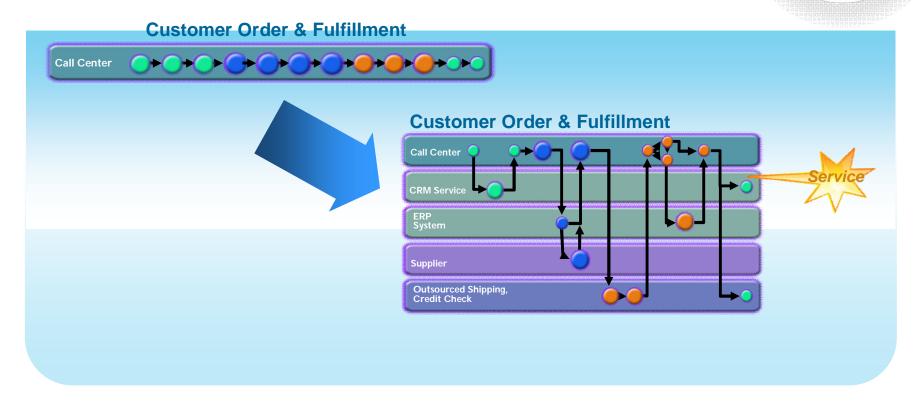
Understanding of current application infrastructure, prioritization of cost-cutting and consolidation candidates, impact analysis of portfolio decisions, and central oversight of architecture, risks, demands, and investment management

Revitalize



Enterprises want to...

Have a nimble IT organization that leverages SOA to respond more quickly to the needs of the business

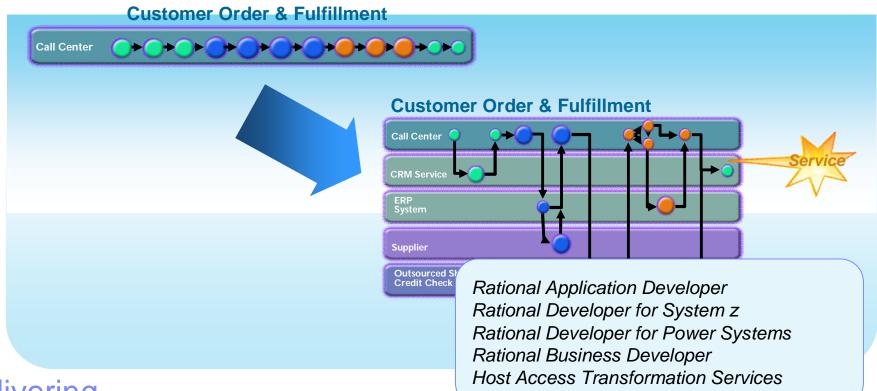


But...

They have application architectures that were built incrementally over the last 20-30 years and are no longer flexible or agile.

Revitalize

Solution: SOA tools for all platforms and languages Use powerful tools to quickly begin SOA evolution by harvesting and repurposing proven assets



Delivering...

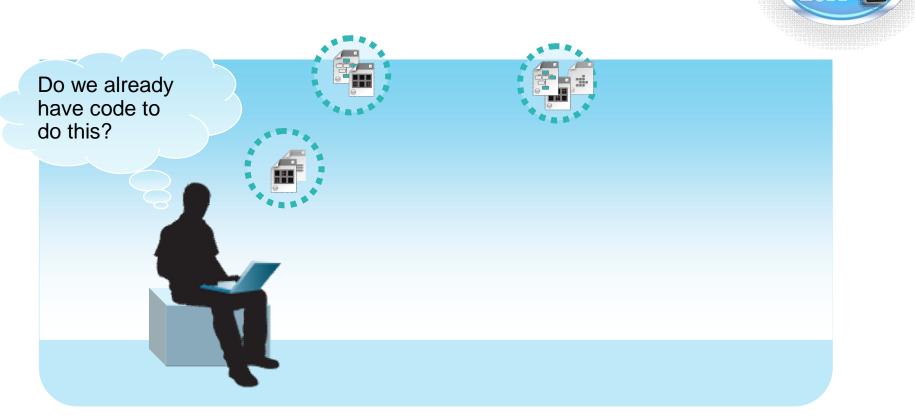
5x lower costs and reduced risk through reuse of existing assets, higher productivity, and platform portability of new services

Revitalize



Enterprises want to...

