



*The future runs on System z*

# **Delivering Applications and Services at the Speed your Business Demands**

***Hayden Lindsey  
VP & Distinguished Engineer***

***Enterprise Modernization,  
Modeling, Construction & Compilers  
Rational Software***



# Businesses are challenged to deliver innovation

**80%**

CEOs anticipate turbulent change and bold moves.<sup>1</sup>



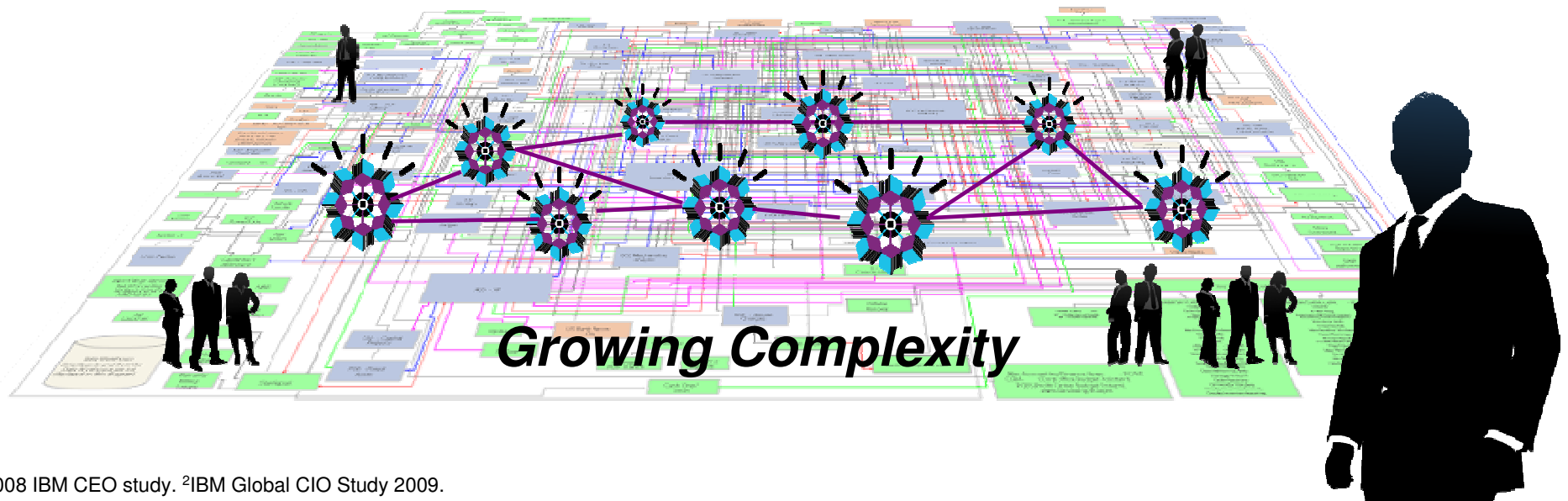
**64%**

of CIOs work with senior business executives to drive innovation.<sup>2</sup>



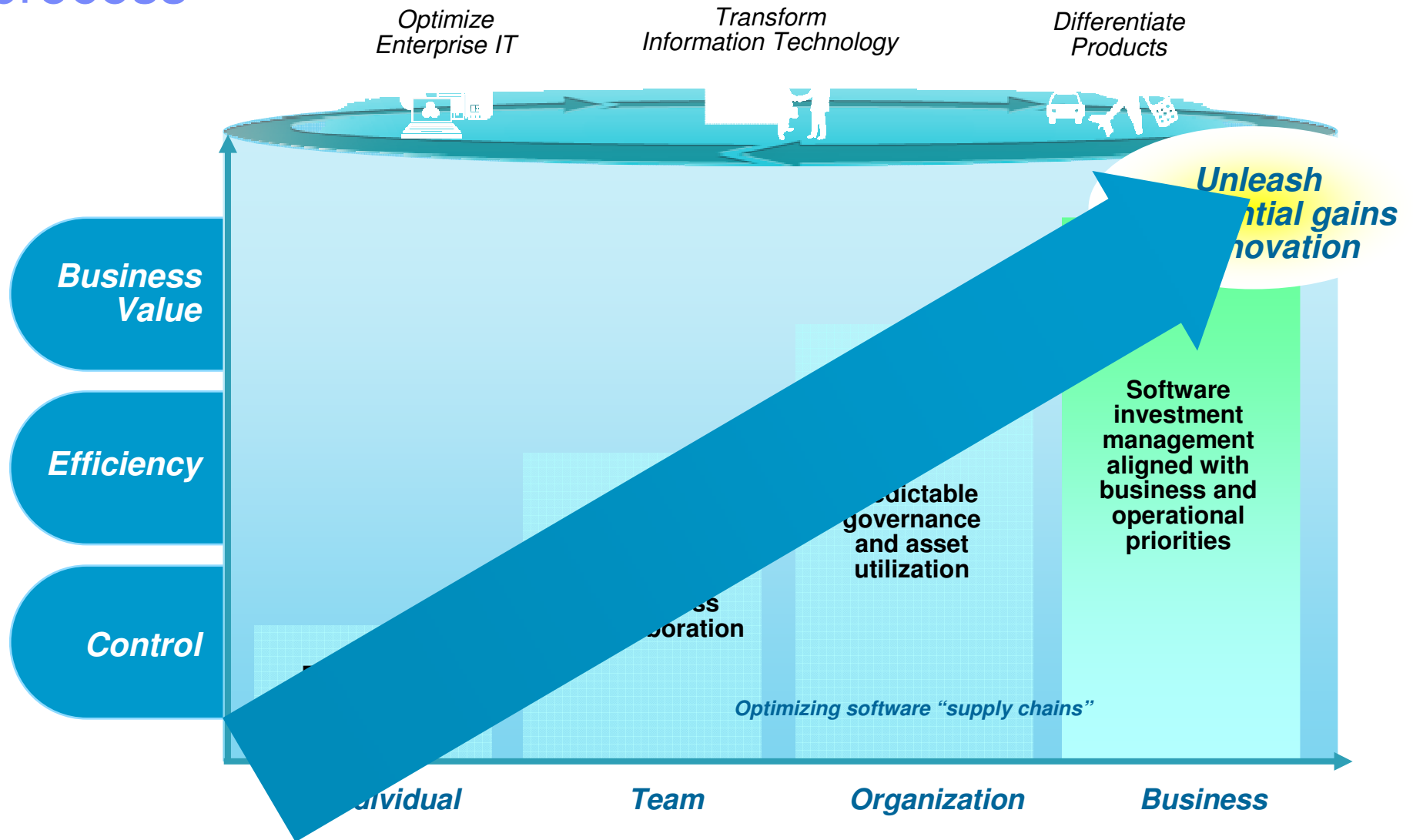
**3x**

increase in the gap between leaders' need and their ability to deliver it.<sup>1</sup>



<sup>1</sup>2008 IBM CEO study. <sup>2</sup>IBM Global CIO Study 2009.

# Treat software development as a strategic business process

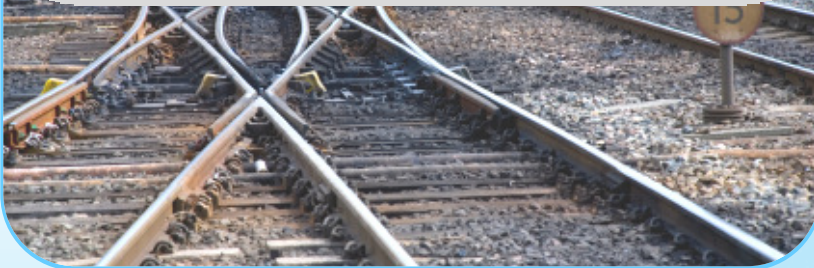


# Challenges to achieving greater value from your IT investments

## 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



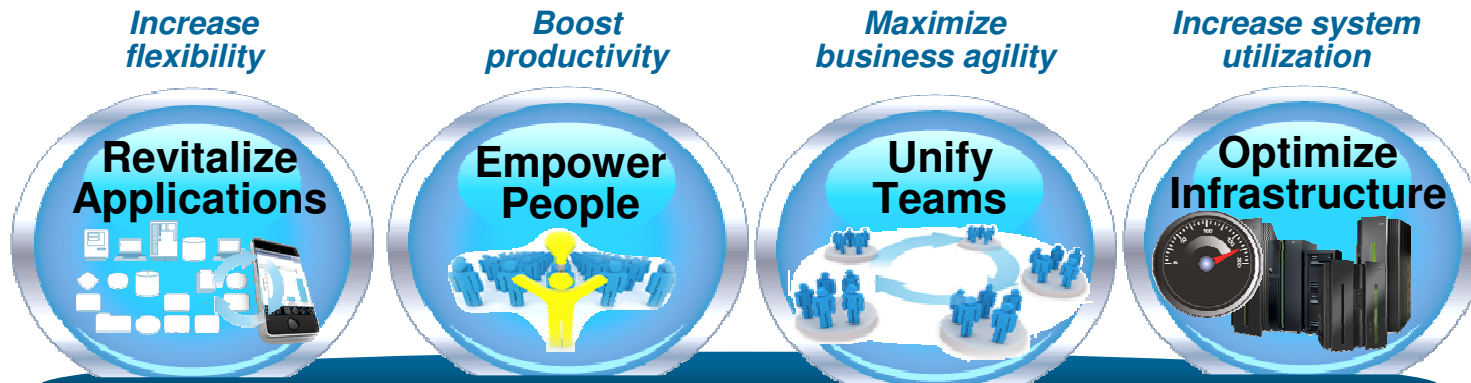
*“Our teams on different platforms are struggling to communicate. How do we collaborate in the context of our work?”*

