News to Development Environments and for RDz for z/VSE

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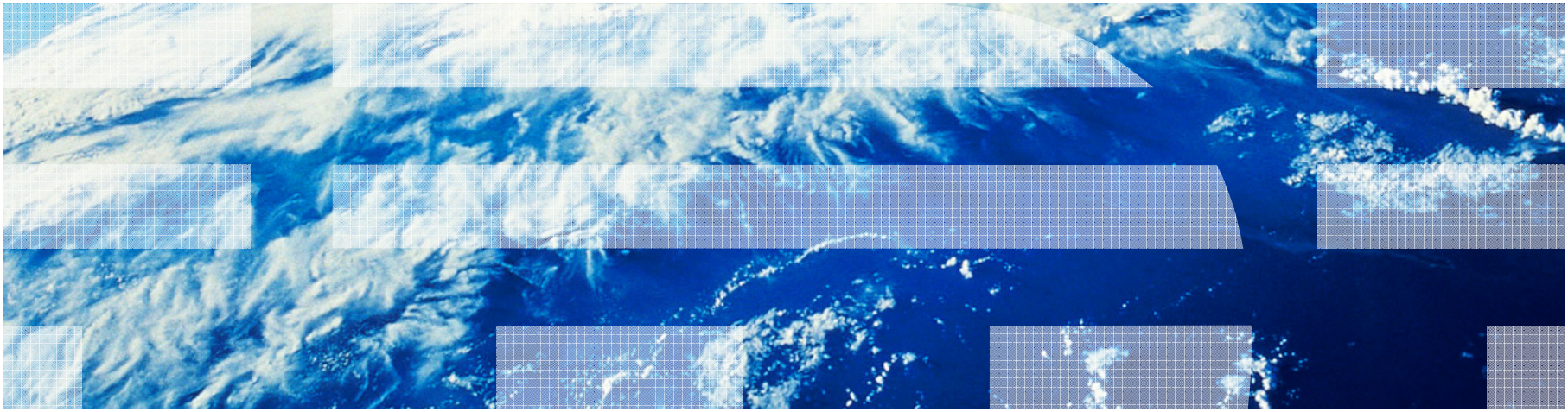

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Application Life-cycle Management Business Problems – In customers own words

- “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.)

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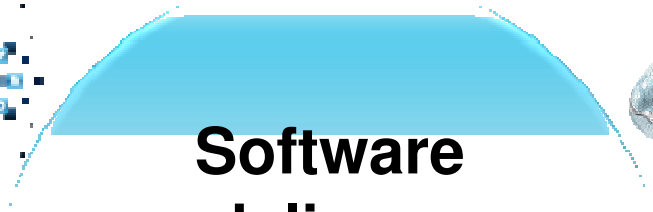
Software delivery is at the heart of today's top technology trends

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



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

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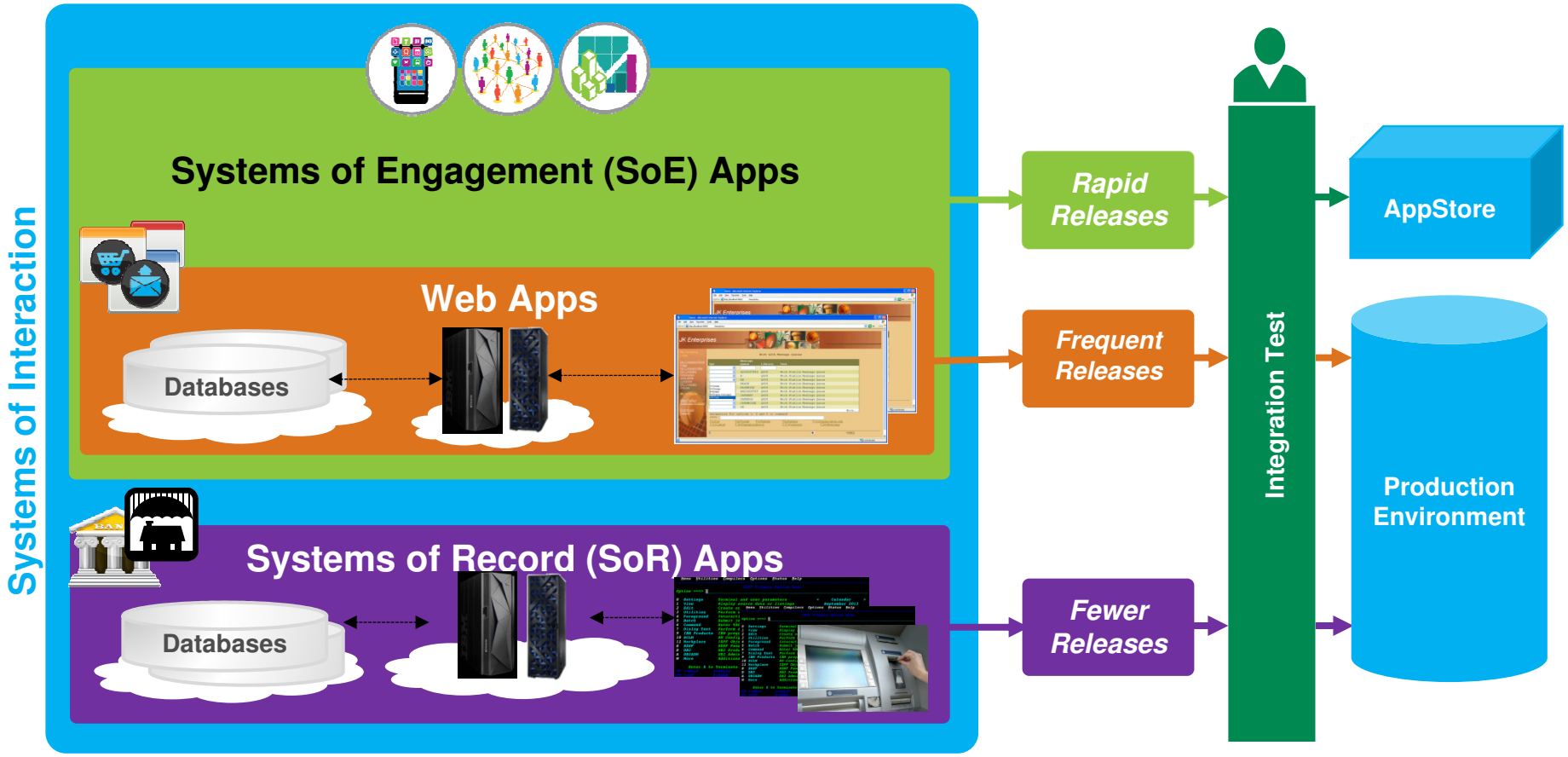
The Systems of Interaction landscape

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



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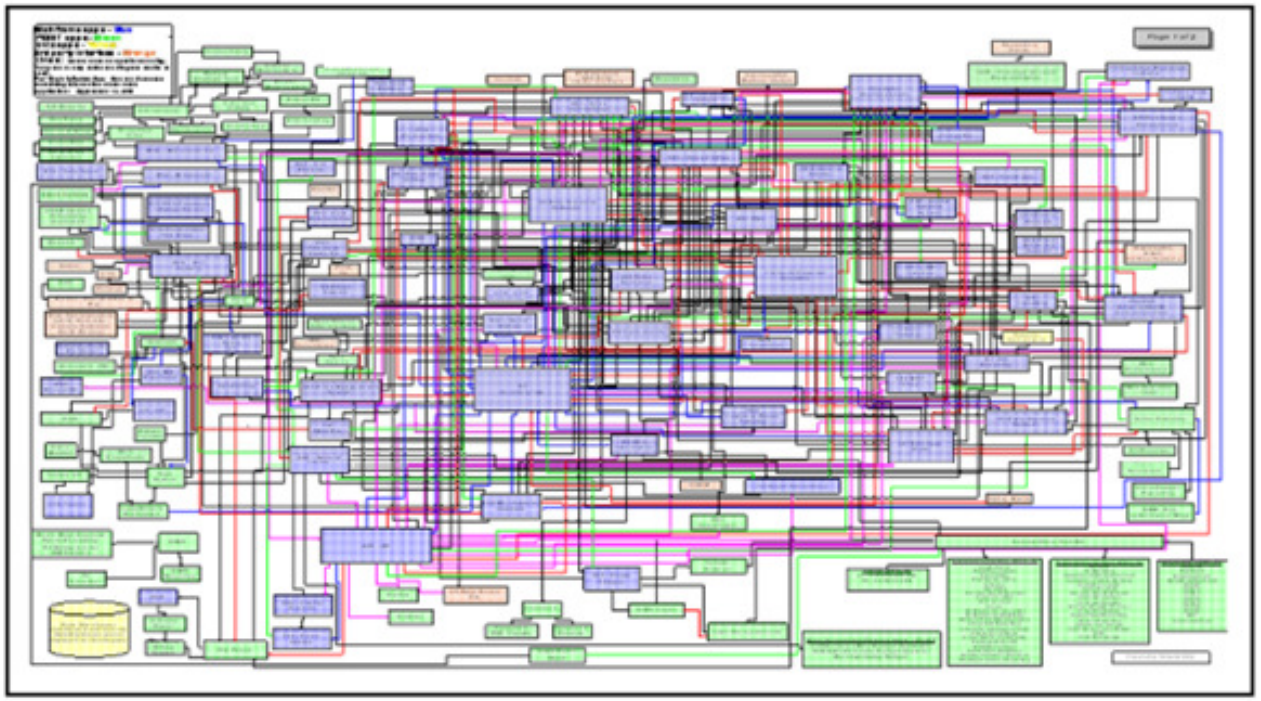
System of records can be complex systems built on decades of continuous & incremental development

Change?

Improve response time?



Modernization?

Where do I start?

Re-use?

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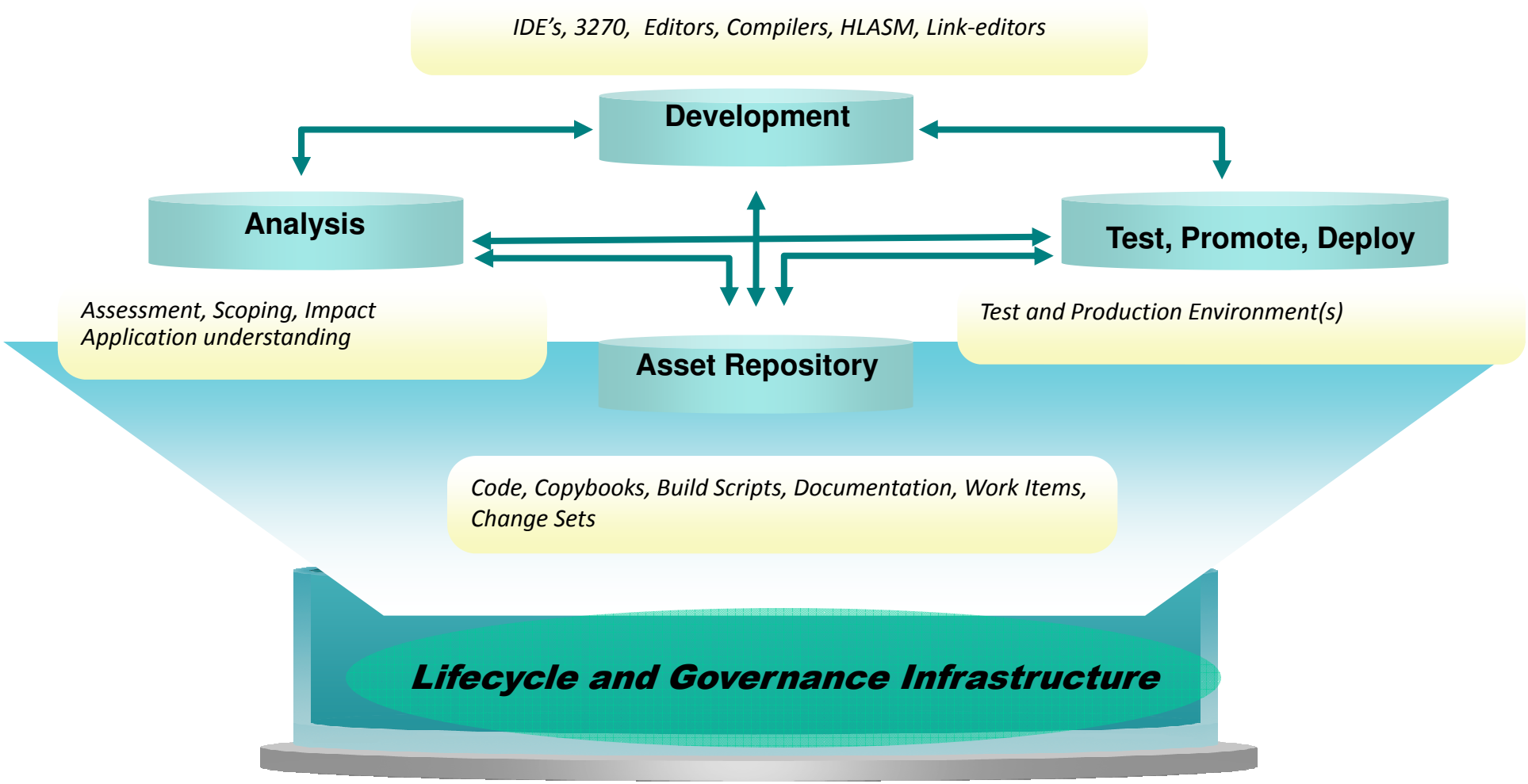
Infrastructure for Application Development on z



