

***Il Mondo dei Partner***  
***INNOVARE E CRESCERE. INSIEME*** **2006**  
*Milano 19 - 20 Ottobre* ***Technical World***

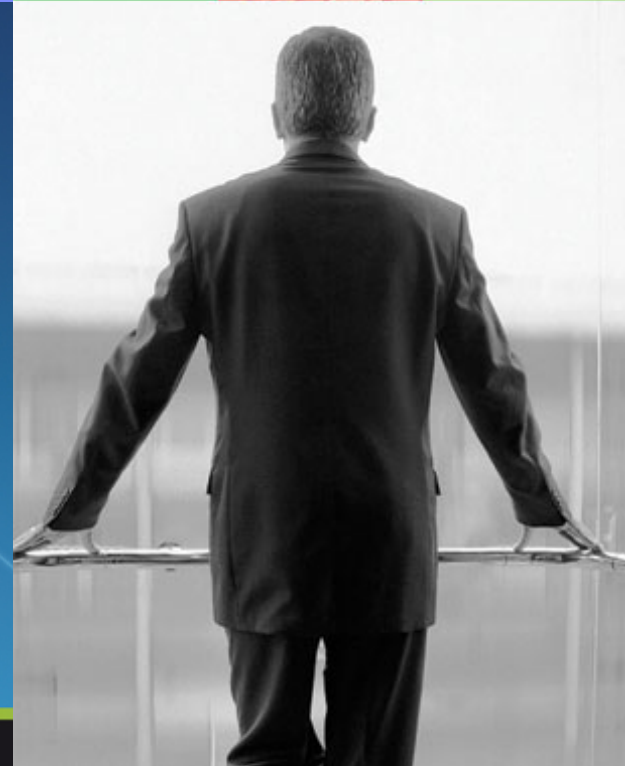
Introduction to the IBM Rational Software Development Platform

Barbara Santambrogio



# Agenda

- ● ● Business and IT challenges
- ● ● Business Driven Development
- ● ● “P” is for Platform



# The challenge: Poor visibility, lack of cohesion across business and technology domains

## Business View

**Poor visibility and governance over IT investments**  
**Lack of actionable information**  
**Blind decision-making**

## Operations View

**Inadequate service levels**  
**Inability to rapidly deploy applications**  
**Complex, multi-tier operating environments**



## Application Development View

**Overwhelming complexity**  
**Relentless time-to-market pressure**  
**Uncontrolled change**

# The solution: Breaking down the silos

## *A shared view of the development lifecycle*

### Business View

**Clear view of technology ROI**  
**Top-down and bottom-up visibility into technology projects**  
**Objective decision-making support**

