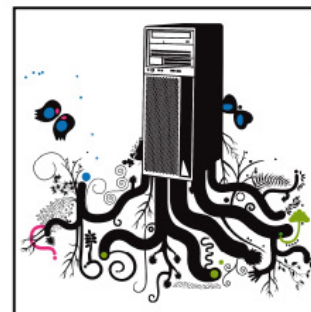
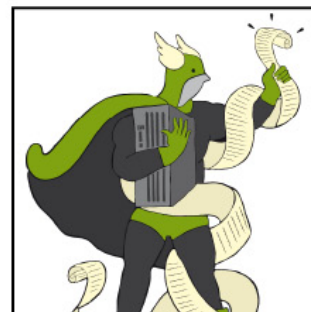
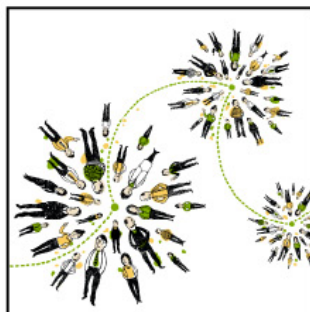
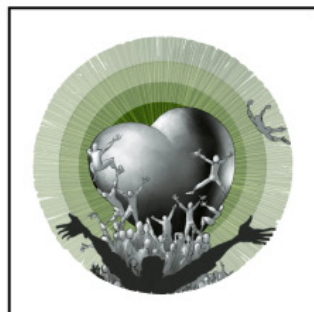




**IBM SOFTWARELAND 2009.**  
**SOLUZIONI INTELLIGENTI**  
**PER PROSPETTIVE**  
**CHE CAMBIANO.**



Roberto Pozzi  
Modernizzare le applicazioni esistenti  
con le soluzioni Rational

## Agenda

- Business Process Optimization e modernizzazione: le sfide più comuni e i differenti aspetti
- Recuperare il controllo e governare l'evoluzione dei propri assets
- Migliorare la produttività delle persone
- Migliorare la collaborazione e il gioco di squadra



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## Predisporre per la Business Process Optimization

Evolvere il proprio patrimonio applicativo verso architetture di riferimento moderne e più reattive al cambiamento e alle esigenze di flessibilità del business significa scontrarsi con:

- Stratificazione delle applicazioni
- Scarsa conoscenza dell'esistente e delle interrelazioni
- Skill del proprio team di team di sviluppo
- Difficile comunicazione e interazione all'interno dell'organizzazione allargata (Business e IT)

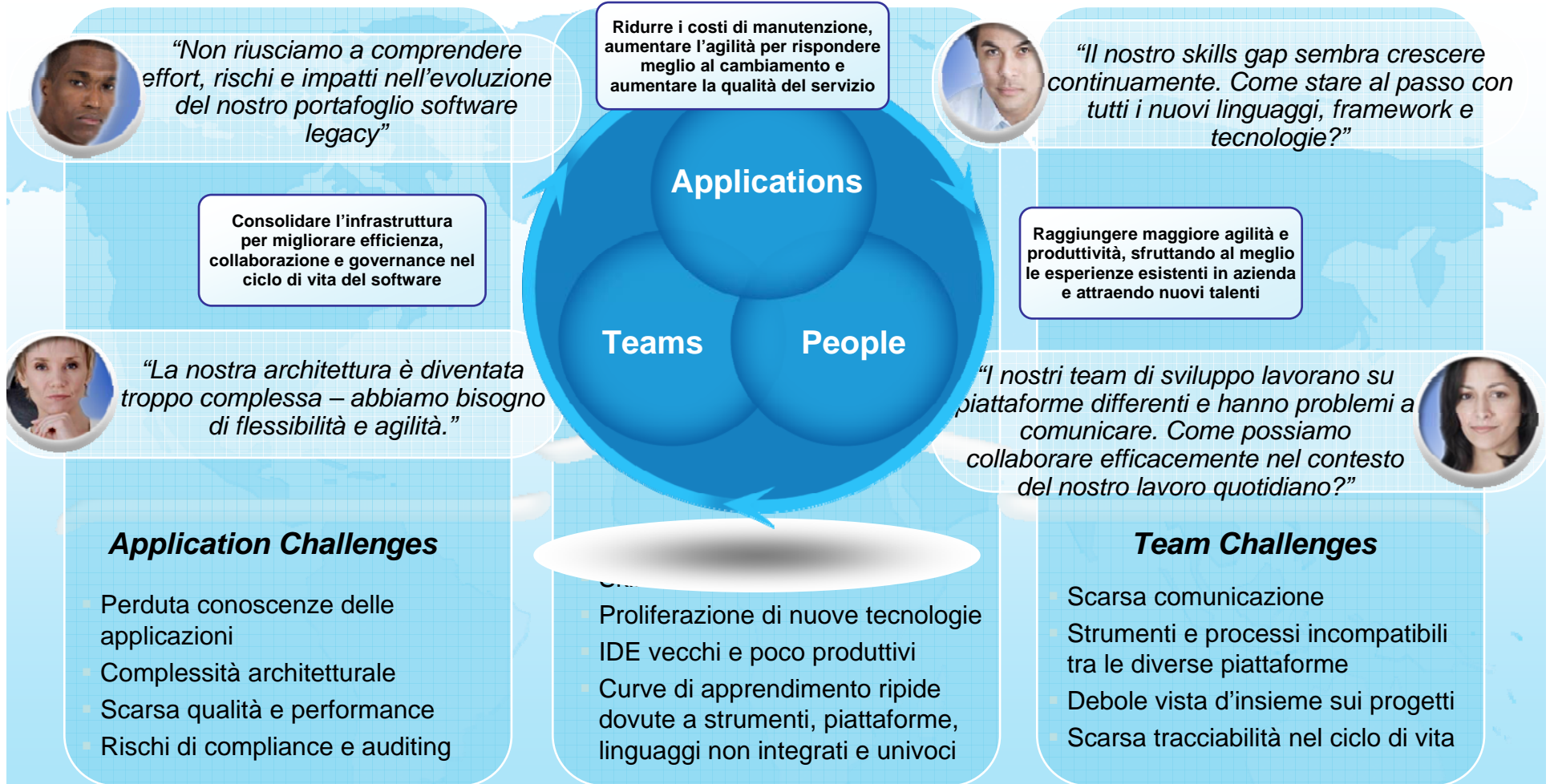
Per predisporre e sfruttare al meglio le vere potenzialità del BPO è quindi necessario:

