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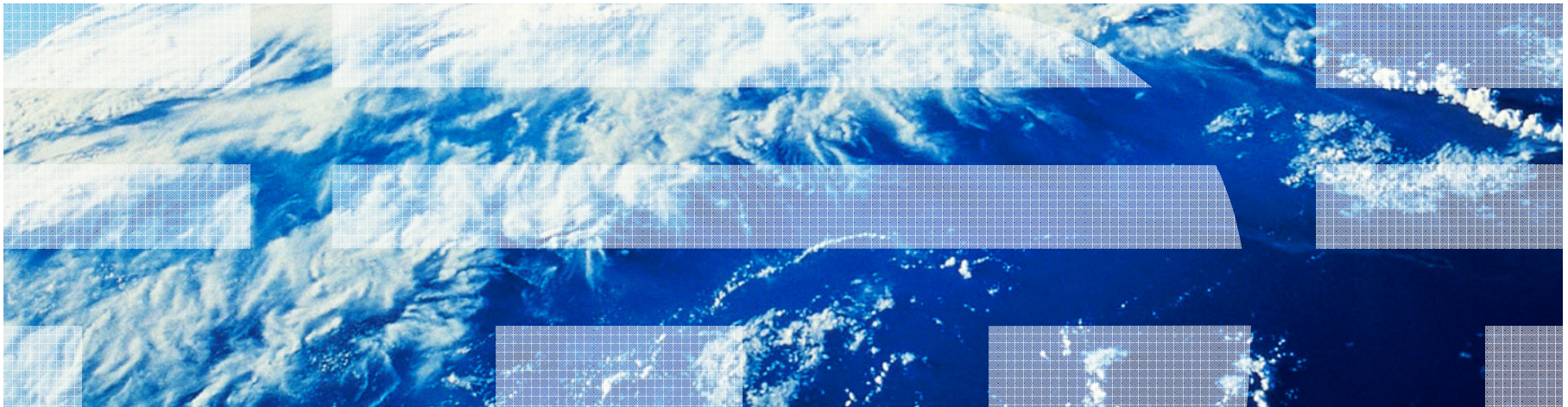
# News to Development Environments and for RDz for z/VSE

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## Application Life-cycle Management Business Problems – In customers own words

- “We do progress reporting the same way we've been doing it for 40 years. It's all manual: weekly status meetings, progress reports, demonstrations. We'd love to get test results from nightly builds posted somewhere instead of having to run people down to ask them whether things are working yet.”  
(Bank)
- “We had a consulting company define a methodology for us. We still have it on a shelf somewhere. A process needs to live in the tools we use if it's ever going to be followed.” (Transportation Co.)

# Software delivery is at the heart of today's top technology trends

## Big Data

Insights on new products by more efficiently interpreting massive quantities of data



## Cloud

Demand for apps requires fast, scalable environments for dev and test, as well as production



## Social Business

Broader set of stakeholders collaborate to deliver continuous innovation and value



## Instrumented Products

Industry requirements demand faster response to regulations and standards, with traceability and quality



# Software delivery

## Mobile

Modern workforce expects constantly updated software to connect to enterprise systems



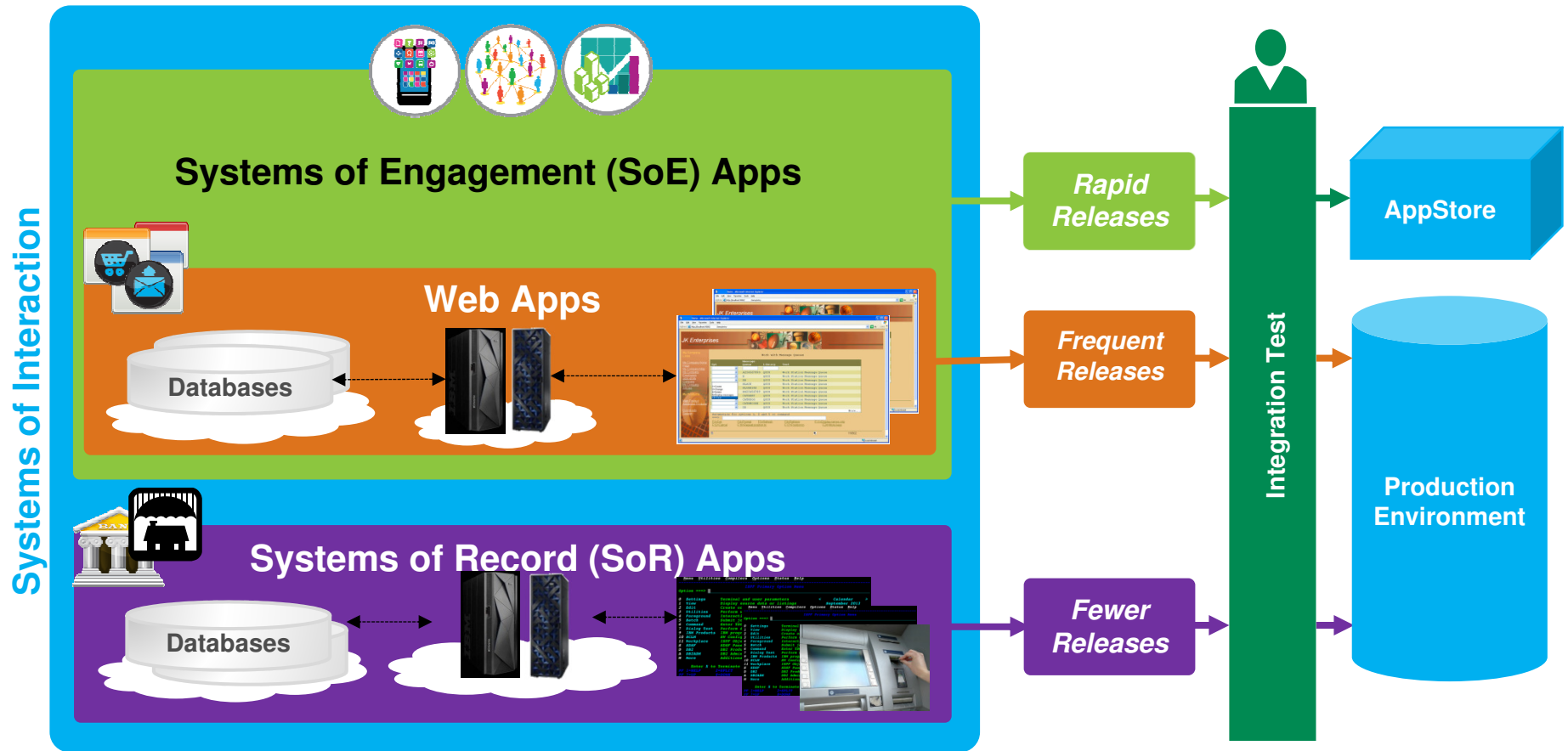
## Intelligent/ Connected Systems

Software components in smart products driving increased value and differentiation



# The Systems of Interaction landscape

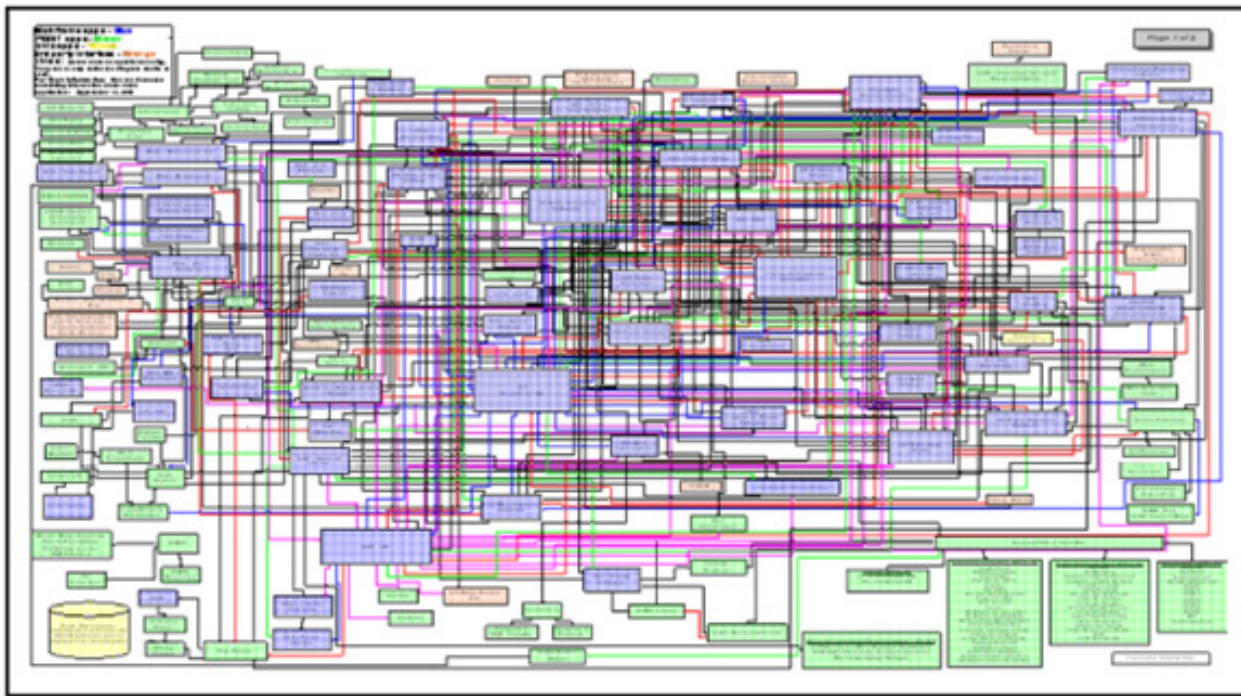
*Bringing together the people, processes, and tools across the entire software delivery lifecycle – spanning mobile to mainframe platforms*



System of records can be complex systems built on decades of continuous & incremental development

Change?

Improve response time?

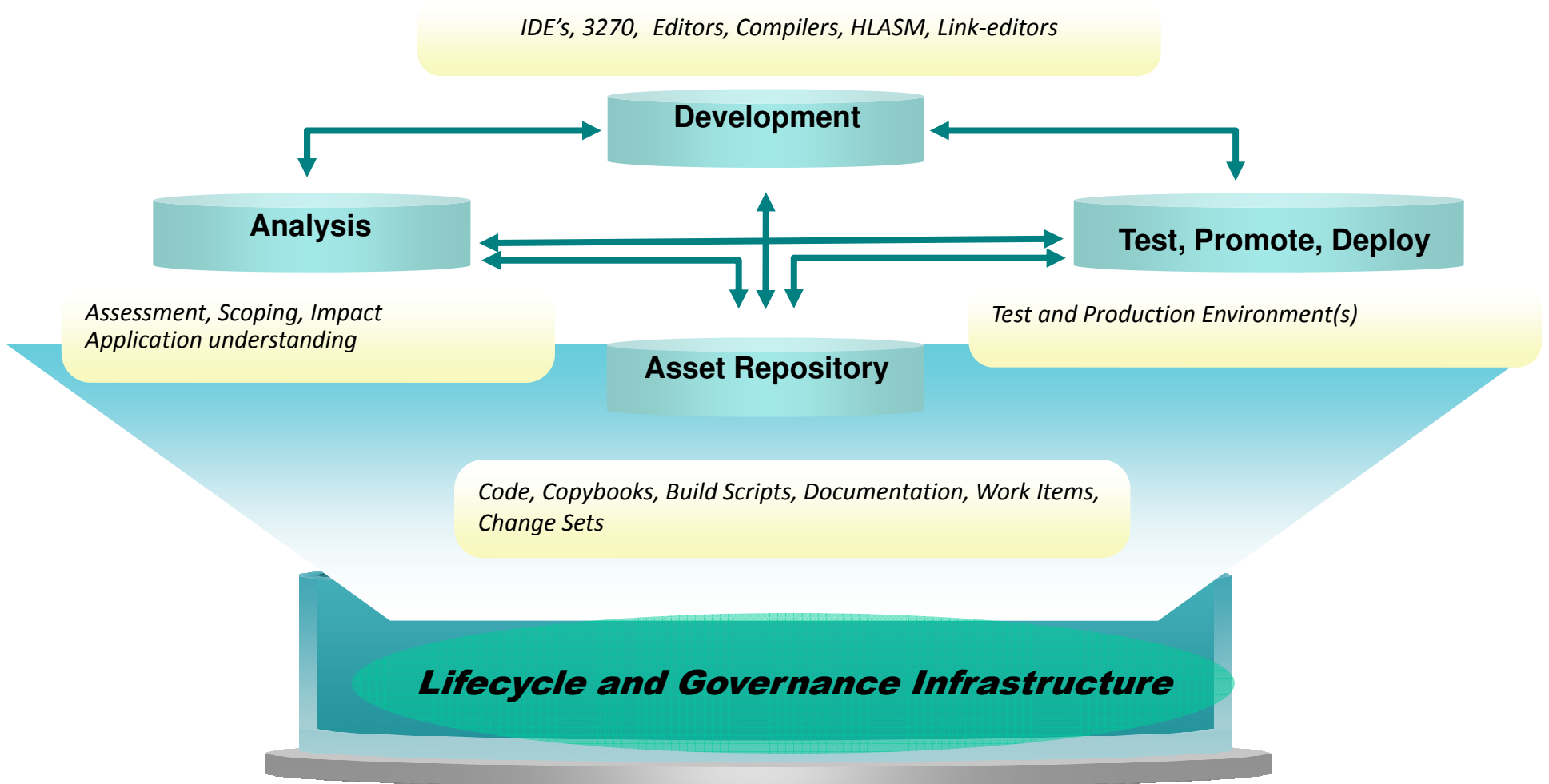


Modernization?