### Operations View

**Improved service and quality compliance**  
**Predictable deployments**  
**Accelerated diagnosis and repair**



### Application Development View

**Rapid application development and deployment**  
**Improved collaboration**  
**Asset reuse**

# The IBM Rational Software Development Platform

## Business

Prioritize Plan Manage Measure



## Operations

Optimize Iterate

Discover business & technology assets

- Business priorities
- Requirements
- Middleware and software assets

Develop at the speed of business

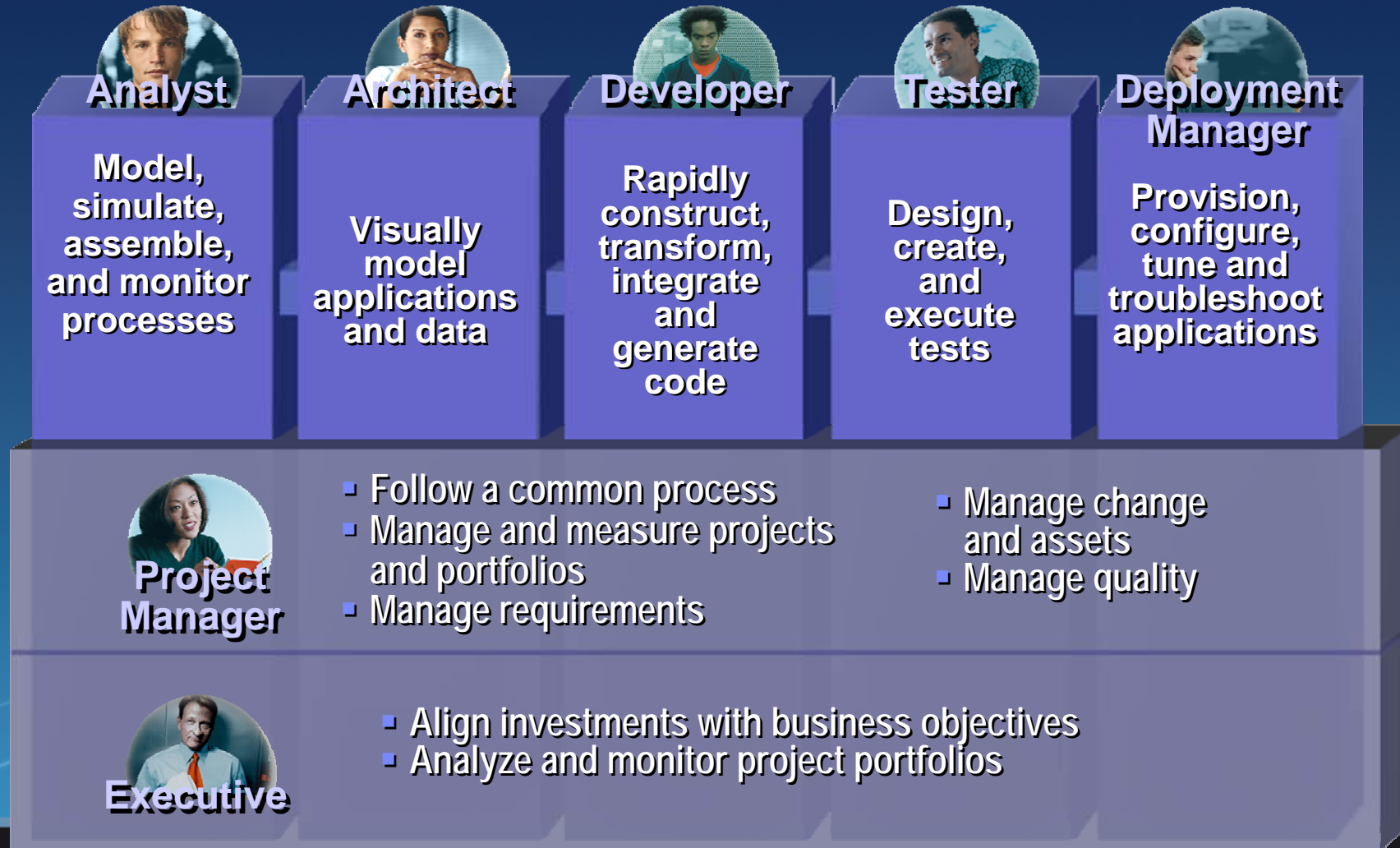
- Rapid application development
- Model-driven architecture
- Asset-based development

Deploy to closed-loop environments

- Automated applications deployment
- Streamlined composite application management
- Direct-to-operations productivity

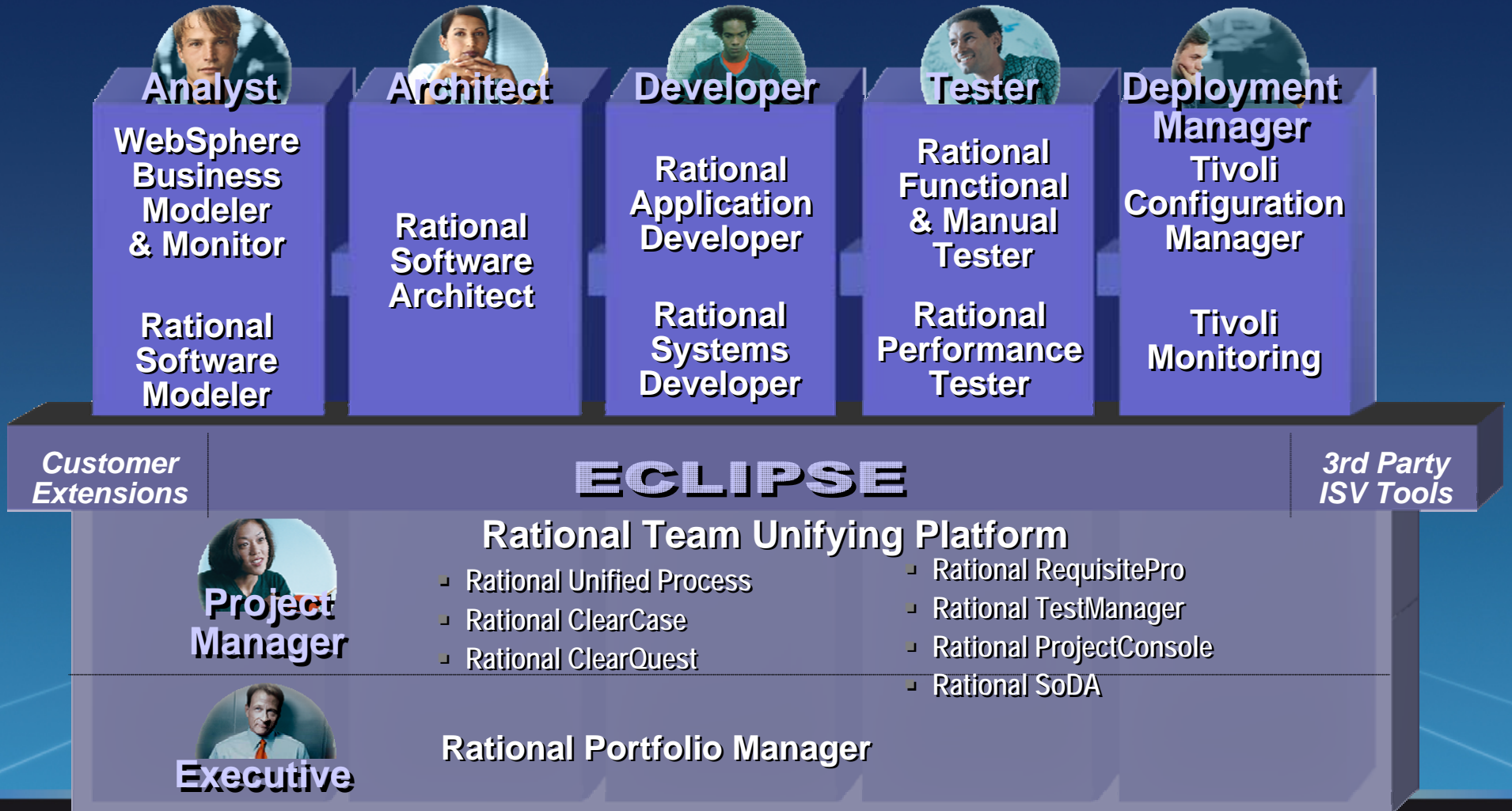
# The IBM Rational Software Development Platform