- Analizzare per riprendere il controllo dell'esistente
- Adeguare infrastruttura, architetture, processi e metodologie
- Evolvere e guidare la trasformazione degli asset legacy per renderli riutilizzabili in nuovi contesti

Tutti questi fattori sono il motivo della rilevanza dell'Enterprise Modernization



## Sfide chiave nella modernizzazione



## Differenti aspetti da considerare

- Inventario degli assets esistenti e delle loro interrelazioni per riguadagnare il controllo e minimizzare i costi di sviluppi duplicati e inutili
- Evolvere architetture e applicazioni:
  - Refacing delle vecchie applicazioni “green screens” per quick win e ROI veloce
  - Costruire nuove applicazioni integrando e riusando gli asset esistenti nei nuovi sviluppi
  - Migrare applicazioni legacy per ridurre i costi di manutenzioni e aggiornare/evolvere gli skills
  - Analisi e refactoring degli assets per riusarli in architetture moderne
- Approcciare piattaforme eterogenee con un “Single IDE” per guadagnare produttività, fare economia di scala e ampliare la disponibilità di esperienze e skills preziosi
- Abbattere le isole di sviluppo e definire una infrastruttura comune di collaborazione per eliminare le inefficienze



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## Comprendere il valore del portafoglio applicativo



- **Risparmiare tempo e soldi riacquisendo la conoscenza dell'esistente**
  - ▶ Determinare velocemente gli impatti di un cambiamento
  - ▶ Identificare ed eliminare dead code e difetti nel codice
  - ▶ Enuclerare business rules per riutilizzarle come potenziali servizi
  - ▶ Refactoring degli assets esistenti per favorirne il riuso
- **Valutare e adottare scelte di investimento più "smart"**
  - ▶ Comprendere meglio l'intero portafoglio applicativo
  - ▶ Acquisire strumenti per valutare la rilevanza per il business
  - ▶ Migliorare il processo decisionale con dashboards real-time
  - ▶ Collegare applicazioni, sistemi, organizzazioni e processi

- ✓ **Capire i processi e mapparli sui sistemi IT**
- ✓ **Refactoring di asset esistenti per riuso o migrazione**
  - ▶ WebSphere Studio Asset Analyzer
  - ▶ Rational Asset Analyzer
  - ▶ Rational Transformation Workbench
  - ▶ ILOG Rules for COBOL
  - ▶ Rational Asset Manager
  - ▶ Telelogic System Architect

*HighMark, a major health care payer, accelerates claims analysis by 70% by using business rule management.*







## Ridurre i costi e aumentare la flessibilità tramite architetture più moderne

- **Tagliare tempi e costi di sviluppo riutilizzando assets testati e approvati**
  - Abilitare le applicazioni green screen alla SOA e al Web a costi contenuti
  - Creare velocemente web services da applicazioni esistenti
- **Accelerare il deployment di nuovi servizi e user interfaces**
  - Modellare, costruire, deployare e debuggare nuovi servizi indipendenti dalla piattaforma
  - Costruire rapidamente applicazioni “Web 2.0”

✓ **Creare web services per estendere a web e SOA applicazioni 3270 e 5250**

▶ Host Access Transformation Services

✓ **Sviluppare nuovi servizi ed esporre servizi a partire da tecnologie RPG, COBOL, C, C++, Java, PL/I, EGL**

▶ Rational Developer for System z

▶ Rational Developer for i for SOA Construction

▶ Rational Business Developer

✓ **Creare modelli architetturali dai modelli dei processi di business. Governare il riuso**

▶ Rational System Architect

▶ WebSphere Business Modeler

▶ Rational Asset Manager

▶ WebSphere Integration Developer

▶ WebSphere Service Registry and Repository

*“HVB IS adopted IBM Rational® Developer for System z software to accelerate mainframe development, improve the efficiency of its COBOL development teams, and move to a similar environment for mainframe and Web development” –*

*Almut Geiger, Product Specialist at HVB IS*

**HVB Information Services**  
UniCredit Group



## Gestire la qualità e contenere i rischi



- **Coordinare la qualità end-to-end attraverso piattaforme eterogenee**
  - Tracciare i requisiti in tutto il ciclo di vita
  - Identificare e risolvere i difetti fin dalle fasi iniziali del ciclo di vita
  - Gestire e pianificare la qualità in maniera consistente
  
- **Garantire la ripetibilità attraverso test automatizzati**
  - Validare la scalabilità delle applicazioni
  - Identificare e fixare colli di bottiglia nelle performance
  - Scoprire vulnerabilità, problemi di privacy, qualità, accessibilità e violazioni di policy nelle applicazioni web
  - Generare automaticamente audit e compliance reports

✓ **Raccogliere, elaborare, discutere, gestire, e revisionare i requisiti**

- ▶ Rational Requirements Composer
- ▶ Rational RequisitePro
- ▶ Telelogic DOORS

✓ **Coordinare piani, processi e risorse per garantire la qualità nel ciclo di vita**

- ▶ Rational Quality Manager

✓ **Condurre software code reviews ed enforcement di policy fin dalle prime fasi del ciclo di vita**

- ▶ Rational Software Analyzer

✓ **Ridurre tempi, contenere costi, garantire ripetibilità, performance e scalabilità con il test automatico**

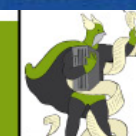
- ▶ Rational Functional Tester
- ▶ Rational Manual Tester
- ▶ Rational Performance Tester

✓ **Identificare vulnerabilità, esposizioni di privacy, problemi di qualità e non compliance a standard**

- ▶ Rational AppScan

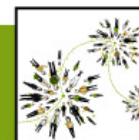
*"AppScan has increased our team's productivity by enabling us to automate very complex and time-consuming activities as well as help substantially increase our level of quality, security and regulatory assurance."*

- [André Hiotis, technology security officer, NAV CANADA](#)