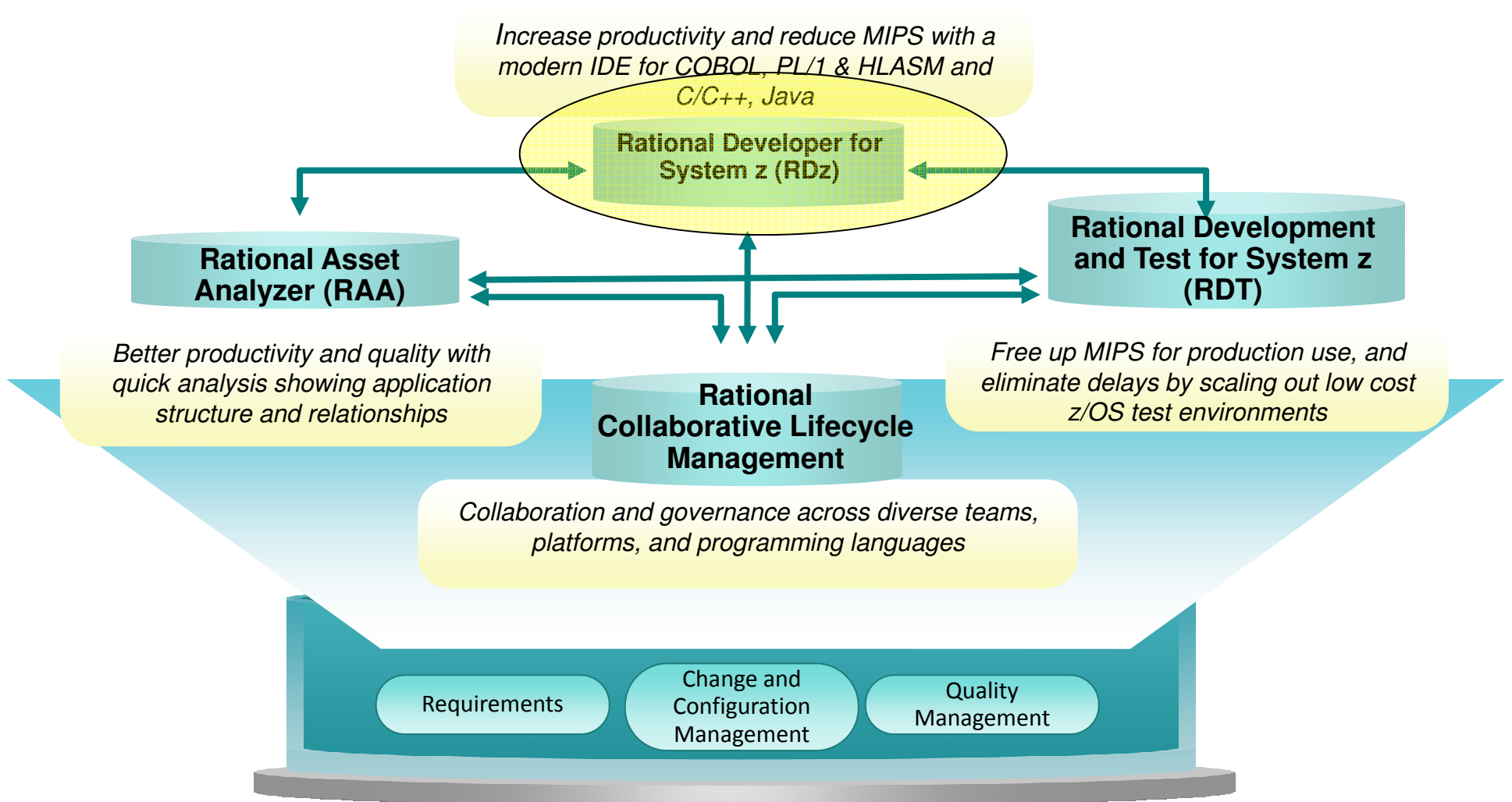
Where do I start?

Re-use?

# Infrastructure for Application Development on z



# IBM Rational Integrated Solution For System z Development



**Rational Software Delivery Platform**

powered by



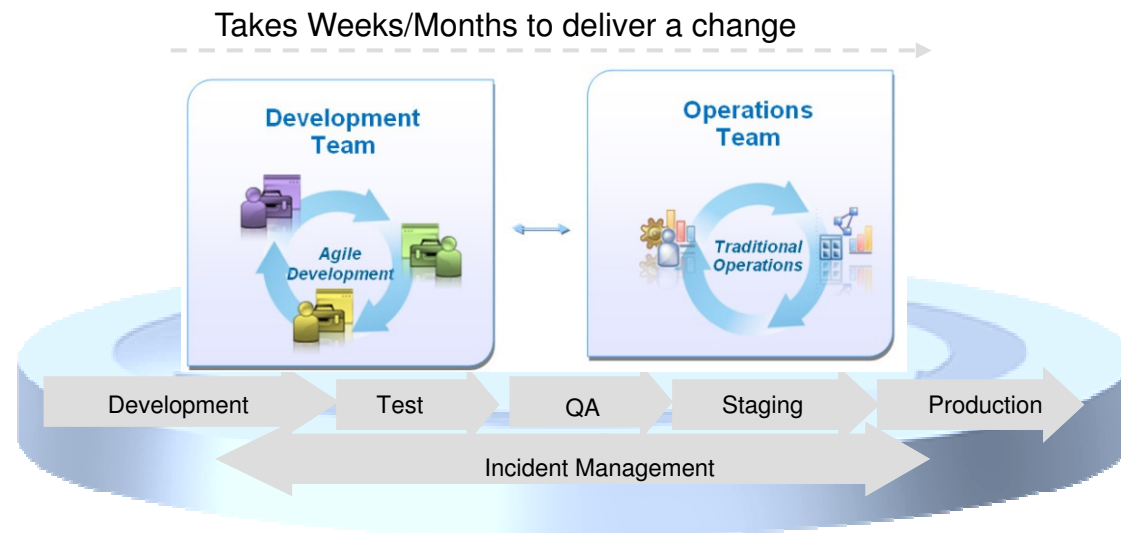
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# Software Delivery Challenges: what we hear from customers

## Needs:

- Reduce cycle time and delays
- Improving software delivery efficiencies with standardization and automation
- Improving Quality of Delivery and reducing roll-backs



## Quality Challenges

- Difficulties in reproducing production defects
- Long time to fix defects
- Poor Test coverage
- Lack of automated testing

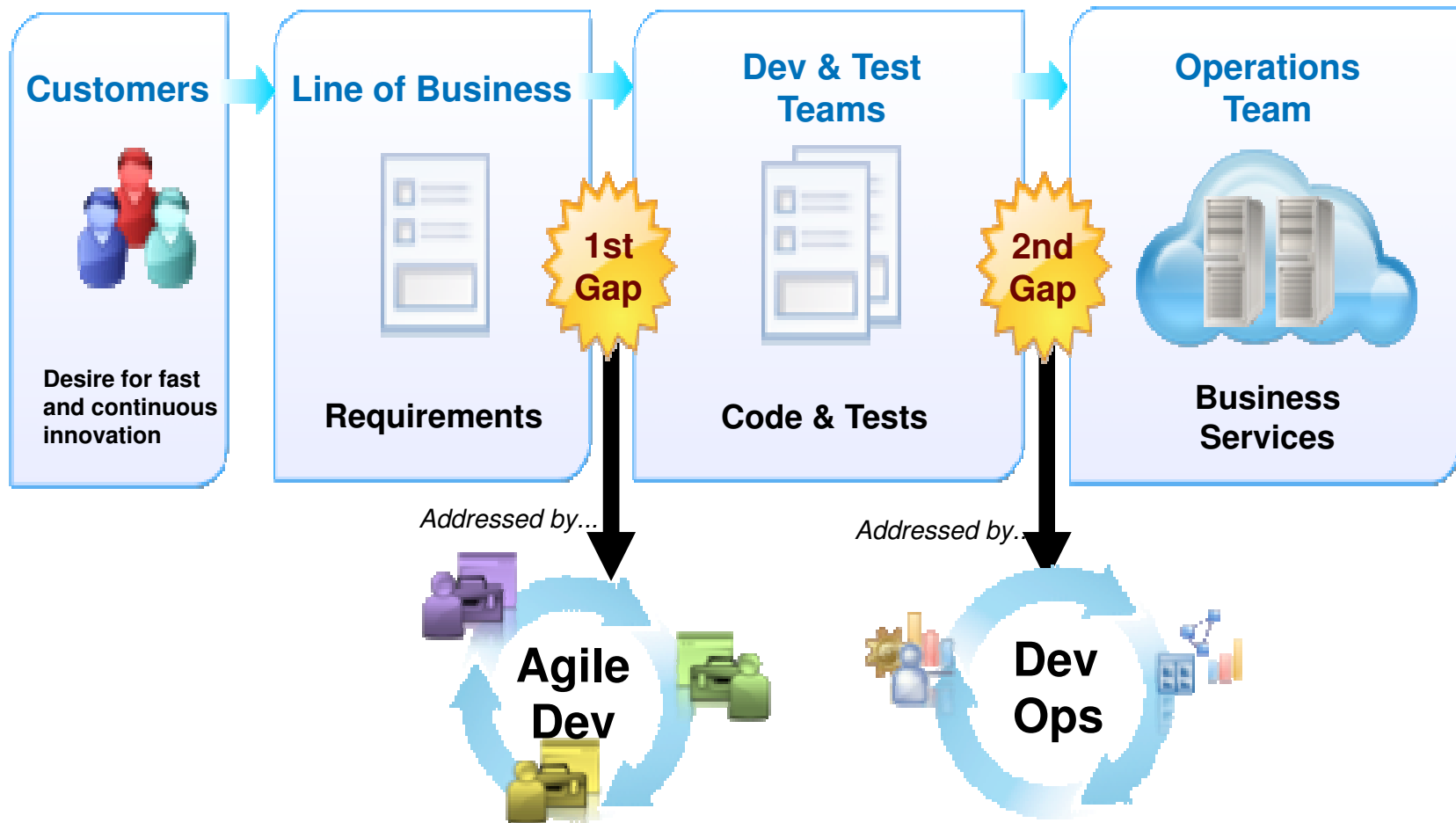
## Release Challenges

- Differences in Dev/Ops environments
- Siloed / Limited automation
- Long set up time

## Process and Cultural challenges

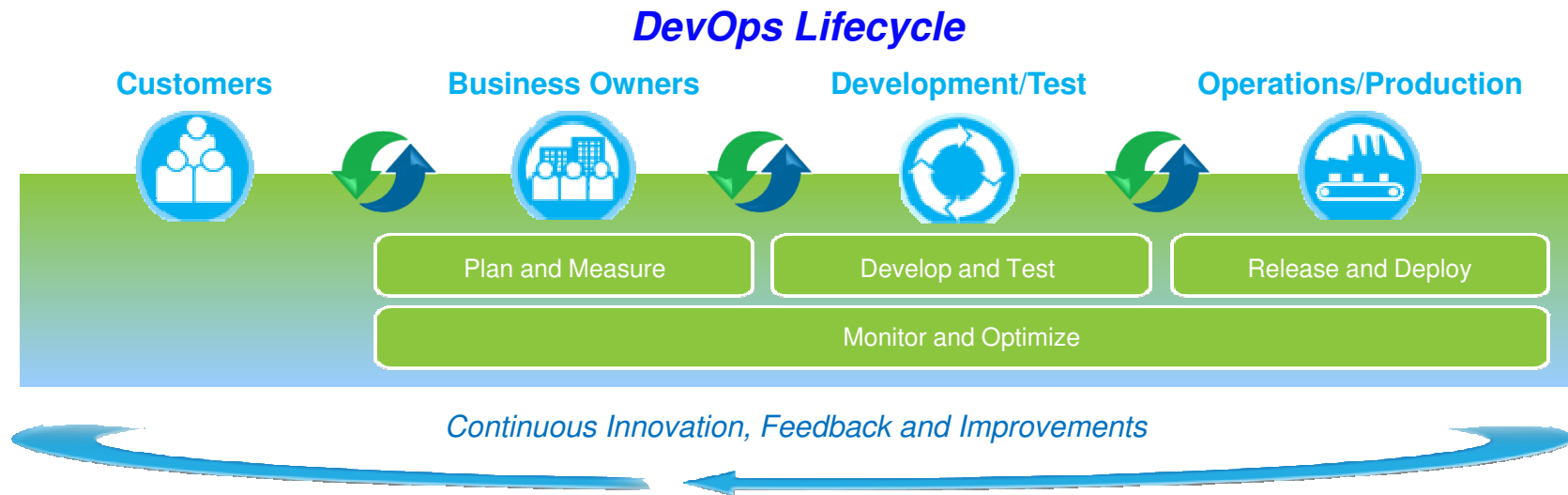
- Point-Point, adhoc and Fragile integration of tools
- Poor visibility, stability and extensibility
- Cultural barriers limiting collaboration
- Heavy-handed control of dev environments

# Challenges delaying delivery of functionality to the business



# What is “DevOps”? - close the Gap between Development & Operations

**DevOps** - Enterprise capability for continuous service delivery that enables clients to seize market opportunities and reduce time to customer feedback.