## Infrastructure



*“We are looking for a cost effective way to improve our infrastructure efficiency and free up capacity to handle more volume”*

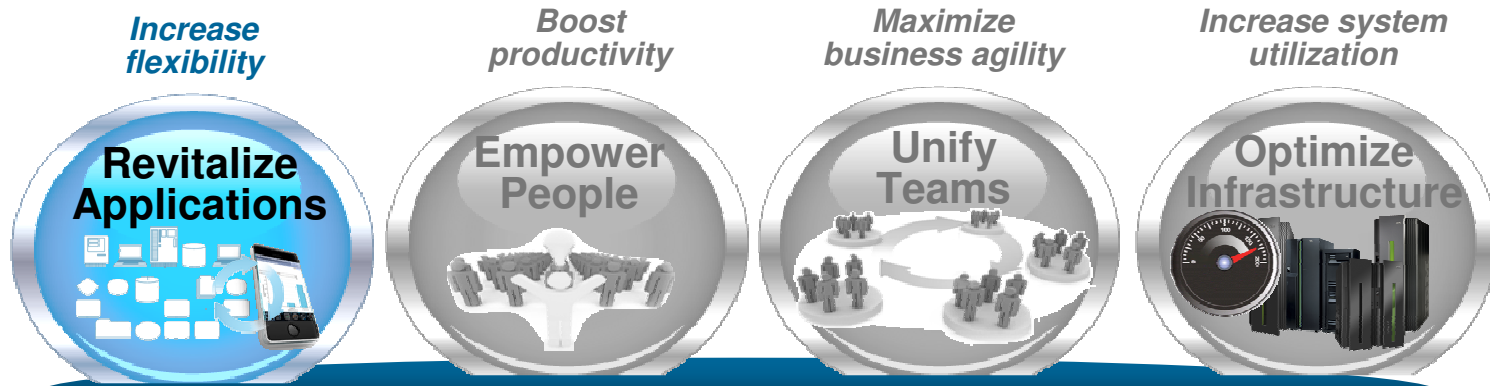
# IBM Rational Enterprise modernization solutions can help *Optimize your applications, people, team and infrastructure investments*



- **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 optimizing application infrastructure

Rational Software Delivery Platform *powered by jazz*

# Increase flexibility by revitalizing existing application portfolios

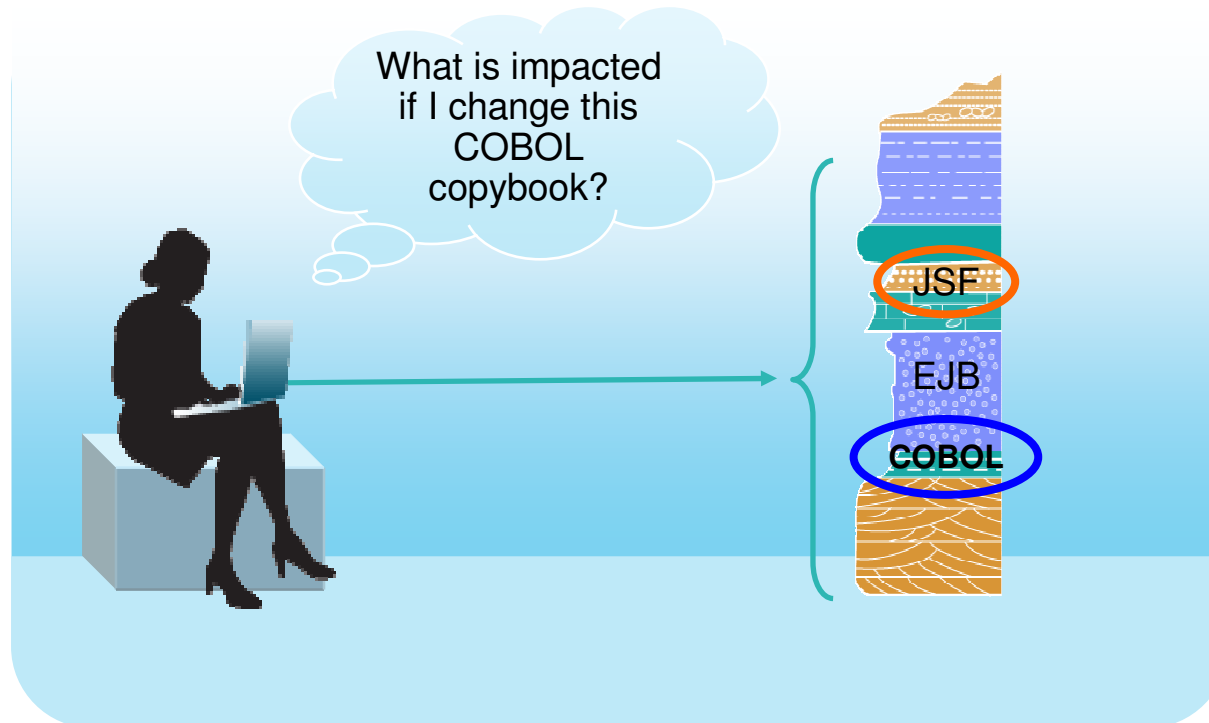


**Business intelligence for applications**  
**Enterprise architecture and portfolio management**  
**SOA tools for all platforms and languages**      **Operational reuse**  
**User interface modernization**

Rational Software Delivery Platform *powered by jazz*

## Enterprises want to...

*Understand the impact and cost of change to their IT systems*

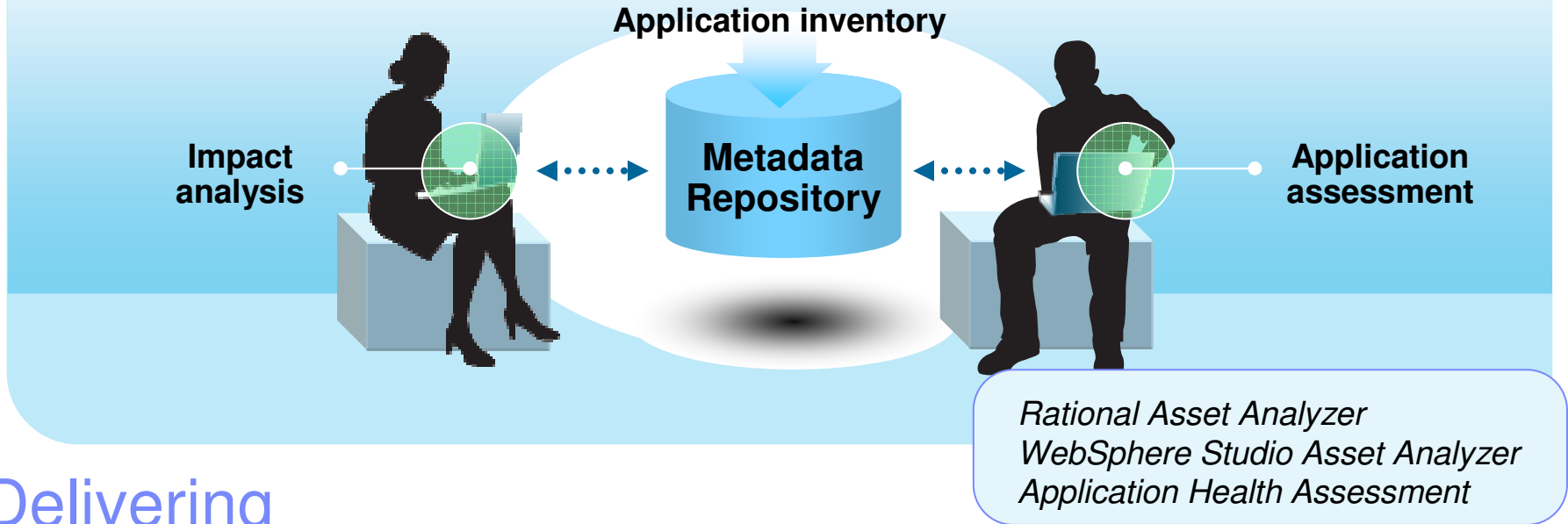
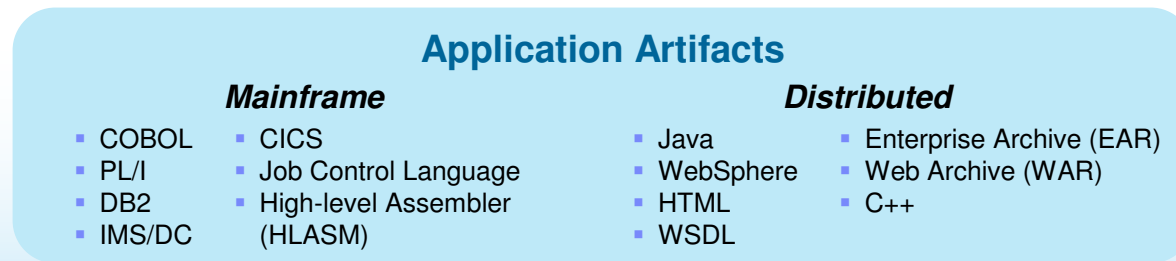