## Agenda

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- Recuperare il controllo e governare l'evoluzione dei propri assets
- **Migliorare la produttività delle persone**
- Migliorare la collaborazione e il gioco di squadra



## Migliorare la produttività delle persone eliminando skill silos



- **Usare un unico IDE basato su Eclipse per differenti piattaforme, linguaggi e tecnologie**
  - Migliorare la produttività degli sviluppatori legacy
  - Contenere i costi dei MIPS per lo sviluppo mainframe fruendo di funzionalità di syntax check e compilazione locale
  - Attrarre nuovi talenti con IDE moderni e familiari anche su ambienti e tecnologie legacy
- **Abilitare gli sviluppatori a rilasciare soluzioni multipiattaforma consistenti e di qualità**
  - Semplificare lo sviluppo di applicazioni Web 2.0 e SOA
  - Deployare le applicazioni su piattaforme target eterogenee
  - Supportare la migrazione da tecnologie vecchie, proprietarie, costose e non più supportate ed evolute

✓ **Accelerare lo sviluppo di applicazioni web, tradizionali RPG, COBOL, C, C++, PL/I, EGL, Web services, con la produttività di un "Single IDE"**

- ▶ Rational Developer for System z
- ▶ Rational Developer for i SOA
- ▶ Rational Migration Extensions for Natural and RPG

**Target Platform:**  
System z, IBM i, and distributed

*"Currently we have one set of developers for web applications, and another for batch systems. With EGL, the same developers can do both, and we can offer our clients a choice of deployment platforms,"*

- [Mauricio Alvarenga, IT manager at Montreal Informática](#)

**M.I.**  
**MONTREAL**  
**INFORMÁTICA**  
Integrando Tecnologia aos Negócios



## Ottenere velocemente un ROI adeguato modernizzando le applicazioni host



- **Usare il proprio staff per abilitare al web le applicazioni “green screen”**
  - Fornire ai propri end user un accesso web sicuro alle “business applications”
  - Ridurre i costi del training degli utenti finali e migliorare la produttività dello staff IT
  - Deployare senza modifiche al codice e riducendo il downtime
- **Costruire applicazioni Web 2.0 moderne**
  - Consentire agli sviluppatori esistenti di costruire Rich Internet Applications (RIA)
  - Ridurre la necessità di avere skills su JavaScript, Ajax, JSON, HTML and CSS, etc.

✓ **Estendere velocemente e facilmente applicazioni 3270 e 5250 sul web e integrarle in approcci di Business Process Management**

- ▶ Host Access Transformation Services
- ▶ Rational Developer for System z with EGL
- ▶ Rational Developer for i for SOA Construction
- ▶ Rational Business Developer

*“Rational Host Access Transformation Services (HATS) makes legacy modernization a relatively easy and fast process. I estimate that HATS cut 75% of the man-hour requirements from other approaches we have used”*

- [Alan Jack, director of technology, Oxford International](#)



## Agenda

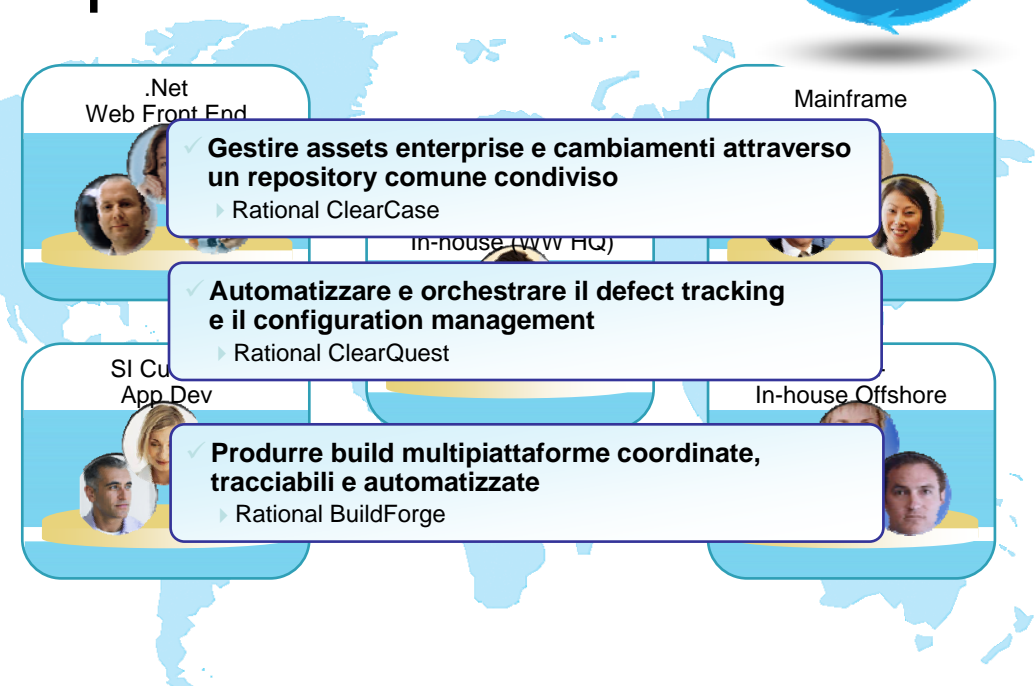
- Business Process Optimization e modernizzazione: le sfide più comuni e i differenti aspetti
- Recuperare il controllo e governare l'evoluzione dei propri assets
- Migliorare la produttività delle persone
- **Migliorare la collaborazione e il gioco di squadra**



## Ridurre i costi e migliorare l'efficienza unificando i teams in un processo univoco

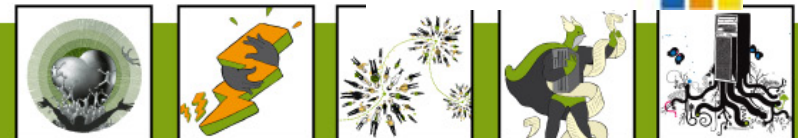


- **Consolidare l'infrastruttura di team**
  - Introdurre uno “Unified change management” per tutte le piattaforme, linguaggi, ruoli e locations
  - Assicurare il delivery globale del software con un singolo punto di controllo
- **Automatizzare il processo di build, change e release multi-piattaforma**
  - Abbattere costi e tempi dovuti a interventi e rilavorazioni manuali
  - Assicurare il riuso di asset certificati, valutare l'impatto dei cambiamenti e automatizzare gli aggiornamenti