Reuse existing assets to reduce duplication and speed time to market



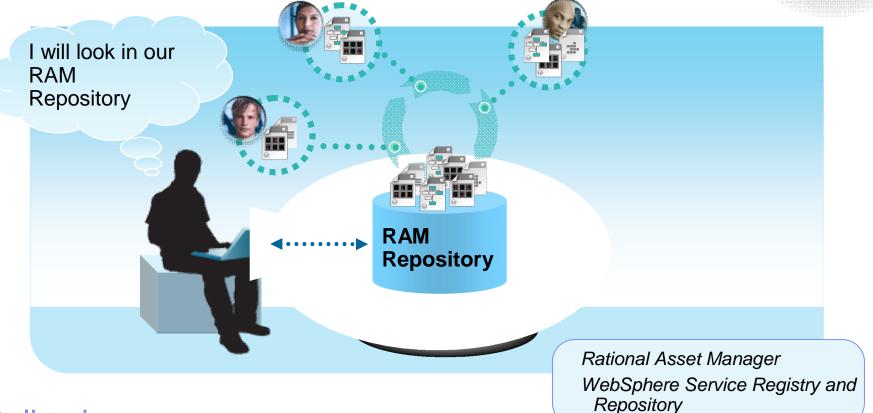
But... They do not have the infrastructure to establish a reuse culture

Revitalize Applications



Solution: Operational reuse

Instill proactive asset management of all IT artifacts into the organization's processes and culture by deploying a reuse infrastructure



Delivering...

Greater reuse, development efficiency, faster time-to-market, and higher quality

Revitalize



Enterprises want to...

Provide a range of appealing, more intuitive user interfaces to increase employee productivity and boost customer satisfaction



But...

The cost of replacing or re-writing these applications is prohibitive, and they may not have the necessary web and UI technology skills Revitalize

Solution: User interface modernization Deploy the ideal UI for your application, from quickly creating a modern Web UI out of an existing green screen application to customizing a highly interactive, graphical Web 2.0 UI

Delivering...

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Greater customer satisfaction, lower employee training costs, and fewer errors from more modern and compelling UIs

Rational EGL

Host Access Transformation Services

Rational Developer for Power Systems

Rational Developer for System z

Rational Business Developer

Rational Application Developer

Revitalize





Original Screens

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- ✓ One to one screen to EGL RUI
- UI patterns mapping (list, detail, headers, message, etc)

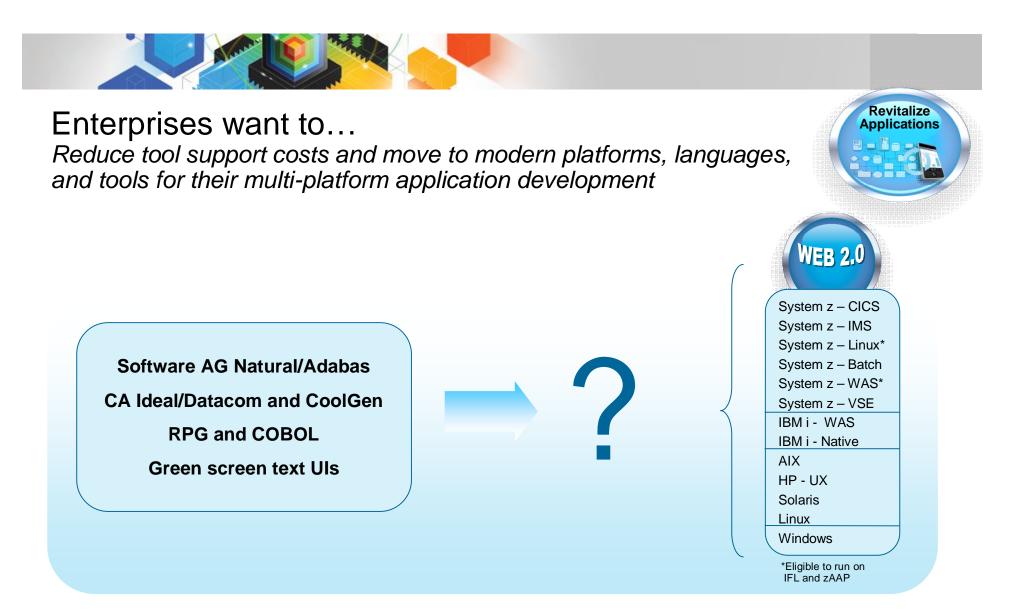
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Enhanced Transformation



