



Delivering Applications and Services at the Speed your Business Demands

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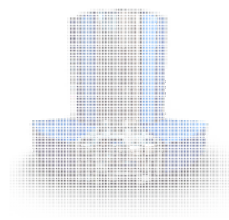


Change is the new norm

Soon there will be over **2 billion people** are on the web



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



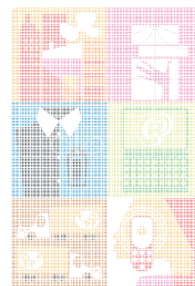
IBM Roadrunner Super Computer
It would take the **entire population of the earth**, – about six billion – each of us working a handheld calculator at the rate of one second per calculation, **more than 46 years** to do what **Roadrunner can do in one day.**

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

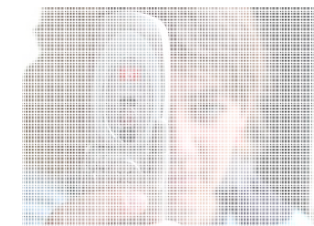
– 2008 IBM CEO study



Last year, the world produced **more transistors** (and at lower cost) than **grains of rice.**



The internet of people is over one billions strong. The internet of things is almost one trillion.



There are **1 billion camera phones** in use today

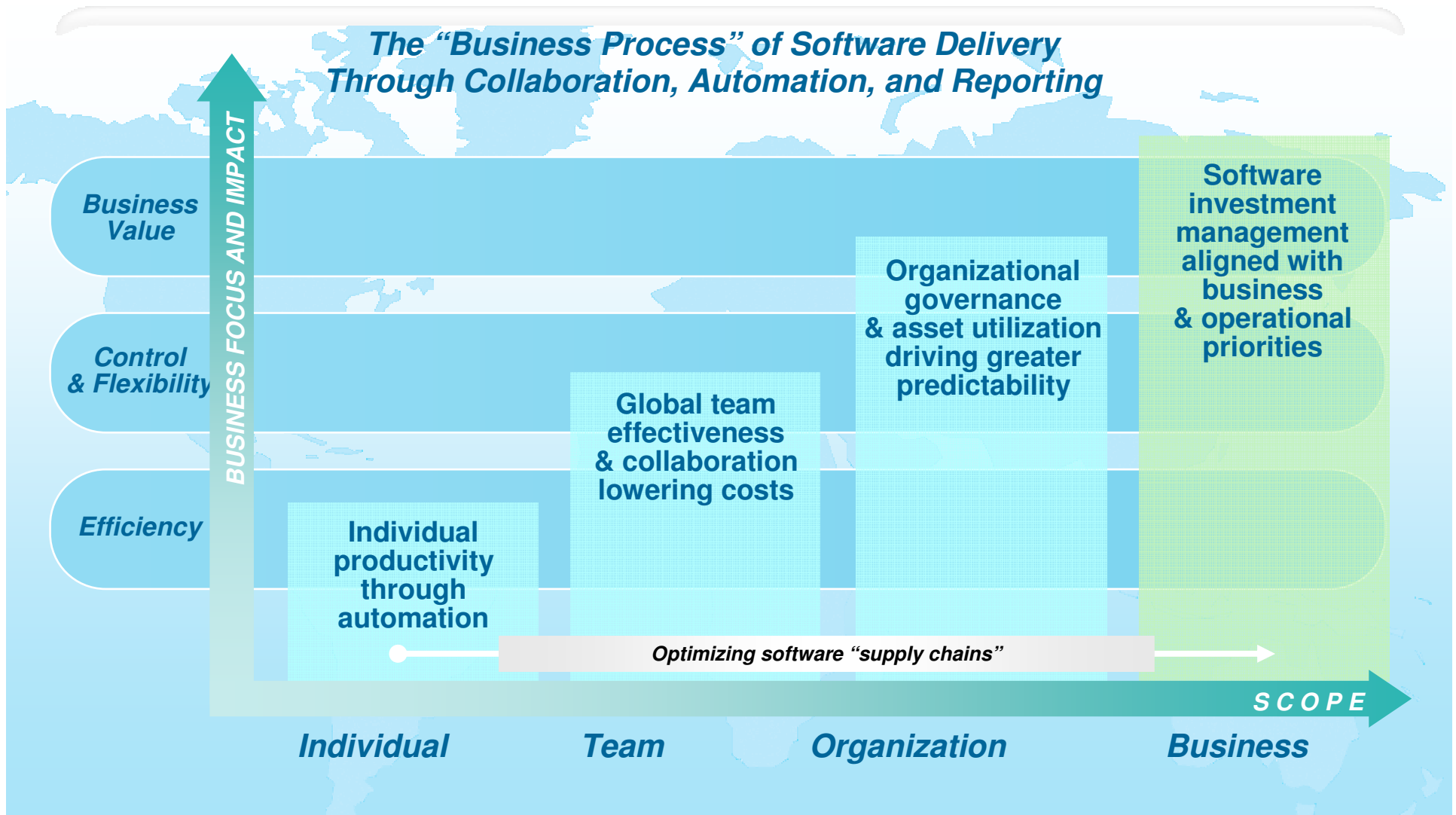
Is your IT infrastructure flexible enough?