*“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


kreditwerk



## Migliorare la collaborazione tra i team



- **Rimuovere gli ostacoli agli sviluppi distribuiti**
  - Collaborare tra team geograficamente distribuiti indipendentemente dalla piattaforma
  - Definire un ciclo di sviluppo software più automatizzato, trasparente e predicibile
  - Accedere agli asset software ovunque, sempre, utilizzando tecnologie web 2.0
  - Comunicare in real time, in context
  
- **Massimizzare la visibilità e la trasparenza sullo stato dei progetti**
  - Usare una singola interfaccia web per fornire una vista globale sulla salute dei progetti
  - Adottare una governance agile adeguata a team e piattaforme eterogenee



✓ **Collaborare tra tutti i teams, customizzare i processi, mantenere facilmente il controllo e la supervisione**

- ▶ Rational Team Concert for System z
- ▶ Rational Team Concert for i
- ▶ Rational Team Concert
- ▶ Rational Method Composer
- ▶ Telelogic Focal Point

*“By providing our development teams with a common platform from which to analyze, design, develop, and test, IBM Rational solutions have created opportunities to improve the quality of our software as well as our organization”*  
- Douglas Cook, [Verizon Business](#)





# THANK YOU

Learn more at:

- [IBM Enterprise Modernization Solutions](#)
- [IBM Rational Software Delivery Platform](#)
- [Process and portfolio management](#)
- [Change and release management](#)
- [Quality management](#)
- [Rational Developer for System z](#)
- [Architecture management](#)
- [Rational trial downloads](#)
- [developerWorks Rational](#)
- [Rational Transformation Workbench](#)
- [IBM Rational Business Partners](#)
- [Rational Asset Analyzer](#)

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# Backup Slides

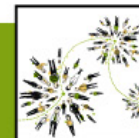


## Asset Discovery: Rational Asset Analyzer V5.5

- **Business Drivers**
  - Better know what you have
  - Analyze impacts to reduce risks of change
  - Reducing costs by reuse
  - Governance of assets evolution

### How can Rational Asset Analyzer help?

- Provides a dashboard and browser-based tool to accelerate the discovery and analysis phase in any new effort.
- Supports Application Understanding
- Supports End to End Impact Analysis
- Gathers metrics, counts related to the IT artifacts in the enterprise
- RAA is a sister product of Websphere Studio Asset Analyzer (WSAA)
  - *RAA = Asset Analyzer deployed on Windows*
  - *WSAA = Asset Analyzer deployed on System z*
- Rational Asset Analyzer consists of the following components:
  - Source scanners running on Windows
  - Metadata repository in DB2 on Windows



## Asset Governance - Rational Asset Manager

- Once you have the map of your assets you have to govern the evolution...
- ...Being sure everybody is aware of what is available and what is changing
- **Solution**
  1. Use RAA to identify artifacts/assets of interest
  2. Then publish RAA artifacts to RAM as assets for reuse, and manage/govern the development process around them.
- **Challenge #1:** Unknown location and usage of software components makes difficult to reuse assets
- **Solution:** RAM is a collaborative warehouse that:
  - Makes easier to search, locate, communicate and trace assets across distributed teams
  - Notifies users of additional assets related to them
  - Lets users know when their assets are changed
  - Lets users understand and manage asset relationships
  - Lets users subscribe to assets via RSS. E-mail

The screenshot shows the Rational Asset Manager interface. The top part displays the details for an asset named 'Loan Application [1.0]'. It includes sections for 'General Details', 'Description', 'Categories', 'Related Assets', and 'Recent Activity'. A blue arrow points from the 'Asset Detail Tools' section to a central callout box. The callout box contains the text: 'Accelerate project timelines and drive innovation'. Below the callout box is a network diagram showing relationships between assets. The diagram includes nodes for 'Claims Business Process [1]', 'Low Touch Claim Service Design [1.1]', 'Low Touch Claim Service [1.0]', and 'Training on how to file a insurance claim [1.0]'. A 'Dependency' relationship is shown between 'Claims Business Process [1]' and 'Low Touch Claim Service Design [1.1]'. User avatars are shown next to some nodes.

Analyst,  
Developer,  
Architect Tester  
**Search &  
Retrieve Assets**

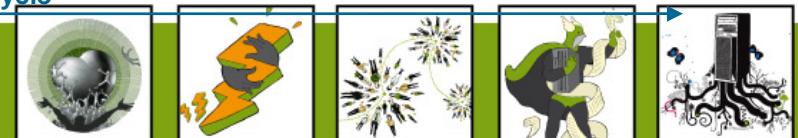
Asset  
Administrator  
**Define**

Analyst,  
Developer,  
Architect Tester  
**Create &  
Modify Assets**

Project Manager  
Reviewer  
Approver  
**Measure**

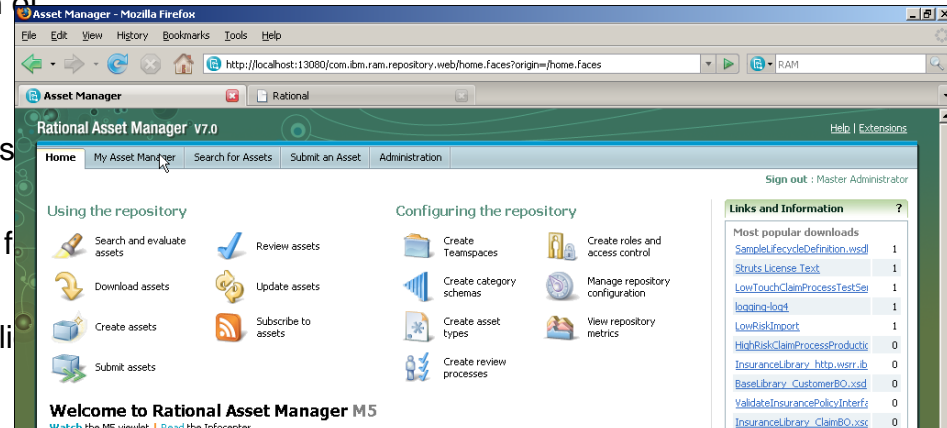
Project Manager  
CIO/CTO  
**Govern**

Asset Management Lifecycle



## Asset Governance - Rational Asset Manager

- **Challenge #2:** Lack of SOA governance and duplication of assets
- **Solution:** RAM helps to:
  - Define review processes to ensure only approved assets are running
  - Determine what is shareable with other and in which form to ensure reusability
  - Reduce risks and exposure by automating assets policies
  - Enhance asset traceability and reporting
    - Understand the impact of change and reduce outages by being able identify and notify related asset owners and consumers
    - Metrics to quantify ROI of asset reuse
  - Support SOA initiatives
    - Improve overall SOA Governance with easy discovery, storage and deployment of services