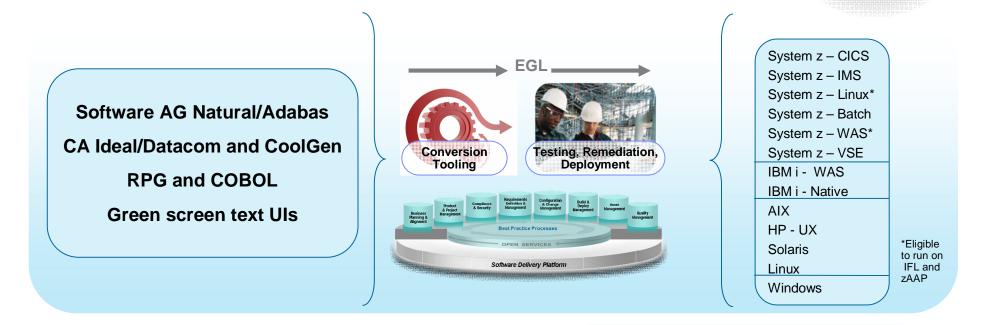
- Combined UIs, improved flow, resizable panels, etc
- Combo boxes, radio buttons, date pickers, tabs, etc
- Mash-ups and integration with other systems



But...

They are stuck on poorly supported, expensive, legacy development platforms

Solution: Application transformation tools and services Migrate from older languages and expensive tools to modern development platforms, languages, databases and tools



Delivering...

Greatly reduced development platform support costs, and more flexible, integrated development environment for making future application enhancements Rational Migration Extension for Natural Rational Migration Extension for CA Rational Migration Extension for Rich UI Rational Migration Extension for IBM i

Revitalize



Boost productivity and accelerate innovation with modern skills



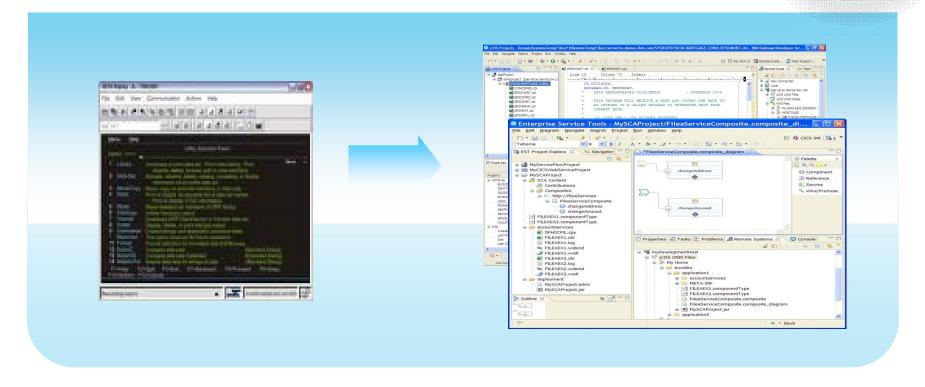
Modern IDEs for all platforms and languages

Modern business language

Enterprise training programs, communities and resources



Enterprises want to... Increase productivity of their "backend" development staff, as well as attract new employees to this work



But...

They have antiquated development tools which deliver low productivity and are repulsive to younger staff Empower

Solution: Comprehensive, multi-platform IDEs Upgrade to modern Eclipse-based tools to develop and maintain enterprise applications spanning multiple platforms, languages, and technologies

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Constant of the second of	Constant of the second se	Rational Developer for System z Rational Developer for Power Systems Rational Application Developer Rational Business Developer

Delivering...

22%-37% improvement in developer productivity¹, modern tools with which to attract new talent, and 50%-80%¹ reduction in host CPU usage with workstation syntax checking

Empower

The original System z development environment ISPF has provided consistent tooling for decades...but it is limiting



Challenges...

- Constant connection to mainframe is required
- Development shares processor with production use; gets lower priority
- Inability to create cross-platform components
- ISPF green screen UI is unappealing to new hires
- MIPS used for development vs. production