## But...

*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.*

# Solution: Business intelligence for applications

*Restore lost application knowledge via technical analysis*



## 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*



## Enterprises want to...

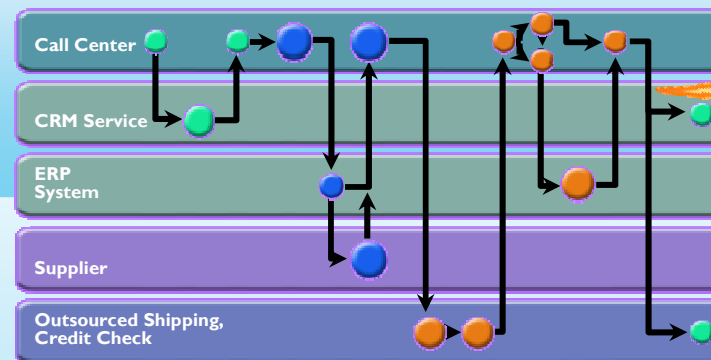
*Have a nimble IT organization that leverages SOA to respond more quickly to the needs of the business*



### Customer Order & Fulfillment



### Customer Order & Fulfillment



## But...

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

# Solution: SOA tools for all platforms and languages

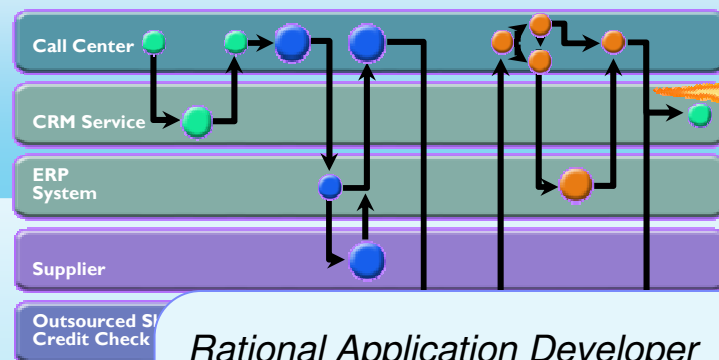
Use powerful tools to quickly begin SOA evolution by harvesting and repurposing proven assets



## Customer Order & Fulfillment



## Customer Order & Fulfillment



*Rational Application Developer  
 Rational Developer for System z  
 Rational Developer for Power Systems  
 Rational Business Developer  
 Host Access Transformation Services*