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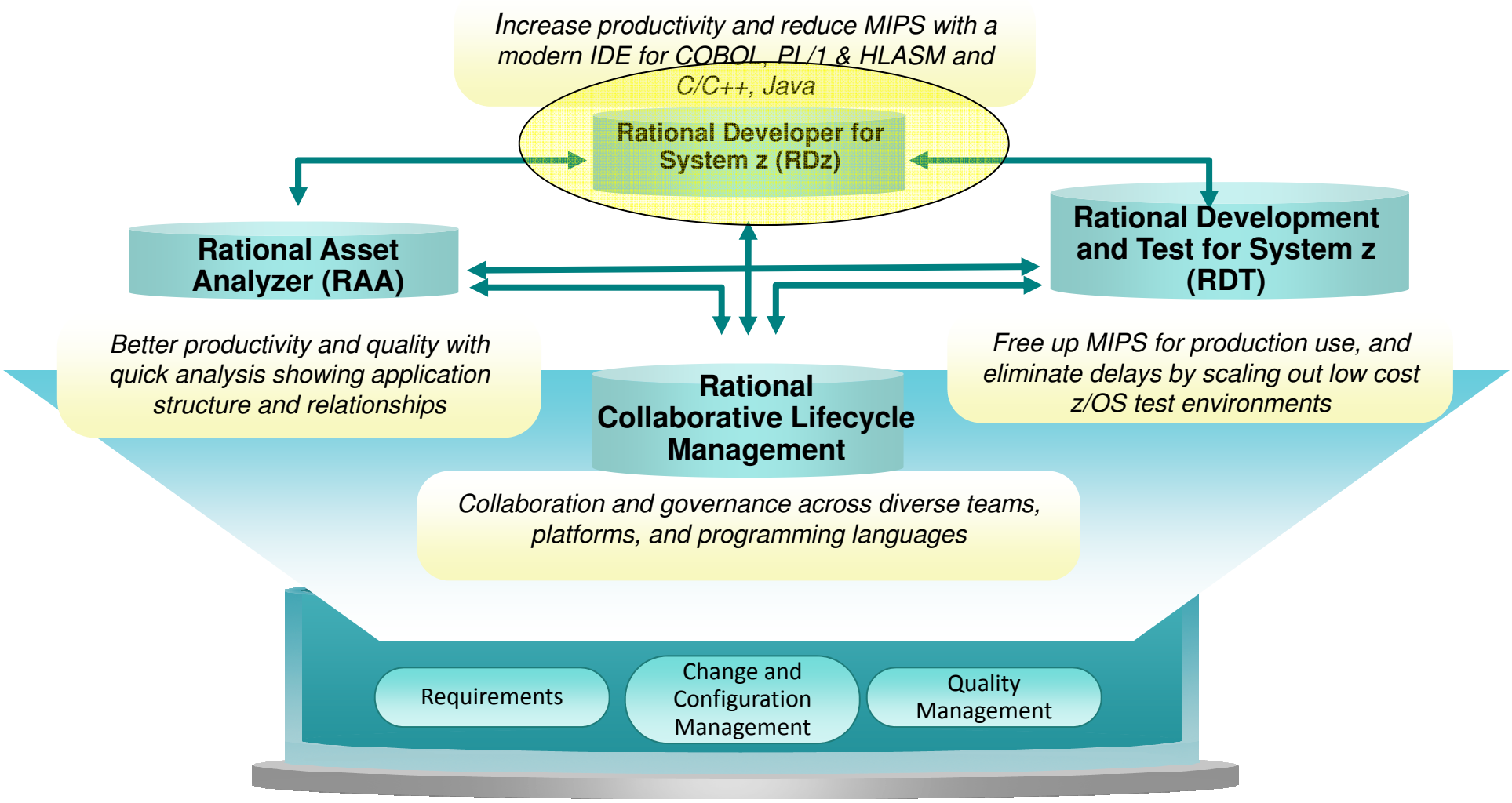
IBM Rational Integrated Solution For System z Development



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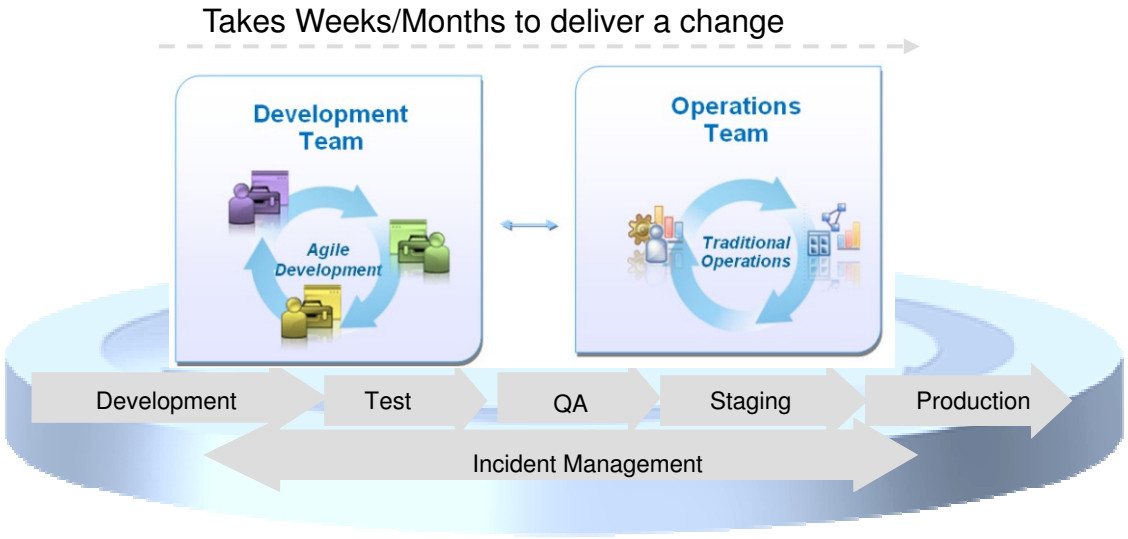
Software Delivery Challenges: what we hear from customers

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

Simplified view of a single-release pipeline. In general, there are multiple projects, releases, and technologies at play

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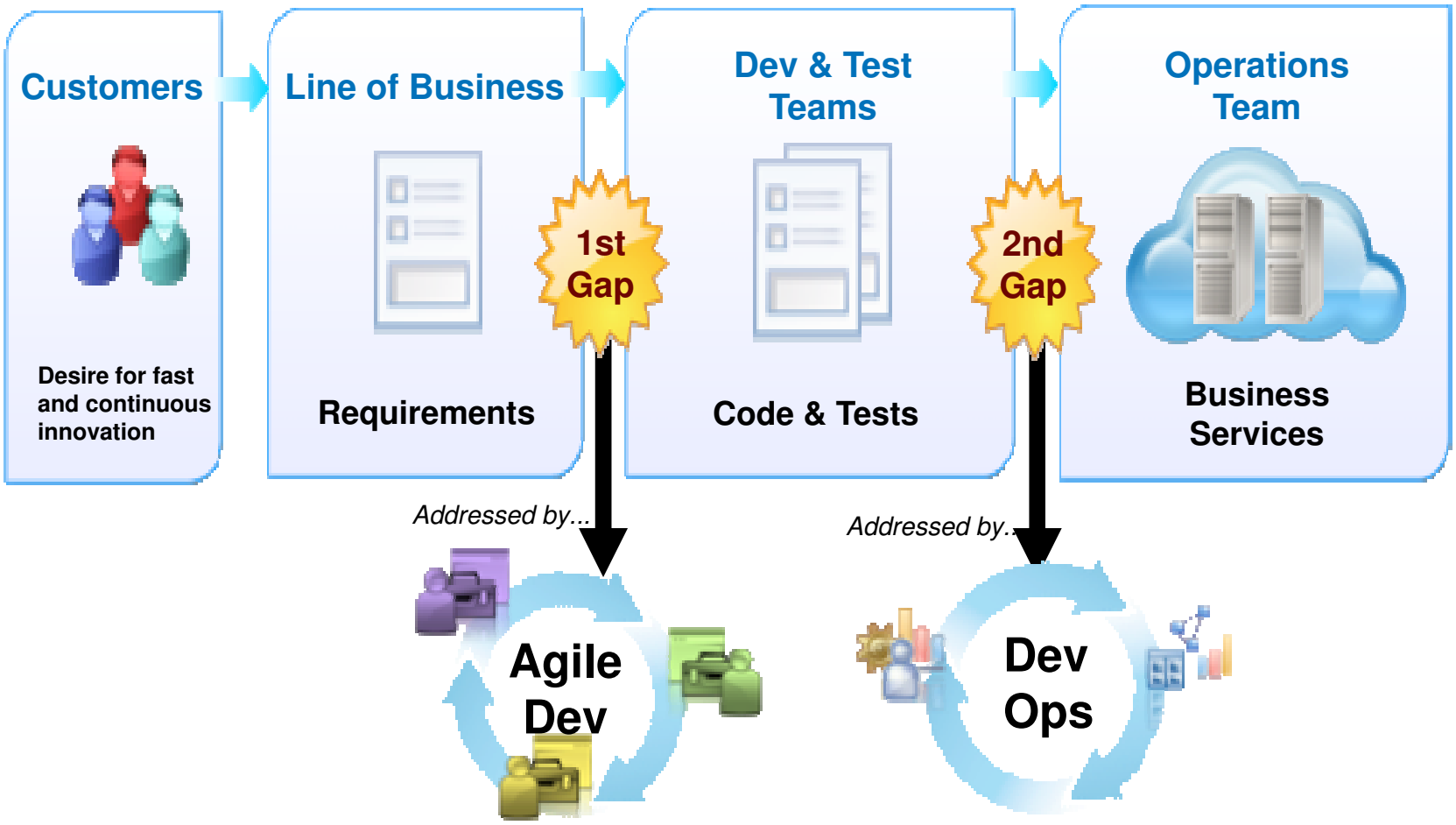
Challenges delaying delivery of functionality to the business



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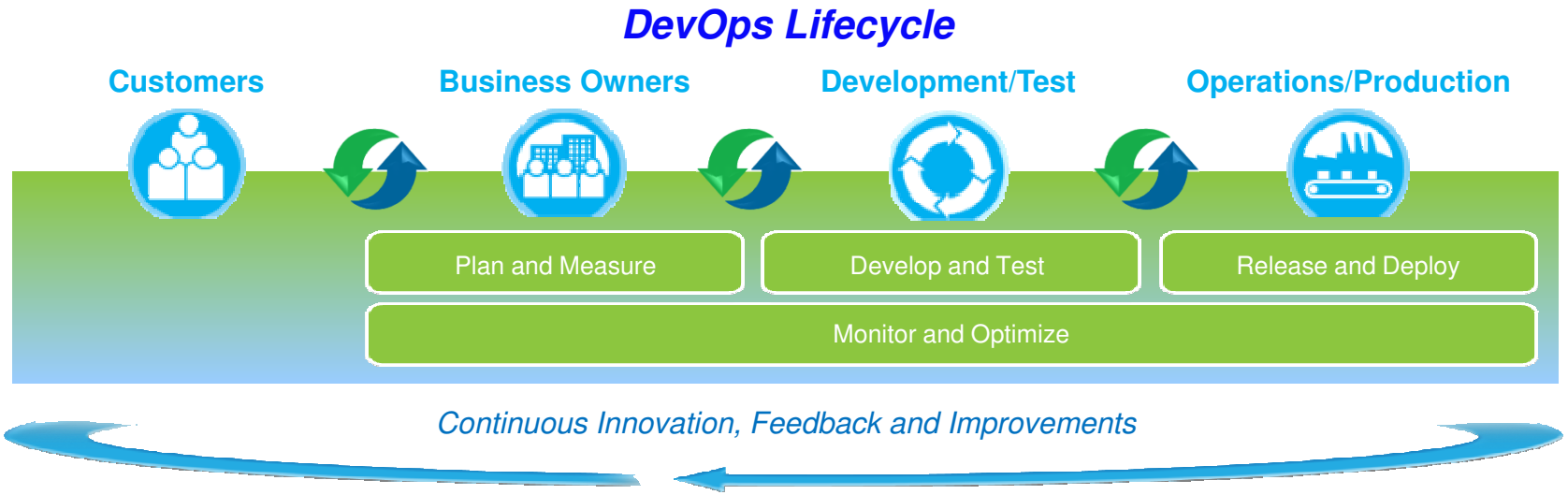
What is “DevOps”? - close the Gap between Development & Operations