Empower

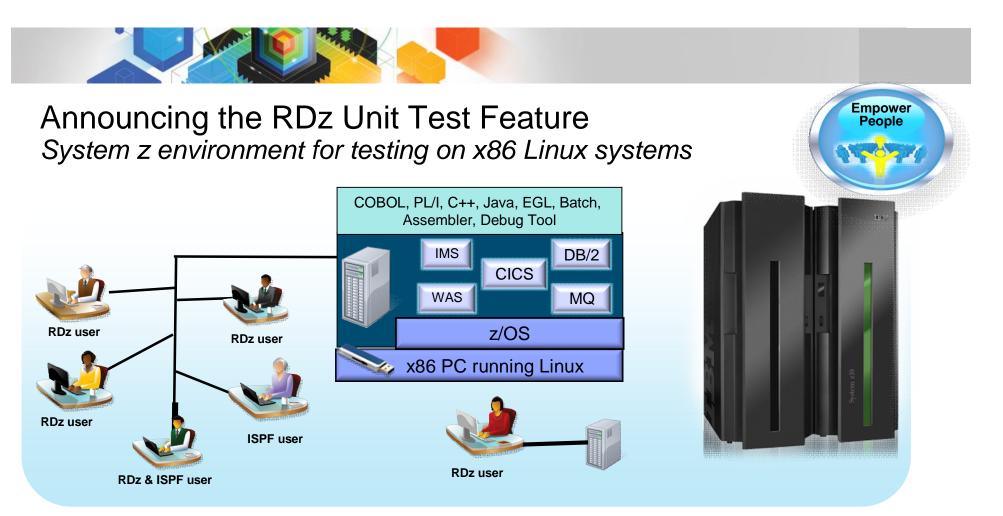


Modern IDEs add value

- Higher productivity; more attractive for new developers
- Ability to offload some development MIPS
- Integration with complete application lifecycle tools

But challenges remain

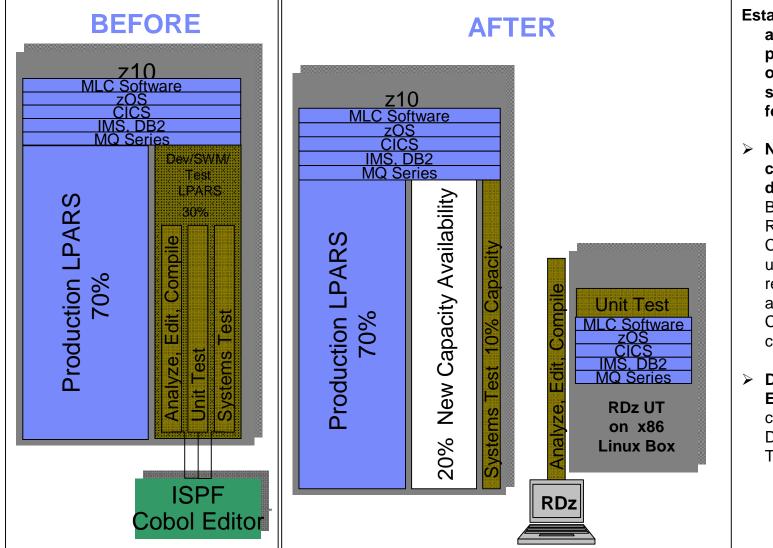
- Business pressures to reduce development MIPS further
- Test delays caused by dependencies on operations team, thus hurting productivity or portion



- Liberate developers to rapidly prototype new applications^L Develop and test System z applications anywhere, anytime
- Free up mainframe development MIPS for production capacity
- Eliminate costly delays by reducing dependencies on operations staff

Note: This Program is licensed only for development and test of applications that run on IBM z/OS. The Program may not be used to run production workloads of any kind, nor more robust development workloads including without limitation production module builds, pre-production testing, stress testing, or performance testing.

RDz UT & Mainframe Capacity - Before and After

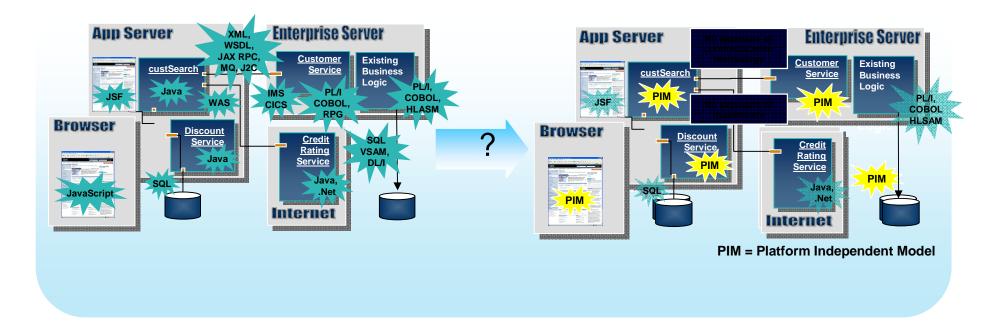


Establishing RDz UT, as in the "AFTER" picture, provides opportunities for savings in the following areas.

