

# Enterprise Modernization: The Transformation of Application Development for All Platforms

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IBM Rational Software Development Conference 2008

WHERE TEAMS ARE **R-HEROES**



# Change is the new norm

Soon there will be over 2 billion people on the web



By 2010, there will be 1 billion transistors per human



China sends more text messages in a week than the U.S. does in 1 year

***“8 of 10 CEOs see significant change ahead”  
- 2008 IBM CEO Survey***



By 2010, there will be 30 billion RFID tags in circulation

By 2011 there will be trillions of interconnected objects – cars, planes, cameras, roadways, pipelines - forming an “Internet of Things”

There are 1 billion camera phones in use today



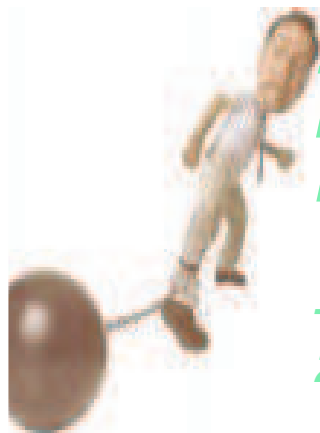
## Companies are struggling to keep up

*“The gap between expected change and the ability to manage it has almost tripled since 2006.”*

*– 2008 IBM CEO study*

*“IT investments made 10 to 20 years ago are ... constraining the speed with which these businesses can change and respond to industry threats.”*

*– Gartner’s Top Predictions for Industry Leaders, 2007 and Beyond*



## IT should be an Enabler, not a Burden

## Modernization is Easier said than Done



To enable flexibility, IT must overcome challenges such as:

No business intelligence inventory of application assets

Complex application architectures

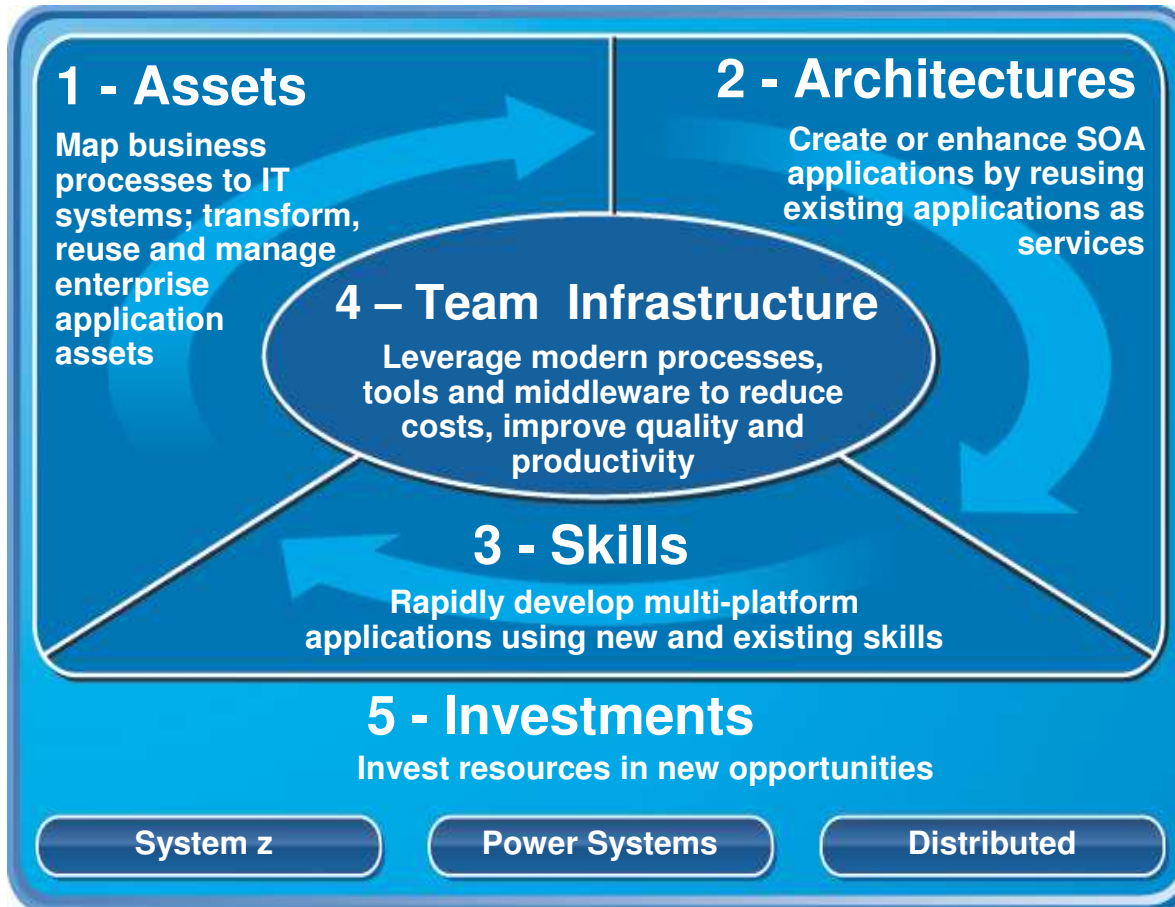
Skills lock-in and staff inflexibility

Antiquated development tools

Islands of development – tools, processes, infrastructure

Limited funding for new investments

# 5 Dimensions of Enterprise Modernization



1. *Leverage value in existing assets to support and enhance business processes*
2. *Drive innovation with SOA and web technology advancements*
3. *Leverage existing and new staff on multi-platform projects*
4. *Improve quality and flexibility with a consolidated team infrastructure*
5. *Reduce maintenance costs*

<http://www-306.ibm.com/software/info/developer/solutions/em/>

# Modernize your Asset Management

I want to improve my business processes, but where do I start?



## Business Challenge:

Difficulty understanding and leveraging existing IT systems to support business processes

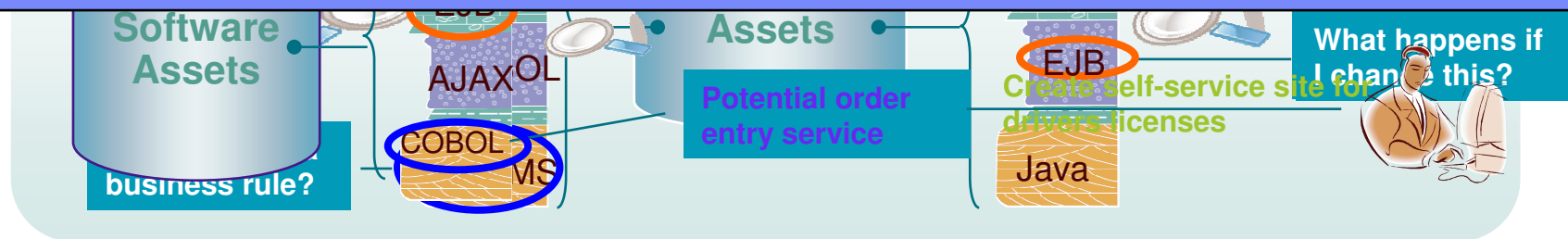
## Solutions:

Comprehensive inventory of assets for impact analysis & reuse



**EM06: Modernizing your assets for SOA**  
Tuesday, September 23, 2:00 PM – 3:00 PM  
Andy Symonds (IBM)

**EMLAB01: Hands-on Experience with Rational Transformation Workbench**  
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# Modernize your Architectures

That would make a great web service!



**Business Challenge**  
Inflexibility in adapting applications in

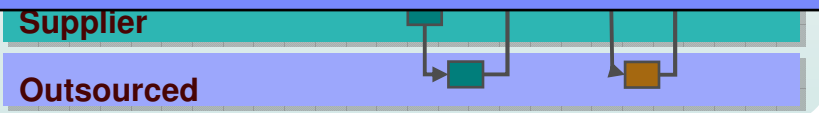
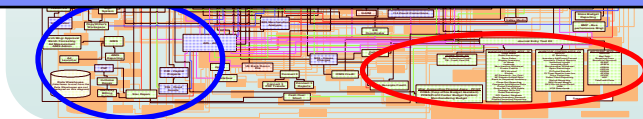
**Solutions**  
Flexible architectures to enable business agility