Analyst,  
Developer,  
Architect Tester  
**Search &  
Retrieve Assets**

Asset  
Administrator  
**Define**

Analyst,  
Developer,  
Architect Tester  
**Create &  
Modify Assets**

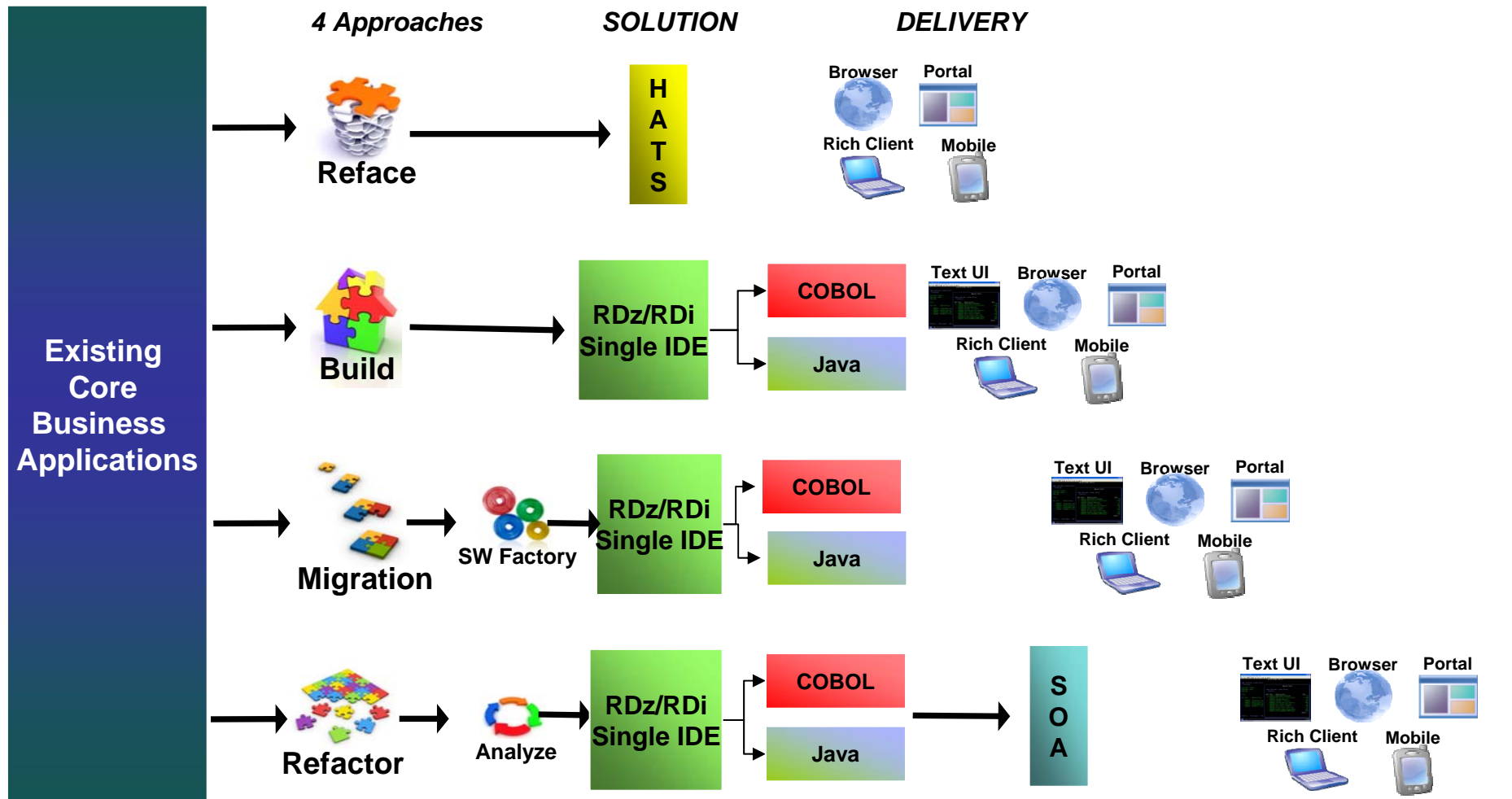
Project Manager  
Reviewer  
Approver  
**Measure**

Project Manager  
CIO/CTO  
**Govern**

Asset Management Lifecycle



## Evolving Architectures: approaches and IBM Solutions

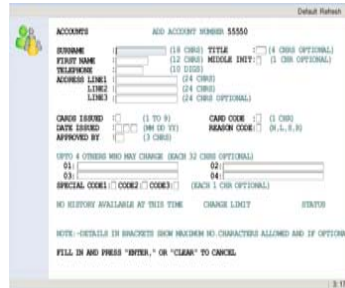


## Reface existing applications with HATS

- **Business Drivers** and objectives customers are pursuing

- Increase productivity and reduce training costs
- Containing costs
- Containing risks
- Deploy to new architectures with a Quick ROI
- Improving work flow from multiple applications

### Rich Client



- Integration at the desktop with other Eclipse applications
- Client side processing
- Rich set of user interface widgets
- Built on the standard, open Eclipse foundation