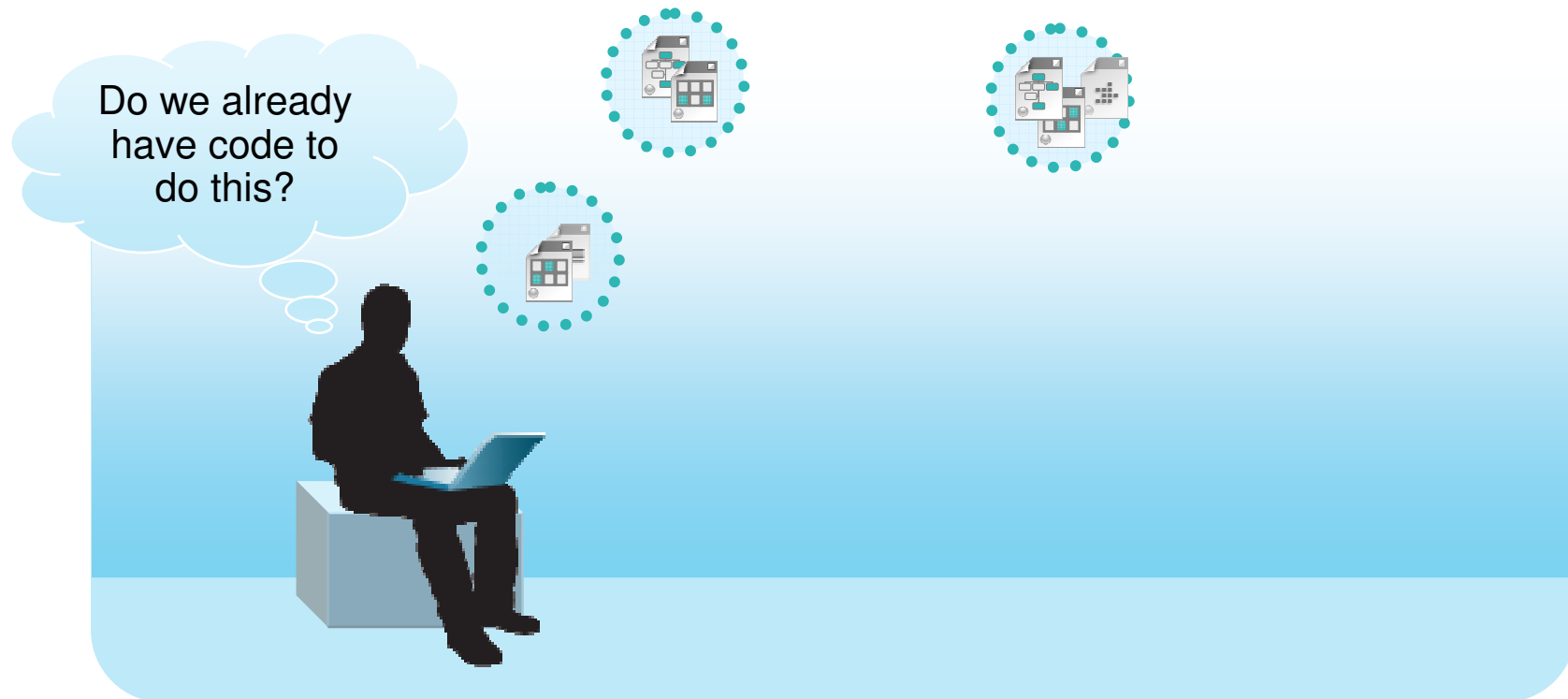


## Delivering

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

## Enterprises want to...

*Reuse existing assets to reduce duplication and speed time to market*

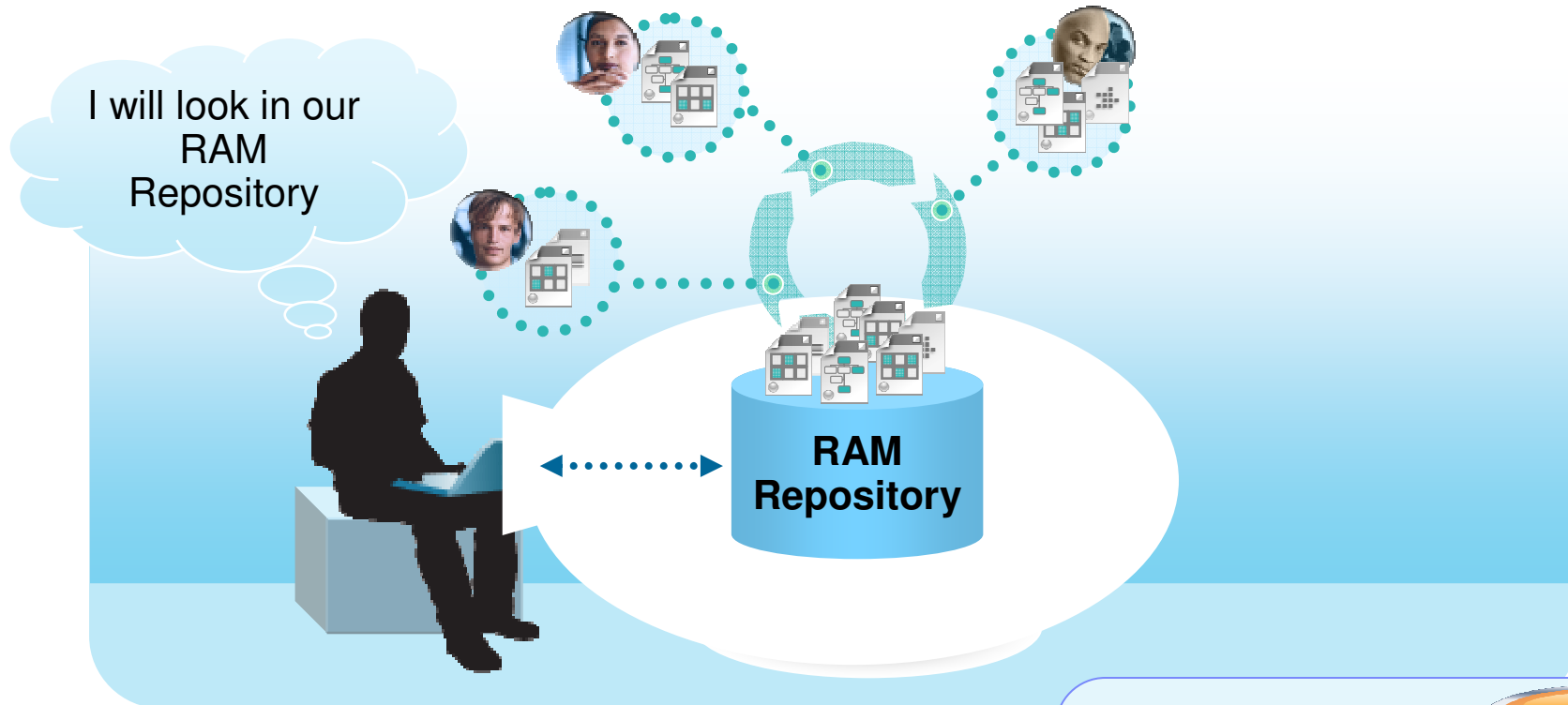


## But...

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

# Solution: Operational reuse

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



*Rational Asset Manager* **ENHANCED!**  
*WebSphere Service Registry and Repository*

## Delivering

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

## Enterprises want to...

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

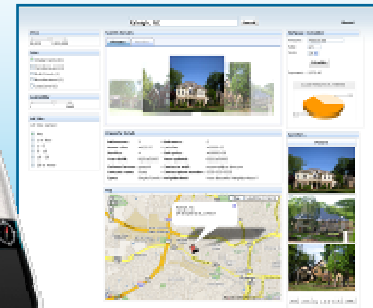
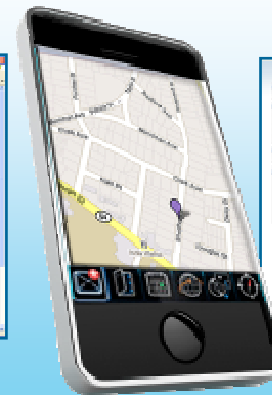


```
Session A - (24 x 80)
File Edit View Communication Actions Window Help
Client Inquiry - calls LAB3POT (LAB3BMS)

Customer number: 004
Last name: Silva
First: Lula da
Address: Palacio do Planalto
City: Brasilia
State: DF
Country: BRAZI

Type customer Number Between 1 and 10 or 99 to END

Customer retrieved sucessfully
```

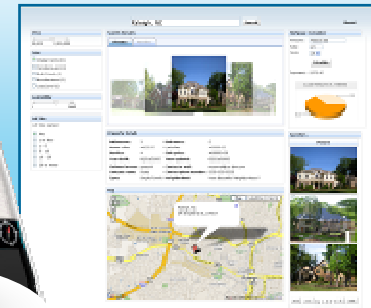
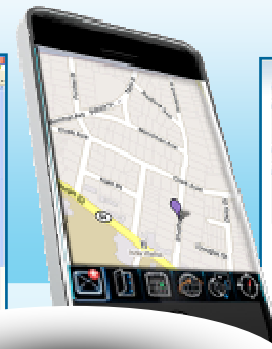
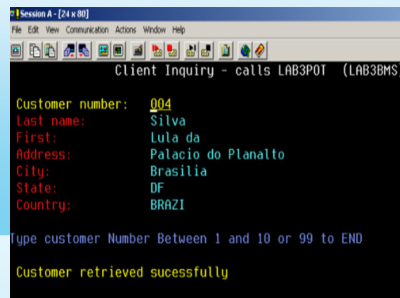


## But...

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

# 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*



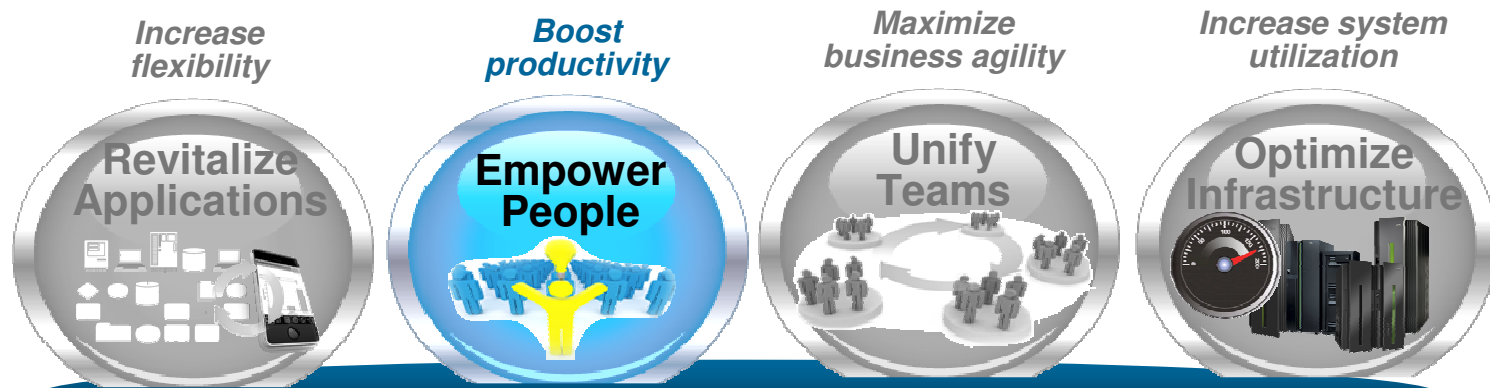
*Rational EGL Community Edition  
Host Access Transformation Services  
Rational Developer for System z  
Rational Developer for Power Systems  
Rational Business Developer*



## Delivering

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

# Boost productivity and accelerate innovation with modern skills



**Modern IDEs for all platforms and languages**

**Modern business language**

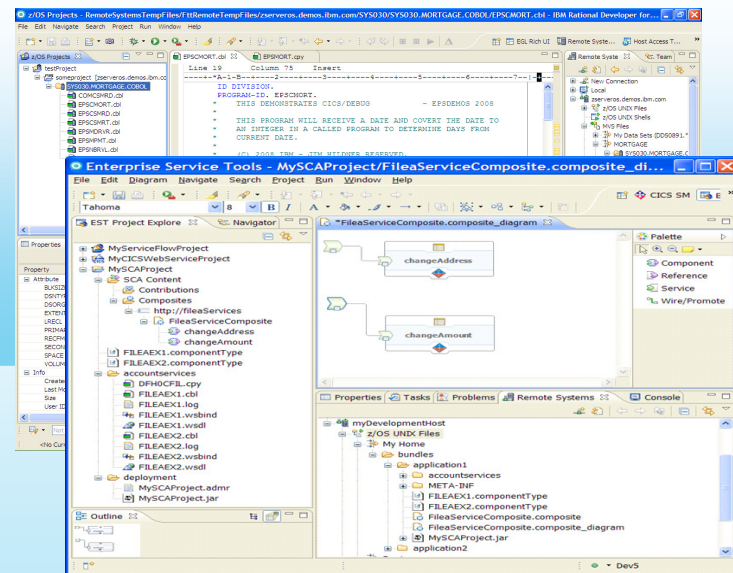
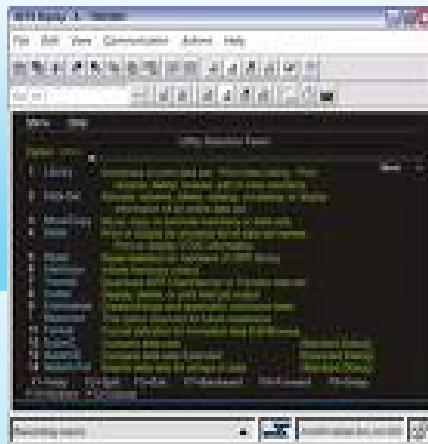
**Application transformation tools and services**

**Enterprise training programs, communities and resources**

**Rational Software Delivery Platform powered by *Jazz***

## Enterprises want to...

*Increase productivity of their “backend” development staff, as well as attract new employees to this work*



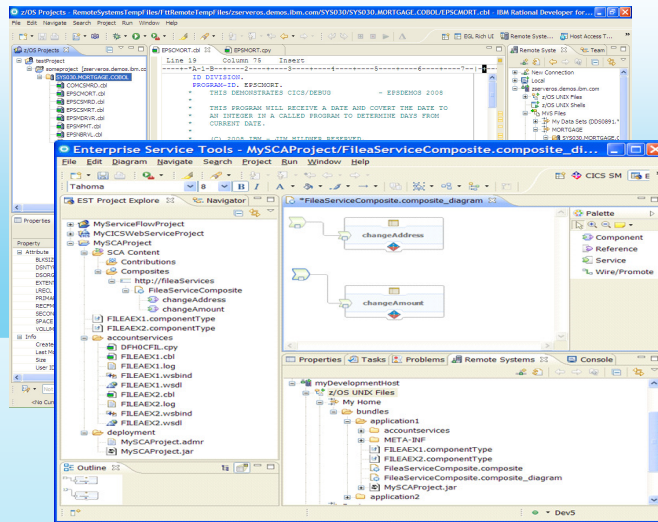
## But...