**EM02: Service-enable Your New and Existing System z Applications**  
Monday, September 22, 1:20 PM – 2:20 PM  
Russell Bonner (IBM)

**EM04: Service-Oriented Architecture Enabling 3270 and 5250 Assets using IBM Rational Host Access Transformation Services**  
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# Modernize your Skills - Languages

I built that cool web 2.0 app with EGL



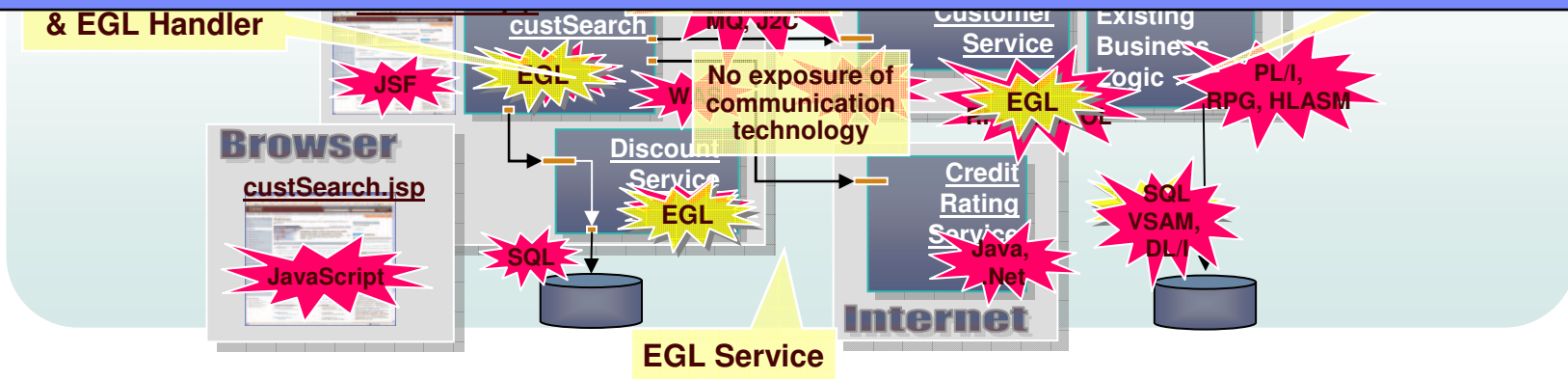
**Business Challenge**  
Staff inflexibility due to “skills silos”

**Solutions**  
Powerful tools & abstractions for cross-platform development using today’s skills & tomorrow’s new

EPD 71 9/2008



**EM03: EGL and IBM Rational Business Developer: An Executive Overview**  
Monday, September 22, 2:30 PM – 3:30 PM  
Todd Britton (IBM)





New!

## Web 2.0 - Rich Internet Apps

Users now expect modern, interactive UIs: Dojo, Google Maps, etc.

Browsers are ubiquitous and increasingly powerful

Reap the benefits of Client-Server architectures:

- Presentation logic within the browser

- Server used for business and data access logic

- Server bandwidth and response times increase

But typically, many low-level technologies to learn:

- JavaScript, HTML, CSS, Ajax, Dojo, SilverLight, SOAP, WSDL, Flex, XML, JSON, Google Maps, HTTP, etc

- Focus is on “how” instead of “what”

EGL Rich UI hides these details and complexities:

- Focus is on “what” instead of “how”

- Improves developer productivity

- Enables more developers to build Web 2.0 solutions

- Easily extensible with new widget sets



# Rational Business Developer - EGL Café

*The Community for Business Developers*

- Join
- Download
  - product trials
  - Sample code
- Learn
  - Documentation Corner
  - Jon's Corner – Learn
  - Articles, Books
  - About Products
  - Sandbox
- Participate
  - Forums
  - Blogs
  - Ratings
  - Reviews
  - Share code
- Partners
- Extending to RPG, COBOL, C/C++ in near future

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EGL Café  
Simplify Innovation

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Why EGL? A chat with the language Architect Tim Wilson.