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

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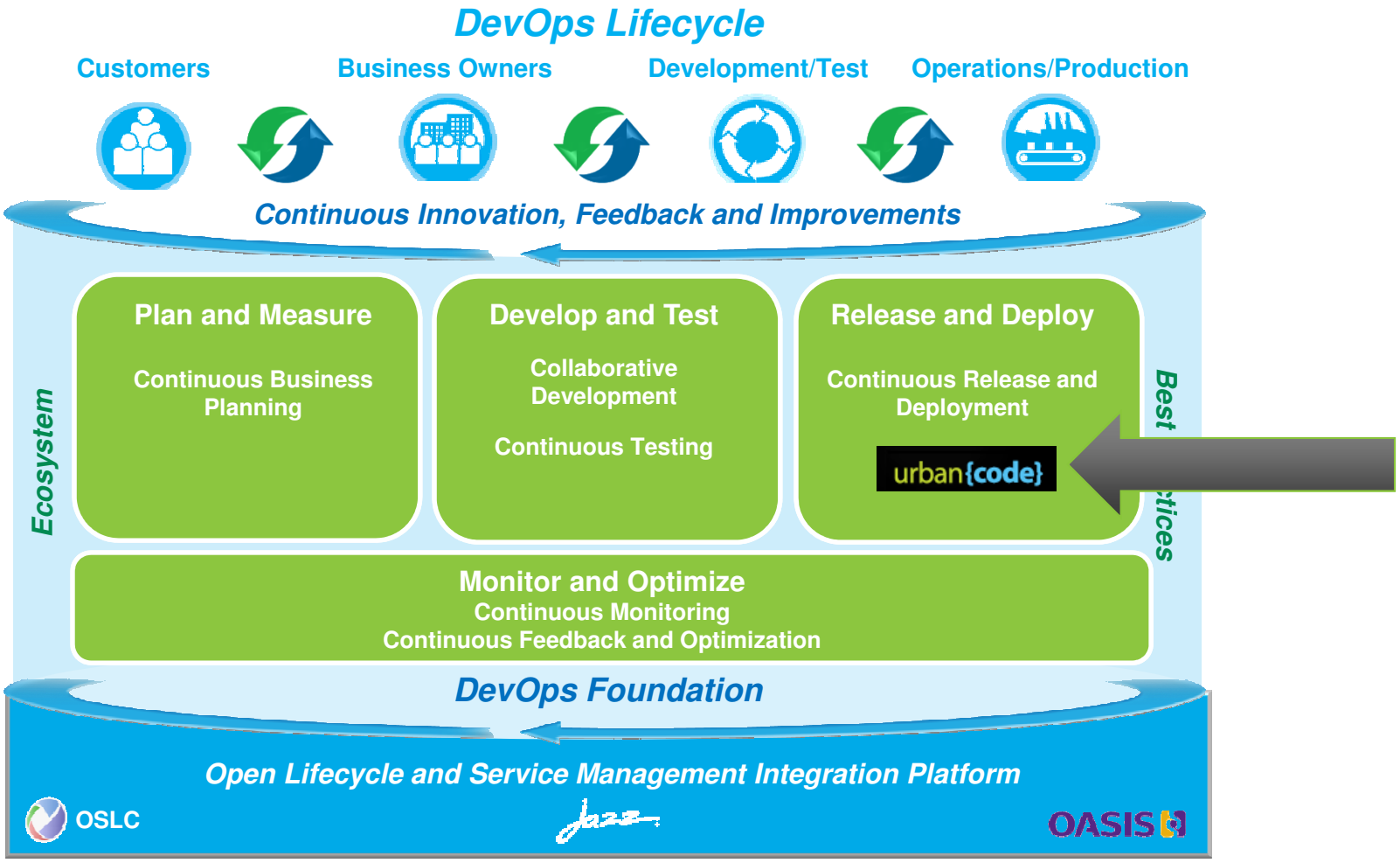
Urbancode at the Heart of IBM's DevOps Architecture



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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

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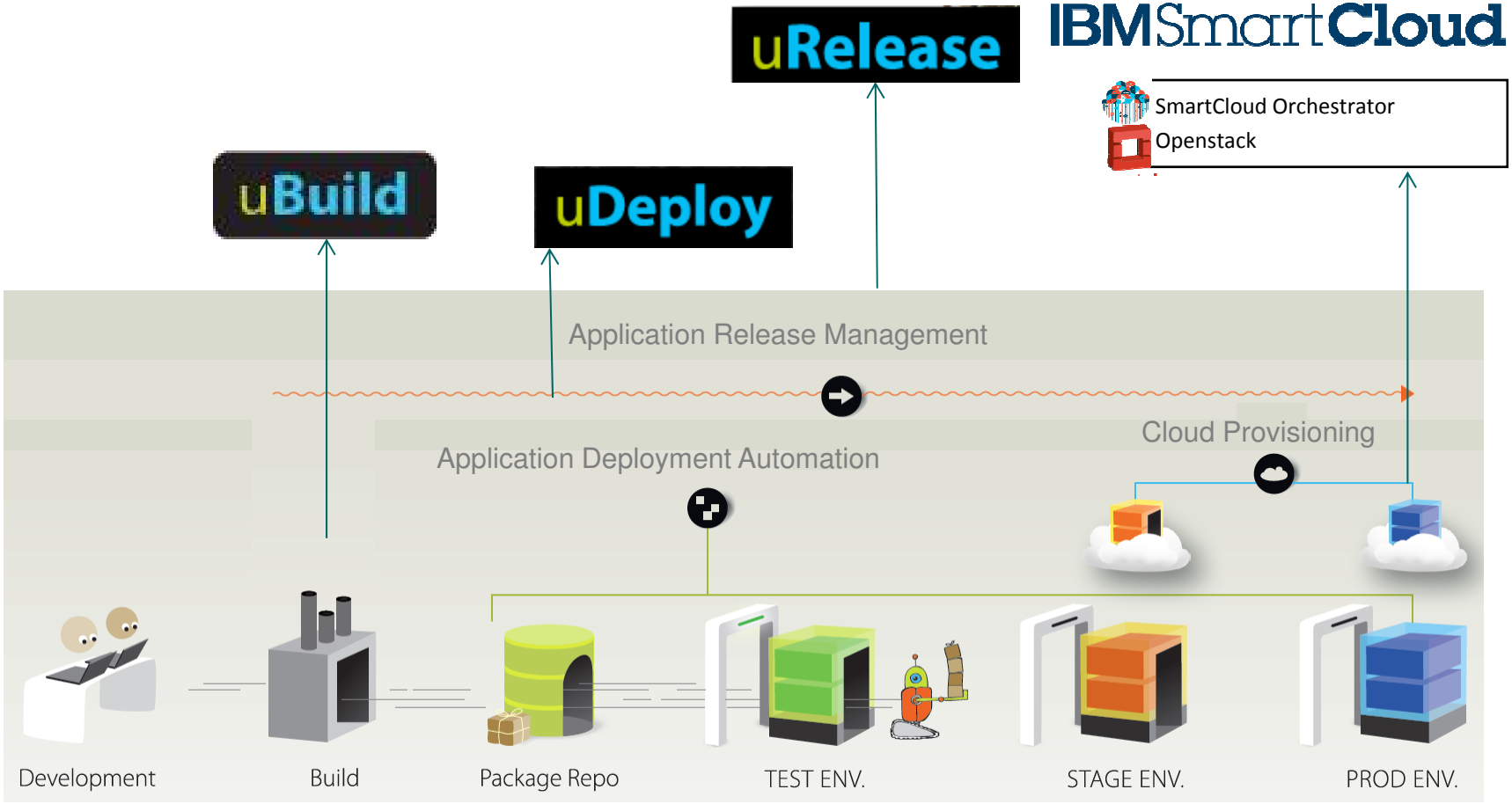
UrbanCode “u” Product Line



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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

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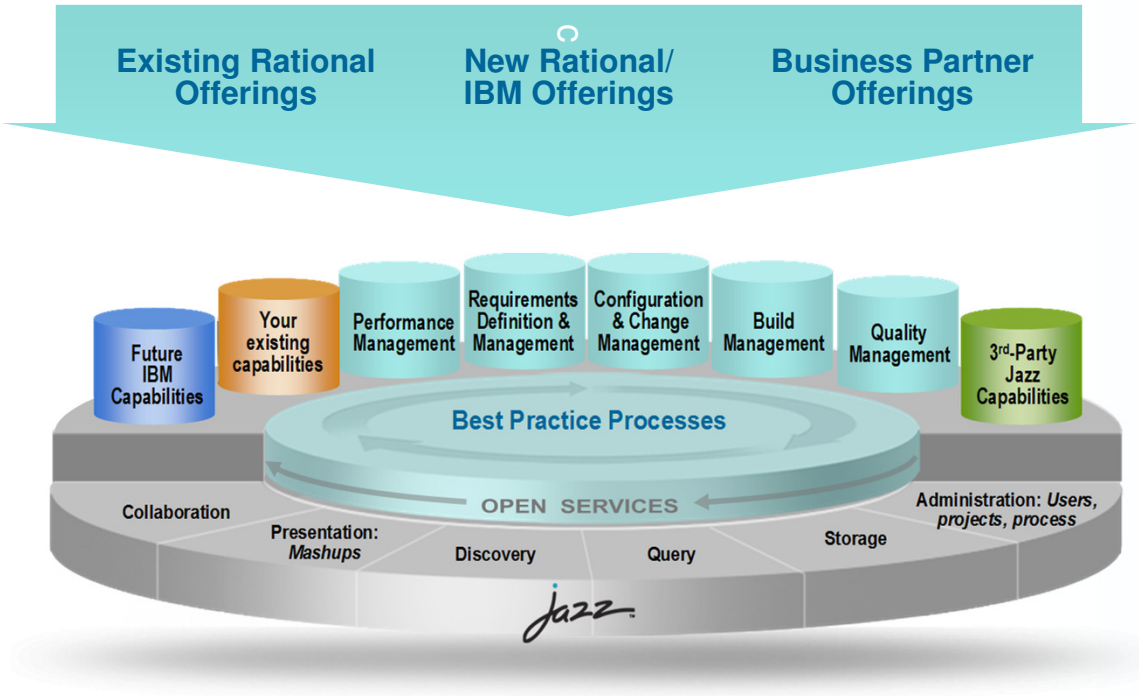
Envisioning a platform that can transform software delivery



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

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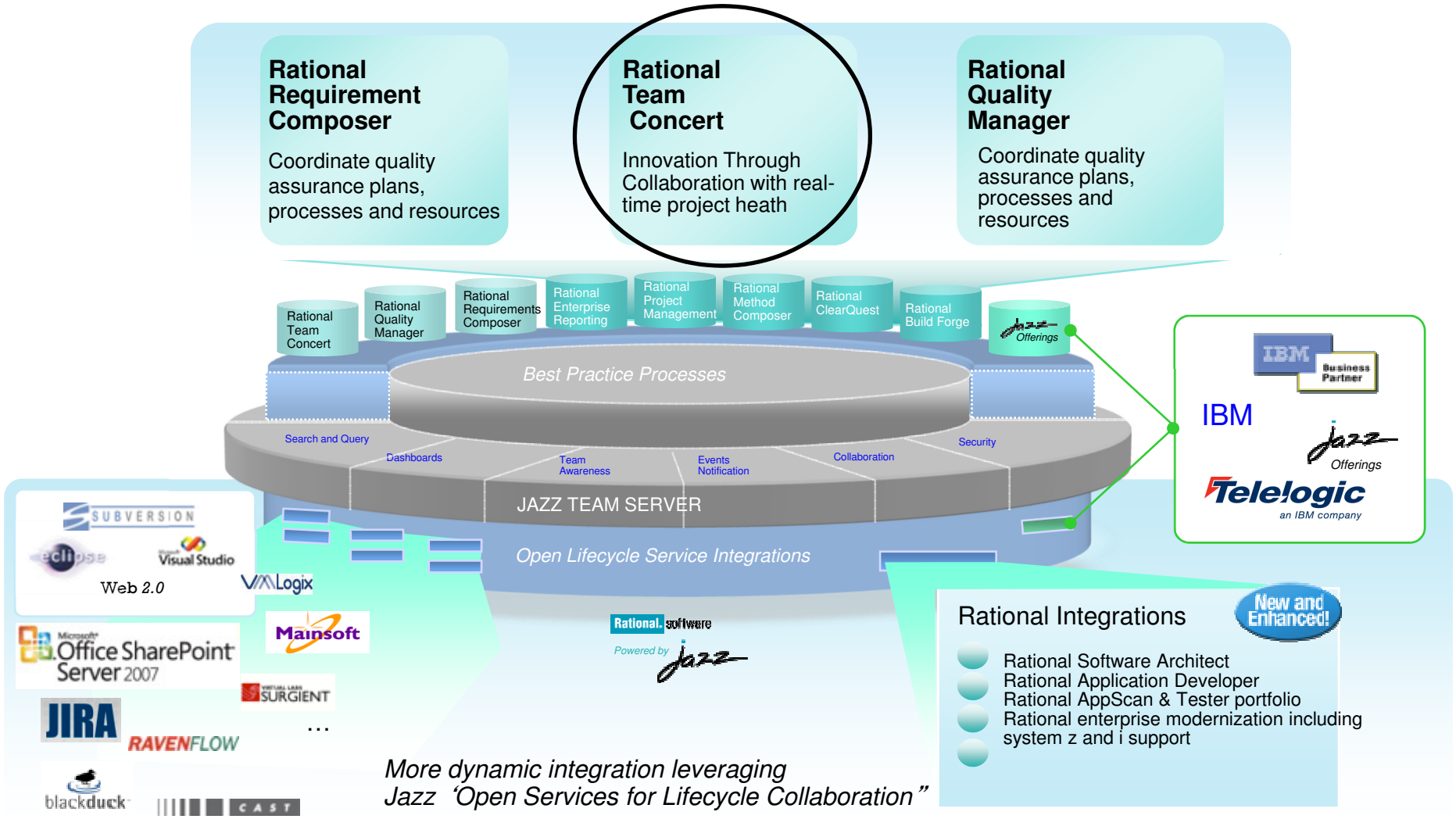
IBM Rational Jazz Platform