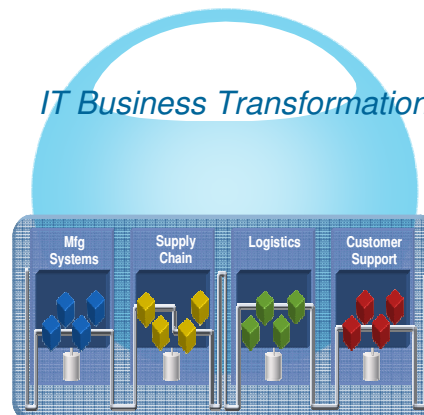
“The message for IT is clear; business needs and expects greater agility from IT. A new approach to IT delivery models and sourcing options is required that allows IT organizations to be more responsive to the needs of the business.”

– Gartner, October 14, 2008, “Changing the Cost Structure of IT Will Become a Business Imperative for Most CIOs”

Treat your software as a strategic business process



Rational solutions can help in 3 domains



- **Enterprise Modernization** – harness the same power and flexibility for all types of applications, no matter what platform they are deployed on
- **IT Business Transformation** – align your IT infrastructure with your business strategy and vision to innovate new business strategies and meet long term objectives
- **Complex/Embedded Systems** – deliver innovative software for your products, while integrating across mechanical, electronic, and software domains

Key modernization challenges for IT organizations



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



"Our skills gap just seems to keep growing. How do we stay current with all the language and technology changes?"



"Our architecture has evolved to be too complex and convoluted— we need to be flexible and agile."

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



Application Challenges

- Lost application knowledge
- Architectural complexity
- Poor quality and performance
- Regulatory and compliance risks
- Higher costs

People Challenges

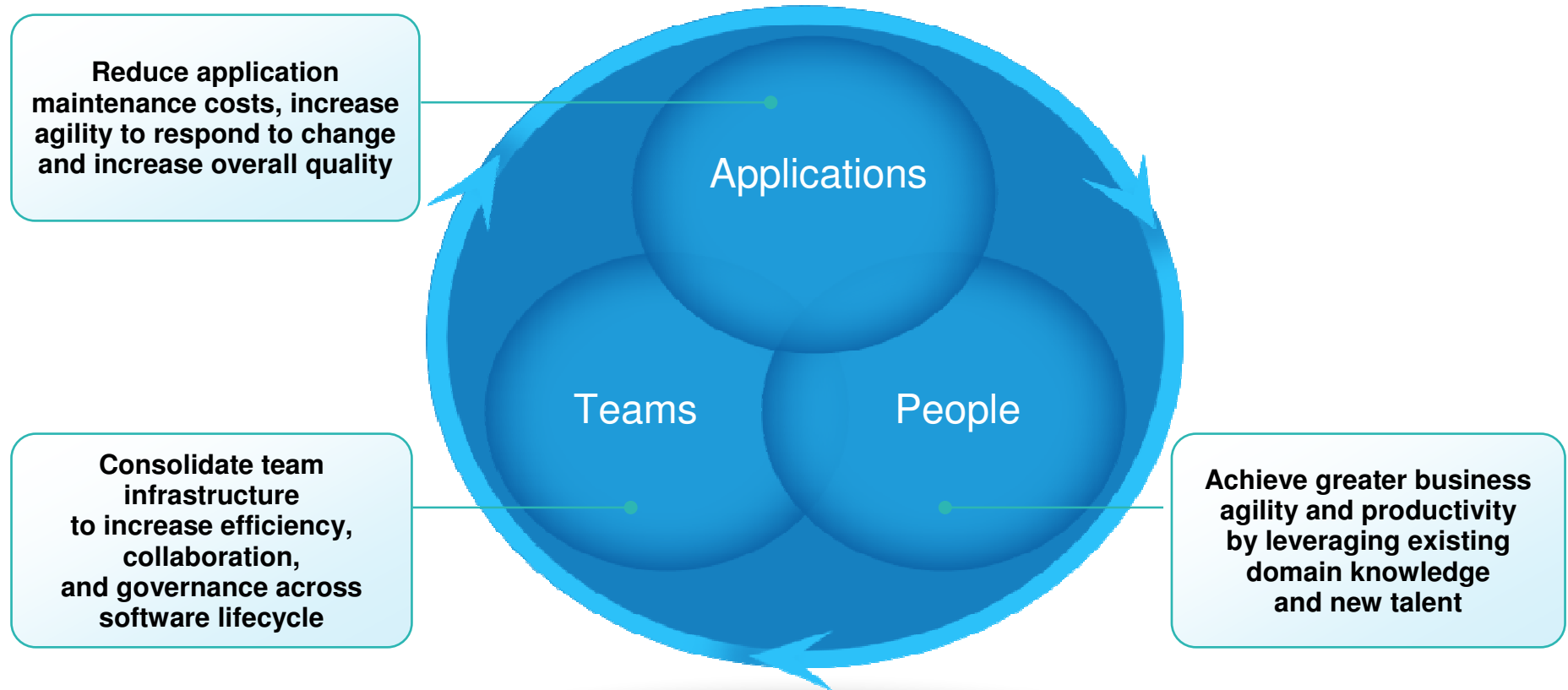
- Skills lock-in
- Plethora of new technologies
- Unattractive, low productivity tools
- Steep learning curve due to platform/language-unique tools

Team Challenges

- Poor communication
- Incompatible tools & processes across platforms
- Weak project oversight
- Lack of traceability across lifecycle

Enterprise Modernization solutions

A smarter way to maximize the value of your applications, people and teams



For more information, visit:
www.ibm.com/rational/modernization



Application Level

Challenge

No electronic inventory of assets

How can we...