- Newly available capacity can help defer z upgrade -By establishing the RDz UT environment Customer can defer upgrade costs related to IBM MLC and One Time Charge upgrades costs from ISV's.
- Dedicated Available
 Environment for
 continuous
 Development and
 Test



Enterprises want to... Build modern, multi-platform applications with existing and new staff



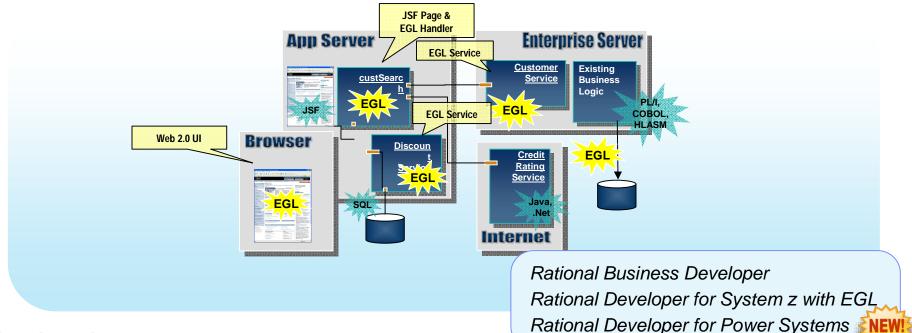
But...

They have different teams of developers for each platform, and re-training them to all the new technologies is costly, time consuming, and often impractical

Empower

Solution: EGL – An open, modern business language

Build new or extend existing multi-platform enterprise applications in EGL with its middleware abstractions, high productivity language, modern IDE, and extensible architecture



Delivering. . .

High productivity, platform portability, and skills flexibility, for existing and new developers when building all types of modern enterprise applications

Empower People



- Open source project at Eclipse.org for the EGL language, compiler, source editing tools, debugger, and generators for Java and JavaScript
- Initial contribution based on technology in IBM Rational Business Developer
- Core EGL development by IBM and other participants in the open on Eclipse
- Project launched June 7, 2010



Benefits of an open EGL ...

- Reduces risk
 - Jointly developed in the open at Eclipse.org
 - Source available under Eclipse Public License (EPL)
- Accelerates innovation
 - Gives others (not just IBM) the ability to ...
 - Build tools that compliment the tools provided by IBM
 - Extend deployment to new runtime platforms
 - Add language extensions to support new concepts
- Broadens awareness and community
 - Opens EGL to new audiences
 - Gives others the opportunity to be involved in the planning and development process



Tools and solutions from IBM

- Rational Business Developer
- Rational Developer for z with EGL
- Rational Developer for i for SOA
- Rational Migration Extensions

IBM tools provide support for WebSphere Application Server, development of EGL JSF and TUI applications, generation of COBOL, and more ...

Read the project proposal:

www.eclipse.org/proposals/egl





Consolidated team infrastructure

Agile team infrastructure

Rational Software Delivery Platform powered by Jazz

Given the rise of distributed teams and the pace of technology change, managing software development cycles has never been more difficult

What we're

"2/3 of our projects span multiple business units"

"Our architecture needs to be significantly more scalable and flexible"

"We' have a process but our tools don't enforce it. It's not serving it's purpose."

On time delivery of software is paramount as it is a risk to our business profitability.?"

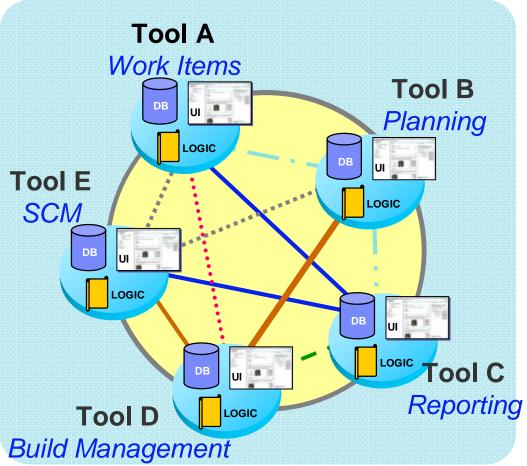
"We have to go where the best talent is, but we have IP and compliance realities"

What we're seeing...

- Increasingly diverse and cross organizational project teams with multiple product architectures
- Interest in managing software as an asset using flexible software delivery models
- Software becoming more critical to the operation and on-time delivery of new products
- Open, customizable, framework enabling new business models

Our customers have invested in a diverse set of ALM tools...

- Traditionally, each tool came with its own
 - UI Web and desktop presentations of views and tasks
 - Logic Workflow, process, search, query, scale, security and collaboration
 - Storage Availability, traceability
 - Privacy, backup/archive
- Resulting in...
 - Brittle integrations
 - Silos everywhere
 - High cost to maintain and administer
 - Proprietary API's



How do you solve this?