More dynamic integration leveraging Jazz "Open Services for Lifecycle Collaboration"

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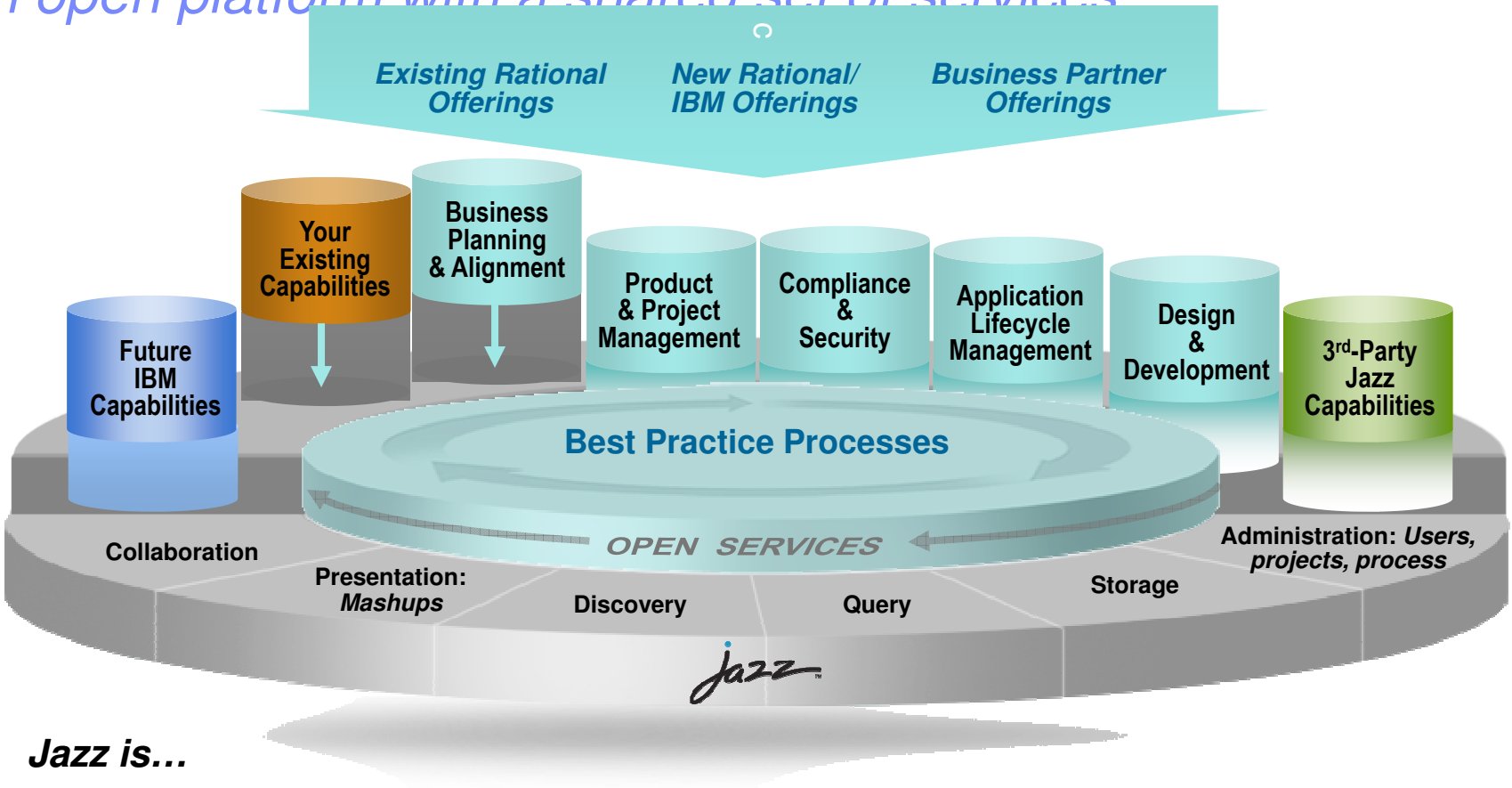
Rational Team Concert (RTC) is based on Jazz

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)

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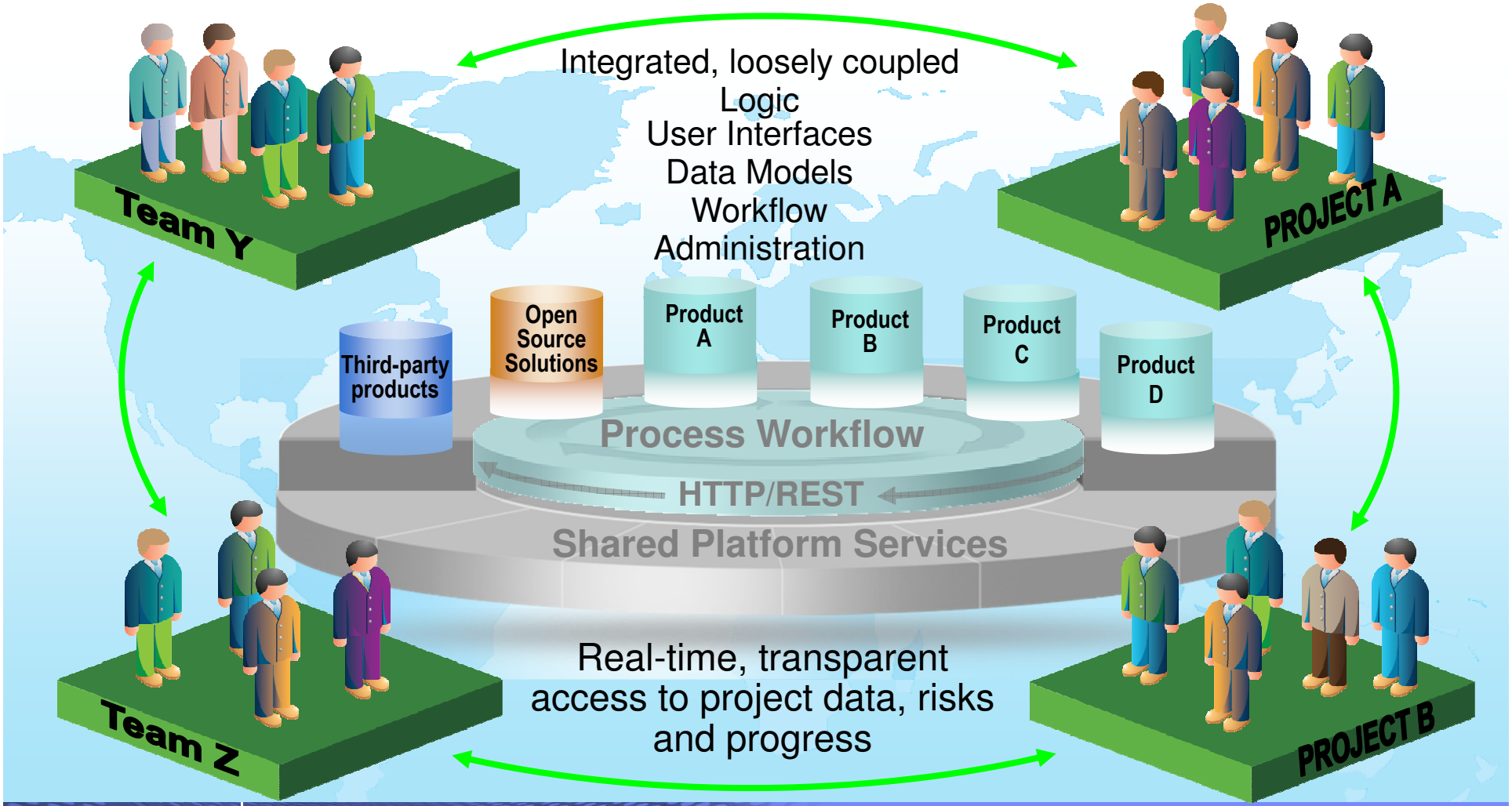
Jazz:
A platform for development integration and collaboration



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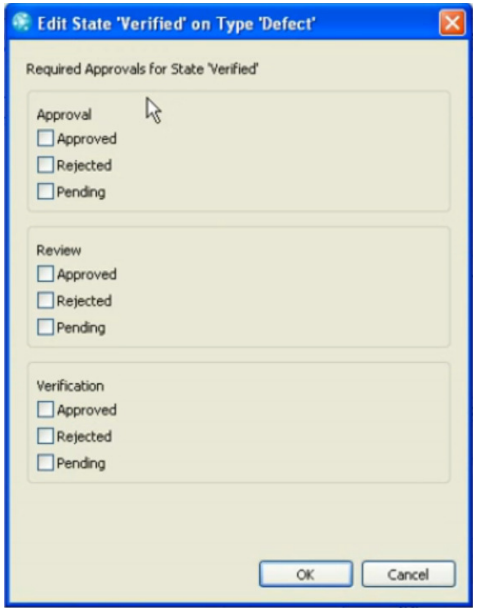
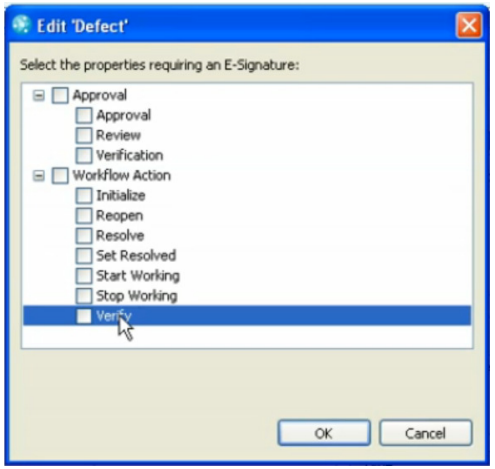
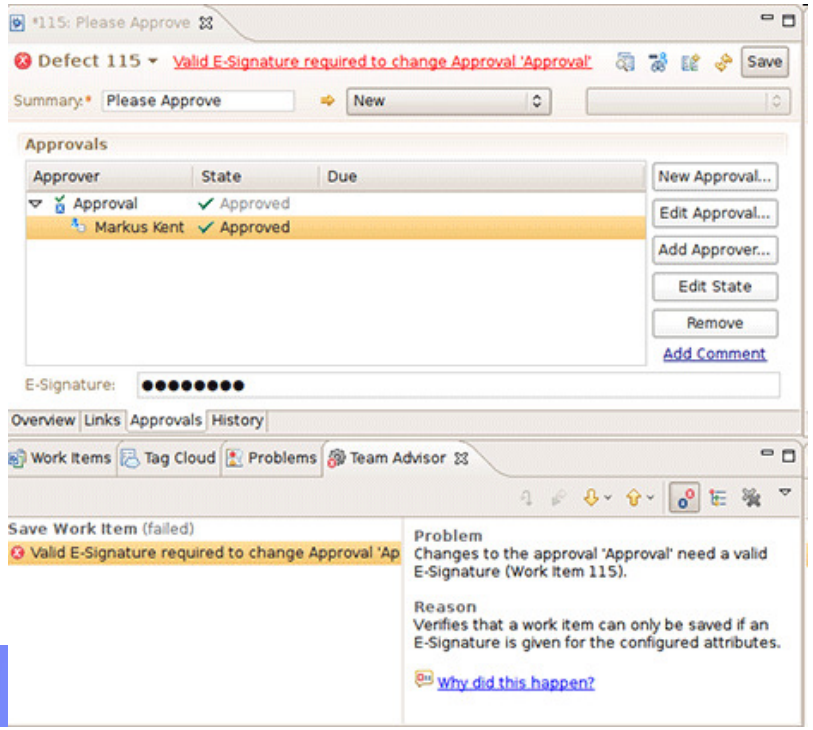
Govern change-mgmt

- 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.