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Popular Tags

What is EGL?  
Welcome to EGL, IBM newest business language.  
Just as in the 1960s the COBOL programming language was introduced to offer a simpler, more understandable and more productive way than the Assembly Language for writing business applications running on standalone computers, today the EGL language provides a simpler more understandable and more productive way to write cross platform, network enabled business solutions running across distributed computing environments.  
[Read the White Paper](#)

What's New

Concatenation operators  
17 hours ago in Documentation Corner by [ibnixon](#)

as operator  
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[www.ibm.com/rational/eglcafe](http://www.ibm.com/rational/eglcafe)

New!

# Modernize your Skills - IDEs

I am NOT going to miss my green screen editor



**Business Challenge**  
Low productivity, non-competitive tools for new developers

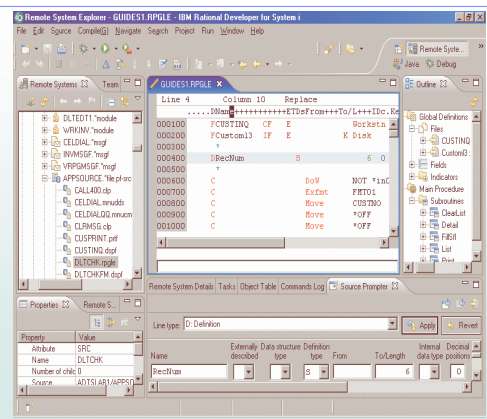
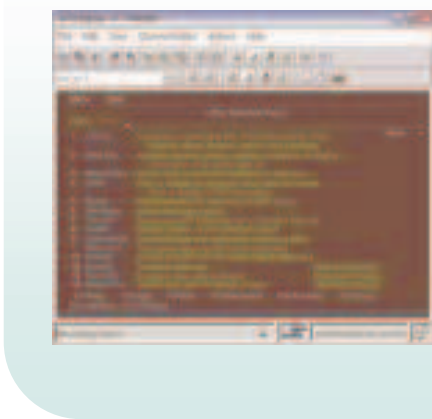
**Solutions**  
Modern IDEs to achieve high productivity and attract new talent

- How can we achieve this?**
- ▶ Achieve high productivity for new developers
  - ▶ Attract and retain new talent
  - ▶ Simplify license management by standardizing on a single, multi-platform development IDE?
  - ▶ Free up System z MIPS for production use?

**RDz 7.5 – 4Q08**

- ▶ Real-time syntax checking
- ▶ Simpler integrated build tooling
- ▶ Integrated program analysis tools
- ▶ Generate VSAM and QSAM access
- ▶ Generate COBOL from UML activity diagrams
- ▶ Decrease client & host resource usage

- ✓ Use modern IDEs to develop and maintain code
- Debug and test from workstation
- *Rational Developer for System z*
- *Rational Developer for System i*
- *Rational Business Developer*
- *Rational Developer for System i for SOA Construction*
- *Rational Application Developer*