### Web



- Zero footprint
- View through your favorite browser

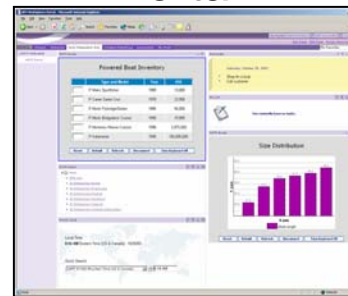
3270 or 5250  
Data stream

### Web Service



- Build self-service transactions

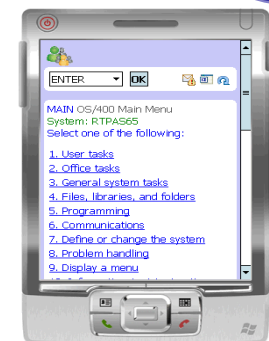
### Portal



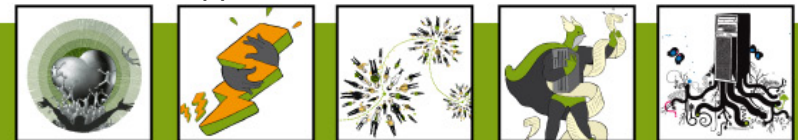
- Integration at the glass
- Click-to-Action support

### Mobile

New!

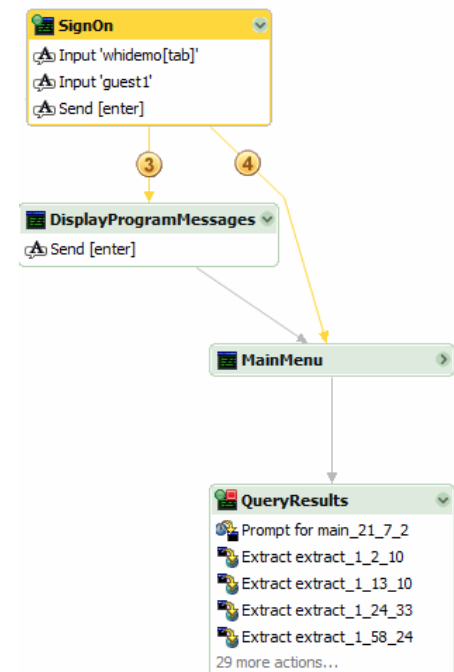


- Access host applications from mobile devices



## Visual Macro Editor (VME)

- The VME is tool for visually developing HATS macros
  - Macros are the scripts that navigate and interact with 3270, 5250, VT host applications.
  - Macros are the foundation for the Web Service support provided by HATS.
  - Inputs and outputs in a HATS macro are eventually manifested as inputs and outputs in a Web Service (screen interactions are hidden behind the Web Service interface).
- The VME provides value by:
  - Significantly increasing the productivity of HATS macro developers.
  - Allowing for easier handling of alternate / error flows.
  - Helping decrease the number of logic / flow problems (since the flow can be clearly analyzed by both developers, expert users, and business analysts).