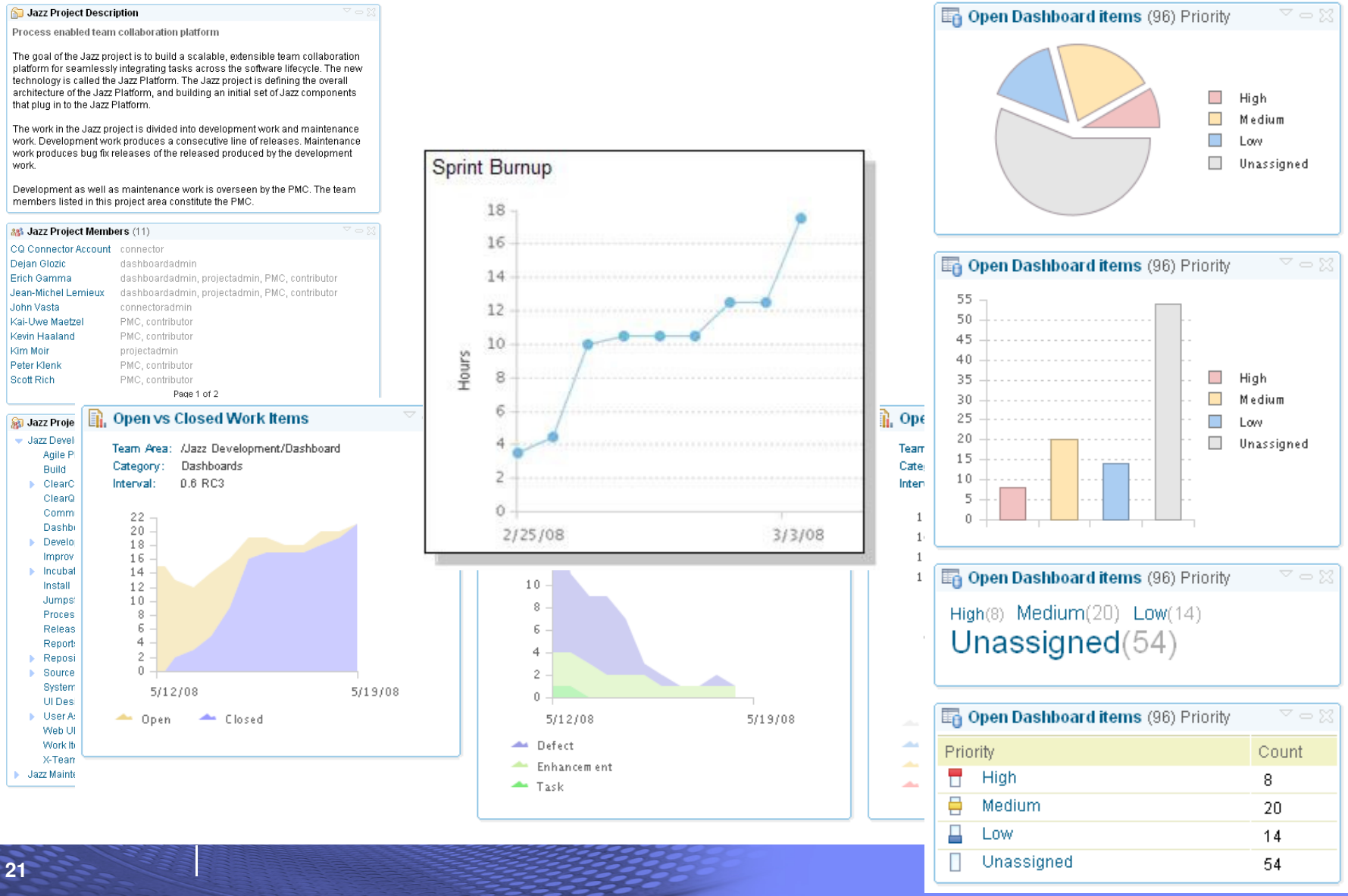






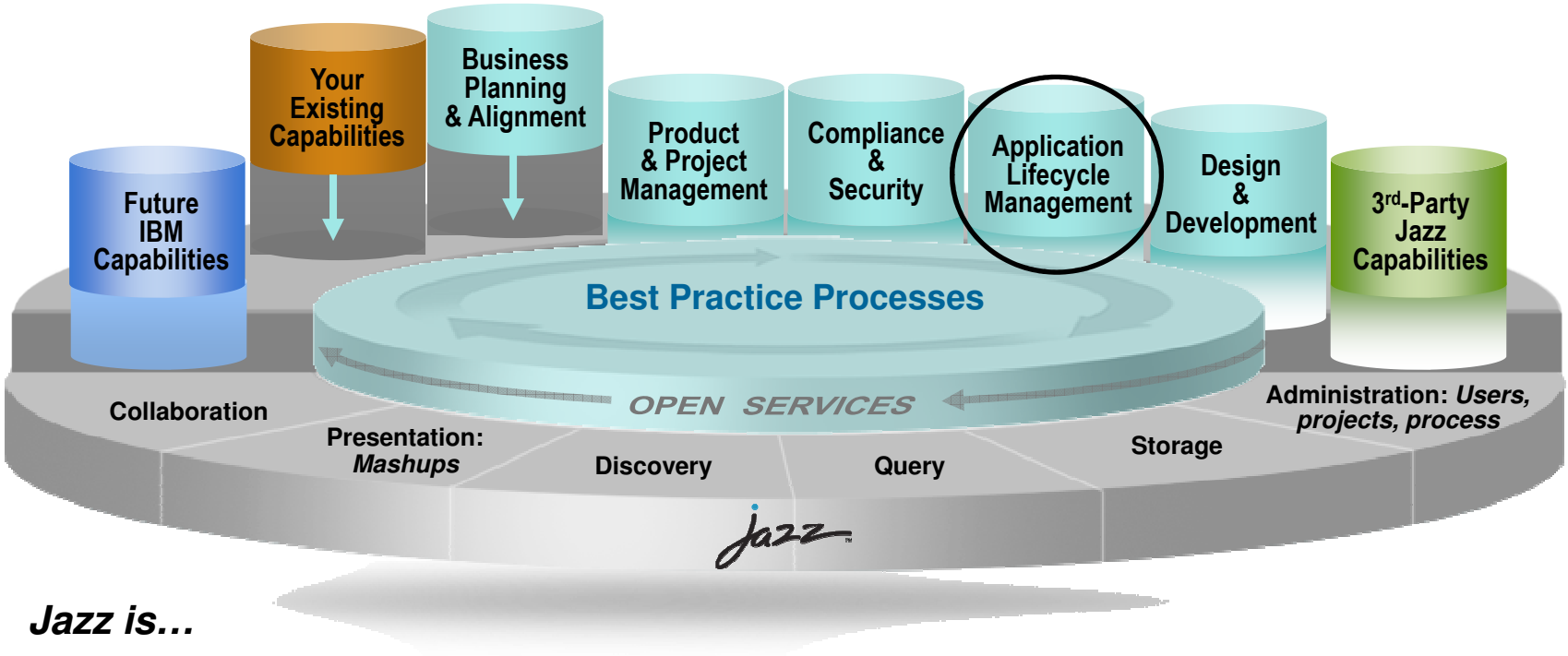
Transparency and Status for Everyone

Every stakeholder knows project status without having to ask



Rational Developer – for development life cycle

An open platform with a shared set of services



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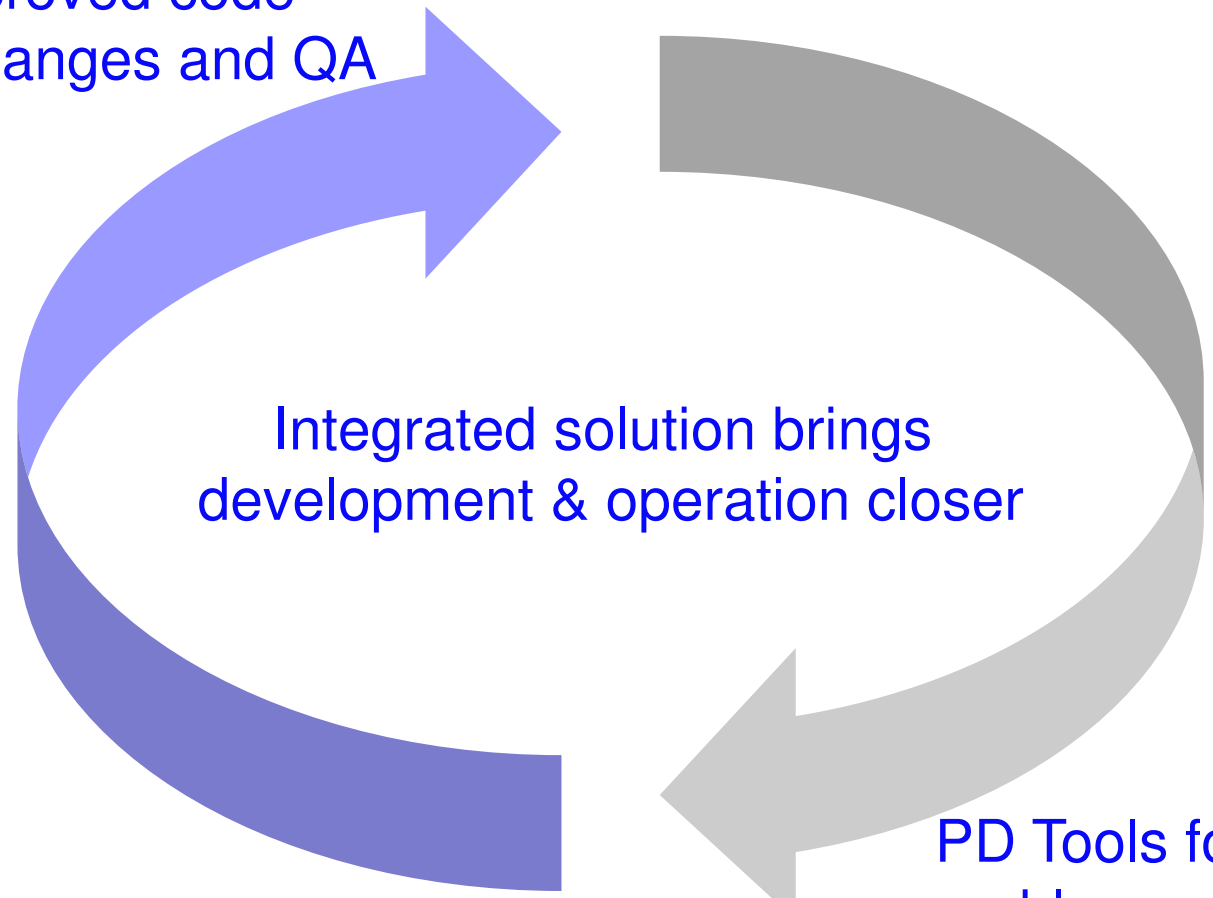
System z tools matter for improved efficiency and productivity - we have the solution for taming the complexity

RDz for improved code analysis, changes and QA



PD Tools for effective problem analysis

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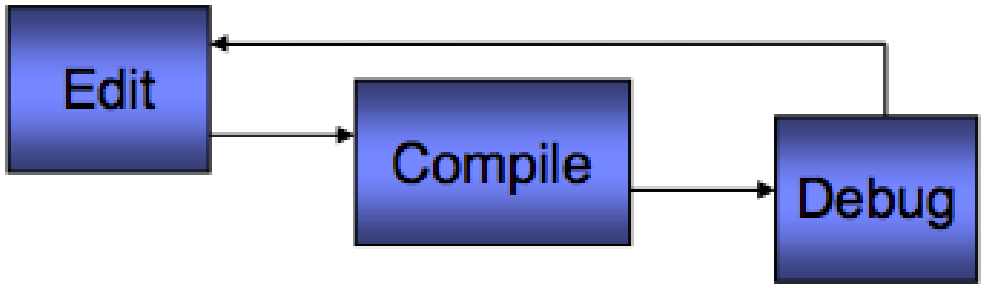
IBM Rational Developer for System z

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



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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

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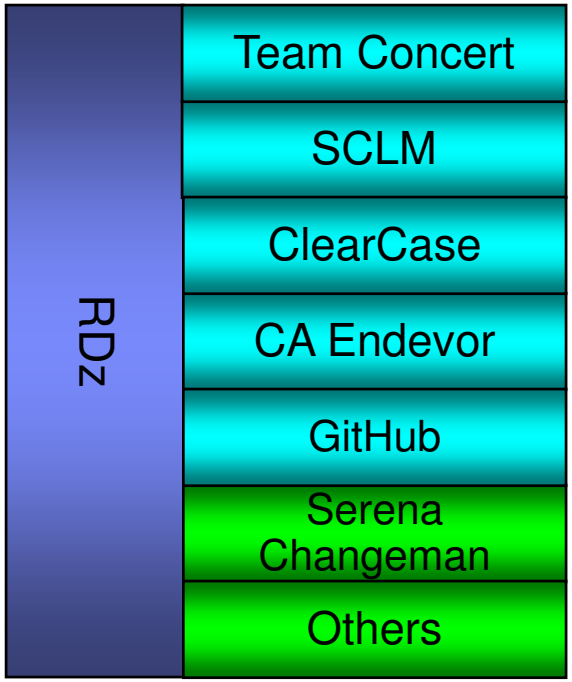
Access source code…

- 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



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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*

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."*

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/

Forrester Wave report:
Rational Team Concert "best current offering"

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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

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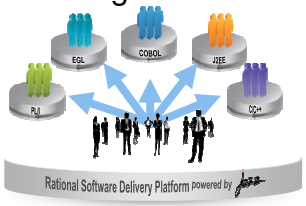
Rational Developer for System z - a complete tools set with capabilities from Mobile Development to COBOL