# Modernize Your Team Infrastructure

The only island I want to see has palm trees



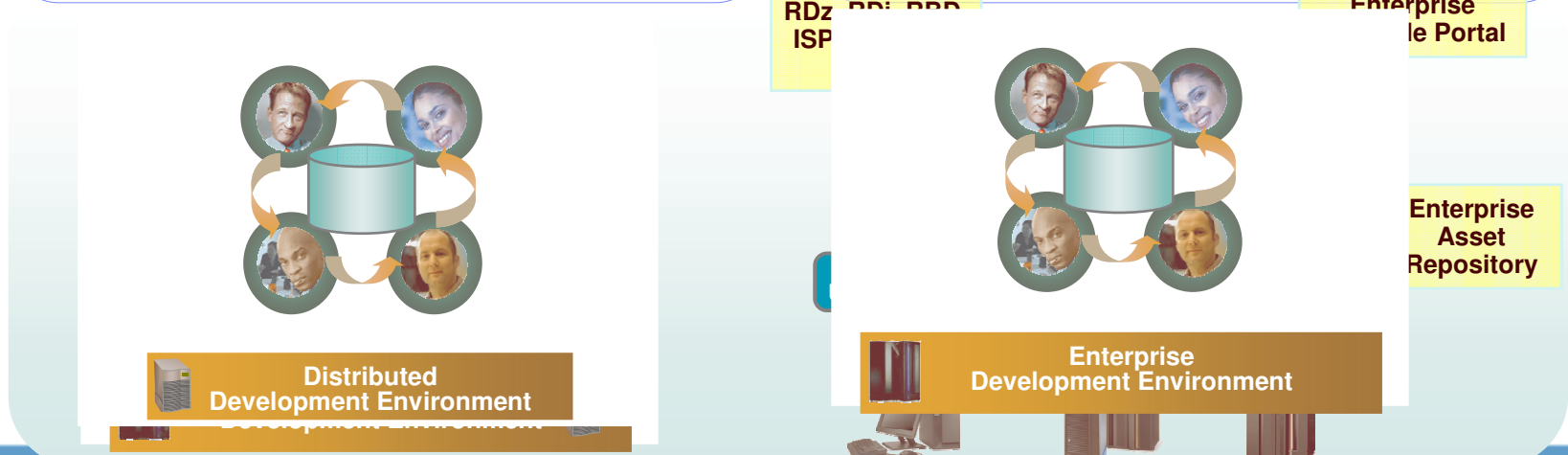
**Business Challenges**  
 Inefficient in multiple...

- CC 7.1 – 2H08**
- ✓ Template builds via CC Explorer
  - ✓ IPv6 support
  - ✓ Implementation Guide improvements
  - ✓ ISPF client performance improvements

- How can we...**
- ▶ Increase quality and improve responsiveness for multi-platform development teams?
  - ▶ Simplify management of team infrastructure for multiple development teams?
  - ▶ Reduce team infrastructure costs across the enterprise?

**Solutions**  
 Coordination, traceability, consistency across platforms

- ✓ Consolidate enterprise and distributed source code management
  - *Rational ClearCase*
- ✓ Automate and orchestrate defect tracking and configuration management across the enterprise
  - *Rational ClearQuest*
- ✓ Produce coordinated, traceable, automated, and cross-platform builds
  - *Rational BuildForge*



# Software Innovation through Collaboration

## Real time, in-context team collaboration

Make software development more automated, transparent and predictive

### "Think and work in unison"

#### Rational Team Concert for System z Rational Team Concert for IBM i

- ✓ Collaborative team environment for z/OS, IBM i, and distributed
- ✓ Specialized support for all language artifacts such as COBOL, PL/I, RPG, EGL, Java
- ✓ Native z/OS & IBM i file system support
- ✓ z/OS & IBM i artifact builds
- ✓ Hosted on z/OS, IBM i or distributed

#### Open beta for RTC on System z and IBM i - in progress

<https://jazz.net/downloads/rational-team-concert/betas>

#### Additional beta to bring Jazz technology to COBOL, PL/1, Assembler, and RPG developers; starting 9/2008 - accepting nominations

<https://www14.software.ibm.com/iwm/web/cc/earlyprograms/rational/RTCiz2008/>

Open and extensible on



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

## IBM Rational Team Concert



present integrated presence  
 wikis OPEN real-time reporting  
 chat automated hand-offs Web 2.0  
 custom dashboards automated data gathering  
**EXTENSIBILITY** Eclipse plug-ins services  
 architecture **FREEDOM TO CREATE**  
**JAZZ TEAM SERVER**



# Modernize your Development Investments

**Business Challenge**  
Archaic green screen applications

How can we

**HATS 7.1 3/2008**

- ▶ Mobile device support
- ▶ Visual macro editor (tech preview)
- ▶ JSR 168 support (portlet standard)
- ▶ Web services usability improvements