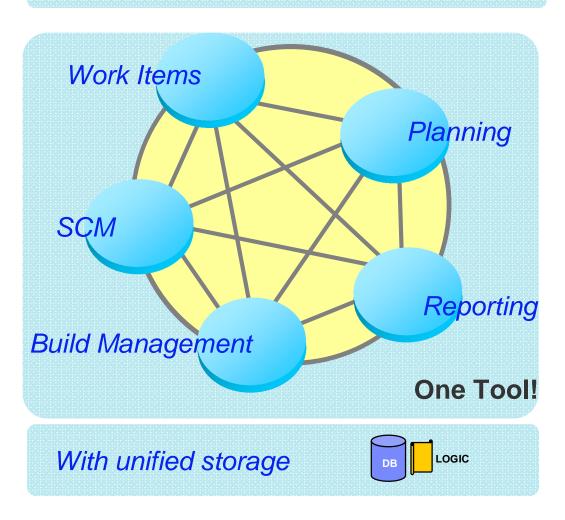
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With Rational Team Concert, you get...

A unified client



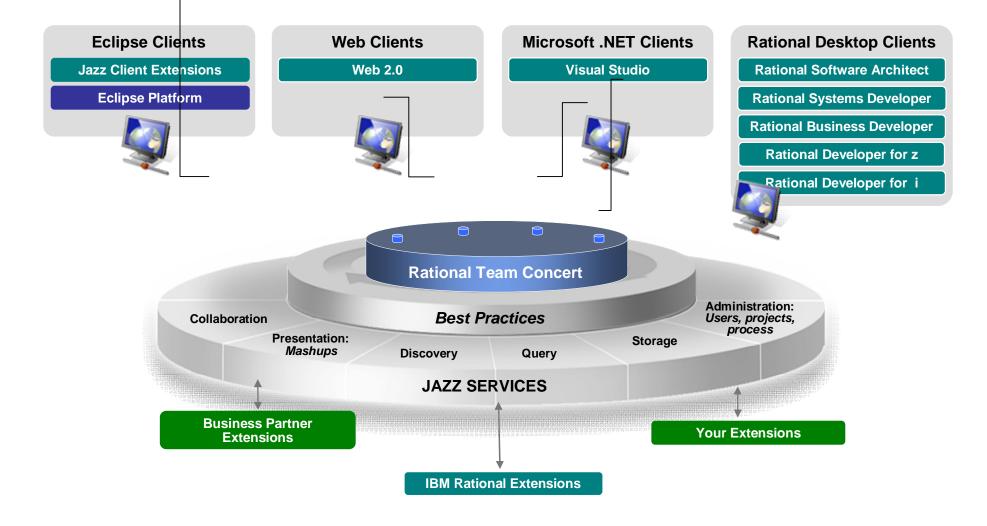
- Unified Work Items, Agile Planning, SCM, Build Mgmt, Reporting
- Single UI, storage and process
- Reduces Cost of Ownership
 - Administrative costs
 - Training/Adoption
 - Customizations



Rational Team Concert: An open, extensible

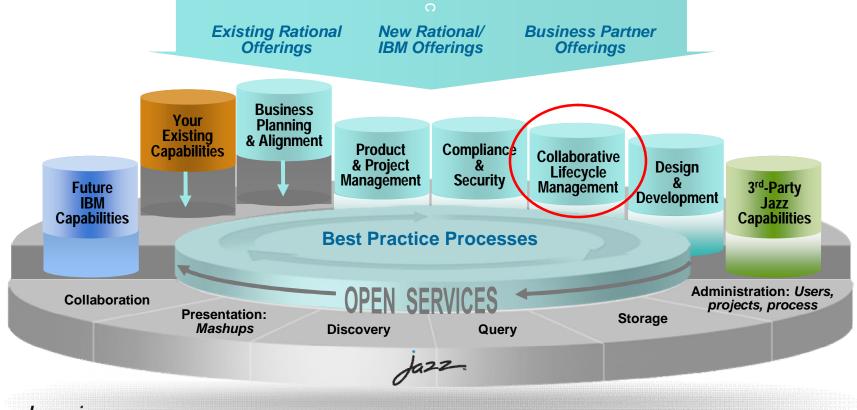
architecture

Supporting a broad range of desktop clients, IDE's and languages



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Rational Team Concert is based on Jazz an open platform with a shared set of services