*A complete, open, modular, and proven solution*



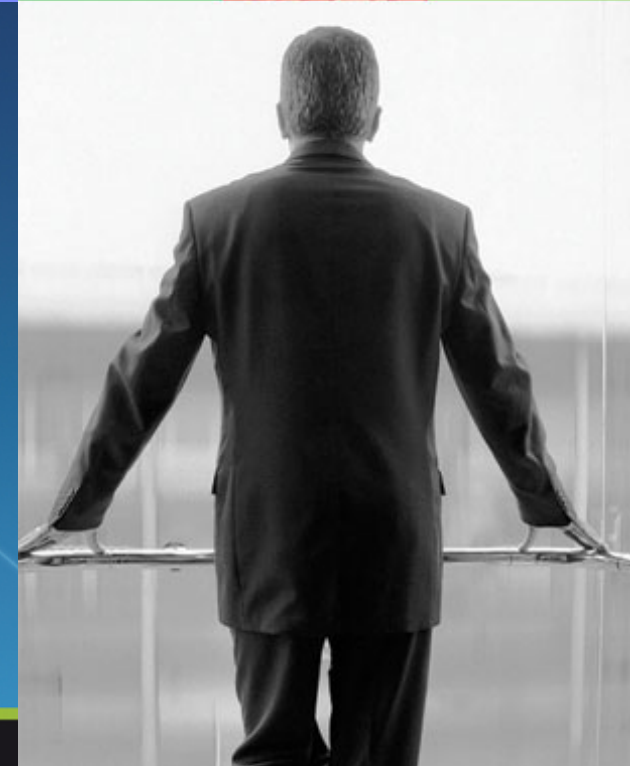
# The IBM Rational Software Development Platform

*A complete, open, modular, and proven solution*



# Agenda

- ● ● Business and IT challenges
- ● ● Business Driven Development
- ● ● “P” is for Platform