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



# Solution: Modern IDEs for all platforms and languages

*Upgrade to modern Eclipse-based tools to develop and maintain enterprise applications spanning multiple platforms and languages*



*Rational Developer for System z  
 Rational Developer for Power Systems  
 Rational Application Developer  
 Rational Business Developer*



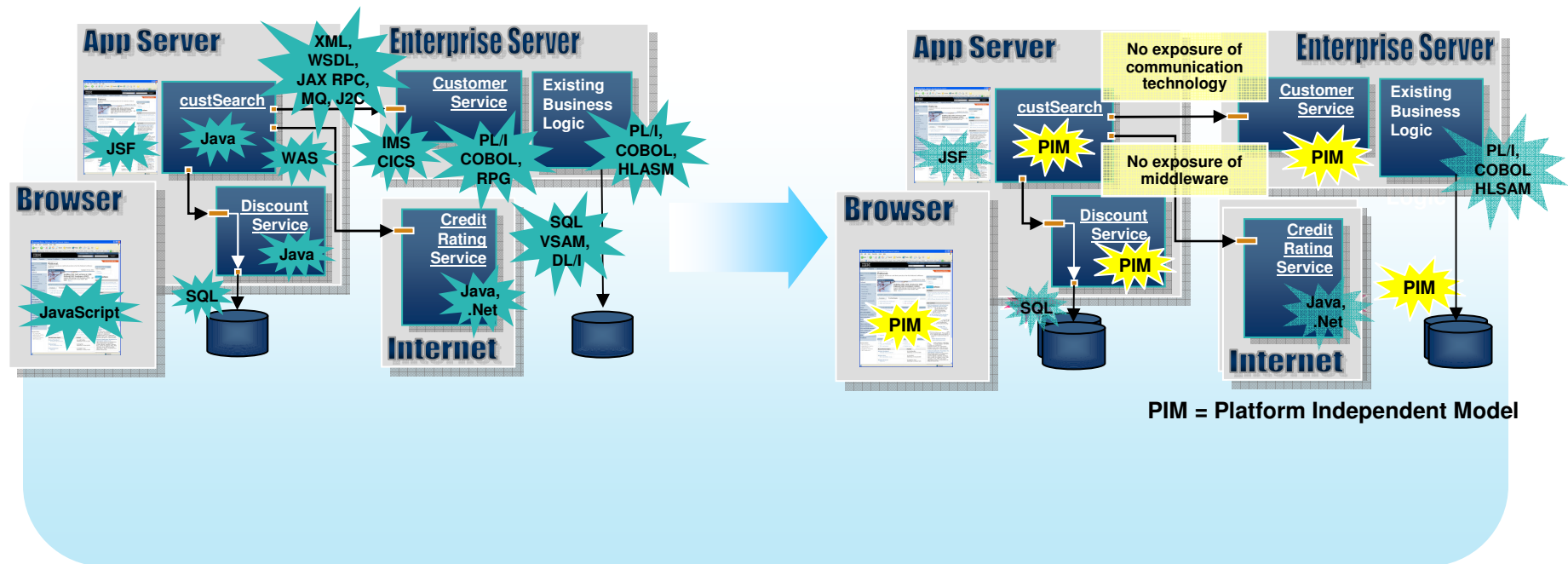
## Delivering

*50%-80%<sup>1</sup> reduction in host CPU usage with workstation syntax checking, ~15% improvement in developer productivity<sup>1</sup>, and tools with which to attract new talent*

<sup>1</sup> Aggregation of results from a productivity study conducted by IBM System z customers

# Enterprises want to...

*Build modern, multi-platform applications with existing and new staff*

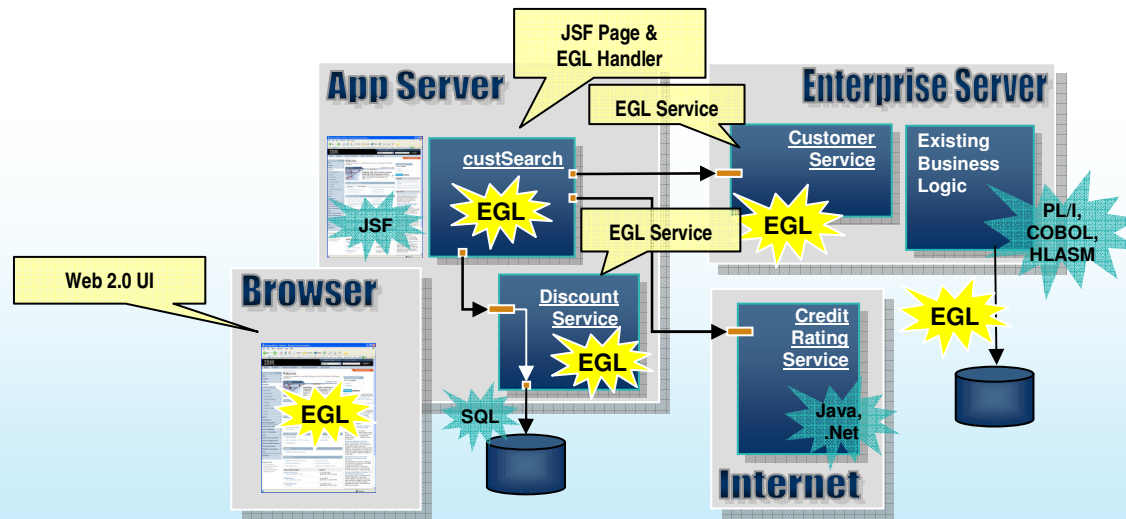


# But...

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

# Solution: EGL – next gen business language

*Build new or extend existing multi-platform enterprise applications leveraging EGL with its middleware abstractions and high productivity language and development environment*



*Rational Business Developer  
Rational Developer for System z with EGL  
Rational Developer for Power Systems*

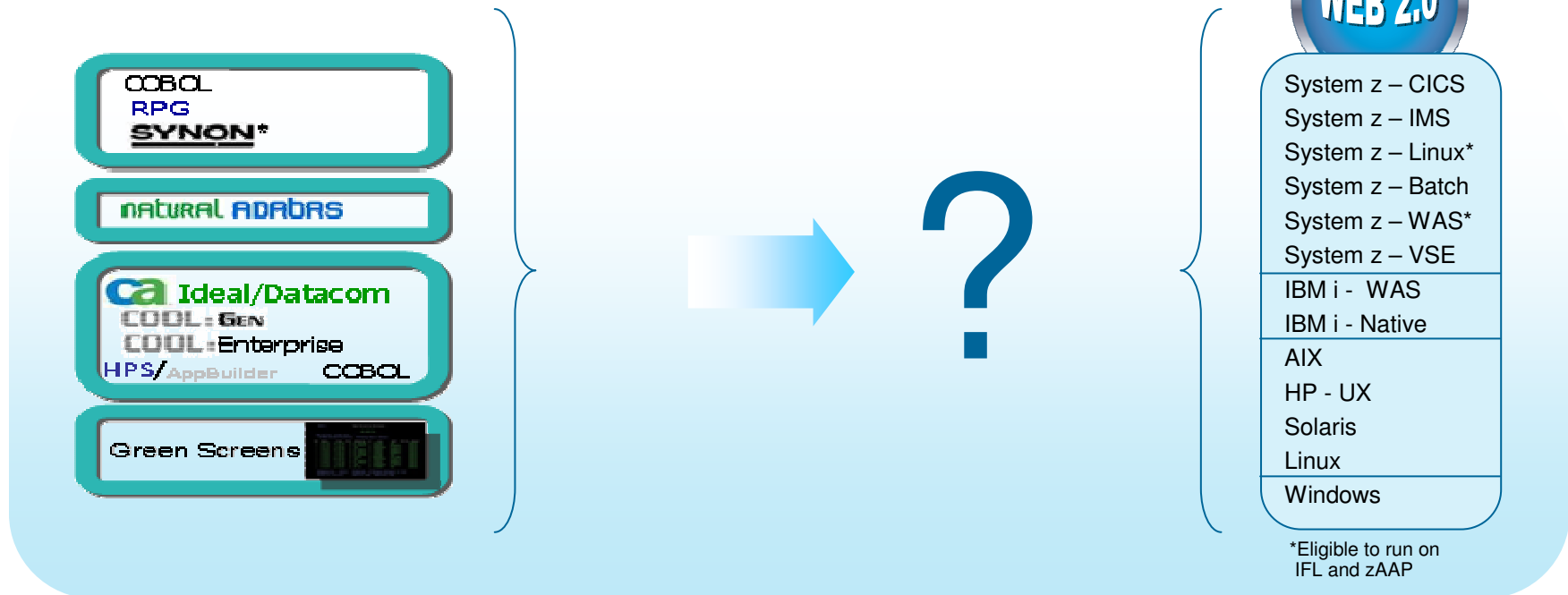


## Delivering

*Skills flexibility, high productivity and platform portability for existing and new developers when building all types of modern enterprise applications*