## Accelerate Software Delivery

Expanding collaboration to include customers, LOB and others to eliminate organization silos

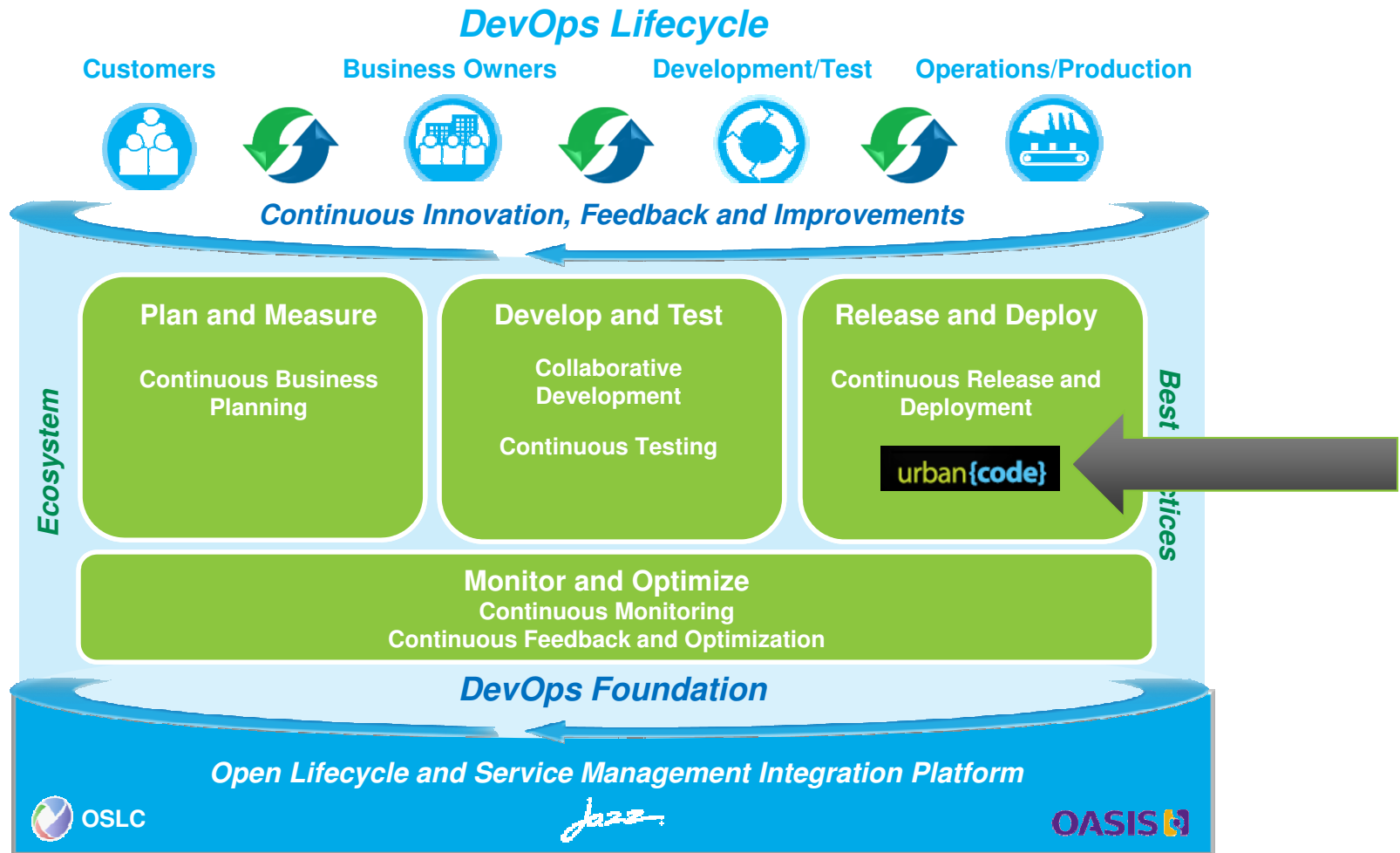
## Balance speed, cost, quality and risk

Automating manual processes across delivery lifecycle to eliminate waste/delays and compliance tracking

## Reduce time to customer feedback

Enabling a customer feedback loop for continuous improvement

# Urbancode at the Heart of IBM's DevOps Architecture



# UrbanCode, an IBM Company

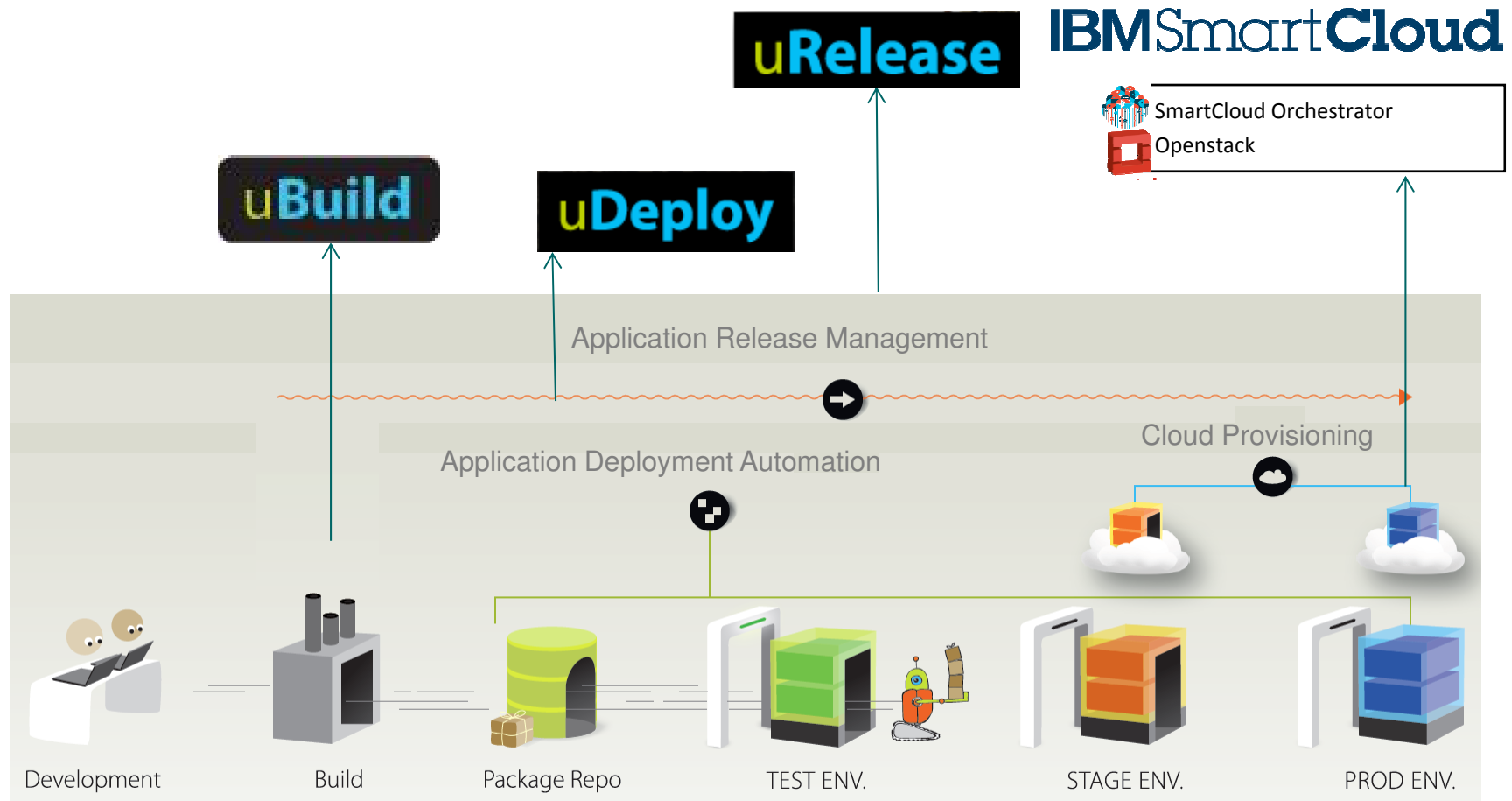
- 11 Years Build, Release and Deployment Experience
- Global Customers
- Enterprise scalability, security, compliance and automation
- Training, consulting and implementation services
- Based in Cleveland, OH

*“One key benefit of UrbanCode is how quickly it can be implemented and used for deployments.”*

**Gartner**



# UrbanCode “u” Product Line



# Open Services for Lifecycle Collaboration

*Simplifying collaboration across the software delivery lifecycle*



## Open Services for Lifecycle Collaboration

Open interfaces. Open possibilities.

- Write non proprietary integrations between CC / CQ integrated work items and other products
- Allows you to easily integrate tools that are OSLC compliant

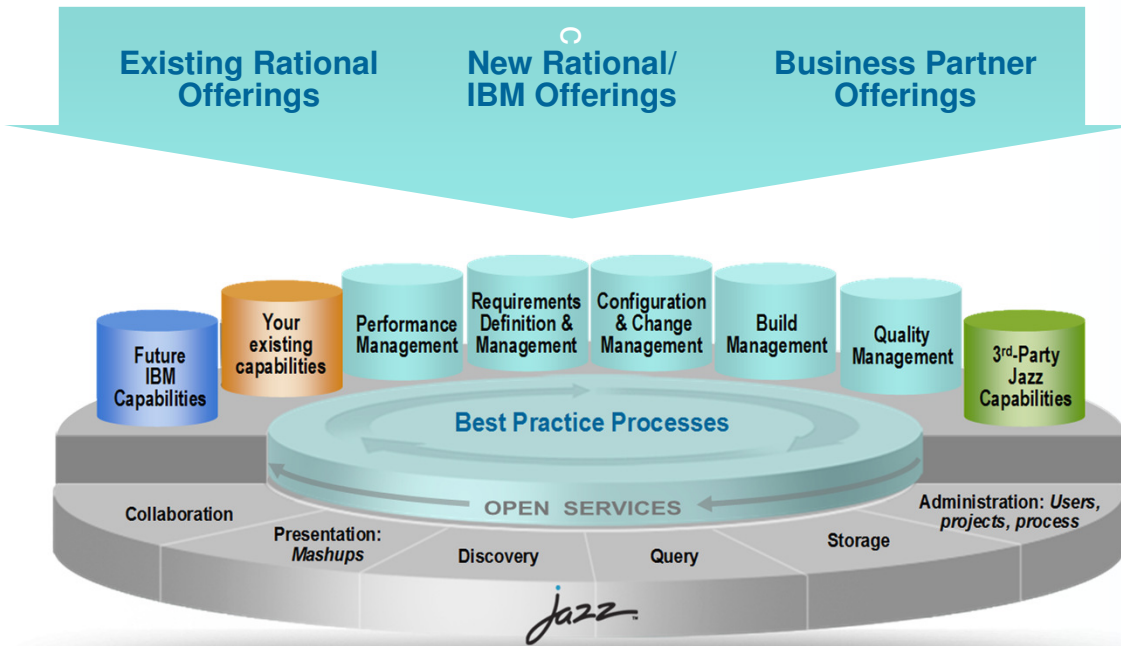
### Barriers to sharing resources across the software lifecycle

- ▶ Multiple vendors, open source projects, and in-house tools
- ▶ Private vocabularies, formats and stores
- ▶ Entanglement of tools and data

### ▶ The Open Services initiative is

- **Building** a community of software vendors, open source projects, integrators, and corporate IT teams, operating at **open-services.net**
- **Creating** public specifications of resources and services for sharing the things that software teams rely on, like change requests, test cases, defects, requirements and user stories
- **Delivering** loosely coupled resource formats and services with “just enough” standardization

# Envisioning a platform that can transform software delivery



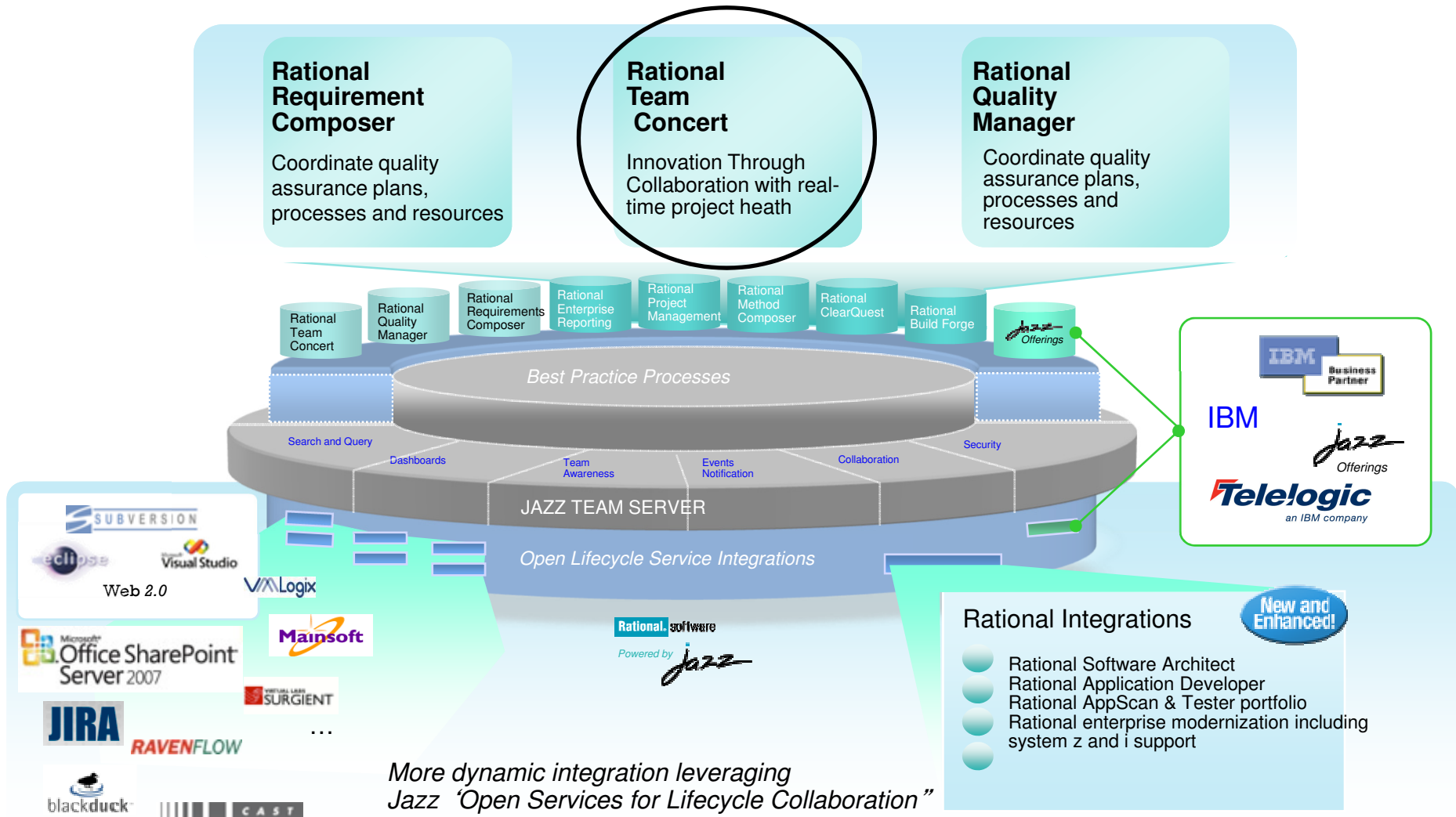
**Jazz is a project and platform for *transforming* how people work together to deliver greater value and performance from their software investments.**