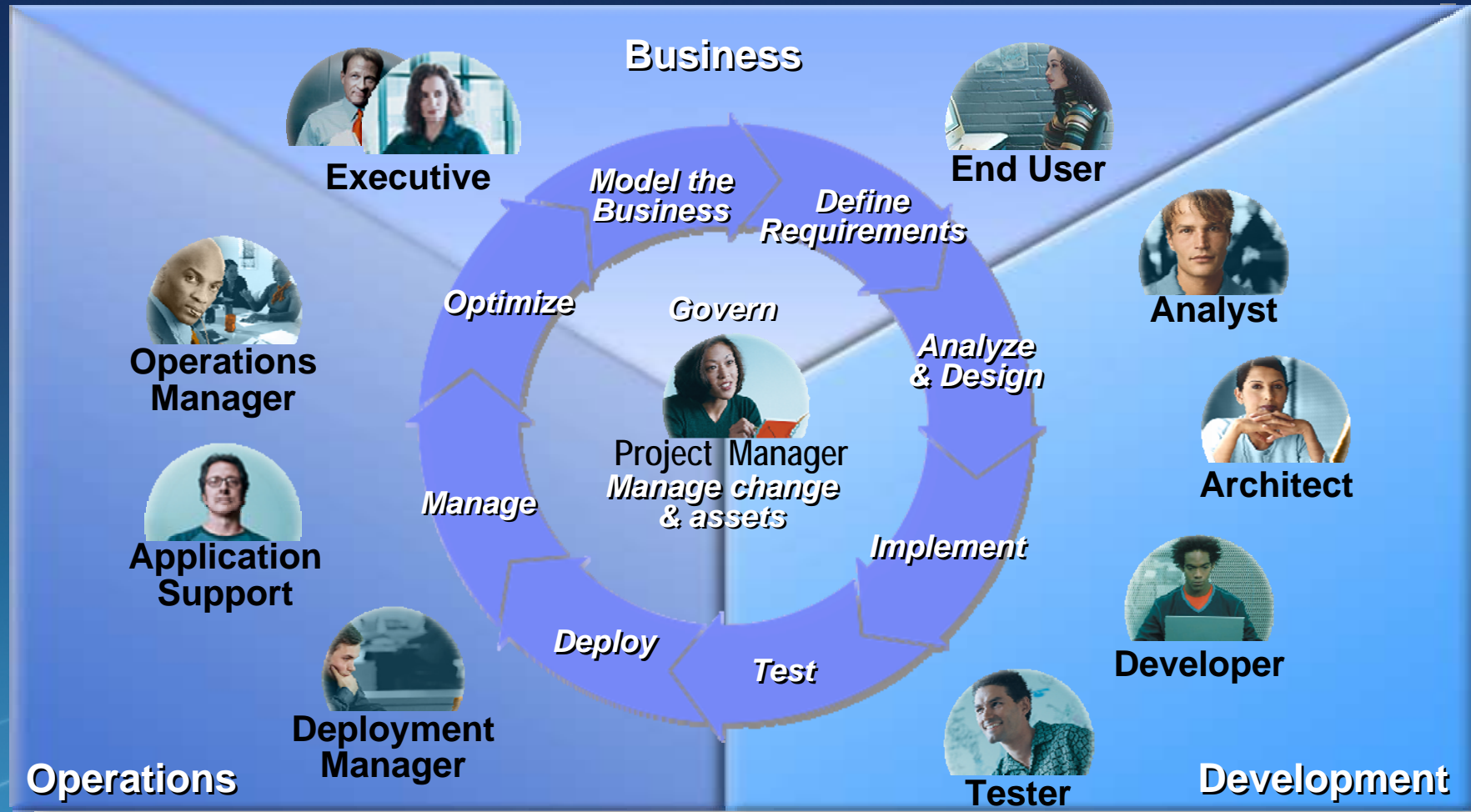
# Business Driven Development

Prioritize

Plan

Manage

Measure



Optimize

Iterate



# Govern: Prioritize, plan, and manage

*Align priorities, projects and people*



## For executives

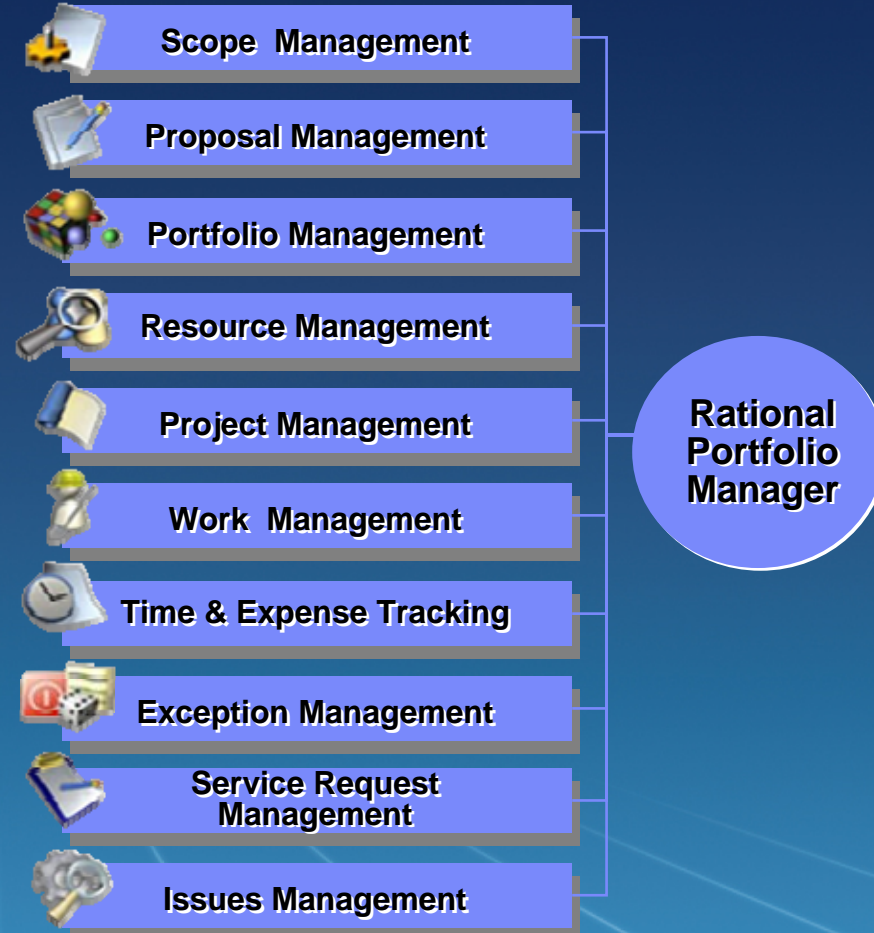
- Visualize and balance portfolios
- Make objective “save/kill” decisions
- Move smoothly from initiatives to measurable programs and projects