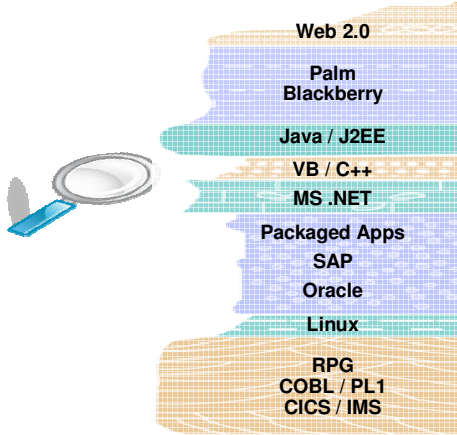
- Discover and understand code dependencies so a change does not break production?
- Learn about application relationships and structures for new staff?
- Maintain control over code provided by outsourcers, business partners, or acquired through a merger?
- Identify assets for reuse in a SOA?

Solution

Comprehensive inventory of assets for impact analysis and reuse

- ✓ Understand existing assets and relationships
 - WebSphere Studio Asset Analyzer
 - Rational Asset Analyzer
- ✓ Document requirements formally
 - Requisite Pro, Doors
- ✓ Create and manage assets during development
 - Rational Asset Manager
- ✓ Deploy and manage services in a production environment
 - WebSphere Service Registry & Repository

Software Archeology

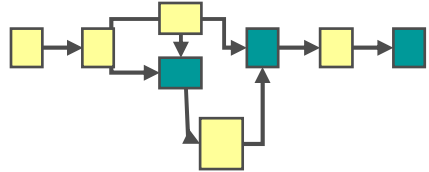


1. Impact Analysis

2. Optimize (15%-20% Avg)



3. Update Address



3. Credit Check

3. Platinum Club

Application Portfolio Level

Challenge

Better align IT activities with Business Goals & Objectives

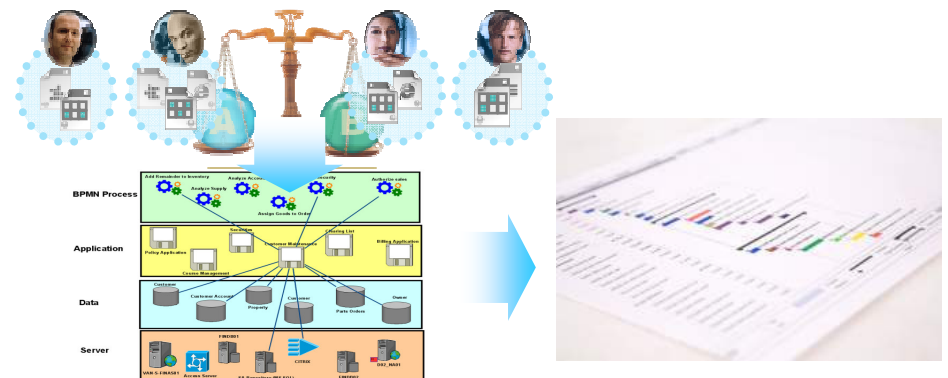
How can we...

- Capture business goals in a shared tool?
- Link assets together in a coherent view?
- Objectively rank order my business priorities and intersect them with my IT assets
- Collaboratively share the knowledge across Business & IT areas?

Solution

Make enterprise IT actionable, trackable and accountable

- ✓ Capture enterprise IT assets in single repository for analysis
- ✓ Central oversight of budget, risks, demands and investment management
 - *Rational System Architect*
- ✓ Prioritization of competing projects, impact analysis of portfolio decisions, assurance projects remain aligned with business goals document requirements formally
 - *Rational Focal Point for Product and Portfolio Management*





Modernize Application Investments

Challenge

Unsupported legacy development platforms

How can we...

- Efficiently move to modern development platforms, languages, and tools?

Solution

Save money by moving off old platforms and languages

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

Non IBM

HPS/AppBuilder

COBOL

ca Ideal
COOL: GEN
COOL: Enterprise

TELON

Maestro

IDMS ADS/Online

NATURAL ADABAS

Microsoft Visual Studio

SYBASE PowerBuilder

Microsoft Visual Basic 6.0

RPG



Consolidate & Advance with EGL

Change & Release Management

Quality Management

Architecture & Construction

Integrated Requirements Management

Process & Portfolio Management

Deploy to:

- Linux
- AIX
- Solaris
- HP-UX
- IBM i
- System z
- Windows



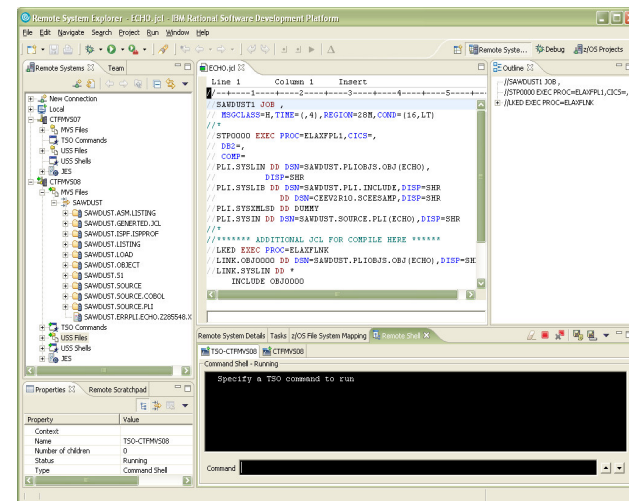
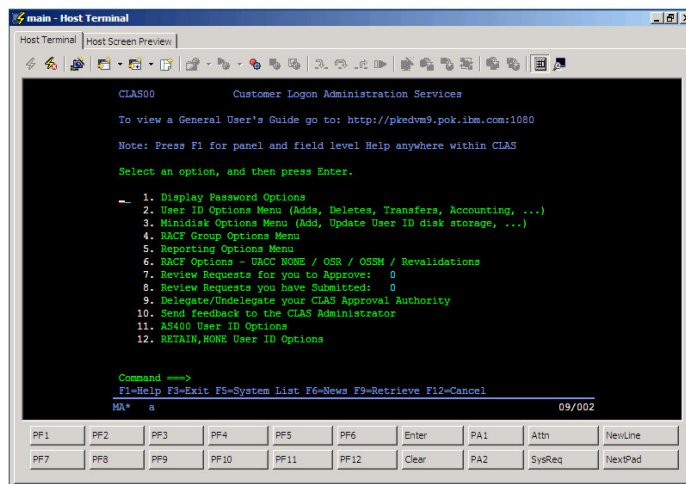
People Productivity and Pipeline

Challenge

- ✓ Aging of the Cobol developer population
- ✓ Difficulty attracting new developers to the mainframe
- ✓ Lack of efficiency increases for existing developers
- ✓ VW customer quotes:
 - "Everything is good that eases their way to the mainframe"*
 - "As soon as modern alternatives there will be enough people willing to use it"*

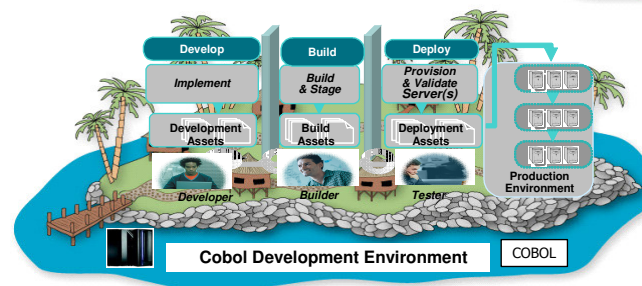
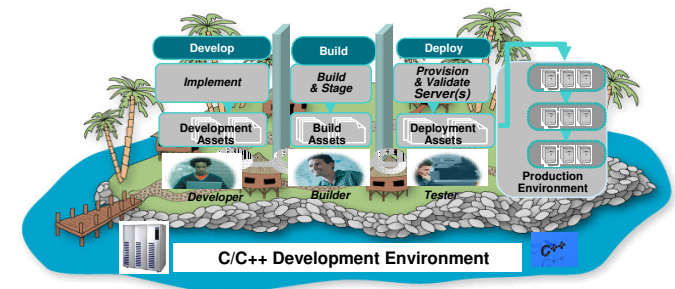
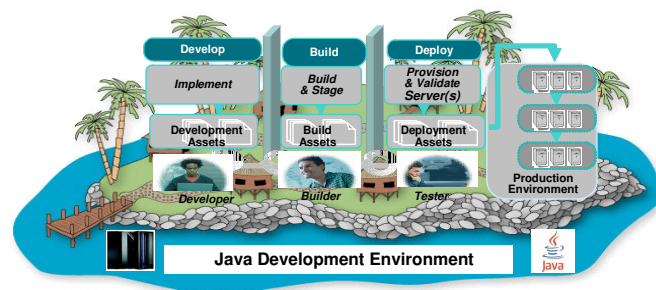
Solution

- ✓ Provide tools for all development languages including COBOL, PL/I, RPG, and Java
 - ✓ *Rational Developer for System z*
- ✓ Apply existing business-knowledgeable staff to build all elements of multi-platform applications ... end-to-end from Web 2.0 to services to business transaction
- ✓ Attract new staff with "IBM's newest business language"
 - Rational Business Developer