## ***Jazz is...***

- A scalable, extensible team collaboration platform
- A community at Jazz.net where you can see Jazz-based products being built
- Our vision of the future of systems and software delivery, supporting globally distributed teams
- An integration architecture enabling mashups and non-Jazz based products to participate
- An evolution of our portfolio which will evolve to leverage Jazz technology over time

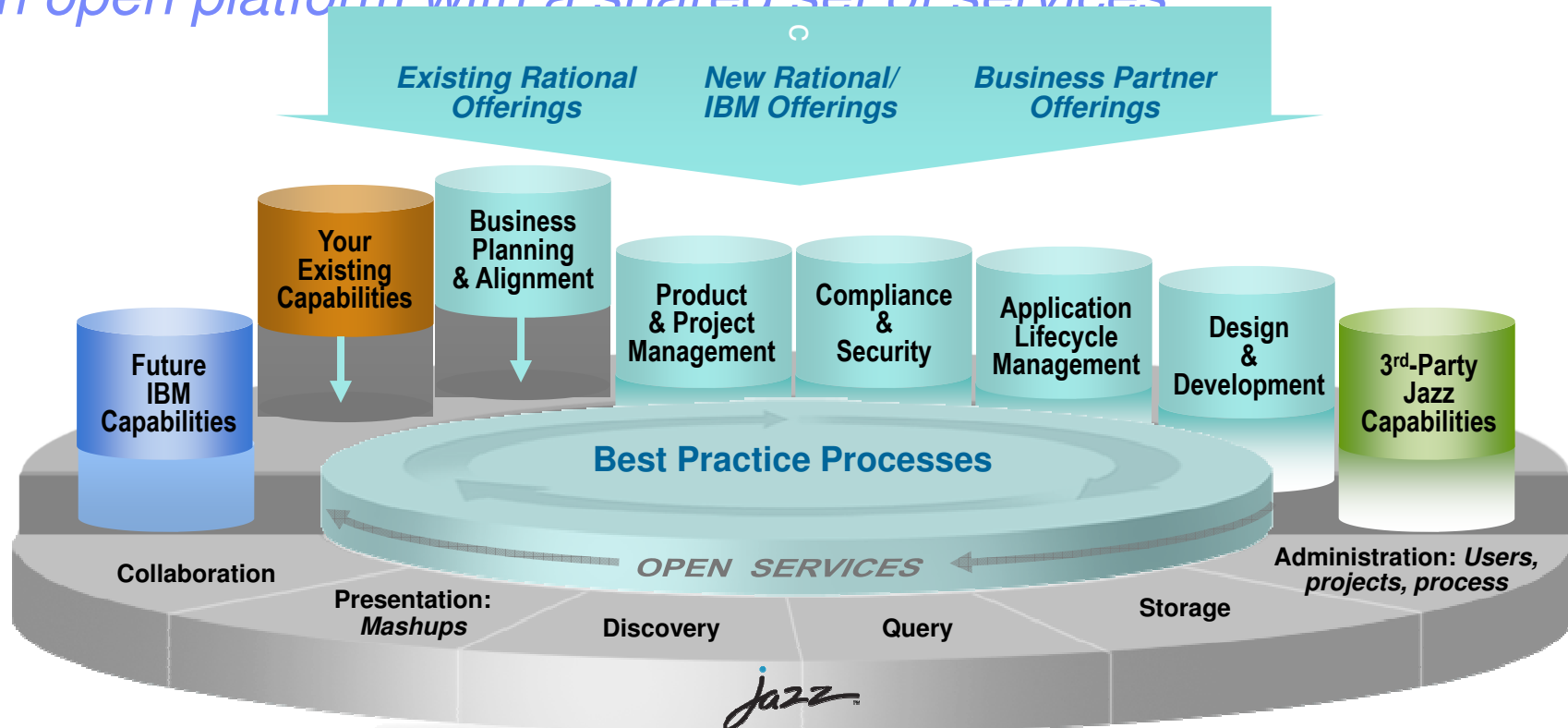


# IBM Rational Jazz Platform



# Rational Team Concert (RTC) is based on Jazz

*An open platform with a shared set of services*

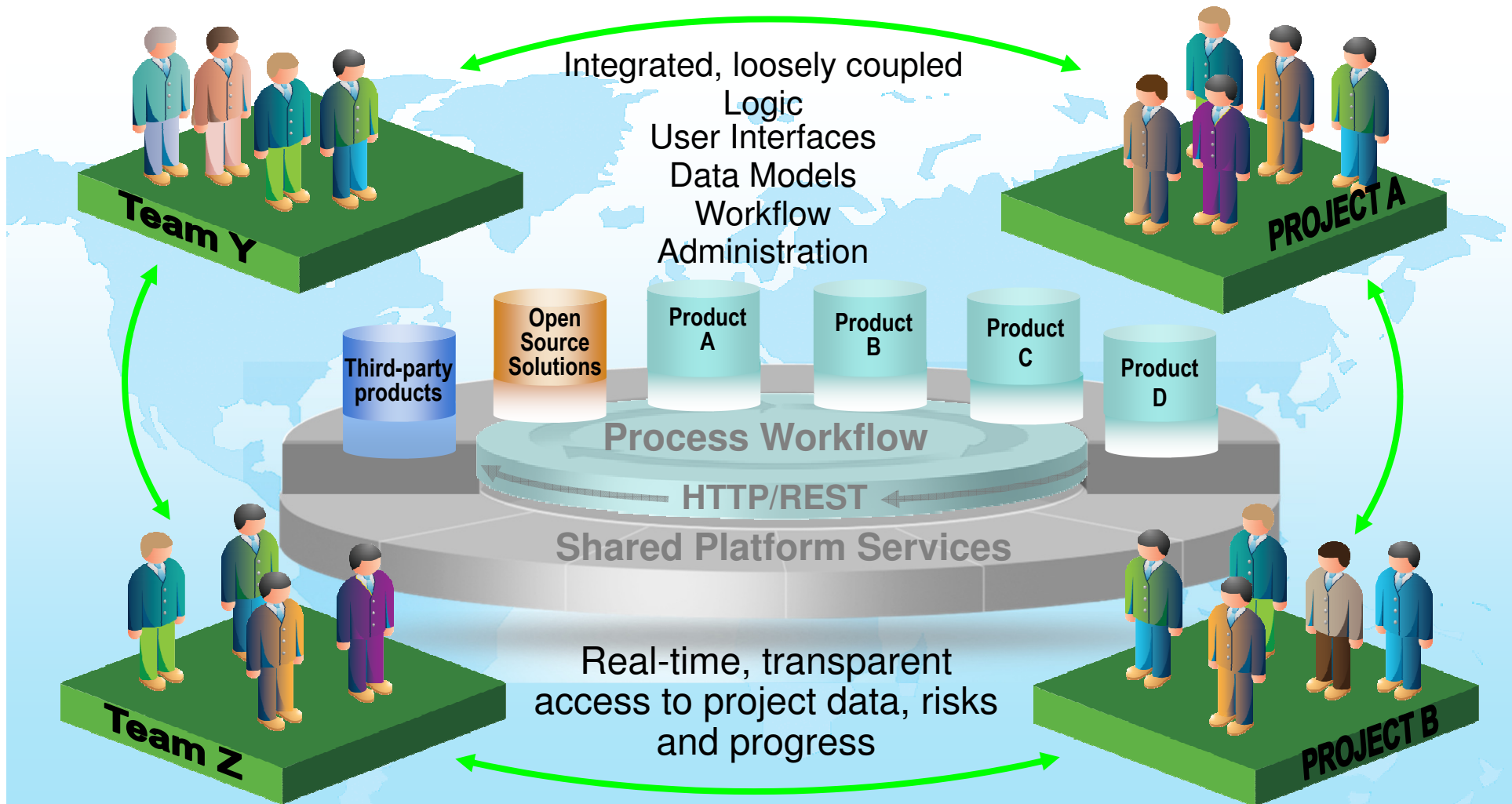


## ***Jazz is...***

- A scalable, extensible team collaboration platform
- A community at Jazz.net, where you can see Jazz-based products built in the open
- An open architecture for lifecycle integration (OSLC - [www.open-services.net](http://www.open-services.net))

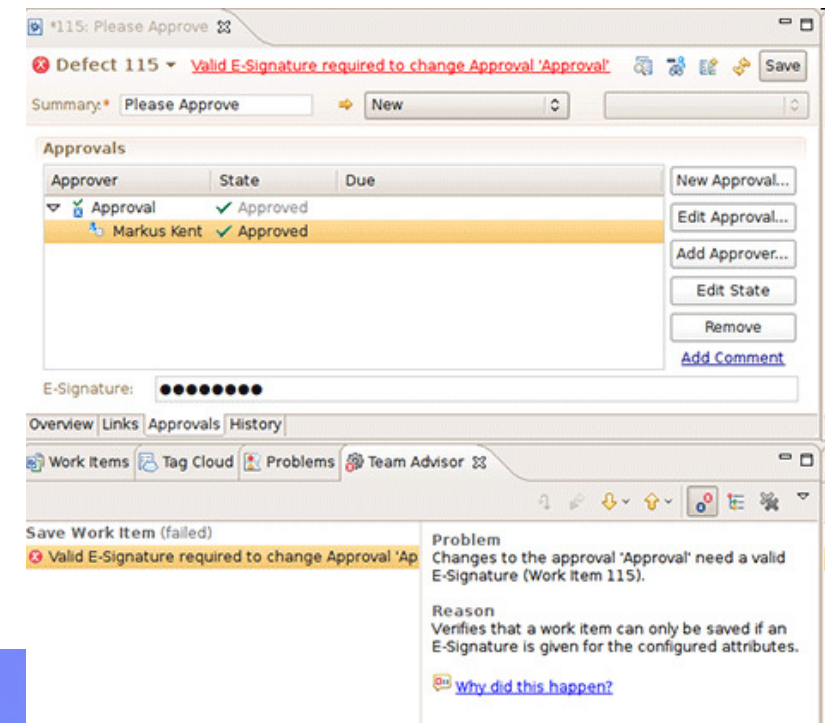
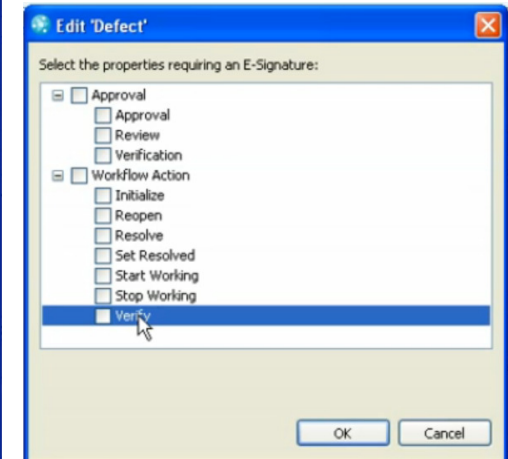
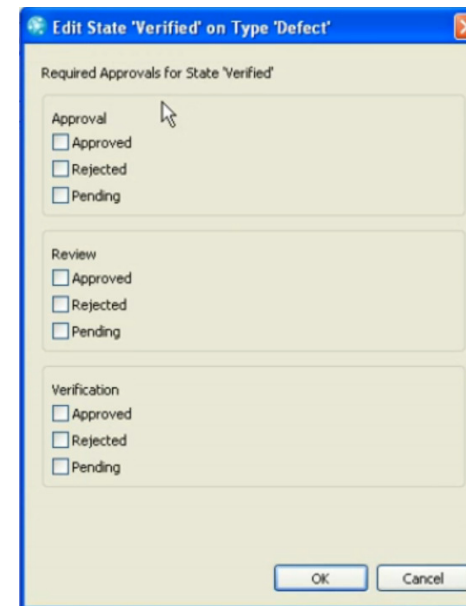
# Jazz:

A platform for development integration and collaboration



# Govern change-mgmt

- Establish and enforce approval and review checkpoints in your change workflow
- Require approvals and reviews before a workflow state change
  - Example: Rejecting a submitted workitem, moving a defect from submitted to planned, moving an enhancement from resolved to implemented
- Establish multiple approvals and reviews integrating comments and discussion
- Require an electronic signature when changing the state
  - Example: As part of an approval, when moving an enhancement or defect from submitted to rejected or accepted.



# Transparency and Status for Everyone

*Every stakeholder knows project status without having to ask*

**Jazz Project Description**

Process enabled team collaboration platform

The goal of the Jazz project is to build a scalable, extensible team collaboration platform for seamlessly integrating tasks across the software lifecycle. The new technology is called the Jazz Platform. The Jazz project is defining the overall architecture of the Jazz Platform, and building an initial set of Jazz components that plug in to the Jazz Platform.