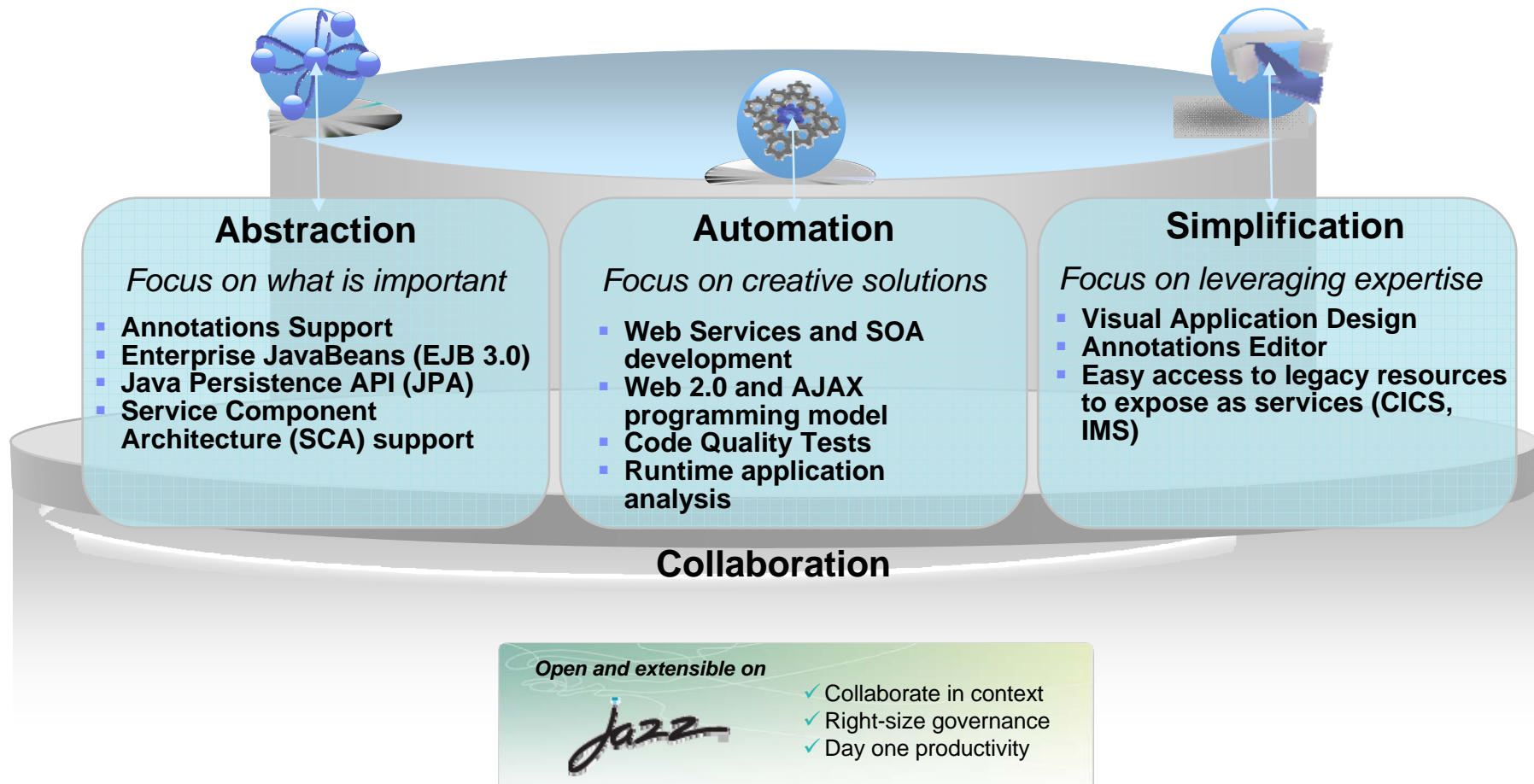


## Build with the Single IDE for System z/System i

- **Business drivers and objectives customers are pursuing**
  - Gain productivity by integrating technology and skills
  - Reduce and rationalize training costs
  - Rationalize infrastructure
  - Reuse skills in different context
  - Facilitate development in distributed and heterogeneous teams
- Solutions for a single IDE – Rational Software Development Platform v7.5
  - Rational Developer for System z (RDz) 7.5
    - Single IDE (COBOL, JAVA, EGL) environment for System z developers
    - Announced on October 7, 2008; general availability on October 31, 2008.
    - Offered in two flavors:
      - RDz with Java 7.5 – contains RDz plus Rational Application Developer
      - RDz with EGL 7.5 – contains RDz plus Rational Business Developer 7.5
  - Rational Developer for i for SOA Construction (RDi SOA) 7.5
    - Single IDE (RPG, COBOL, JAVA, EGL ) for IBM i (System i) developers
    - Announced on October 7, 2008; general availability on December 2, 2008
    - Contains RBD 7.5.1 at GA



## Rational Software Development Platform v7.5



## Why EGL for Application Transformation

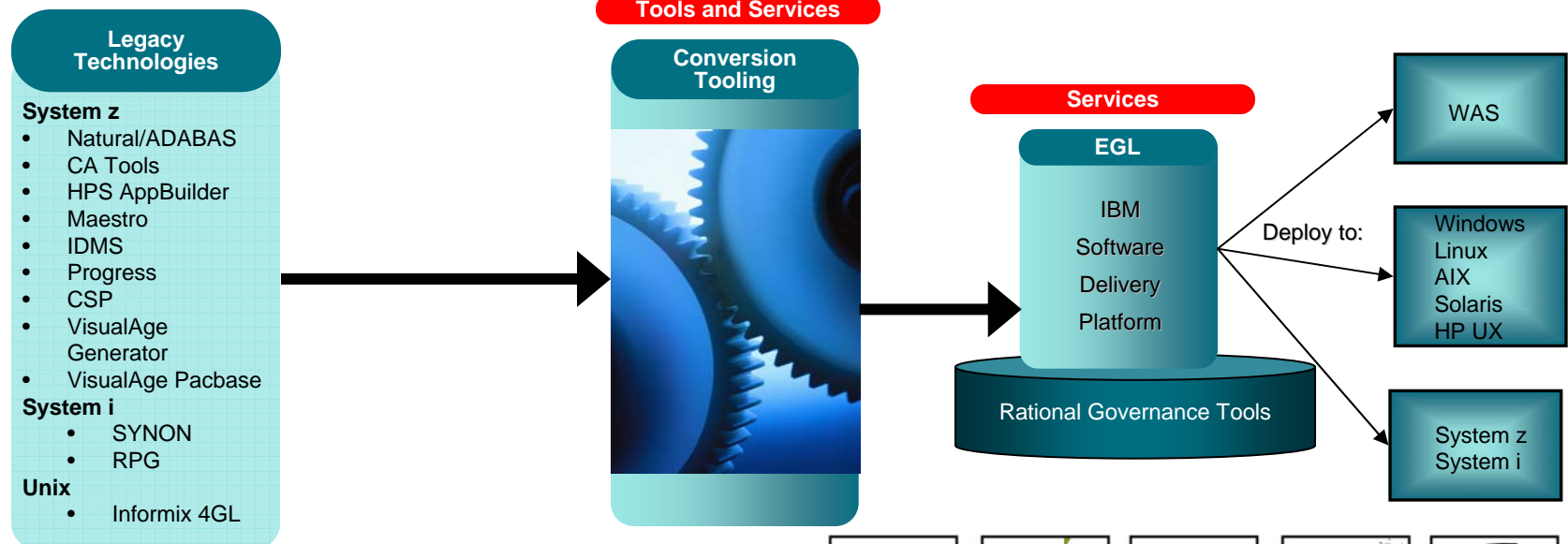
### • Business Drivers

- Eliminate costly runtime charges on legacy platforms
- Need to evolve legacy application to customer reference architectures
- Avoid costly retraining of business developers
- Keep up to date with constantly emerging new technology and frameworks

### • Why EGL can help

- Platform flexibility
  - Broad choice of new target environments
- Modern, Robust, Open, SOA ready
  - Future-proof architecture allows to grow with business requirements
- Easier to learn for legacy 4GL developers
  - No need to re-staff, productive in a very short time
- Procedural nature of EGL target has greater “affinity” with original 4GL source and “legacy” programming structures

### Tools and Services



## EGL in RBD 7.5: what's new

• General availability December 2, 2008 *Web 2.0 made easy*

• Content:

- z/VSE deployment support
- Support for calling SQL stored procedures for COBOL
- Support EXCI interface in z/OS batch programs for calling CICS transaction
- EGL Rich UI / Web 2.0 support