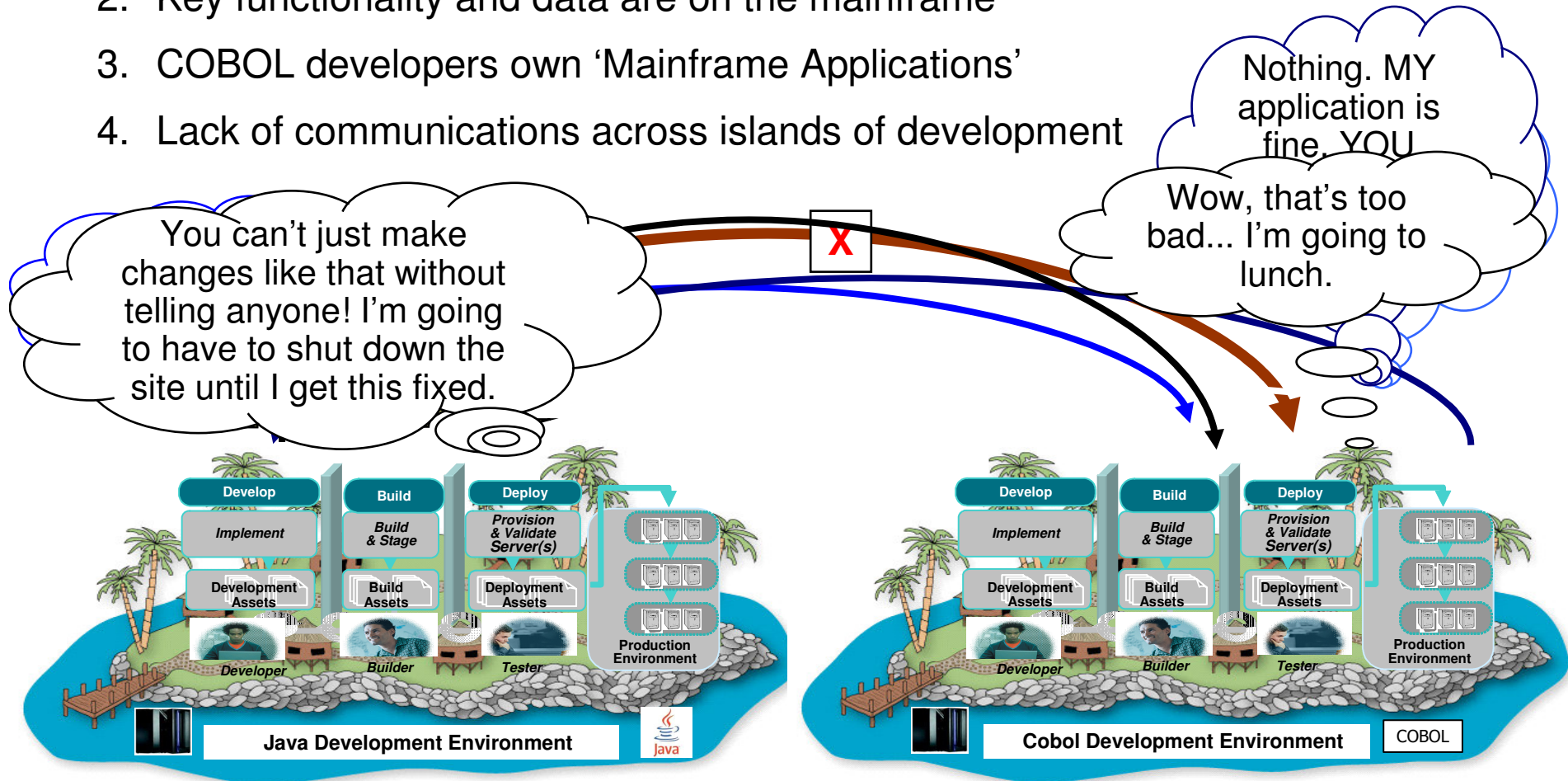
Today's Development Communities (Teams)

- Many teams aligned by platform or project or organization
- Some aligned by role
- Teams separated by programming languages, assets (packaged apps, etc), time, culture - corporate and social
- Disparate and disconnected tools for SCM, Requirements, Build...



Dispersed Teams pose challenges

1. Java developers own customer service 'Java Application'
2. Key functionality and data are on the mainframe
3. COBOL developers own 'Mainframe Applications'
4. Lack of communications across islands of development





Organizationally Distributed Development Challenges...