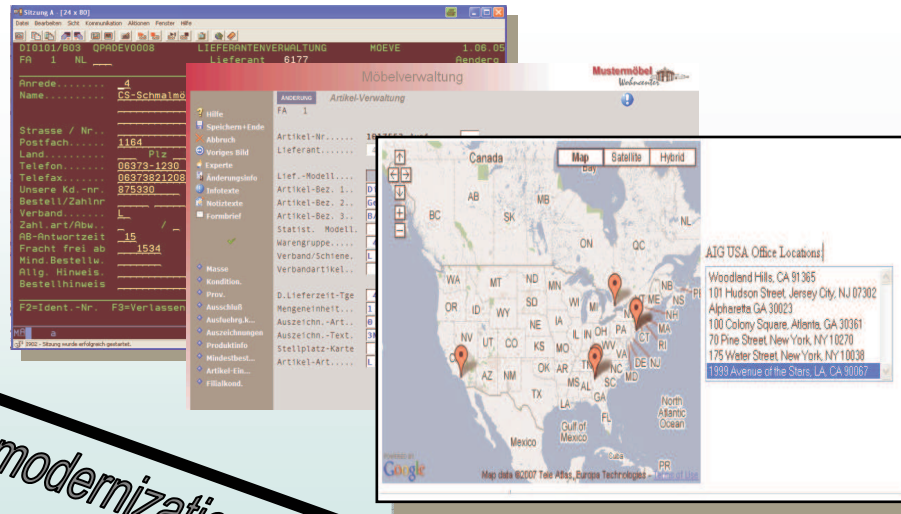
Create modern Web 2.0 rich web UIs without training staff in Javascript, XML, JSON, etc?

**Solutions**  
Create impressive UIs quickly

- ✓ Quickly and easily extend your 3270 and 5250 applications to the web
  - *Host Access Transformation Services*
- ✓ Leverage rich UI and Web 2.0 technologies with existing or new developers
  - *Rational Business Developer 7.5 (2H08)*
  - *On AlphaWorks today!*

Wow, did I build that?

Coming Soon!



# Modernize your Development Investments



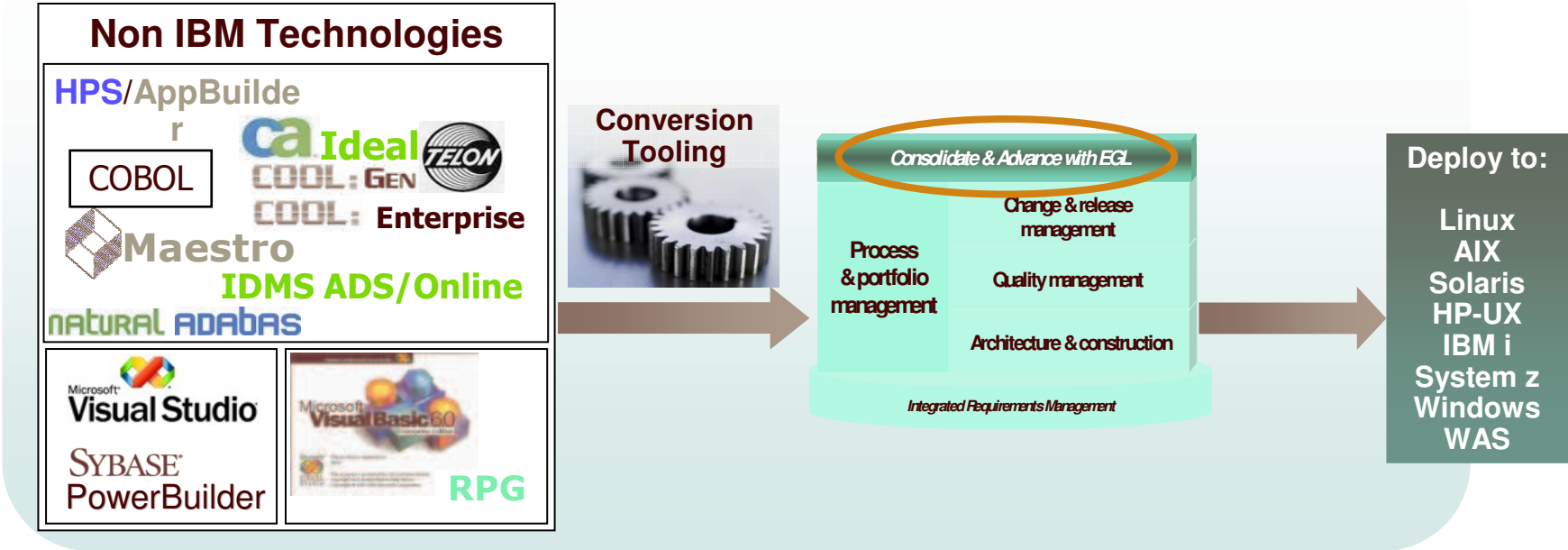
**Business Challenge**  
 Unsupported legacy development platforms