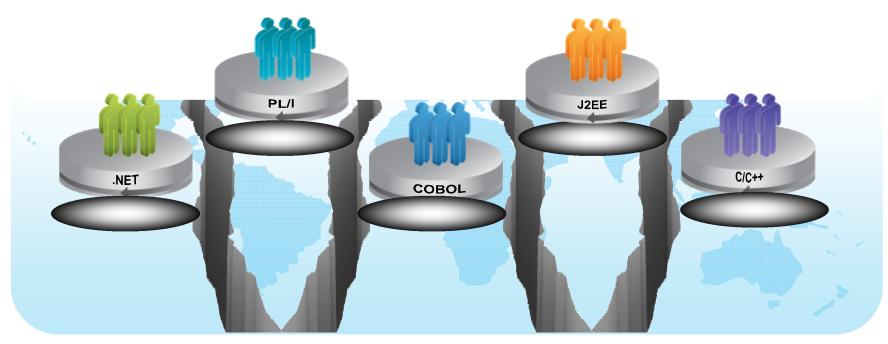
Jazz is...

- A scalable, extensible team collaboration platform
- A community at Jazz.net, where you can see Jazz-based products being built
- An integration architecture, enabling mashups and non-Jazz based products to participate



Enterprises want to...

Enable agile, multi-platform and cross-geo collaboration and governance while reducing their team infrastructure costs



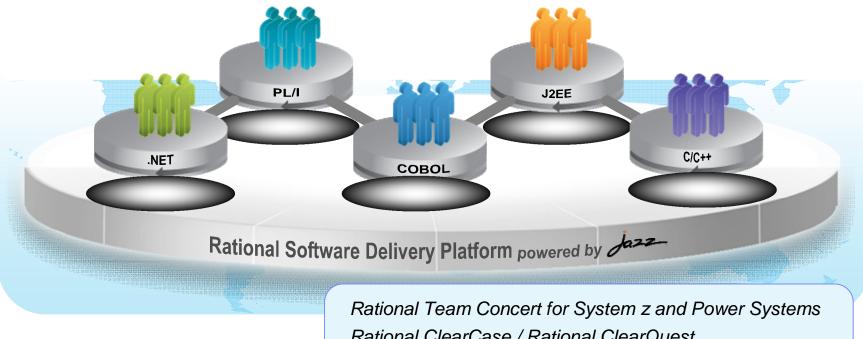
But...

They have "islands" of development, each with different tools, processes and team infrastructure, and they do not support real-time collaboration or integrated, comprehensive oversight Unify

Teams

Solution: Collaborative application lifecycle management

Deploy new, common team infrastructure for source control, change management and build that empowers your team with integrated collaboration, process automation, and reporting



Delivering...

Rational ClearCase / Rational ClearQuest Rational Buildforge

Improved communication, higher quality, informed decision-making, and more automated, transparent and predictable software development Unify

Teams

Traceability answers the commonly asked questions...





do a patch?







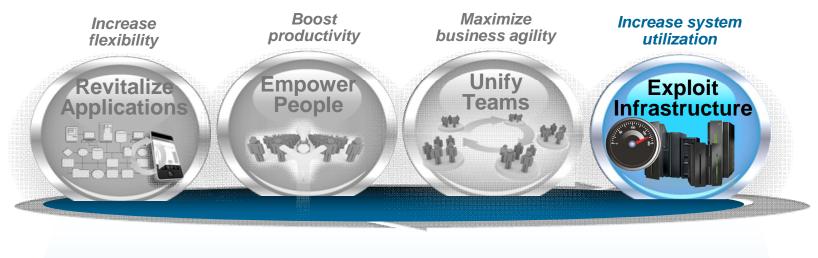
CM / Build Team Test / QA Team Analysts **Developers Project Manager** Which requirements What requirements How can I standardize What is the quality of Are we ready to are addressed in this am I implementing? release? when teams use the build? iteration? different tools? What test What has changed What tradeoffs can we Are all of the uncovered this that I need to test? Where are the make to release on requirements tested? bottlenecks in our defect, on which time? What automated tests environment and processes? What's the quality of have been run & with How far along is a what build? the high priority what result? specific fix in the How can I speed up requirements? my builds? development cycle? What changes What defects have occurred What defects are Are build times been addressed since Can we pass an overnight? reported against getting longer or the last build? audit? How can I recreate which requirements? shorter? What defects were the last version to resolved in this

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release?



Improve application performance by fully exploiting modern hardware



Exploit new advanced optimization technology in C/C++, Java, COBOL, PL/I and Fortran compilers

Rational Software Delivery Platform powered by



Enterprises want to...

Maximize application performance on existing hardware to reduce capital expenses





But... They have back-level compilers or are not fully using optimization

Solution: Advanced compiler technology Exploit new advanced optimization technology in C/C++, Java, COBOL, PL/I and Fortran compilers



I by the C/C++ for AlX and Linux

Delivering...