The work in the Jazz project is divided into development work and maintenance work. Development work produces a consecutive line of releases. Maintenance work produces bug fix releases of the released produced by the development work.

Development as well as maintenance work is overseen by the PMC. The team members listed in this project area constitute the PMC.

**Jazz Project Members (11)**

CQ Connector Account	connector
Dejan Glozic	dashboardadmin
Erich Gamma	dashboardadmin, projectadmin, PMC, contributor
Jean-Michel Lemieux	dashboardadmin, projectadmin, PMC, contributor
John Vasta	connectoradmin
Kai-Uwe Maetzel	PMC, contributor
Kevin Haaland	PMC, contributor
Kim Moir	projectadmin
Peter Klenk	PMC, contributor
Scott Rich	PMC, contributor

Page 1 of 2

**Jazz Project**

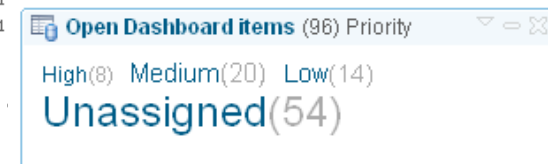
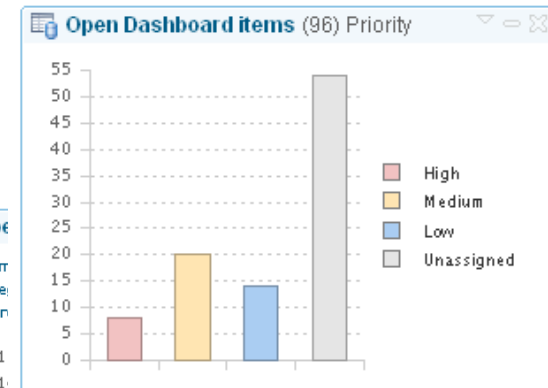
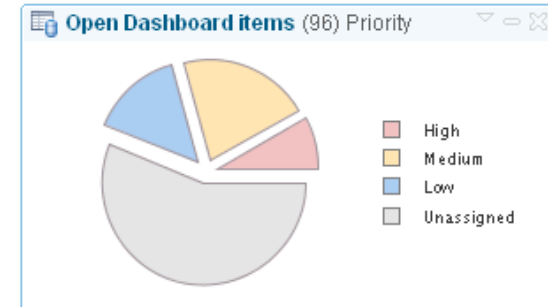
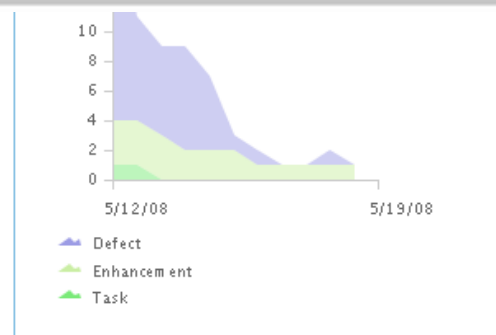
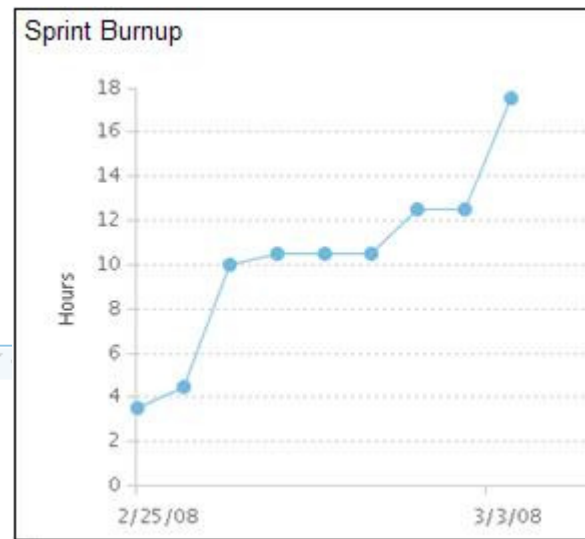
**Open vs Closed Work Items**

Team Area: /Jazz Development/Dashboard  
Category: Dashboards  
Interval: 0.6 RC3

5/12/08 5/19/08

Open Closed

- Jazz Devel
- Agile P
- Build
- ClearC
- ClearQ
- Comm
- Dashb
- Develo
- Improv
- Incubat
- Install
- Jumps
- Proces
- Releas
- Report
- Reposi
- Source
- System
- UI Des
- User A
- Web UI
- Work It
- X-Team
- Jazz Maint

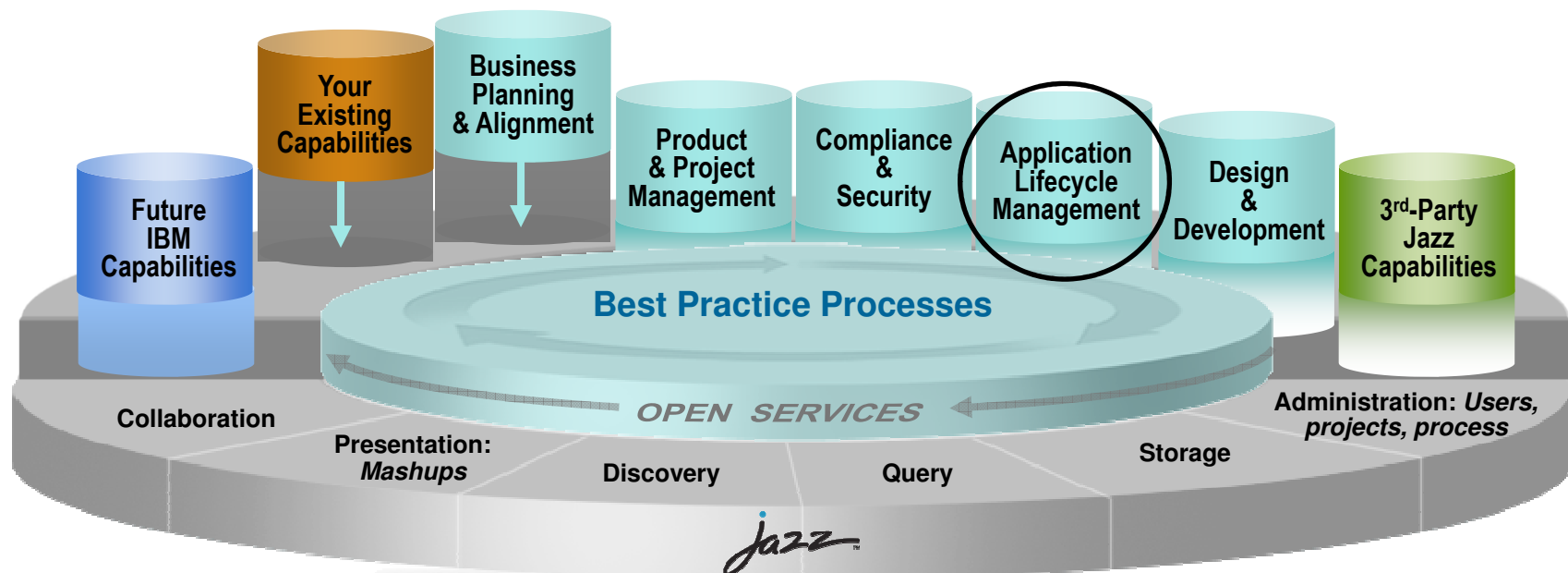


**Open Dashboard items (96) Priority**

Priority	Count
High	8
Medium	20
Low	14
Unassigned	54

# Rational Developer – for development life cycle

*An open platform with a shared set of services*

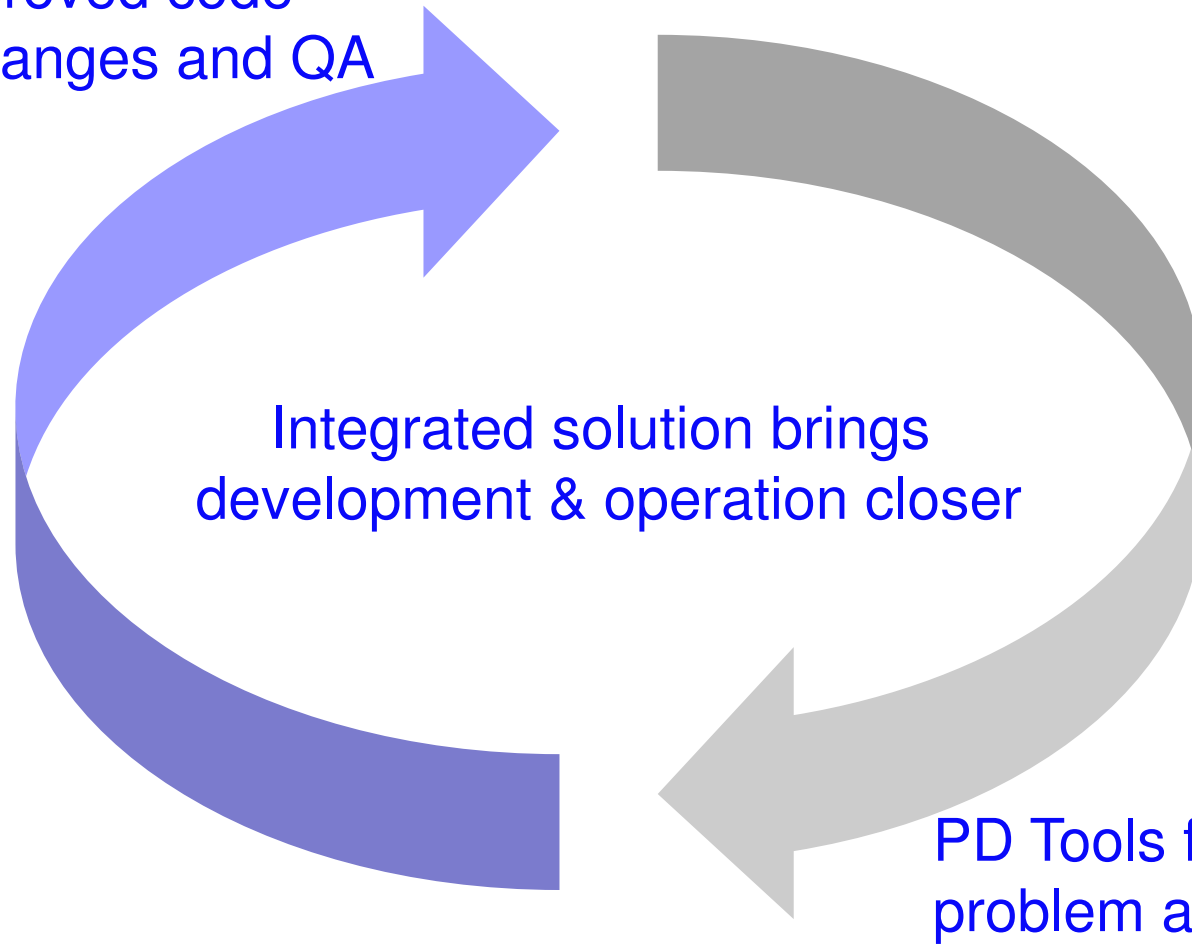


## ***Jazz is...***

- A scalable, extensible team collaboration platform
- A community at Jazz.net, where you can see Jazz-based products built in the open
- An open architecture for lifecycle integration (OSLC - [www.open-services.net](http://www.open-services.net))

## System z tools matter for improved efficiency and productivity - we have the solution for taming the complexity

RDz for improved code analysis, changes and QA

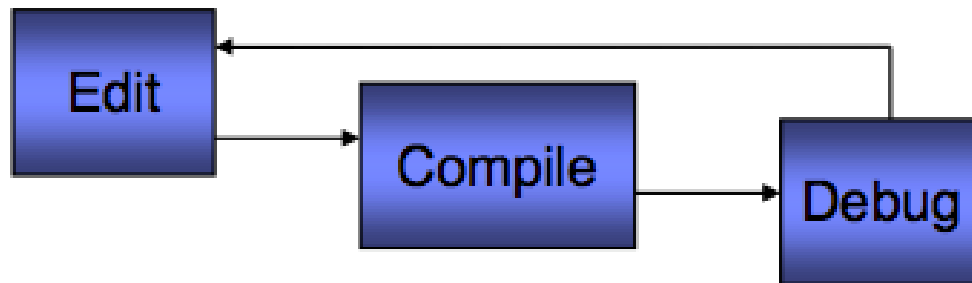


PD Tools for effective problem analysis

# IBM Rational Developer for System z

**An integrated development environment to boost your E/C/D productivity:**

- ✓ Rich source editing and navigation
- ✓ Code review for code governance
- ✓ Integration with the platform's latest compiler technology
- ✓ ... and a new RDz Integrated Debugger to provide a seamlessly integrated & complete Edit/Compile/Debug solution out-of-the-box





# Integrates with Rational Team Concert for System z

- **Rational Developer for System z projects in Rational Team Concert for System z**
  - Rational Developer for System z projects are a view into the Rational Team Concert for System z project
  - Rational Developer for System z projects provide a working set for the developer
  - Rational Developer for System z projects are not shared in the SCM
  
- **Rational Developer for System z augments the development productivity & experience**
  - files act as if on the host
  - Appropriate editors (COBOL, maps, etc.) and functions (content assist, syntax check, etc.)
  - High value functions (XML enablement, SFM, code generation from models, from UML, etc)
  
- **Rational Team Concert for System z provides**
  - Agility, collaboration and process
  - SCM and Build functions for multiple platforms

transparent *integrated presence*  
 wikis OPEN real-time reporting  
 chat documents Web 2.0 *custom*  
*dashboards* automated data gathering  
**EXTENSIBILITY** Eclipse plug-ins services  
 architecture **FREEDOM TO CREATE**