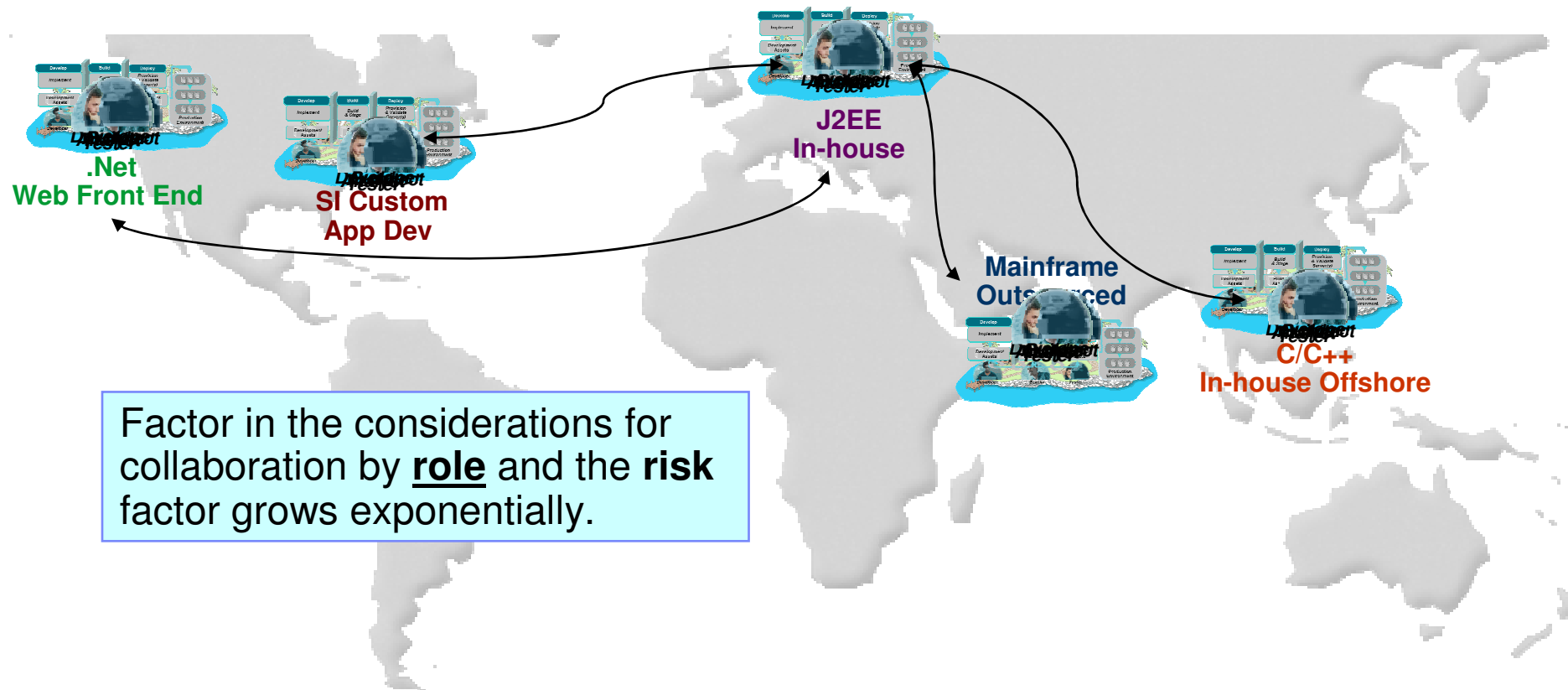
Not really so funny but we see common patterns

- Few (if any) shared artifacts
- Event based lifecycle management
 - e.g., program logic change not cascaded across teams
- Disparate development processes increases difficulty in alignment to shared business objectives
 - e.g., we want lower TCO but process ‘friction’ drives slower time to deployment, greater risk, longer problem determination times, etc.
 - Platform runtime advantages may be mitigated by development process inflexibility
- Lack of real time reporting and common metrics which integrate both business and engineering objectives
- Active process guidance which spans across islands of development which drive greater shared knowledge, efficiency and flexibility





Development issues increase exponentially across roles



Factor in the considerations for collaboration by **role** and the **risk** factor grows exponentially.

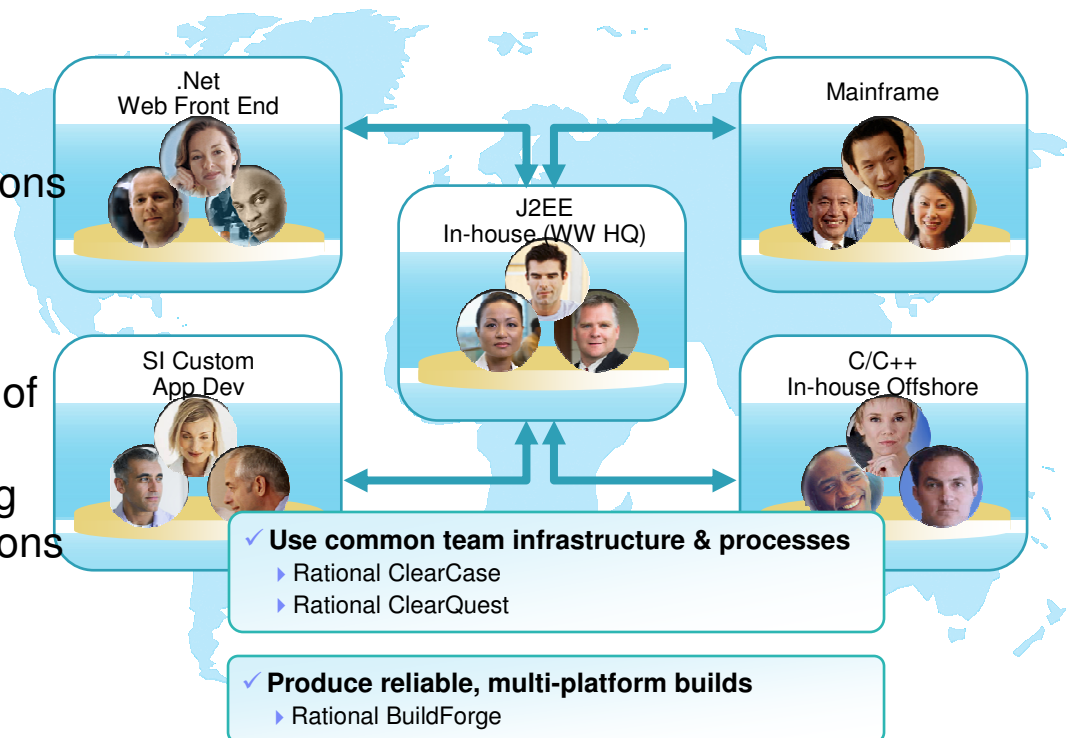
Unify disparate IT infrastructures across teams