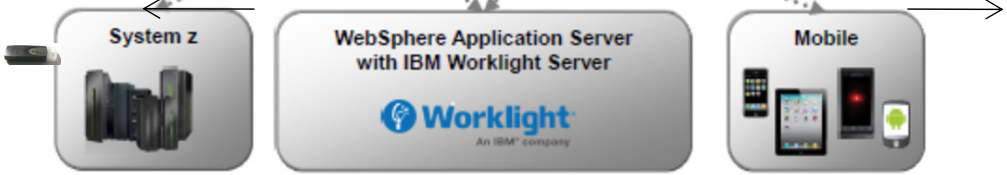
Integration with Team Concert for Lifecycle and Source Management



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

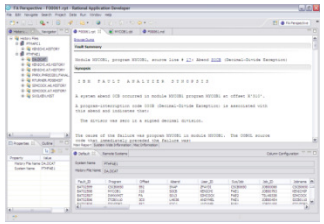
- Built on Eclipse
- Common tool set for end to end development
- Build, preview, and deploy within the IDE
- Mobile simulator (for unit test)
- End-to-end debug
- Integrate with third-party SDKs (e.g. Android Development Tools)

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



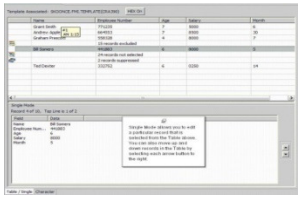
Robust Mobile Development in conjunction with Worklight

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



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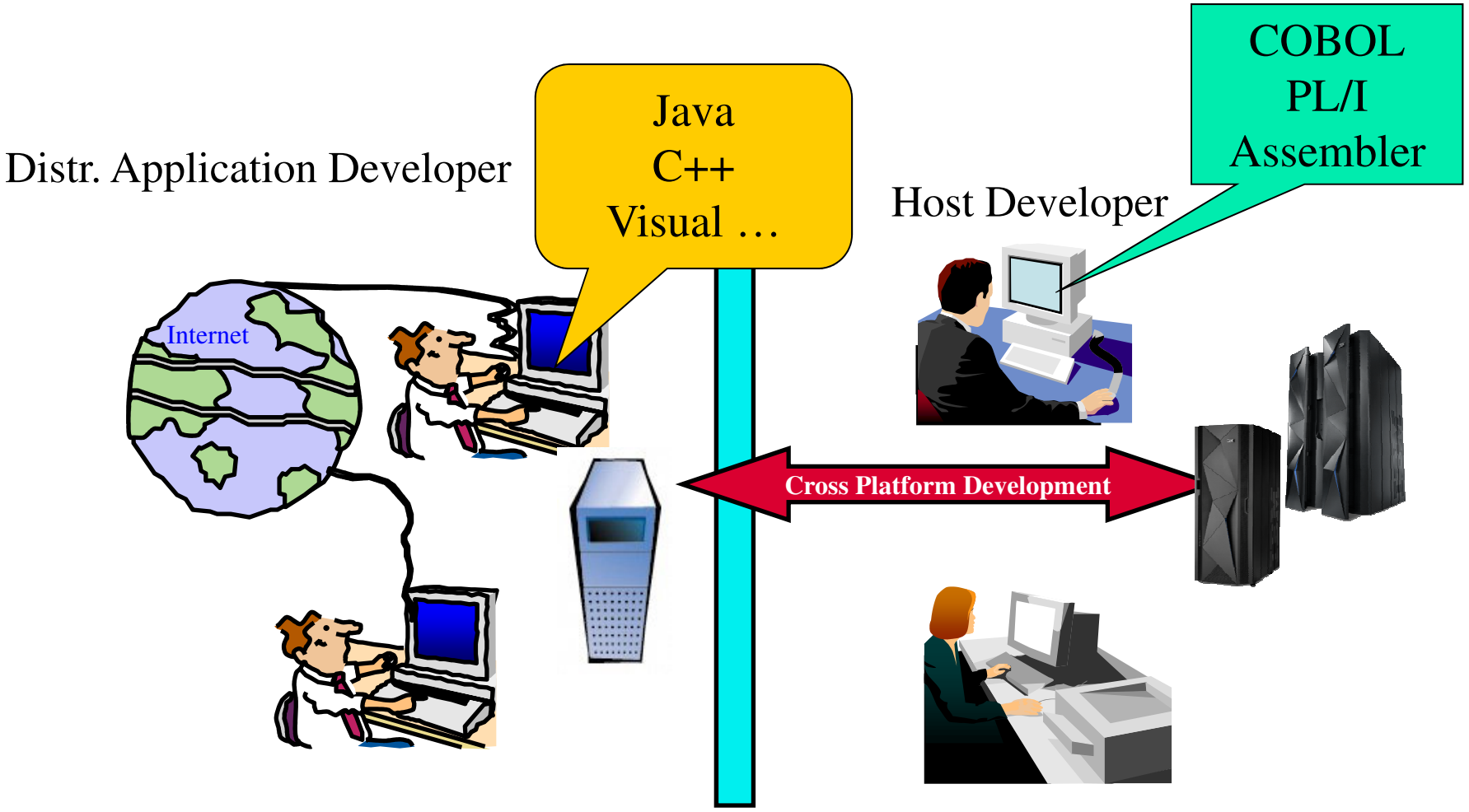
‘Distributed’ Development Landscape…



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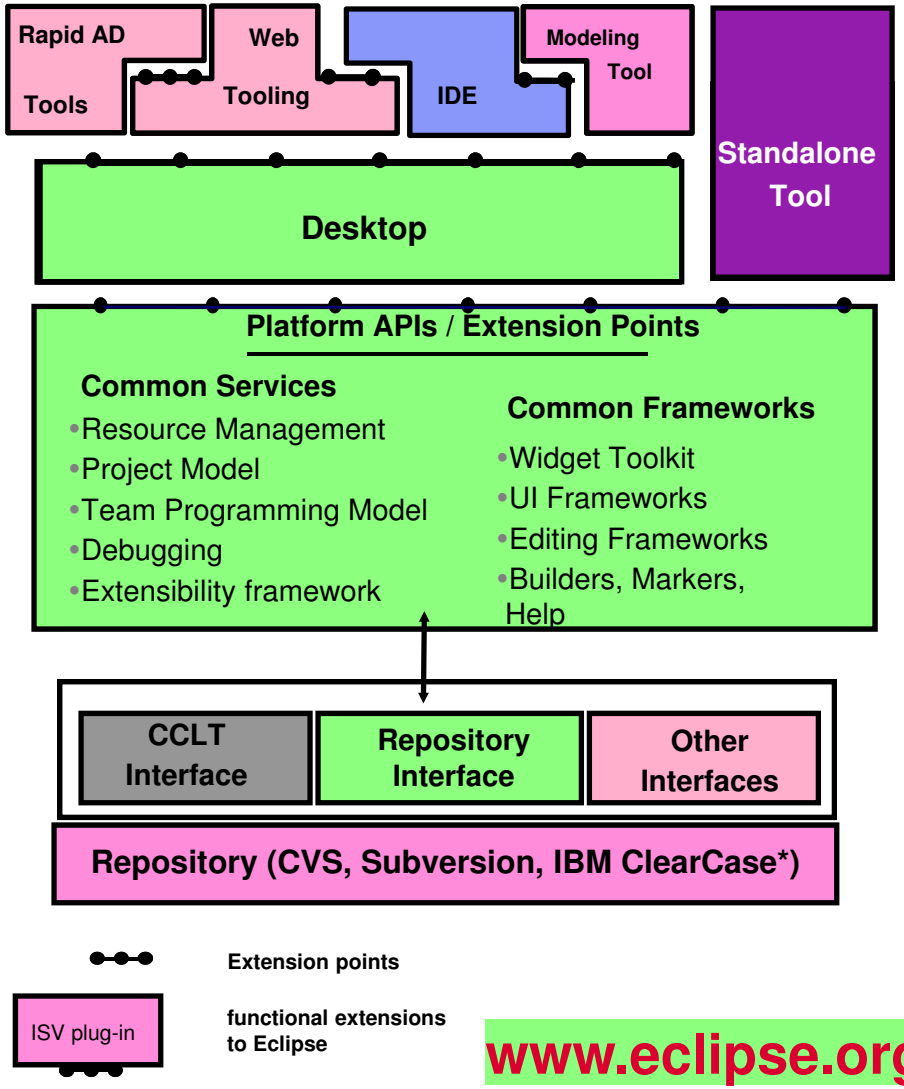
Eclipse – the open Standard for application development



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 appls.
  - **IBM EGL development for z/VSE (RBD)**
    - follow-on to Visual Age Generator

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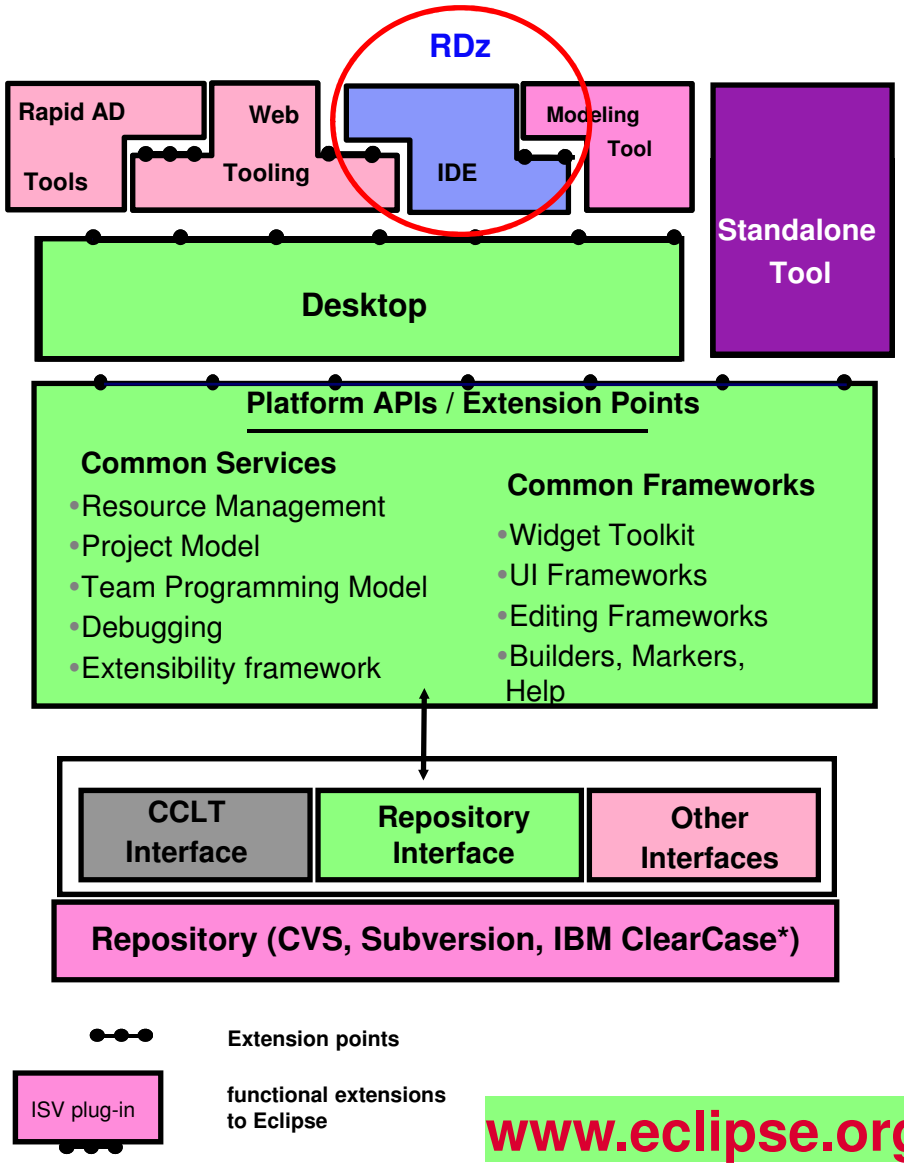
Eclipse – the open Standard for application development



www.eclipse.org

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Analyze applications with graphical correlations