## For project and program managers

- Quickly ramp projects with reusable processes based on best practices
- Balance workload and manage demand
- Manage skills inventory and usage
- Actively manage risks and issues

## For team members

- Communicate, coordinate and collaborate globally



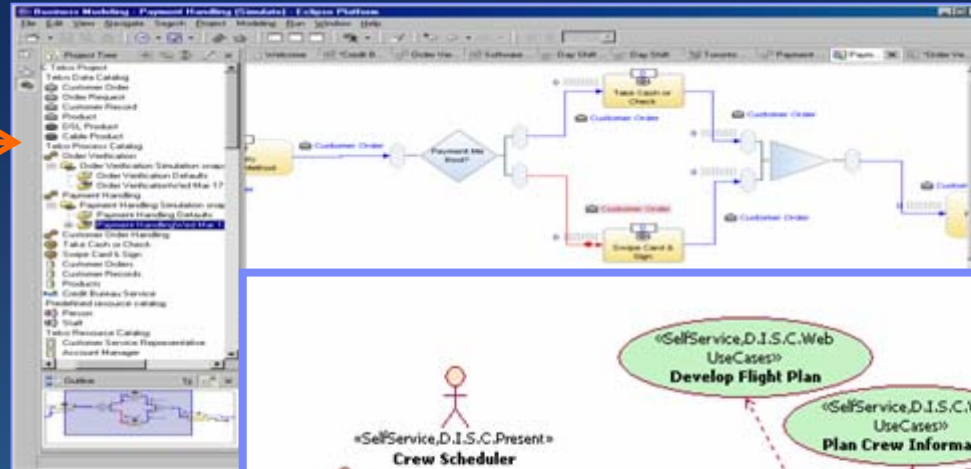
*IBM Rational Portfolio Manager*

# Model the business

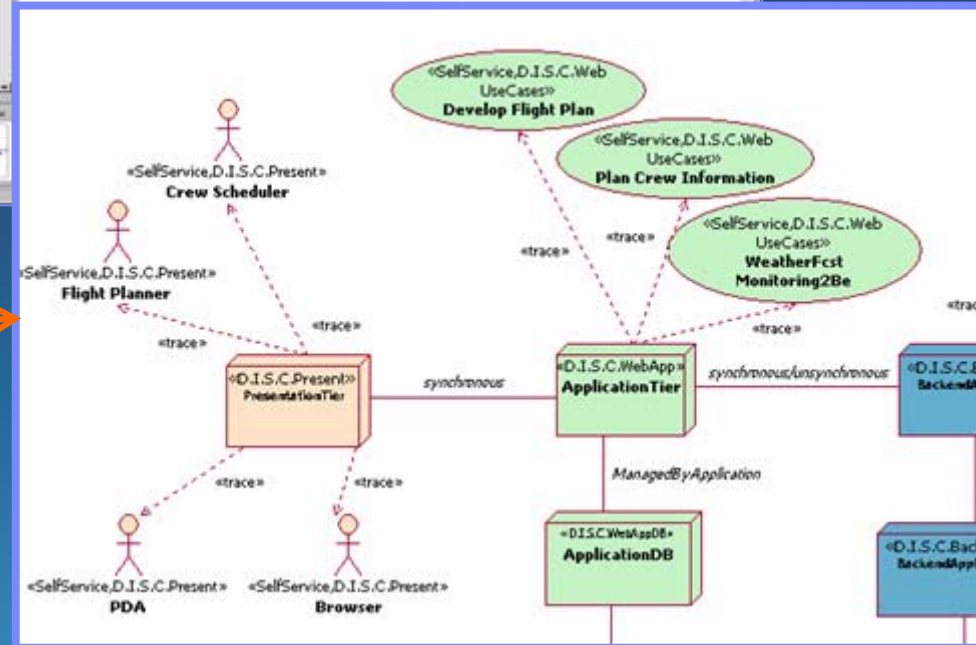
Document business processes and user interactions



Analyst models “as is” business process and explores alternative “to be” business processes