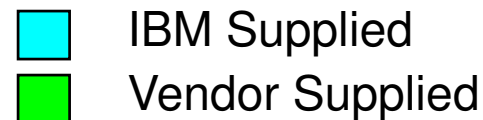
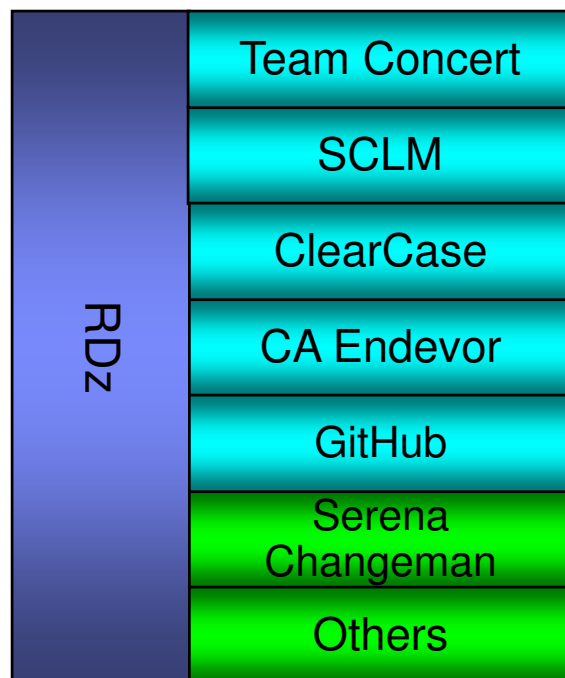
JAZZ TEAM SERVER

Open and extensible on

- ✓ Collaborate
- ✓ Automate
- ✓ Report

## Access source code...

- Rational Developer for System z offers integration into a variety of Source Code Management (SCM) tools as well as a framework for creating SCM integration on your own
- Variety of vendors supply plug-ins to Rational Developer for System z to provide easy access to processes and source code controlled by their products



# Jazz momentum continues ...

## 300,000+ Jazz seats in the market place

### Over **50,000** members active on Jazz.net

- Almost **2,000** new members a month
- Averaging **30,000+** unique visitors per month
- Since last year's Rational conference:
  - Averaging over **400,000** page views per month more, than a 2X increase over the same period 08/09
  - Monthly downloads average over **9,000**, up 3X over the same period 08/09
  - Forum postings have averaged over **1,500** per month and forum searches are averaging over **6,000/month**

### Community Feedback and Testimonials

"Rational Team Concert has **excellent team collaboration** with automated project management dashboards that are transparent to everyone — not just managers. This immediate and automated feedback helps **keep teams on track and motivated** to achieve project goals."  
— Han Jie, Siemens

<http://jazz.net/community/feedback/>



### What Analysts are saying:

**Liz Barnett, Ez-Insight:** "With the Jazz project, Rational has developed **breakthrough technology** and is **poised to set the standard for collaborative ALM...**"

**Paul Herzlich, Ovum:** "IBM has taken the opportunity to exploit the Jazz platform's power inventively. Its 'living' test plan is a **masterpiece of applying new technology to a familiar problem...** What is being delivered will demonstrate convincingly that IBM is raising the standard for a test management product."

**Julie Craig, EMA:** "Rational's differentiators are **difficult for competitors to equal**, and the new Jazz platform foundation may well turn out to be one of the best investments the Rational team has made."

The image shows two award-related graphics. On the left is the "Forrester Wave report: Rational Team Concert 'best current offering'" which includes a photo of a sailboat. On the right is the "Yphise Award for Rational Team Concert" which includes a photo of a gold award trophy. Below the trophy photo is the text: "Boosting Team Collaboration during software projects: Download the report in the agility@scale e-Kit" and a button that says "Get the e-Kit".

## Development objectives !!!

- Tools for managing existing z/VSE source code and changes
  - COBOL, ASM, PL/I, C, 4GL Languages
  - increased productivity for changes and new development
  - flexibility in versioning
  - effective group development control
  
- Develop for multiple platforms
  - common framework for the enterprise instead of multiple unique platform dependent tools
  - same basic tool set for open systems and mainframe
  
- Open source based technology
  - tools that students know from school and university communities
  - help new developers adapt to the mainframe

# Rational Developer for System z - a complete tools set with capabilities from Mobile Development to COBOL

Integration with Team  
Concert for Lifecycle and  
Source Management

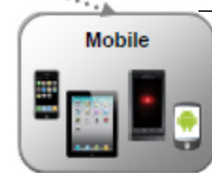


Access to typical System  
z sub-system functionality  
in z/OS, CICS, IMS, DB2,  
WAS



- Built on Eclipse
- Common tool set for end to end development
- Build, preview, and deploy within the IDE
- Mobile simulator (for unit test)
- End-to-end debug
- Integrate with third-party SDKs (e.g. Android Development Tools)

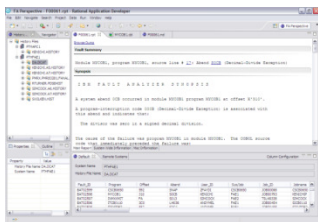
Integration with RD&T for  
flexible access to System z  
environment



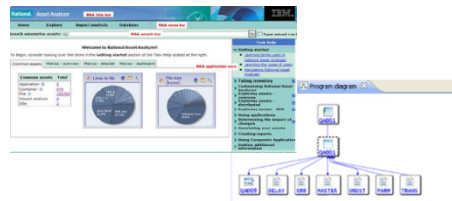
Robust Mobile Development  
in conjunction with Worklight



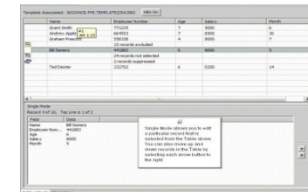
Integration with Fault  
Analyzer for Dump Analysis



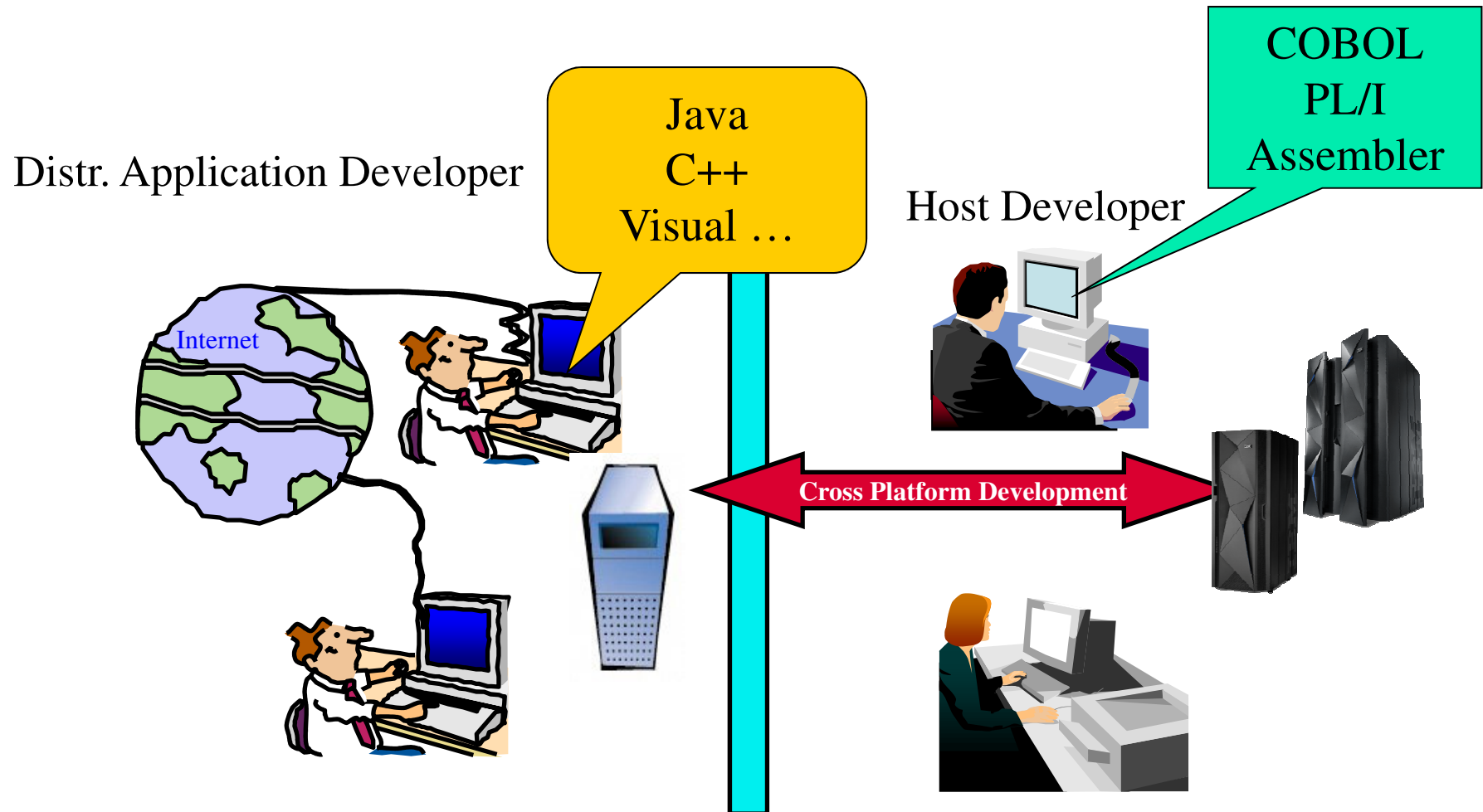
Integration with Asset Analyzer  
for Application Understanding  
and Impact Analysis



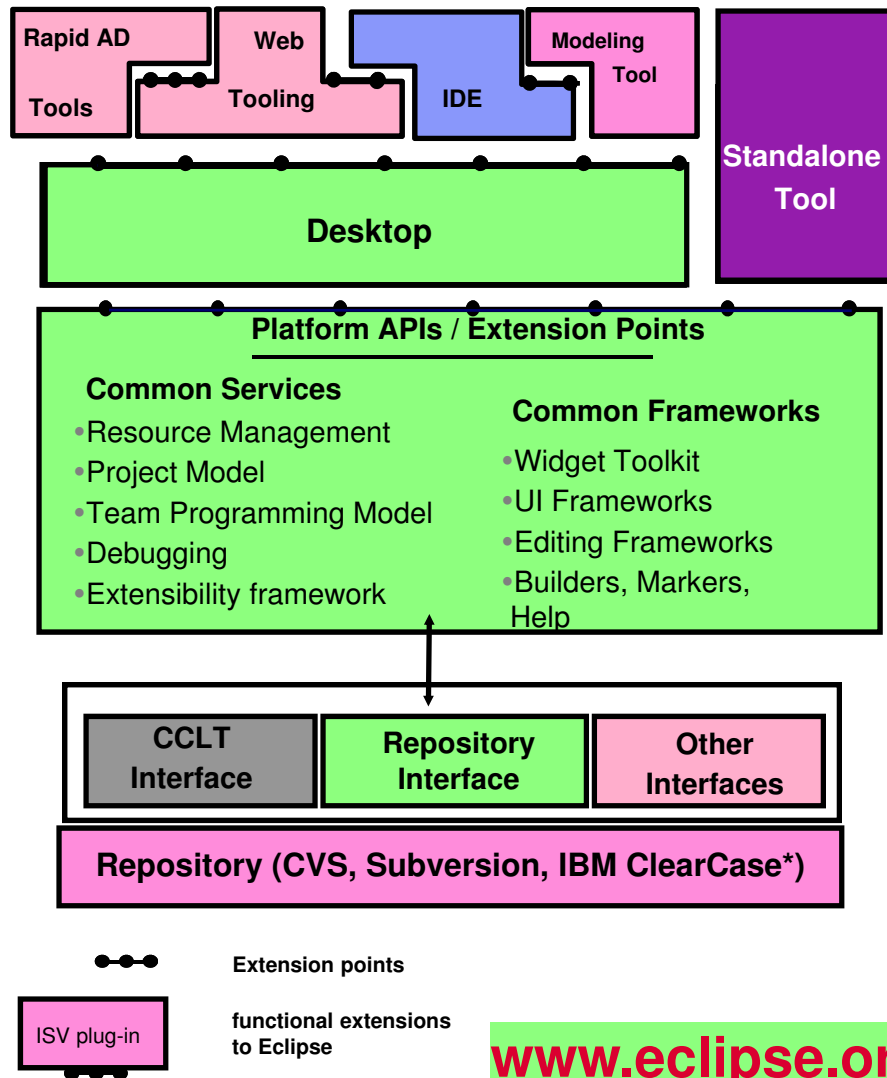
Integration with File  
Manager and Fault  
Analyzer for file and test  
data handling and Dump  
Analysis