- **Consolidate your team infrastructure**

- Eliminate redundant and duplicate tools and processes
- Unify change management for all platforms, languages, roles, and locations
- Ensure accurate global software delivery with a single point of control

- **Automate multi-platform builds**

- Access a consolidated, real-time view of software assembly processes
- Detect and resolve errors with error log filtering and automated email notifications
- Reproduce problems quicker with a reliable and automated ‘Bill of Records’



“Rational ClearCase in conjunction with Rational Developer for System z allowed us to completely centralize our software configuration and release management”
 - Juergen Dimmler, Product Specialist, Kreditwerk





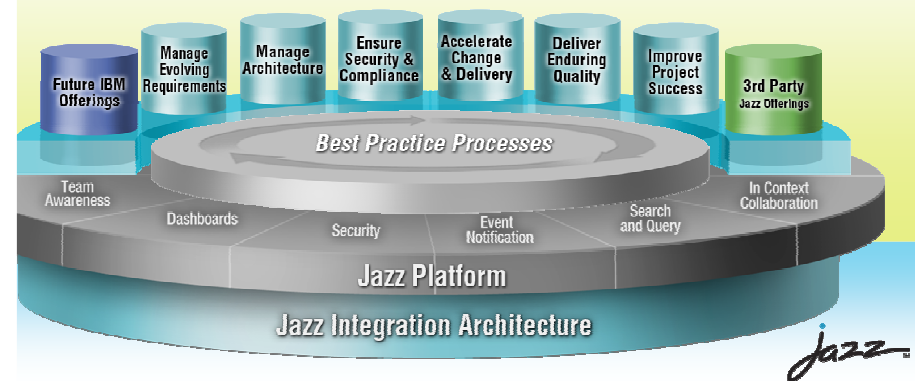
Improve cross-team collaboration

- **Collaborate in context across all platforms and geographies**
 - Make software development more automated, transparent and predictable
 - Think and work in unison with integrated source control, work item and build management

- **Assess real-time project health**
 - Capture data automatically and unobtrusively
 - Measure & report progress against project and business objectives

- **Automate best practices**
 - Accelerate team workflow with dynamic processes
 - Leverage out-of-the-box or customized processes

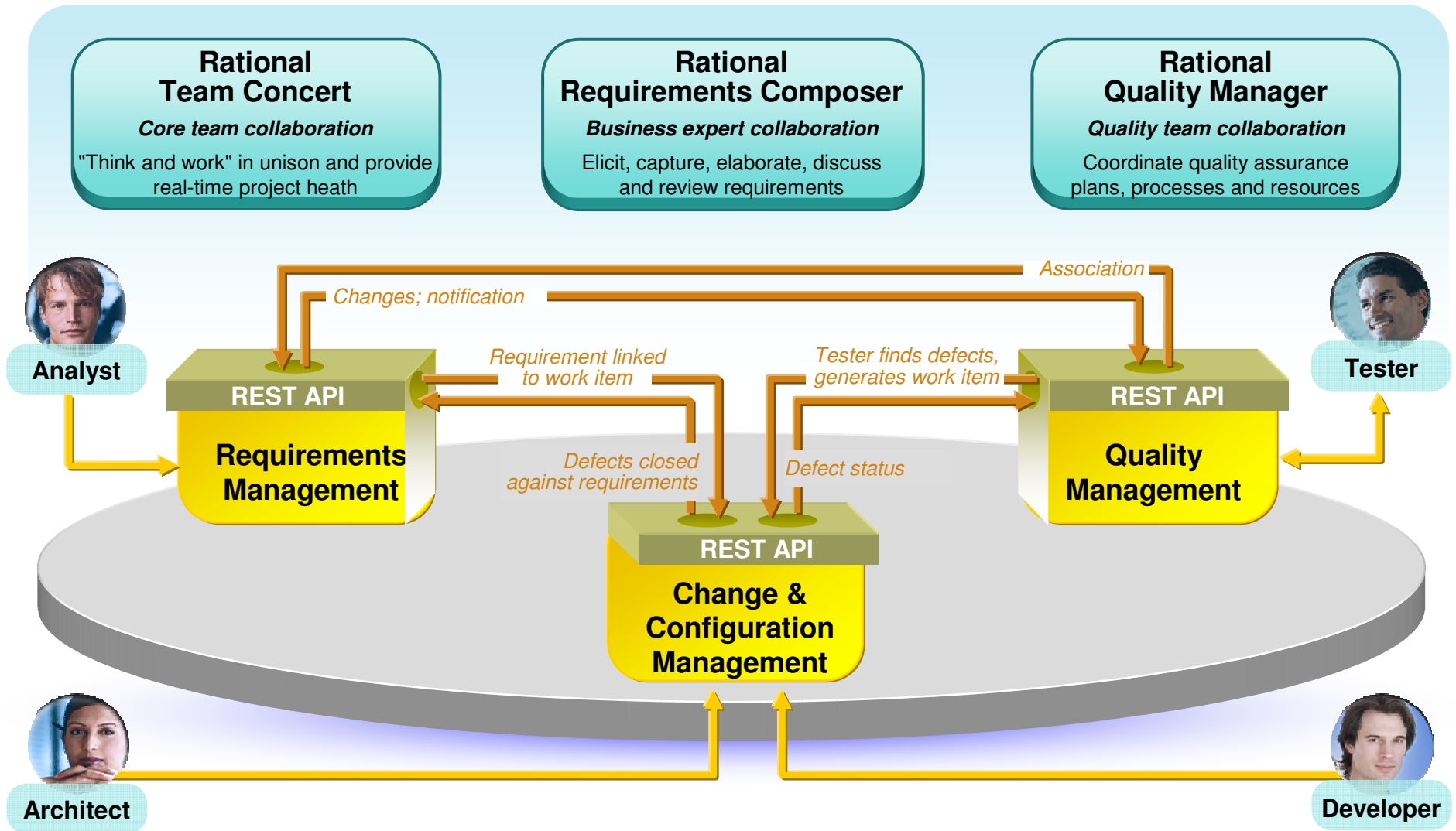
- ✓ **Collaborate across the entire team**
 - ▶ Rational Team Concert for System z
 - ▶ Rational Requirements Composer
 - ▶ Rational Quality Manager