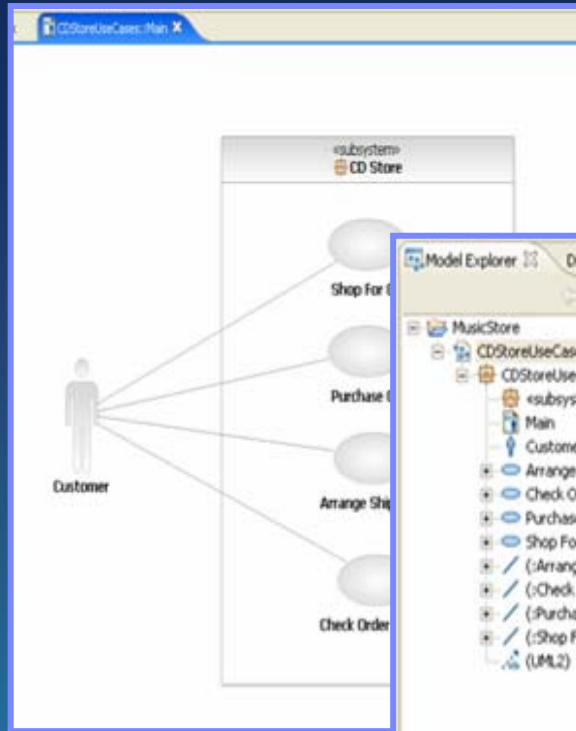
Analyst models “as is” and “to be” user interactions through use cases



IBM WebSphere Business Modeler  
IBM Rational Software Modeler



# Define requirements



The Model Explorer shows a project structure for 'MusicStore' containing 'CDStoreUseCases.emx'. The Requirement Explorer shows a hierarchy of requirements, including 'Global Requirements', 'Learning Project - Use Cases', and 'Use Cases'. The 'Use Cases' folder is expanded to show 'UC1 Arrange Shipment', 'Check Order Status', 'Purchase CD', and 'Shop for CD'.



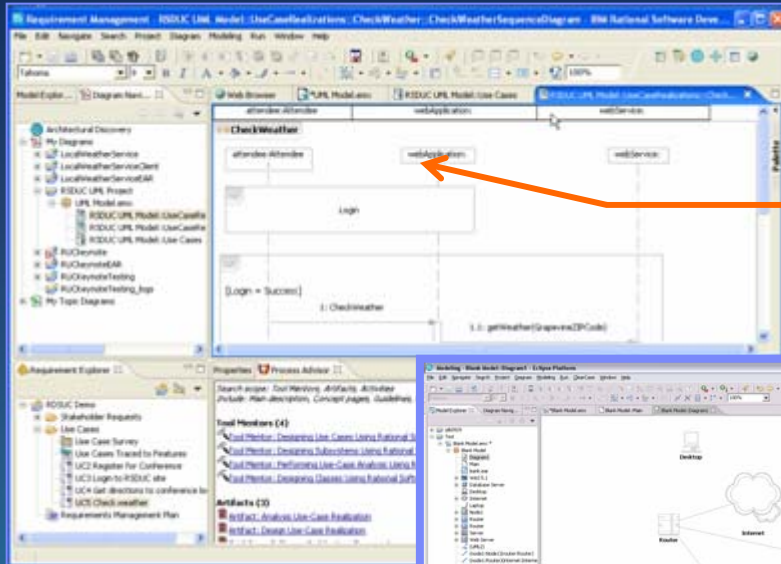
**Analyst defines business requirements and refines them into software requirements and use cases**

Requirement	Property	Affects Architecture	Priority	Status	Difficulty	Contact	EnhancementR...	Defect	Unique ID	Location
UC1 Arrange Shipment	Name	False	Should	Proposed	Medium				342	Arrange
UC2 Check Order Status	Name	False	Should	Proposed	Medium	Rob Z.			320	Check Or
UC3 Purchase CD	Name	False	Must	Approved	High	Catherine Q.			309	Purchase
UC4 Shop For CD	Name	False	Must	Proposed	Medium	Jim X.			296	Shop For

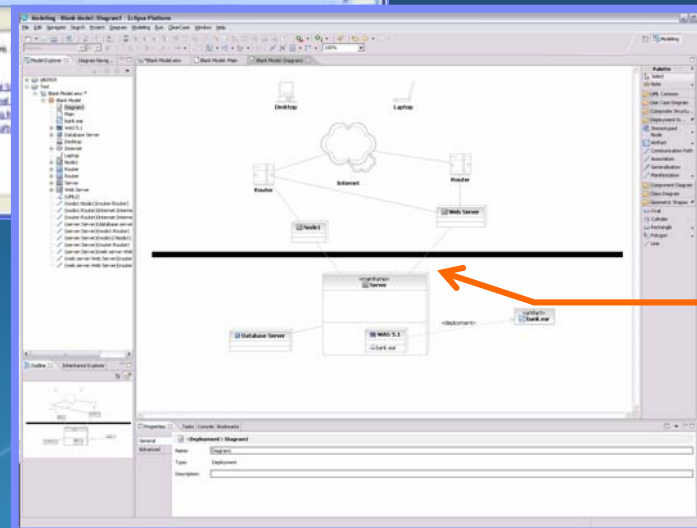
IBM Rational RequisitePro

# Analyze and design application

Minimize risks by understanding architectural dependencies



Architect imports business processes and refines application design, based on best practices, and existing assets