**Solutions**  
 Save money by moving off old platforms and languages

- Rational Migration Extension for Natural – eGA 6/2008**  
 ✓ Transform Natural/ADABAS apps to EGL/DB2 to move to modern language and tools platform, save money
- IBM Rational Migration Extension for IBM i – eGA 6/2008**  
 ✓ Transform RPG apps to EGL for customers and ISVs requiring multi-platform solutions

- ✓ Migrate from out-of-date and expensive legacy development platforms onto the IBM Rational Software Delivery Platform (SDP)
- EGL, DB2
  - All SDP tools

Let's ditch that old stuff and move to the SDP



# IBM Rational Software Delivery Platform

## Rational RequisitePro

- ✓ Reduce risk of project failure by managing shared common

*and so much more*

## Rational Functional Tester

- ✓ Reduce time and guarantee repeatability with automated testing,

### **EM05: Real-World Application Modernisation Projects**

Monday, September 22, 5:00 PM – 6:00 PM

Richard Hopkins (IBM GBS)

### **EM07: Software Quality for Enterprise Business Applications**

Tuesday, September 23, 3:20 PM – 4:20 PM

Neil Williams (IBM)

### **EM08: Enterprise Modernisation for System i**

Tuesday, September 23, 4:30 PM – 5:30 PM

Paul Bromelow (IBM), Andrew Ireland (Binary Computer Services)



## IBM Compiler Technology

- ✓ Exploit hardware improvements to improve application performance and “gain capacity”
- ✓ Use language standards conformance to support mixed language environments, improving flexibility

## Rational AppScan

- ✓ Identify vulnerabilities, privacy issues, quality exposures, and standards non-compliance



# Accelerating software innovation

## Customer successes

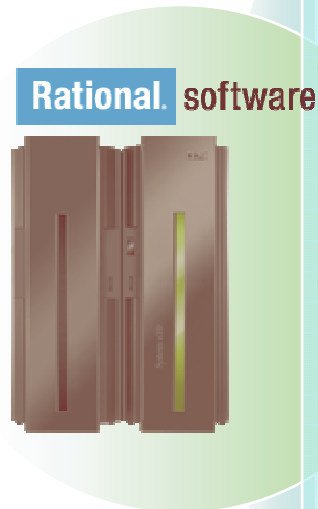
Create web UIs for existing host applications

Identify business services to leverage across the enterprise

Extend COBOL and RPG applications for SOA transformation

Gain staff flexibility by breaking skills silos

Unify enterprise and distributed teams



### User interface modernization

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



### Enterprise portfolio management

- ✓ Identified obsolete code within automotive systems, and began "decommissioning"
- ✓ Performed impact analysis across massive systems with WSAA and RTW
- ✓ Communicated impacts to affected development teams



### Rapid application development

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



### Cross-platform application development

- ✓ Standardized on EGL/RBD and RAD to unify application development across all platforms and transaction managers (e.g. WAS, IMS)
- ✓ Achieved rapid time to market



# What can I do now?



## Learn new stuff

- **Modern Application Architecture for COBOL Developers** - *design and integrate composite applications across CICS and WebSphere*
- **EGL Distance Learning** - *10 days of FREE instructor-led virtual class*



## Get quick ROI today

- **Rational Asset Analyzer** – *find out what assets can be reused today*
- **Host Access Transformation Services** – *quickly turn your green screens into web UIs*
- **Rational AppScan** – *make sure your web sites are hacker-proof*