# Enterprises want to...

*Reduce tool support costs and move to modern platforms, languages, and tools for their multi-platform application development*

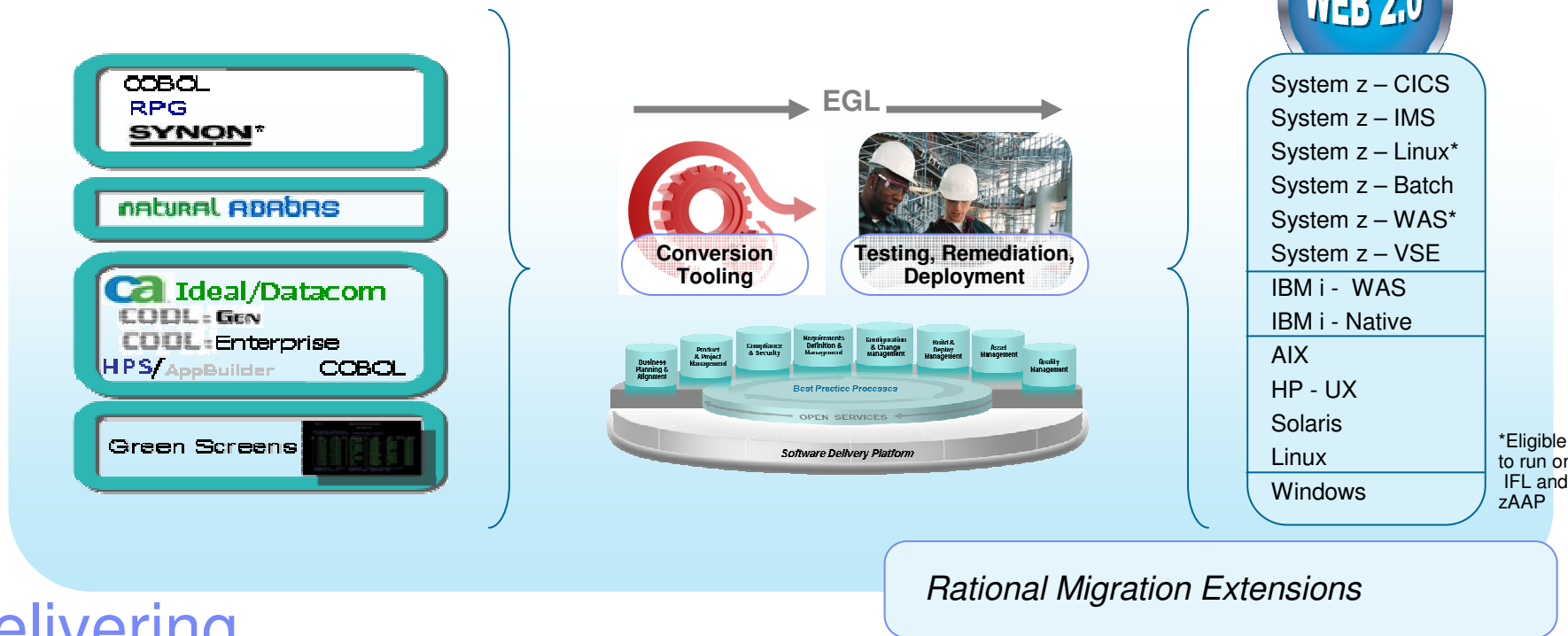


# But...

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

# Solution: Application transformation tools and services

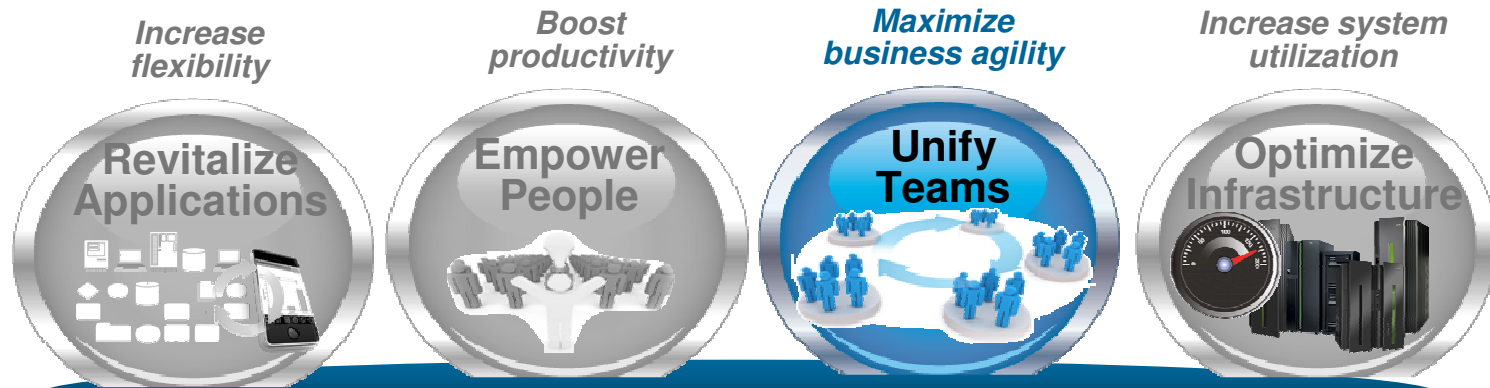
*Migrate from older languages and stagnant platforms to modern development platforms, languages and tools*



## Delivering

*Greatly reduced development platform support costs, and more flexible, integrated development environment for making future application enhancements (e.g. SOA and web 2.0)*