• **Why RIA?**

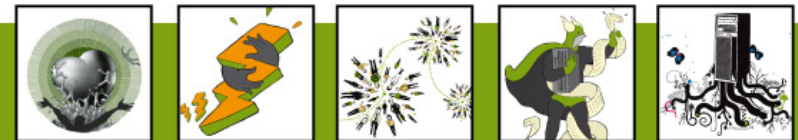
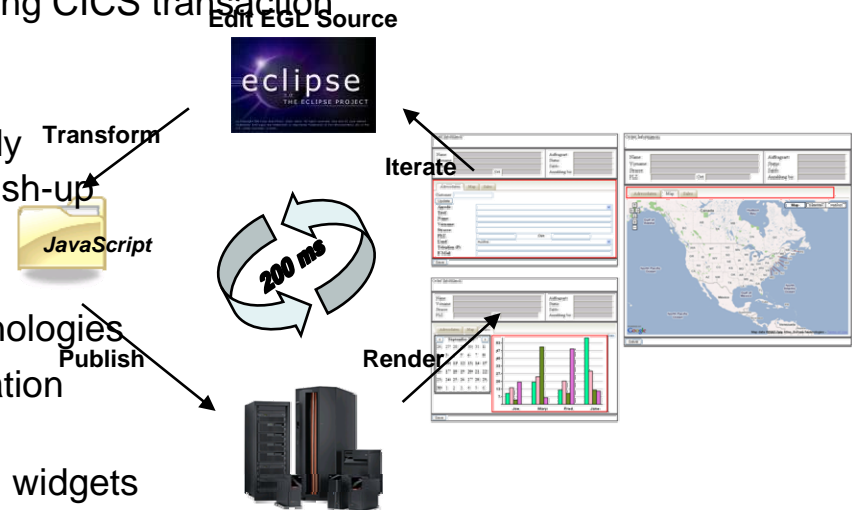
- Applications are responsive and user friendly
- Unleash innovation leveraging services “mush-up”

• **Why is it hard to create RIA?**

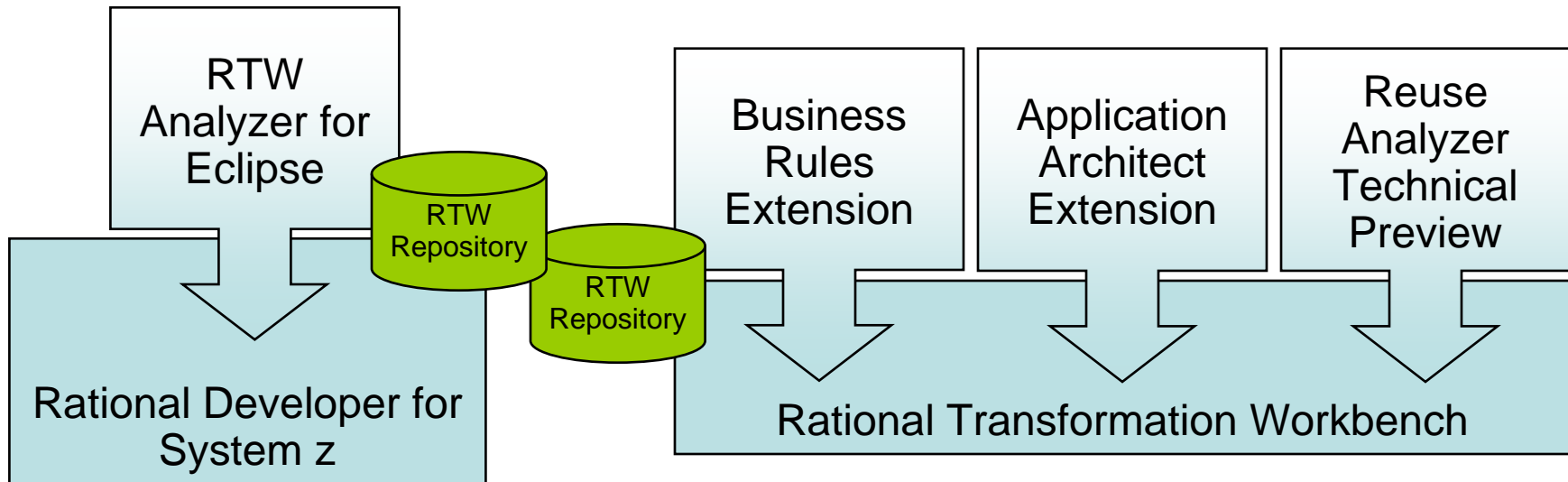
- Currently domain of “tech heads”
- Need to know many low level intricate technologies
- Compound the skill/tool silos and fragmentation

• **EGL Rich UI**

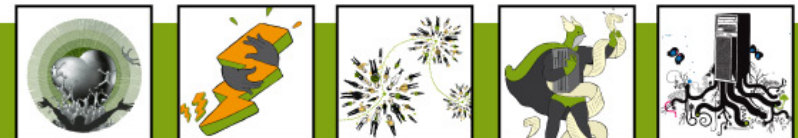
- Includes visual composition, libraries of RUI widgets
- Instant deploy/visualize while you code
- Fully open and extensible
- Easily integrate/consume any service (REST or SOAP)
- Single language end-to-end
- Brings legacy data and assets to Web 2.0



## Refactor with Rational Transformation Workbench



- **Application Analyzer** offers deep insight and knowledge transfer for complex applications; accelerating assessment, sustaining, and modernization initiatives
- **Application Profiler** enables assessments via browser-based reports, metrics, and visualizations; plus simplified auditing through access to the rules repository
- **Business Rule Manager** accelerates the identification and management of business logic to ease compliance issues and to enable alignment of applications with business needs
- **Application Architect** enables the modernization of applications by refactoring and re-architecting application code
- **Reuse Analyzer** readies enterprise applications to be reused or extended through web services
- **RTW Analyzer for Eclipse** brings core program analysis tools to the developer using Rational Developer for System z (RDz)



## What can you do with RTW?

- Advanced searches
  - Powerful query language
    - Use context, relationships, and attributes of source
  - Library of pre-defined queries
    - Coding Standards
    - Logic
- Data item impact analysis
  - Traces the flow of data items
  - Understand impact of changes before testing
- View program logic diagrams
- View program complexity metrics
  - McCabe's Cyclomatic Complexity
  - Halstead's Program Volume
  - Function points
  - Dead Code
- New Rational Transformation Workbench (v4) highlights
  - Server-based offering, so that queries and analytics can be shared.
  - Application Portfolio Manager module to provide executive dashboards, and web-based access to the repository.
  - New Additional language support
    - Java, C++, VB, PowerBuilder and RPG
  - Language support
    - IBM Enterprise COBOL 3.4, VS COBOL II v4, IBM OS/390® COBOL v2.2, IBM AS/400® COBOL V3
    - Software AG Natural
    - PL/I
    - Job control language (JCL)
    - Micro Focus COBOL, Version 3.2 (level 10)
    - IBM CICS BMS, IBM IMS MFS, IBM System i™ screens