- IBM HATS Development Plug-In

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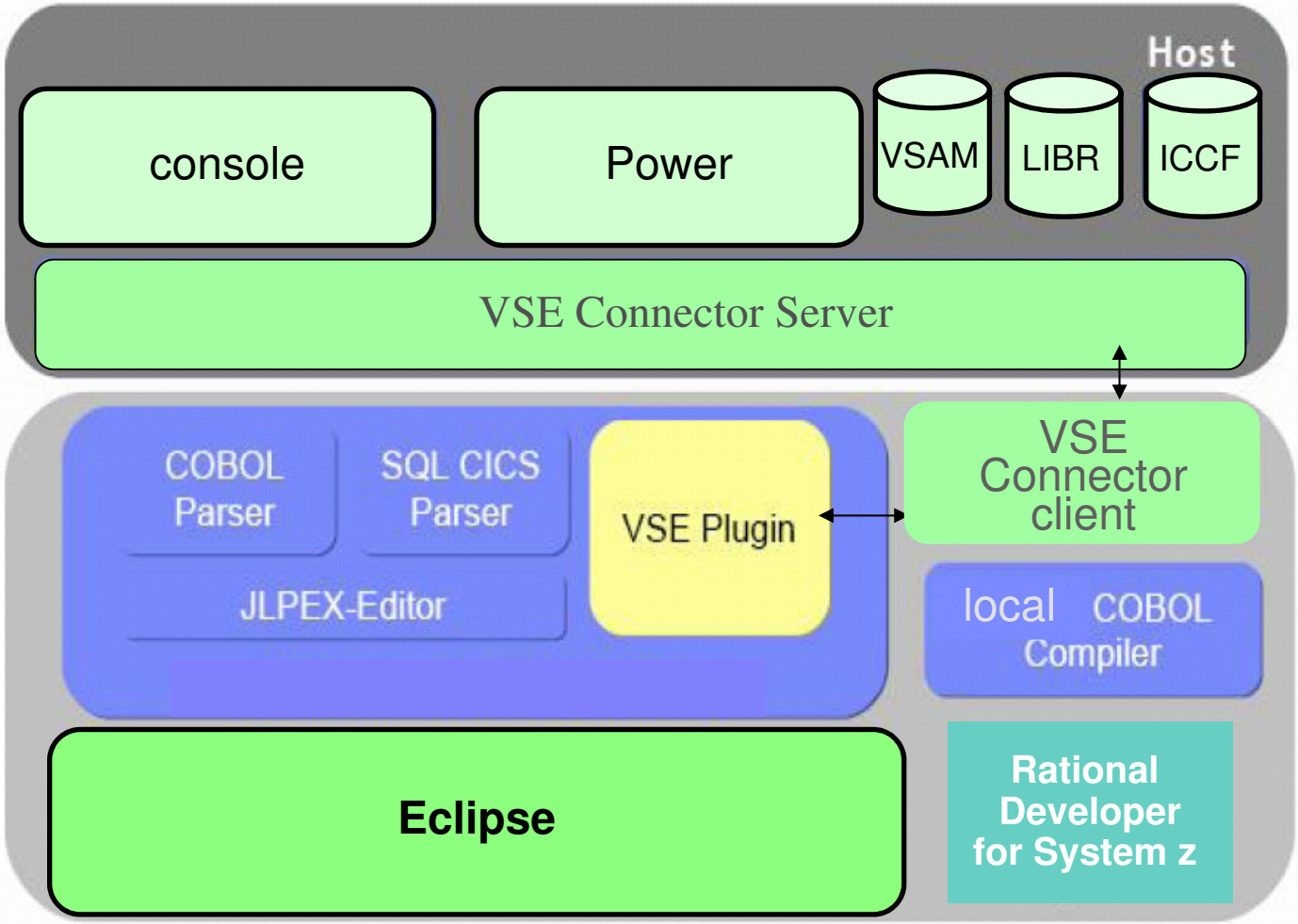
The IBM Development environment for the enterprise

Rational Developer for System z (RDz)

with z/VSE Development Plug-in for RDz – from QGroup



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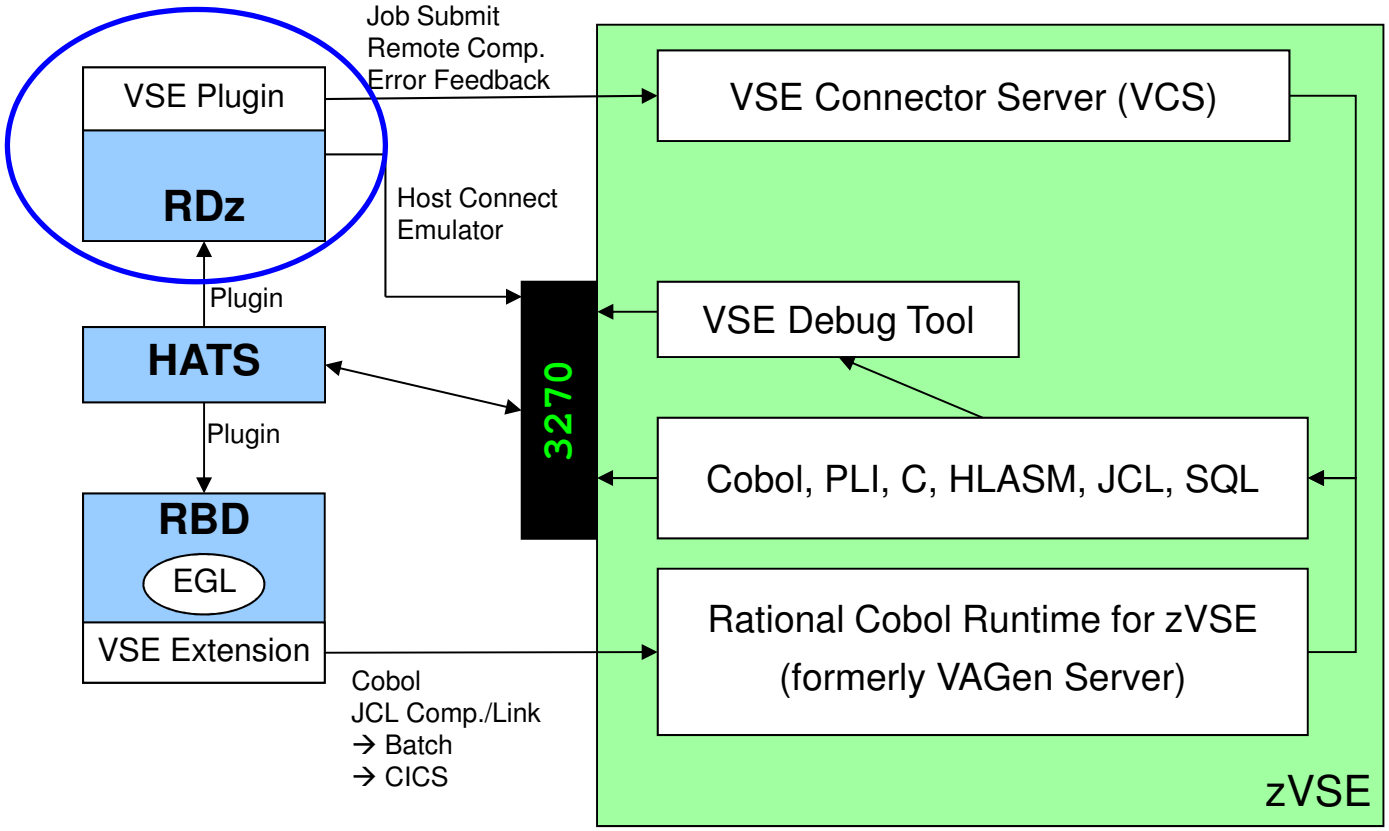

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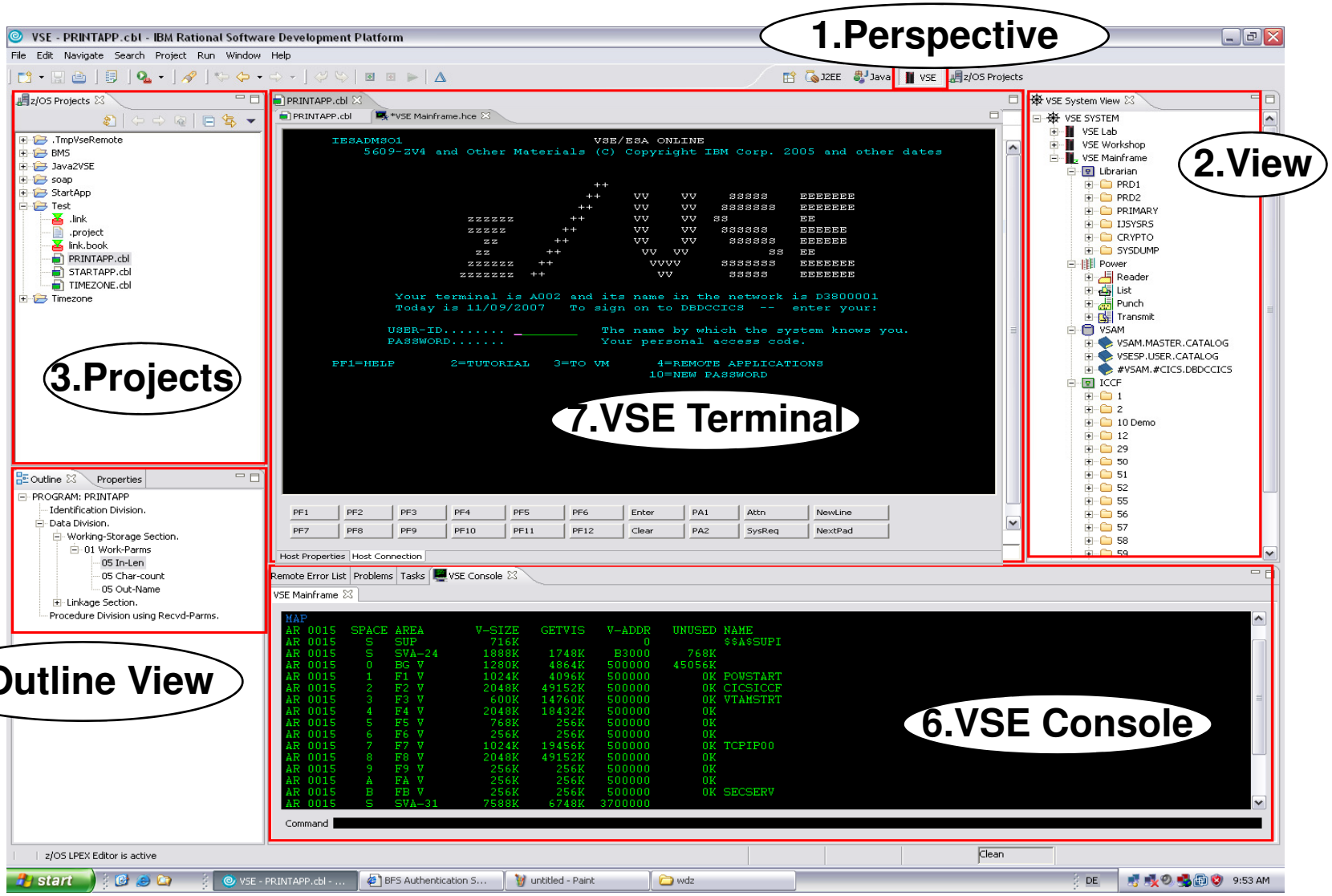
Rational Developer (RDz) in z/VSE perspective



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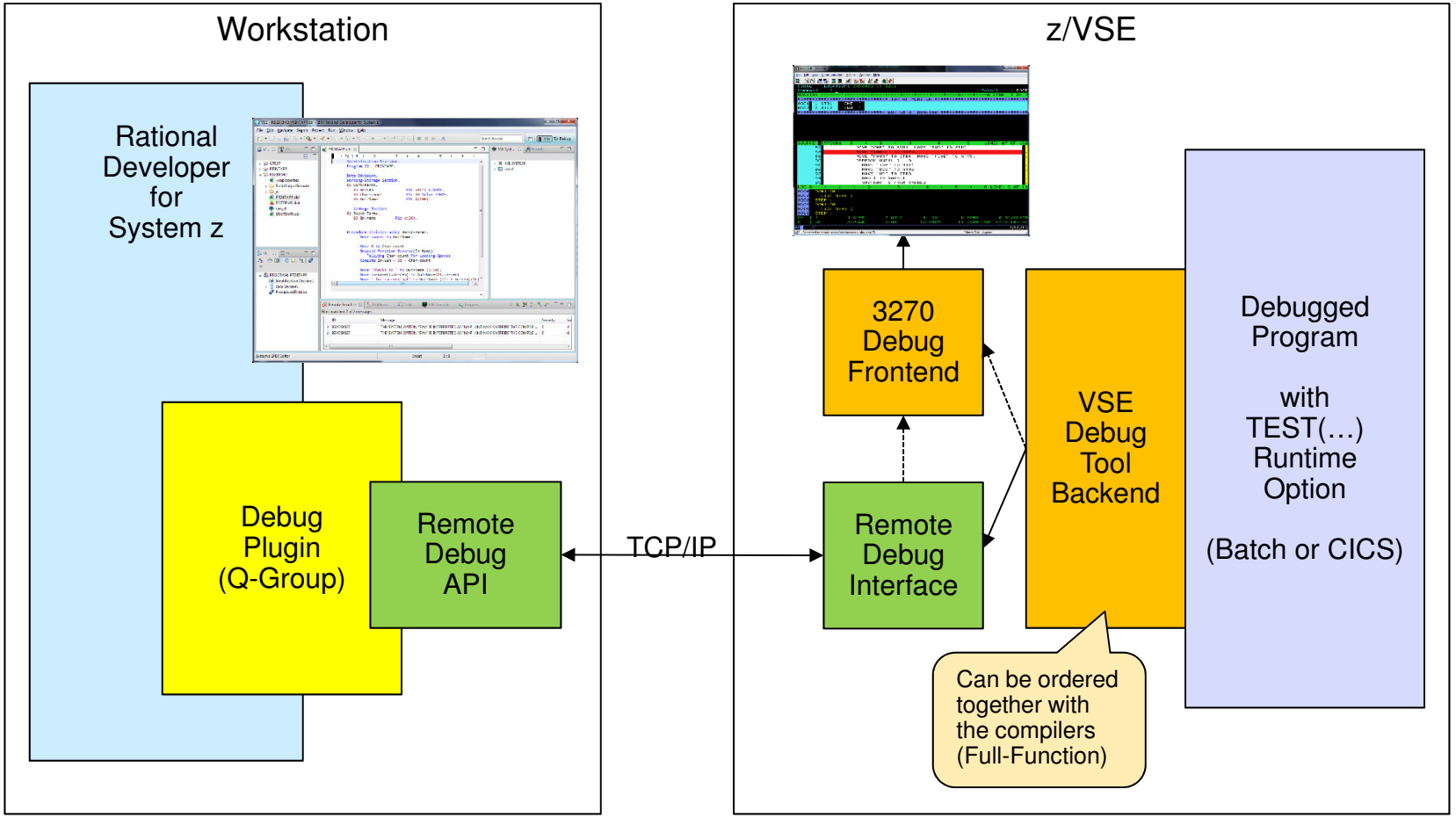
z/VSE Remote Debugging with RDz