# Maximize organizational agility by bridging organizational silos



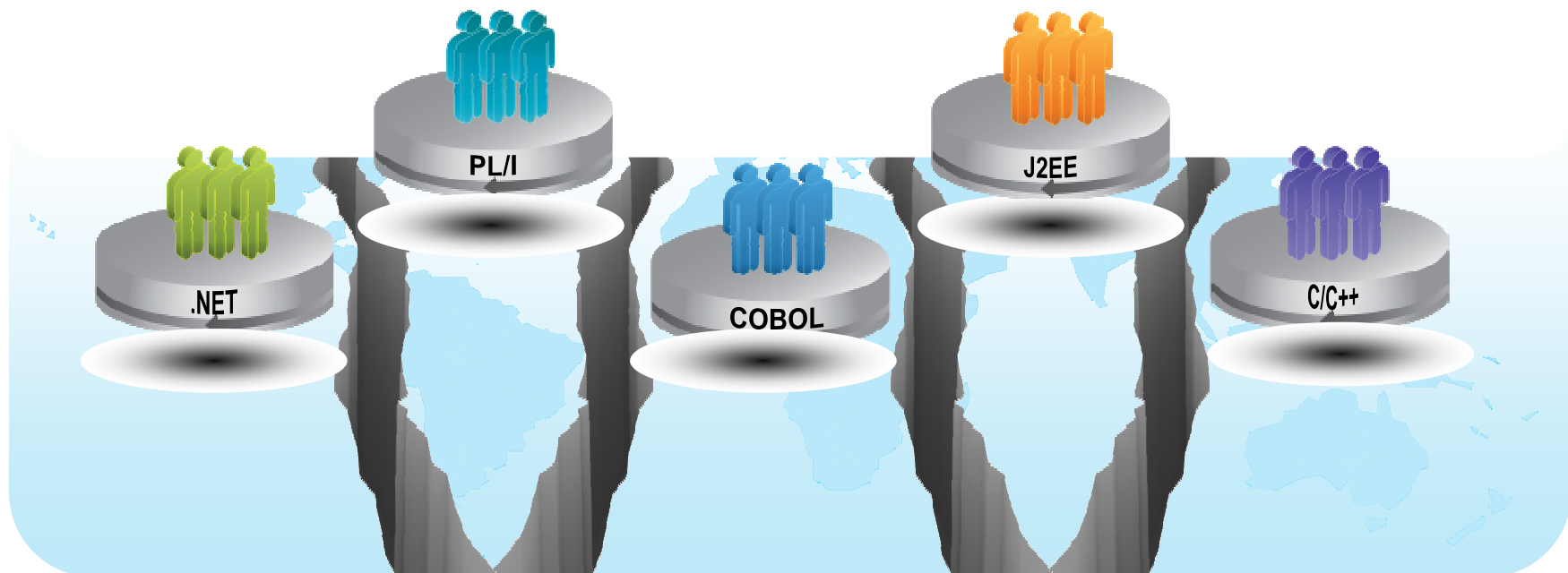
**Consolidated team infrastructure**

**Agile team infrastructure**

**Rational Software Delivery Platform** powered by *Jazz*

## Enterprises want to...

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

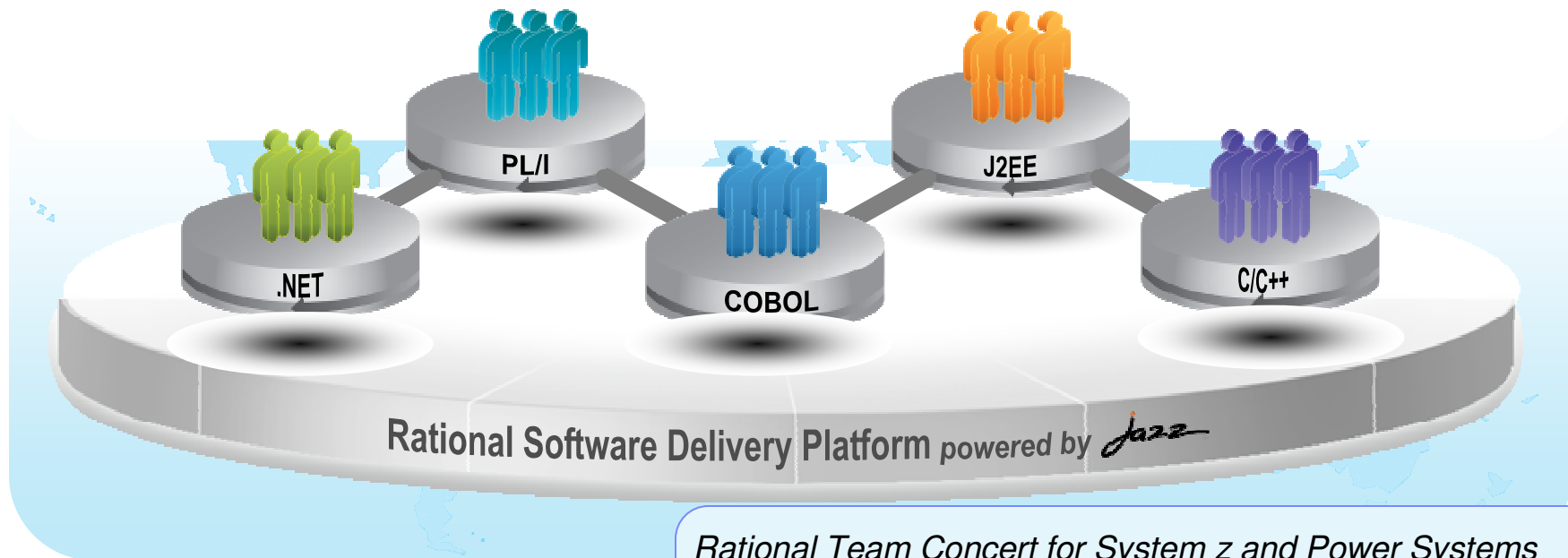


## But...

*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.*

# Solution: Collaborative application lifecycle management

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



*Rational Team Concert for System z and Power Systems  
 Rational ClearCase / Rational ClearQuest  
 Rational Buildforge*

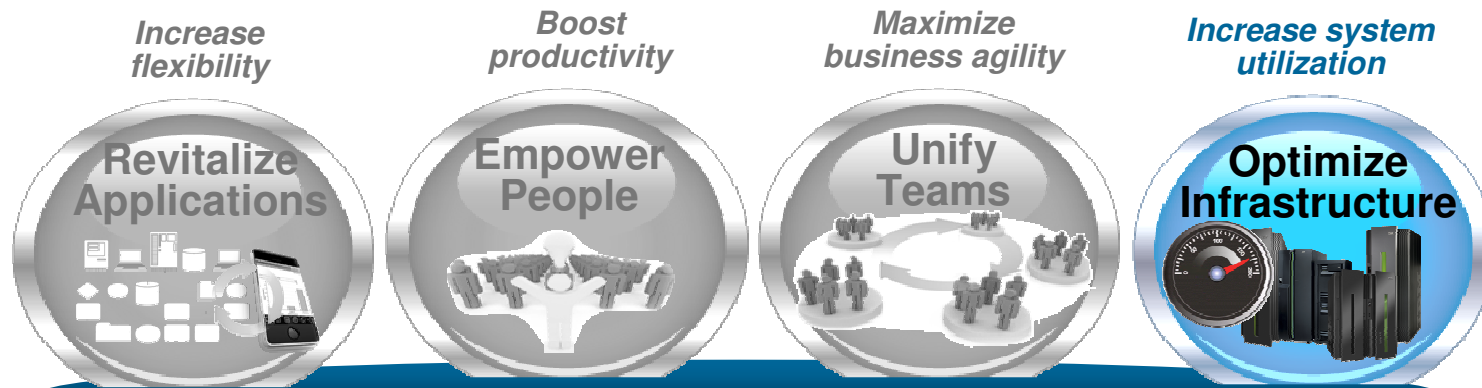


## Delivering

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



# Increase system utilization by optimizing application infrastructure



**Advanced compiler technology**

Rational Software Delivery Platform powered by *Jazz*

## Enterprises want to...

*Maximize application performance on existing hardware  
to reduce capital expenses*



## But...

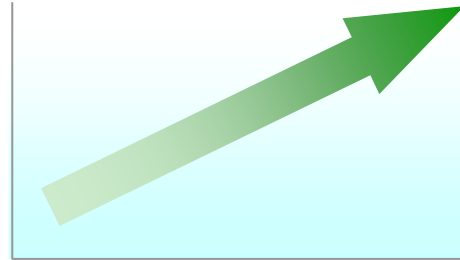
*They have back-level compilers or are not fully using optimization.*

## Solution: Advanced compiler technology

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



Performance



Compiler Version

Same hardware + **NEW** compiler  
= **Increased** Performance

**NEW** hardware + **NEW** compiler  
= **Maximum** Performance

**ENHANCED!**

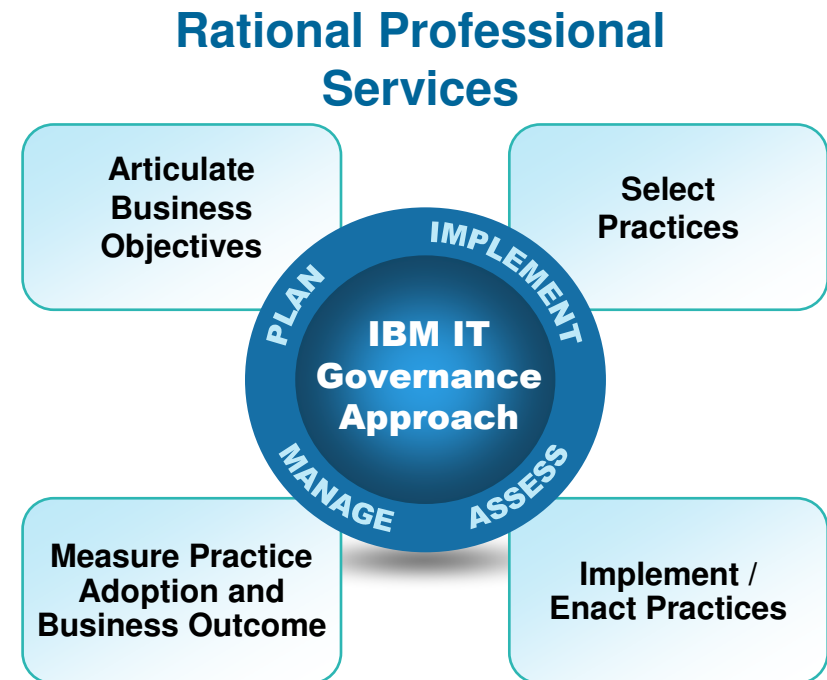
- IBM XL C/C++ for AIX and Linux
- IBM XL Fortran for AIX and Linux
- IBM COBOL for z/OS, AIX
- IBM PL/I for z/OS, AIX
- IBM WebSphere® Development Studio (IBM i compilers)

## Delivering

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

# Leverage IBM Services to get started today

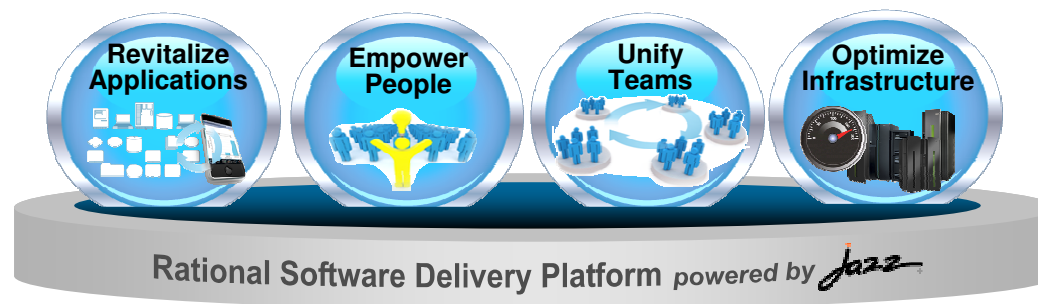
- **Executive Services**
  - ▶ Schedule an *Enterprise Modernization Executive Planning Session* to define modernization strategies
- **Application Modernization Services**
  - ▶ Application Assessments to:
    - Develop Modernization roadmaps to resolve specific business issues
    - Improve Application Quality & Performance
    - Identify opportunities for business software delivery improvements
- **People and Team Modernization Services**
  - ▶ Provide Implementation Services for Rational Enterprise Modernization tools
  - ▶ Provide SCM migration assistance
  - ▶ SDLC Assessments to:
    - Improve Software Delivery performance
    - Implement Software Delivery Metrics to more effectively manage the software development environment



# IBM Rational Enterprise Modernization solutions

*Optimizing your applications, people, team and infrastructure investments*

- **Difficult times present opportunities for businesses to gain efficiencies in the short term while making strategic IT investments for future growth**
- **But application complexity, limited staff productivity, poor team collaboration, and constrained infrastructure limits IT flexibility**
- **Rational Enterprise modernization solutions can help:**
  - ✓ **Increase flexibility** by revitalizing existing application portfolio
  - ✓ **Boost productivity** and accelerate innovation with modern skills
  - ✓ **Maximize organizational agility** by bridging development silos
  - ✓ **Increase system utilization** by optimizing application infrastructure



To learn more visit: [ibm.com/software/rational/modernization/](http://ibm.com/software/rational/modernization/)



Thank  
You

For more information visit [ibm.com/rational](http://ibm.com/rational)

© Copyright IBM Corporation 2009. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, Rational, the Rational logo, Telelogic, the Telelogic logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.