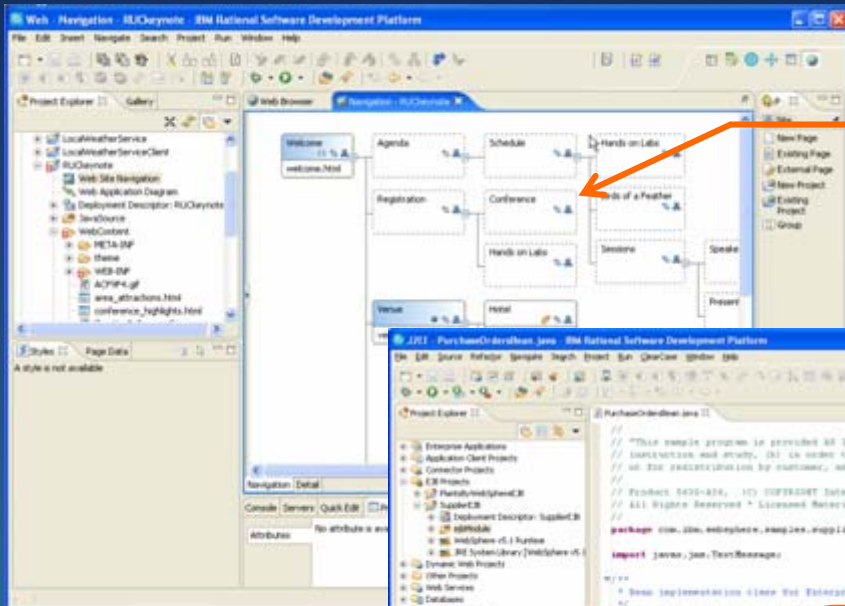
Architect models operational model

IBM Rational Software Architect

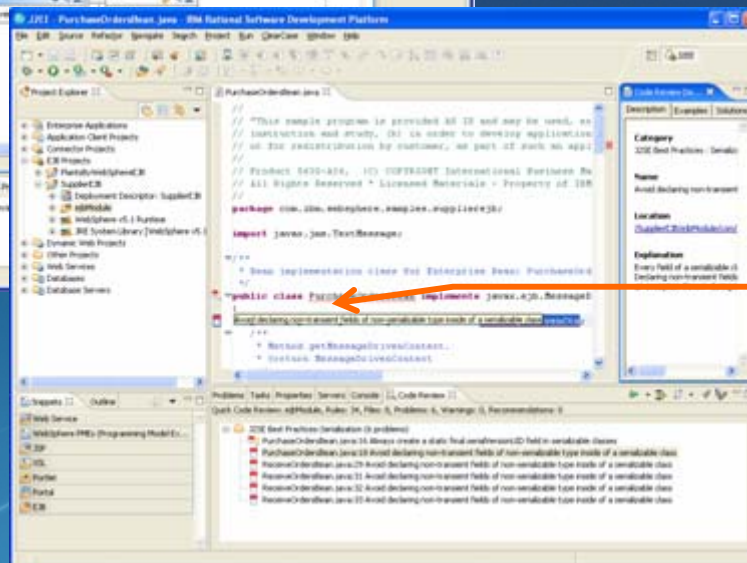


# Implement application

Build higher quality applications in less time



Developer implements application leveraging highly productive J2EE capabilities (JSF, SDO)



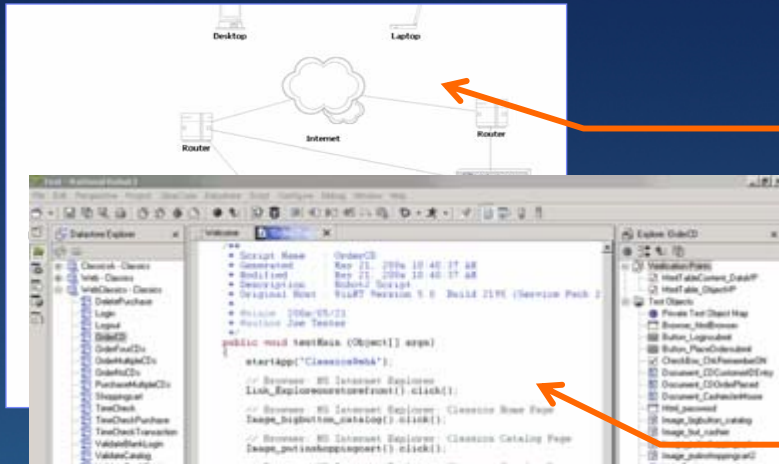
Developer leverages code analysis & unit testing to fix functional, performance, and security problems at the component level