# 'Distributed' Development Landscape...



# Eclipse – the open Standard for application development

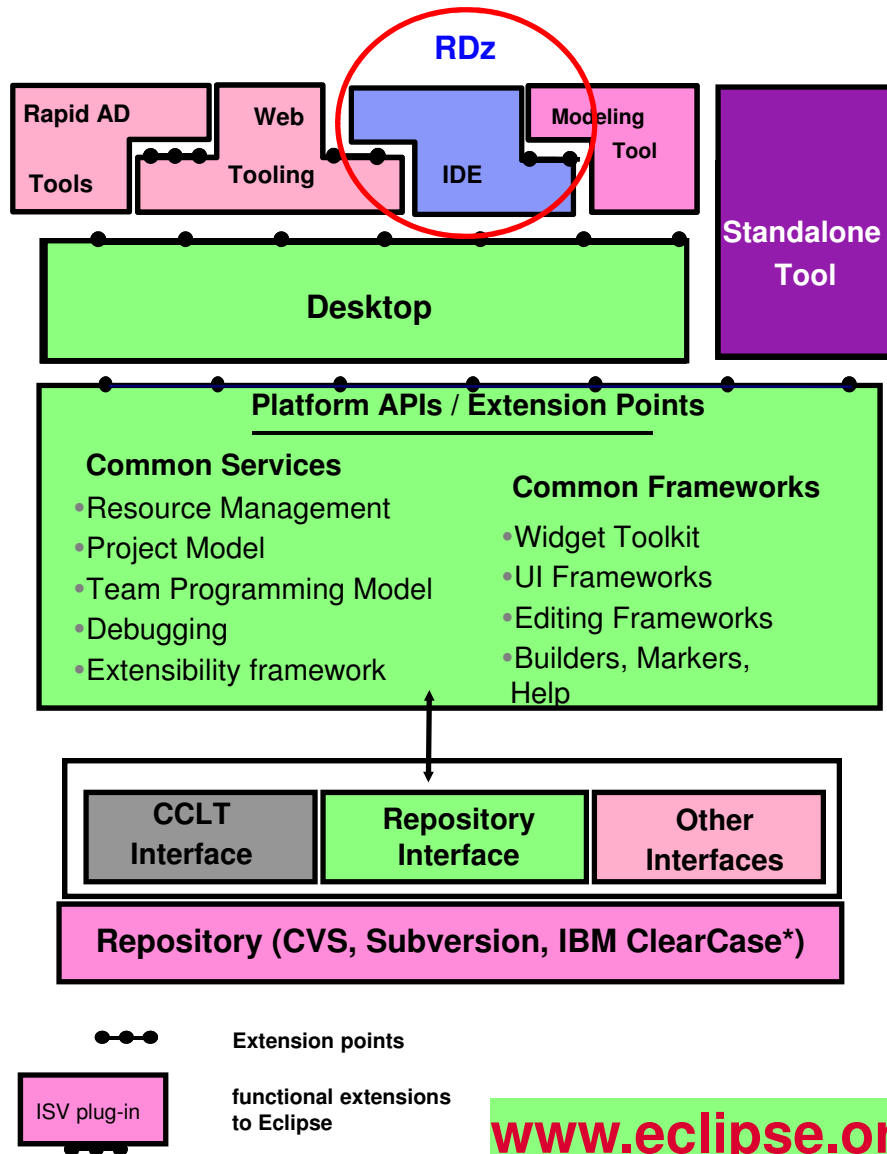


[www.eclipse.org](http://www.eclipse.org)

## What is Eclipse about:

- Open source development framework
  - with modern Editors
  - syntax help & check
  - semantic check
- Centralized source code maintenance
  - entire source code in central Repository
  - cross platform project administration
- Versioning software interface
  - CVS, Subversion, or IBM ClearCase
  - automatic Workgroup-control
    - i.e. development groups, system group
- Open for ISVs development Plug-Ins
  - **Integrated Development Environments (IDE)**
    - for System z (RDz)
    - for Java, COBOL, PL/I, ASM,C
  - **Application analysis and optimization**
    - RTW – Rational Trasformation Workbench
    - Analyze applications with graphical correlations
  - IBM HATS Development Plug-In
    - develop new front-ends to 3270 apps.
  - **IBM EGL development for z/VSE (RBD)**
    - follow-on to Visual Age Generator

# Eclipse – the open Standard for application development



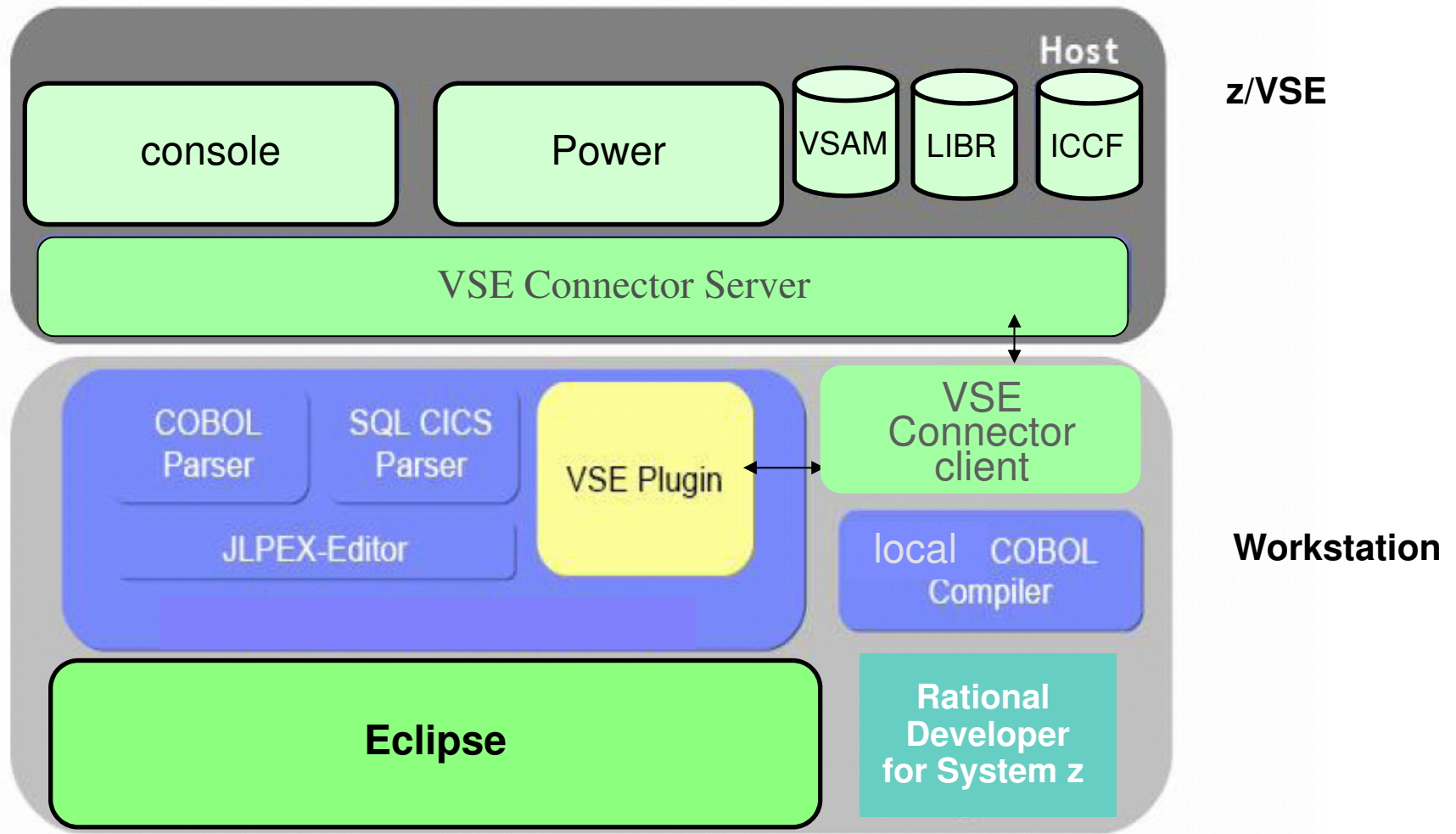
[www.eclipse.org](http://www.eclipse.org)

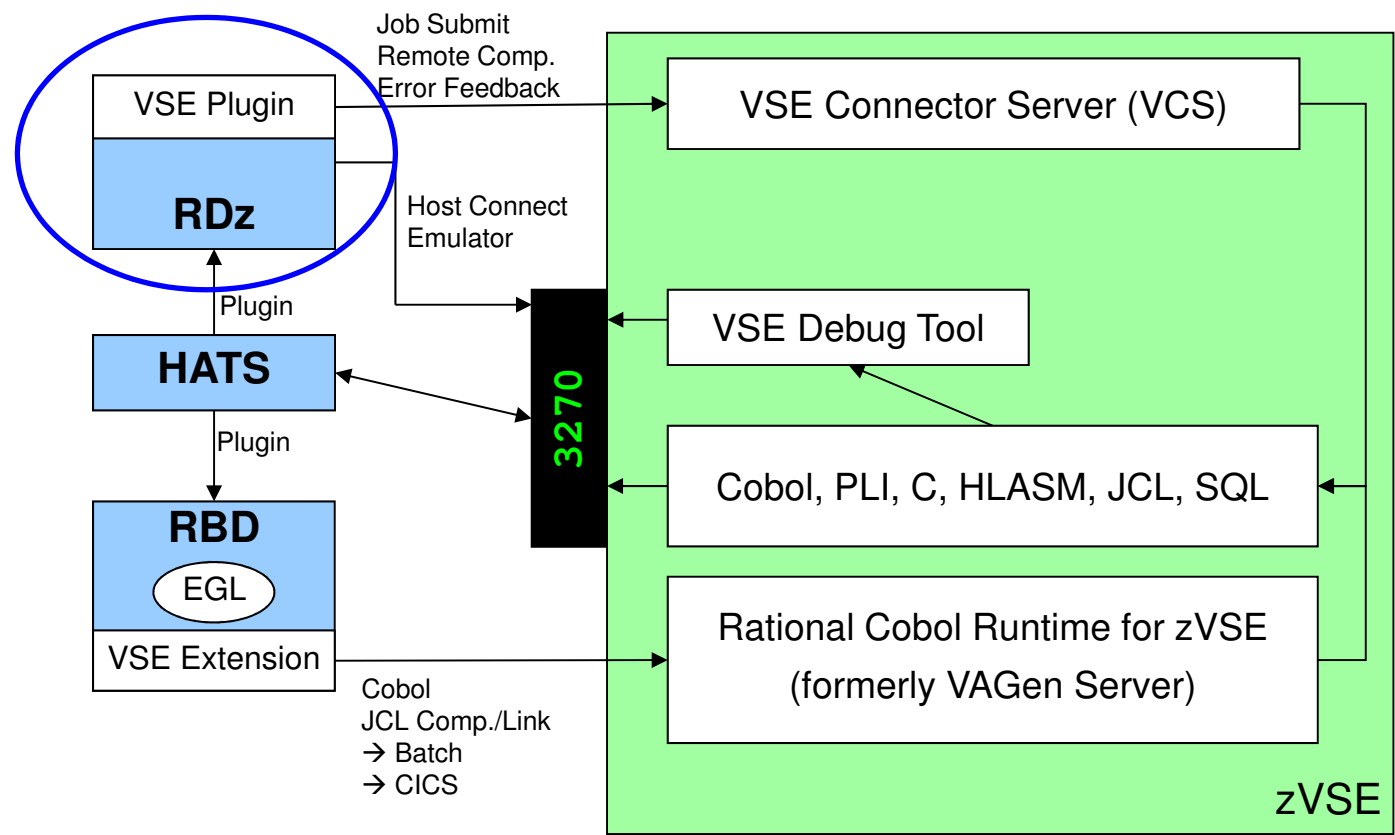
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The IBM Development environment for the enterprise  
**Rational Developer for System z (RDz)**  
 with z/VSE Development Plug-in for RDz – from QGroup





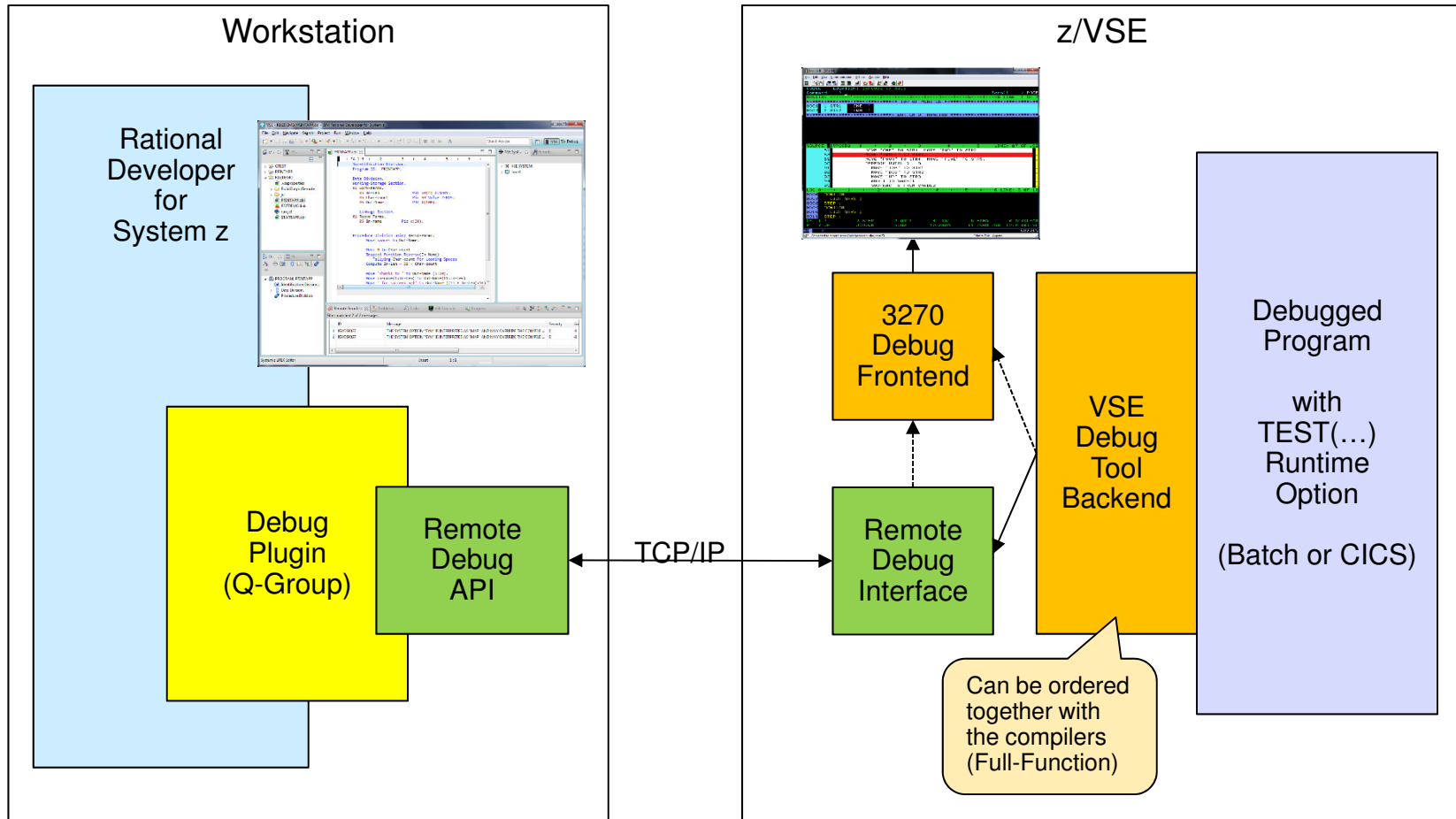
# Rational Developer (RDz) in z/VSE perspective