Register by February 26 and Save.

# Innovate2010

The Rational Software Conference

June 6-10 Orlando, Florida

Let's **build** a smarter planet.



The premier software and product delivery event of the year!

## Top 5 Innovative Reasons to Attend

1. Over 350 sessions focused on software, systems, services and much more
2. New Solution Tracks: Agile, Cloud, Jazz, Systems Development, and POWER
3. Over twenty hands-on technical workshops
4. Participate in the Innovation Jam
5. Networking and innovating with 4,000 peers!

**The innovation conversation has already started!**

[Twitter](#) | [Facebook](#) | [YouTube](#)

You do so much more than just build, deliver, and manage. *You innovate.*

And since software is the invisible thread that speeds innovation and helps us design and build the smarter products and services we need to build a smarter planet, then you deserve a revamped, upgraded, 2.0 conference. One that sparks and celebrates innovation. Get ready for...

**Innovate2010** The Rational Software Conference  
**Register now and save — June 6–10, Orlando**

The premier software and product delivery event. A smarter conference. For a smarter planet. The place to expand and deepen skills you need to keep innovating...

- Software and product development, delivery, and management
- How to seize business opportunities... execute with reduced risk and cost... and achieve precision in desired business outcomes
- And better ways to collaborate, automate, and report

It's your conference, so register now and save!

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

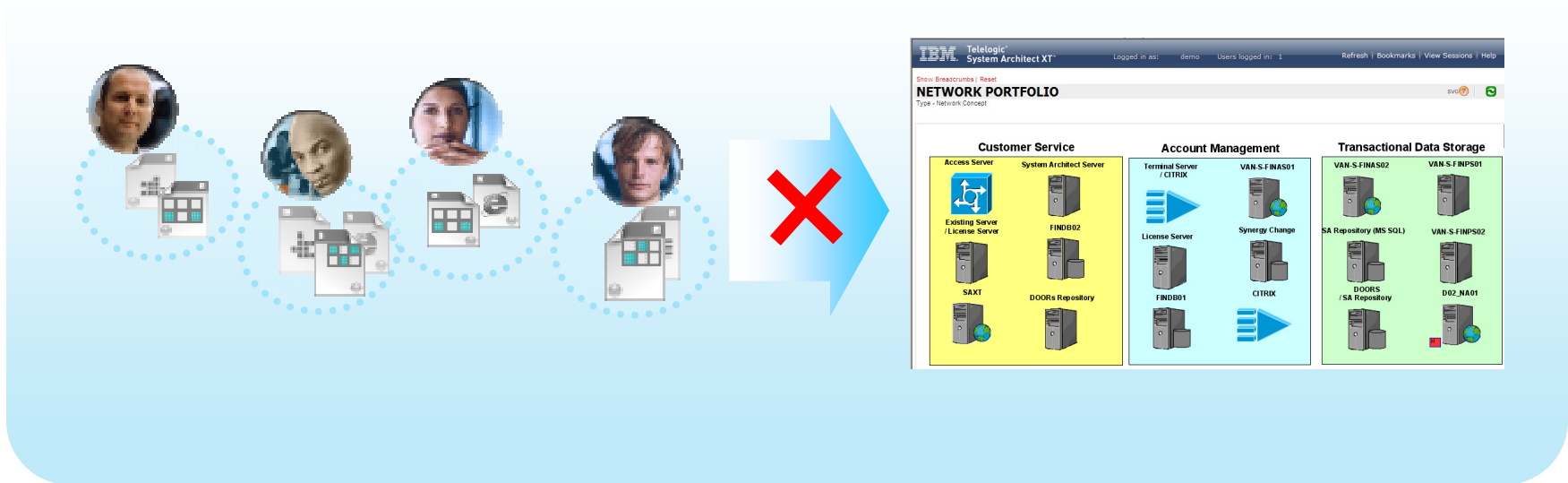
To learn more visit: [ibm.com/software/rational/modernization/](http://ibm.com/software/rational/modernization/)

The screenshot shows the IBM website's 'Enterprise modernization' page. The header includes the IBM logo, a search bar, and navigation links for Home, Solutions, Services, Products, Support & downloads, and My IBM. The main content area is titled 'Enterprise modernization' and features two primary images: 'Power your innovation' and 'Revolutionize the economics of application maintenance'. Below these are sections for 'Overview', 'Why enterprise modernization?', 'What we offer', and 'The IBM enterprise modernization solution difference'. The right sidebar contains 'We're here to help', 'Spotlight', 'Highlights', 'New Customer References', and 'Demos'. The footer of the page includes 'System z Sandbox', 'IBM I Sandbox', and 'Rational Cafe'.



# Enterprises want to...

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

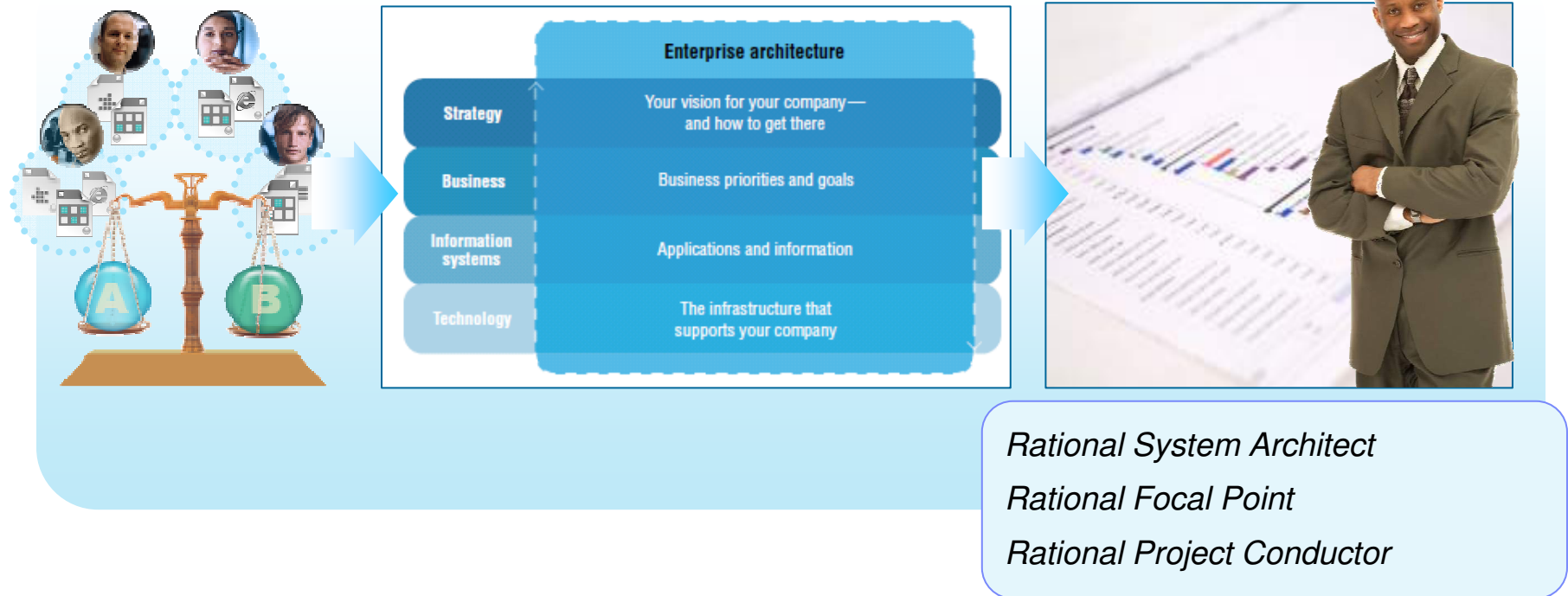


# But...

*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.*

# Solution: Enterprise architecture and portfolio management

*Make enterprise IT planning actionable and traceable*



## 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*