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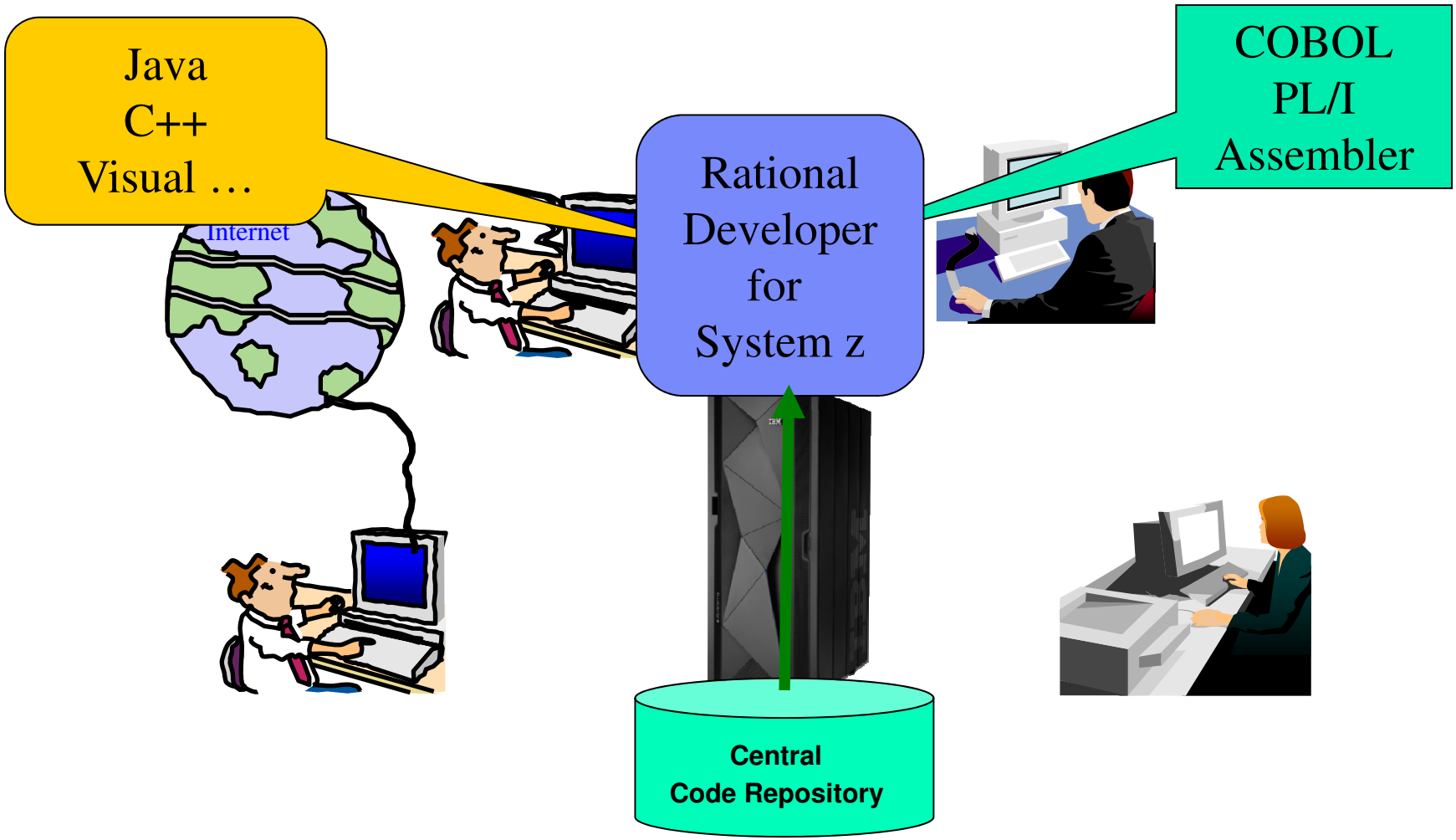
Summary

Eclipse – an open Integrated Development Environment for the enterprise



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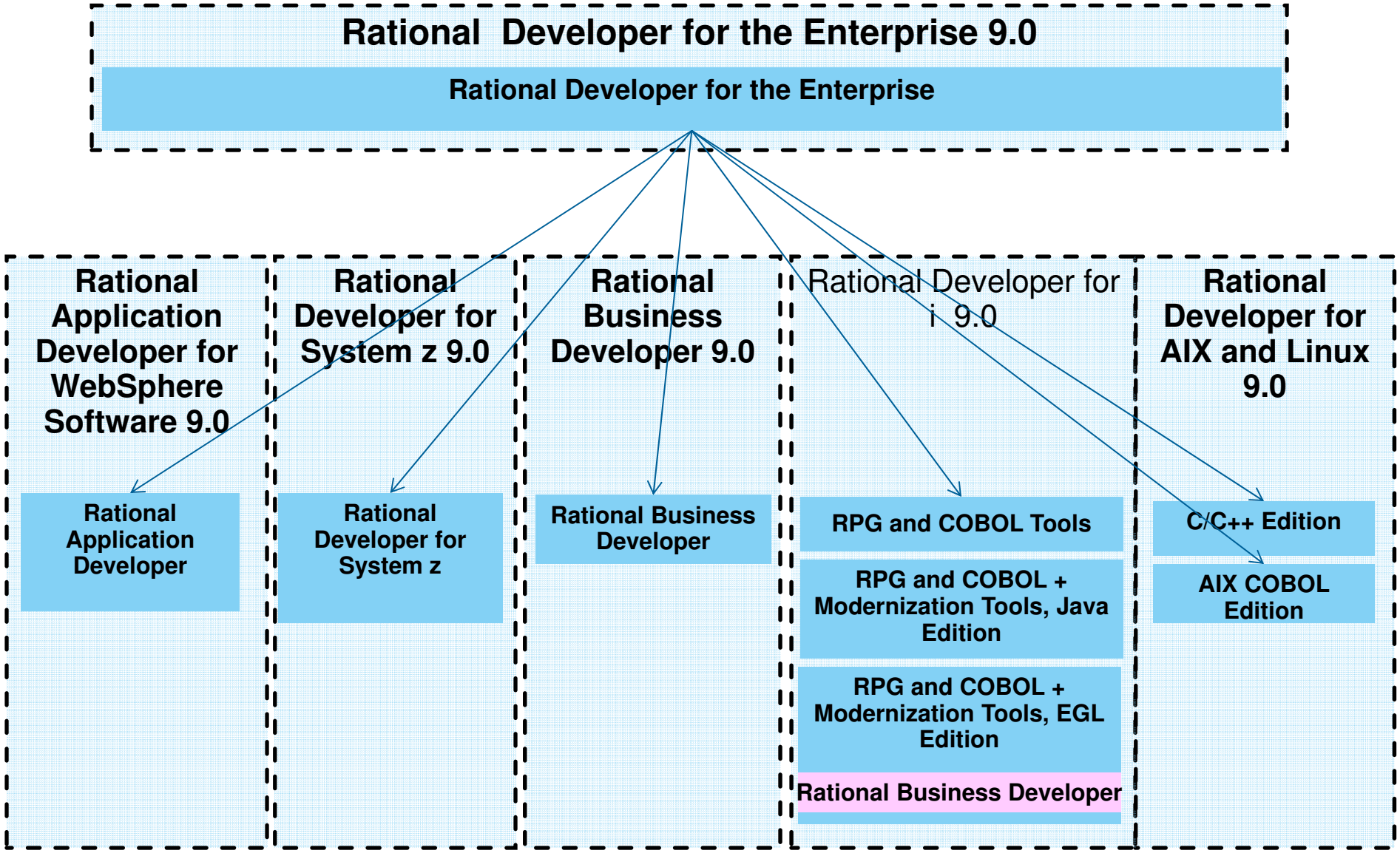

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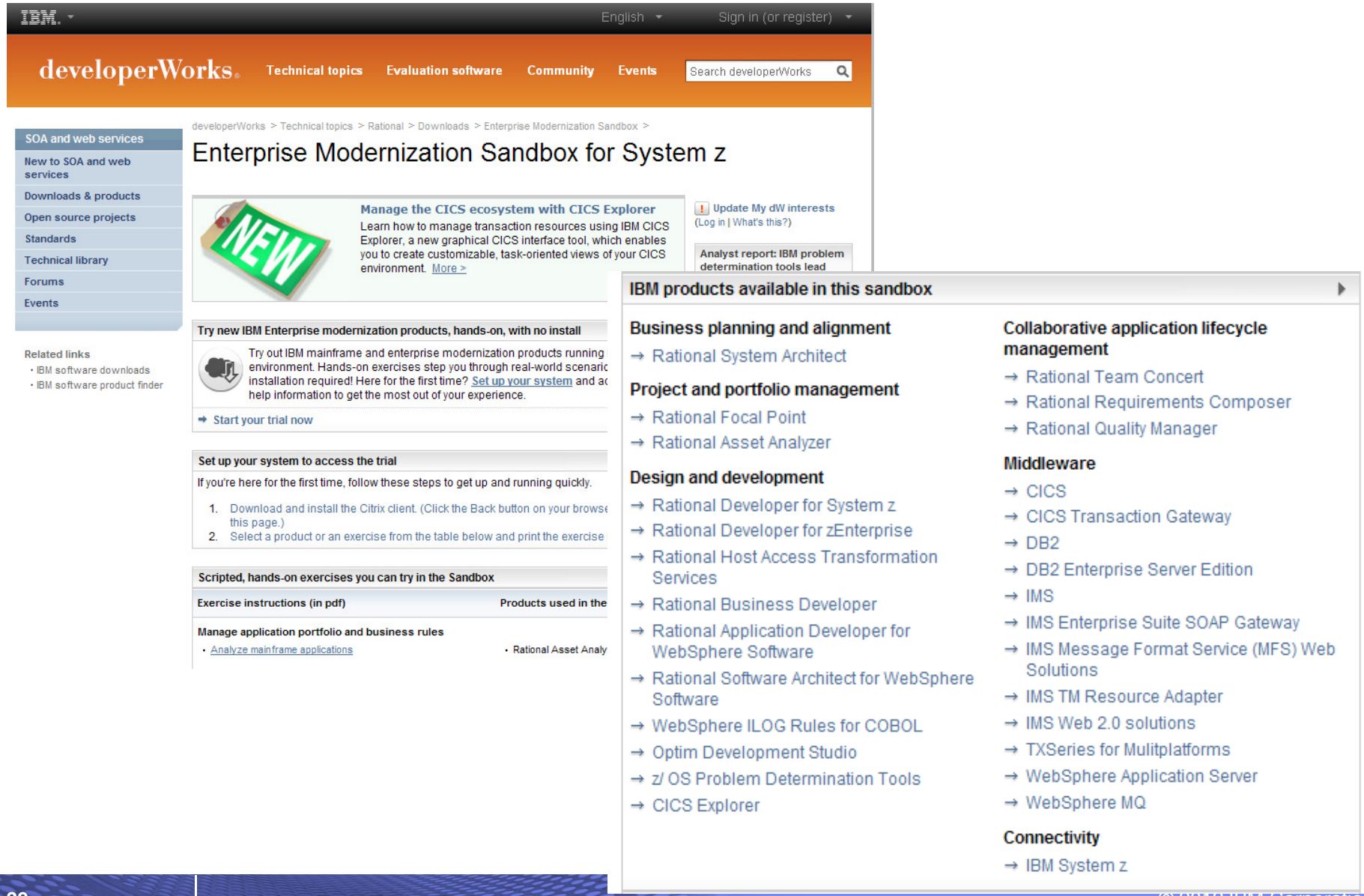
http://www.ibm.com/developerworks/downloads/emsandbox_systemz/index.html



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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 GM BSD GROUP Better Software Development Tasktop IBM ORACLE

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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

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Questions?

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