The screenshot displays the IBM Rational Software Development Platform interface for z/VSE. The main window is titled "VSE - PRINTAPP.cbl - IBM Rational Software Development Platform". It features several key components:

- 1. Perspective:** The overall view of the development environment.
- 2. View:** The "VSE System View" on the right, showing a hierarchical tree of system components like VSE SYSTEM, VSE Lab, VSE Workshop, and various libraries and datasets.
- 3. Projects:** The "z/OS Projects" view on the left, showing a project tree with folders like .TmpVseRemote, BMS, Java2VSE, soap, StartApp, Test, link, link\_book, PRINTAPP.cbl, STARTAPP.cbl, TIMEZONE.cbl, and Timezone.
- 4. VSE Terminal:** The central terminal window showing a VSE/ESA ONLINE prompt. It displays a welcome message, system information (IEBADM801, 5609-zV4), and a login prompt for user A002. It also shows a keyboard layout with function keys (PF1-PF12) and system keys (Enter, PA1, Attn, NewLine, PF7-PF10, PF11-PF12, Clear, PA2, SysReq, NextPad).
- 5. Outline View:** The "Outline" view at the bottom left, showing a tree structure for the program "PROGRAM: PRINTAPP", including sections like Identification Division, Data Division, Working-Storage Section, and Linkage Section.
- 6. VSE Console:** The "VSE Console" window at the bottom, displaying a memory map (MAP) with columns for address (AR), space (SPACE), area (AREA), size (V-SIZE), GETVIS, V-ADDR, and UNUSED NAME. The data includes entries for SUP, SWA-24, BG V, F1 V, F2 V, F3 V, F4 V, F5 V, F6 V, F7 V, F8 V, F9 V, FA V, FB V, and SWA-31.

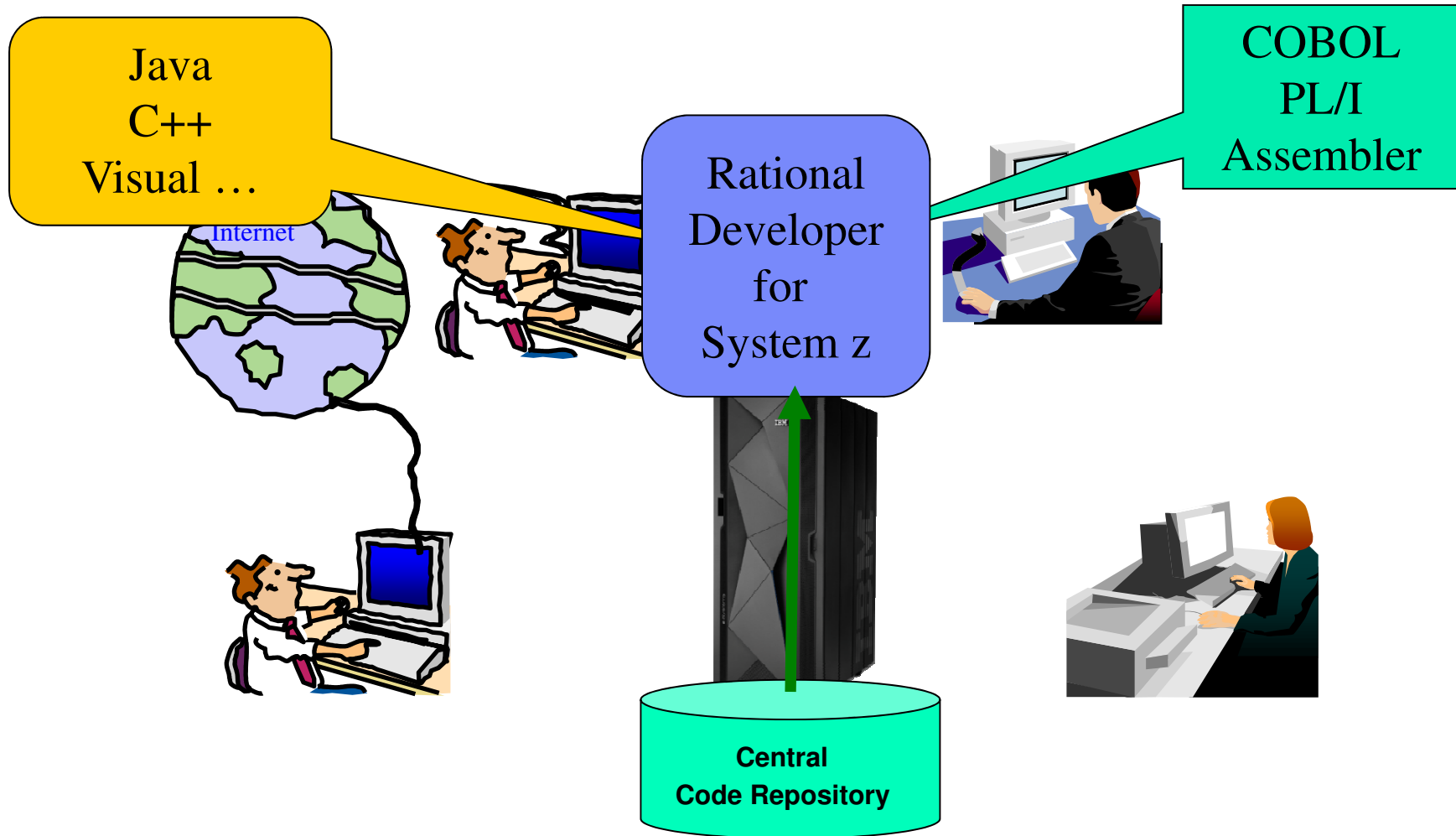
5.Outline View

# z/VSE Remote Debugging with RDz



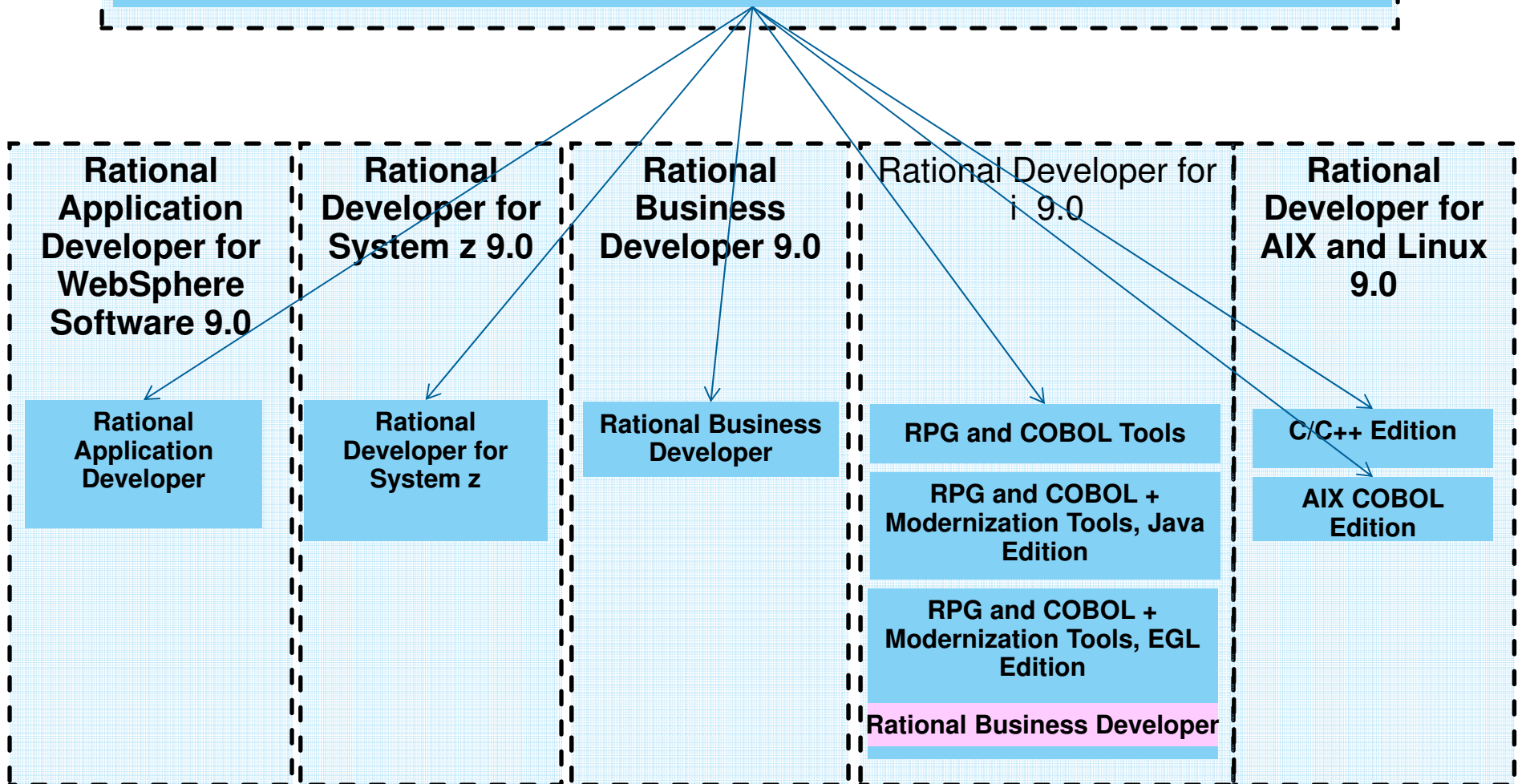
# Summary

Eclipse – an open Integrated Development Environment for the enterprise



# Rational Developer for the Enterprise 9.0

Rational Developer for the Enterprise



[http://www.ibm.com/developerworks/downloads/emsandbox\\_systemz/index.html](http://www.ibm.com/developerworks/downloads/emsandbox_systemz/index.html)

The screenshot displays the IBM DeveloperWorks website interface. At the top, there is a navigation bar with the IBM logo, language selection (English), and a sign-in/register option. Below this is a secondary navigation bar with categories like 'Technical topics', 'Evaluation software', 'Community', and 'Events', along with a search box. The main content area features a breadcrumb trail: 'developerWorks > Technical topics > Rational > Downloads > Enterprise Modernization Sandbox >'. The central heading is 'Enterprise Modernization Sandbox for System z'. To the left is a sidebar with a 'SOA and web services' menu and 'Related links'. The main content includes a 'NEW' badge, a featured article 'Manage the CICS ecosystem with CICS Explorer', and a 'Try new IBM Enterprise modernization products, hands-on, with no install' section. Below this is a 'Set up your system to access the trial' section with numbered steps. A 'Scripted, hands-on exercises you can try in the Sandbox' section follows, listing exercises like 'Manage application portfolio and business rules' and 'Rational Asset Analy'. On the right side, a large box titled 'IBM products available in this sandbox' lists various software products categorized into Business planning and alignment, Project and portfolio management, Design and development, Collaborative application lifecycle management, Middleware, and Connectivity.

## Open Services for Lifecycle Collaboration (OSLC)



### Open Services for Lifecycle Collaboration

Open interfaces. Open possibilities.

*An industry initiative  
for making it easier to use  
software delivery tools in  
combination.*

Barriers to sharing resources  
across the software lifecycle

- ▶ Multiple vendors, open source projects, and in-house tools
- ▶ Private vocabularies, formats and stores
- ▶ Entanglement of tools and data

▶ **The Open Services initiative is**

- **Building** a community of vendors, open source projects, integrators and IT teams, at **open-services.net**
- **Creating** public specifications of resources and services, like change requests, test cases, defects, requirements and user stories
- **Delivering** loosely coupled resource formats and services with “just enough” standardization

SIEMENS

dbMAESTRO



iTKO LISA™

ascendant  
TECHNOLOGY



BSD GROUP  
Better Software Development

Tasktop



ORACLE®



## Customer feedback



"By helping us to make project deliveries more repeatable and predictable, we anticipate that Rational Team Concert will **reduce project overrun costs by 20%**."

--Matt Pomroy - Executive, Software Engineering, Ascendant Technology

"Its automated project management dashboards are transparent to everyone – not just managers. This immediate and **automated feedback helps keeps teams on track and motivated** to achieve project goals."

--Han Jie - Senior Consultant, Siemens

"Where we previously used separate systems, with Rational Team Concert we now have well integrated functionality. **Our developers are more efficient because they are better able to focus on important issues**. Our project managers greatly value the ability to customize these dashboards and **instantly provide status** on their milestones!"

--Mika Koivuluoma - Production Manager, TietoEnator



"Having a **unified and extensible environment is very compelling for us**. Rational Team Concert provides **the team transparency and visibility needed to keep work progressing** so everyone knows what's going on without finger-pointing."

--Carson Holmes - Unified ALM Services Manager, Noblestar



"With IBM Rational Team Concert we've seen a **30% productivity gain** on our global projects. The ability to **easily suspend and resume work, along with advanced SCM features**, helps team members juggle multiple tasks and priorities without missing a beat."

--Alain Bergeron - VP Consulting Services, CGI

# Questions?



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