## Take small steps

**System z & IBM i Starter packs** - *Software bundles to simplify getting started on your modernization journey*



## Try it out

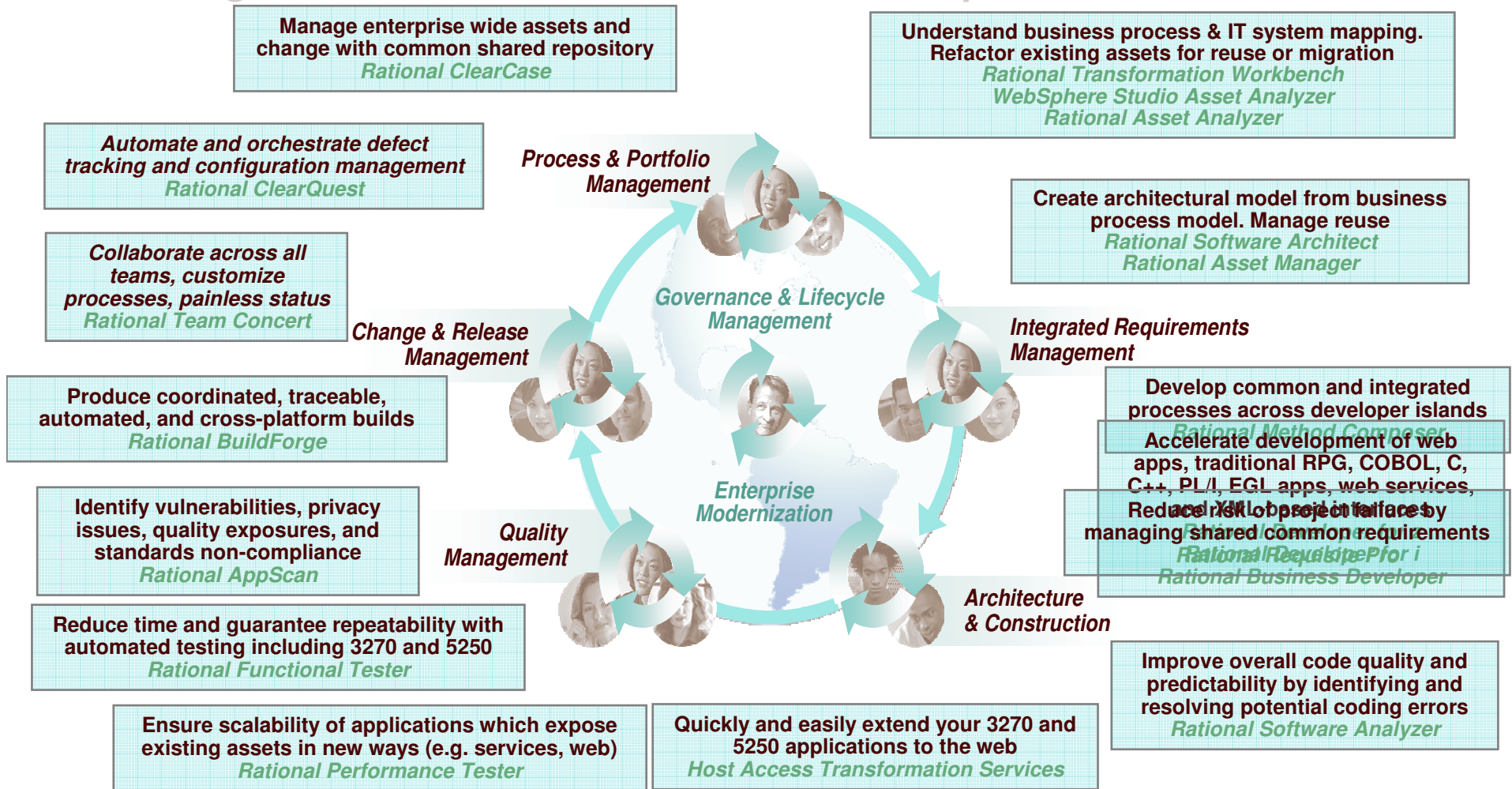
**System z & IBM i Sandboxes** - *Fully hosted online System z and IBM i environments to experiment, try and buy*

Learn more at:

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

# The Rational Software Delivery Platform

*Accelerating software innovation for the entire enterprise*





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Examples of Real-World Scenarios:

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