A major telecommunication services company leveraged IBM Rational software to help development teams establish a common platform from which to analyze, design, develop, and test, IBM Rational solutions have created opportunities to improve the quality of software and services they offer



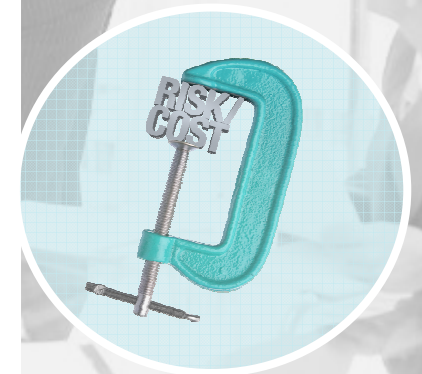
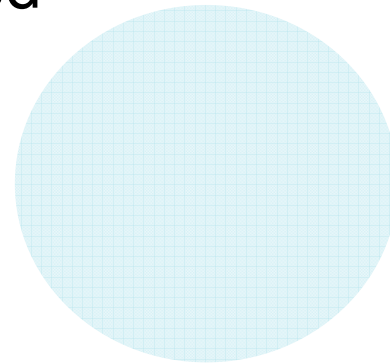
Summary of the first wave of Jazz offerings



Our experience can improve your software delivery

The Managed Capability Improvement Framework (MCIF)

- Drive business innovation and reduce costs through measured and continuous process improvement
- A phased approach that helps teams
 - Adopt an incremental, measured approach to transformation
 - Focus on the core practices that matter most
 - Accelerate adoption through out-of-



MCIF helps software and systems delivery teams measure, manage and incrementally improve their software delivery capability.



▪ RDz V.Next

- Support reuse of CICS v4.1 applications as services (tech preview)

<https://www14.software.ibm.com/iwm/web/cc/earlyprograms/ibm/cicsts41open/>

- Integration with CA Endevor® SCM (tech preview)

[http://www-](http://www-01.ibm.com/support/docview.wss?rs=3365&context=SSQ2R2&context=SS9KR6&context=SS2JX4&context=SS2QJ2&context=SSSTY3&context=SSDV2W&dc=D400&uid=swg24022860&loc=en_US&cs=utf-8&lang=en)

[01.ibm.com/support/docview.wss?rs=3365&context=SSQ2R2&context=SS9KR6&context=SS2JX4&context=SS2QJ2&context=SSSTY3&context=SSDV2W&dc=D400&uid=swg24022860&loc=en_US&cs=utf-8&lang=en](http://www-01.ibm.com/support/docview.wss?rs=3365&context=SSQ2R2&context=SS9KR6&context=SS2JX4&context=SS2QJ2&context=SSSTY3&context=SSDV2W&dc=D400&uid=swg24022860&loc=en_US&cs=utf-8&lang=en)

▪ RTCz

- Extend the z/OS platform to support multiplatform software development and delivery on z/OS, Windows, and Linux, integration with RDz (tech preview)

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

- Tech preview for new **C/C++ and COBOL IDEs for POWER** on alphaWorks

<http://alphaworks.ibm.com/tech/cremoteide>

- **Enterprise Modernization Sandbox** – try out the latest features for z/OS development

- **Improve your skills - preview version of** online course to learn COBOL with RDz, at the **COBOL Café**

<http://www-949.ibm.com/software/rational/cafe/docs/DOC-3129>

- Free version of EGL, with **Java & Web 2.0 support**, available soon on the **EGL Café**

<http://www-949.ibm.com/software/rational/cafe/community/egl>



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