Lower capital outlays by increasing capacity, and improved performance of application suite

- IBM XL Fortran for AIX and LinuxIBM COBOL for z/OS, AIX
- IBM PL/I for z/OS, AIX
- IBM WebSphere[®] Development Studio (IBM i compilers)

Exploit

Infrastructure

Customers are adopting Rational solutions for Enterprise Modernization

Improved productivity by 15%

UniCredit modernizes mainframe development and testing with IBM Rational Developer for System z software

More than 200 developers at HVB IS began using IBM Rational Developer for System z software to develop mainframe applications for IBM System z servers. Increased developer productivity by 15%

Wipro and its customer chose IBM Rational Business Developer and EGL technology to transform the application

The new system accesses the customer's existing IBM DB2 information management system running on an IBM System i platform, and now includes IBM WebSphere Application Server software to support a modern, three-tier architecture.

Reduced development time by 15-20%

SoforTe improves productivity for developers and customers with IBM Rational software on System z and Rational Team Concert for System z

SoforTe chose to implement RDz and RTCz on an IBM System z10 Business Class server running z/OS and clients running Microsoft® Windows® clients to provide a modern powerful development environment for its customers. IBM Rational Enterprise Modernization key announcements Continuing the evolution to optimize System z software development

Rational Migration Extensions for RUI and CA

- Rational Developer for System z Unit Test Feature
- EGL open source on eclipse.org
- Rational Team Concert for System z beta



To learn more visit: ibm.com/software/rational/modernization/





Learn more at:

- IBM Rational software
- Rational launch announcements
- Rational Software Delivery Platform
- Accelerate change & delivery
- Deliver enduring quality
- Enable enterprise modernization

- Ensure Web security & compliance
- Improve project success
- Manage architecture
- Manage evolving requirements
- Small & midsized business
- Targeted solutions

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How to get started?





Sandboxes for SOA, System z and Power

✓ Try IBM's latest software for SOA, BPM, System z and Power Systems for free

 A low risk cloud based approach to try out several new offerings and integrated solutions Sign up for 2010 Rational Developer for System z - Free Distance Learning Classes

http://www-949.ibm.com/software/rational/cafe/docs/DOC-3303

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

Rational Cafés



IBM Rational Cafés

✓ To help, IBM has implemented solutions that feature community-based knowledge sharing - that give your developers instant, secure access to shared content, and opportunity to interact with IBM experts on topics related Enterprise Modernization

Join our COBOL, RPG, EGL and C/C++ Communities

→ Learn more

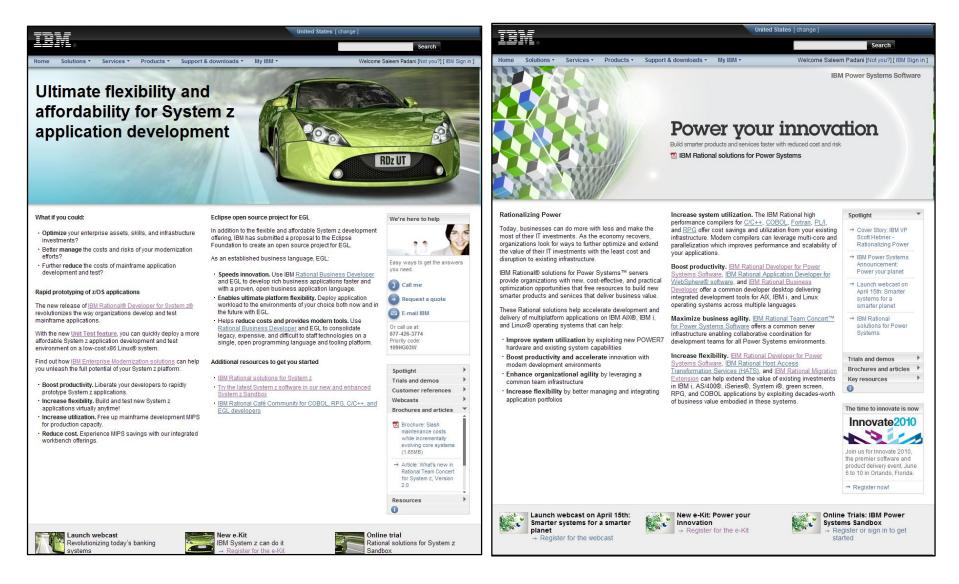
http://www-949.ibm.com/software/rational/cafe/index.jspa



To learn more visit:

www.ibm.com/software/rational/announce/modernization/

www.ibm.com/software/rational/announce/power/



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