IBM Rational Application Developer



# Test application

## Validate functional requirements



Deployment Manager leverages operational model to provision the test lab

A screenshot of a code editor showing test scripts. An orange arrow points from the code to the text box on the right.

```
public void testBasic (Object[] args) {
    startApp("ClassesWeb");
    // Browser: MS Internet Explorer:
    Link_ExplosionTestTest.click();
    // Browser: MS Internet Explorer:
    Example_dialogTestTest.click();
    // Browser: MS Internet Explorer:
    Example_dialogTestTest.click();
}
```



Tester performs automated and manual functional testing based on use cases derived from business requirements

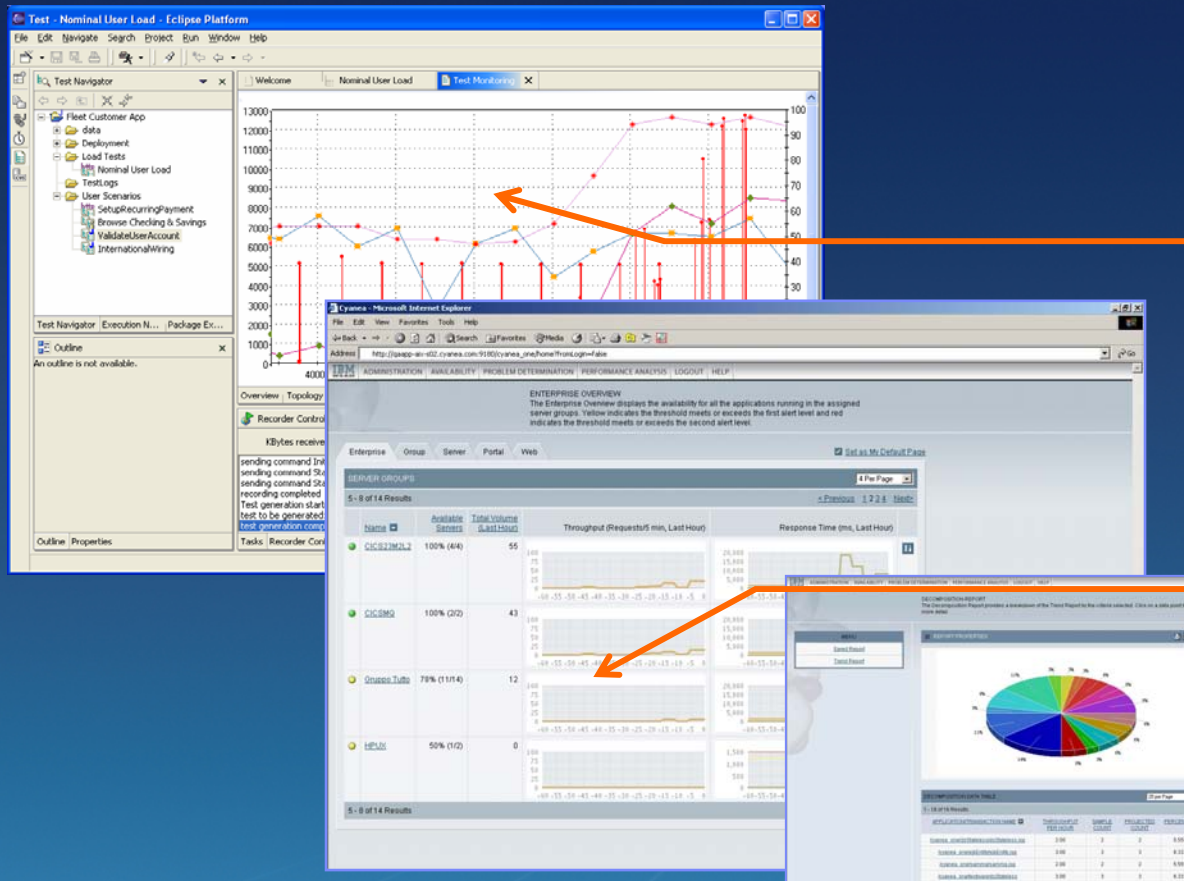
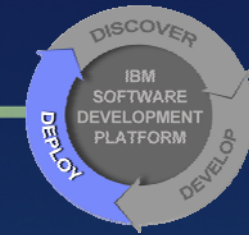
The screenshot shows the IBM Rational Manual Tester interface. On the left is a tree view of test cases including 'Launch Browser', 'Logon For Trading', 'NewName', 'Confirm that the', 'Enter User Name', 'Enter Password', 'Select "Start in:"', 'Does the "Submit"', 'Does the "Remer', 'Check the "Reme', 'Click "Submit"', 'Logged in ok?', 'Navigate to Trading', 'Click "Investing"', 'Click "Executions', 'Verify that tradin', 'Sell Mutual Fund', and 'Click "Mutual Fun'. The main window shows a browser window with the URL 'http://www.ibm.com' and a 'Launch' button. On the right is a 'Reusable Statements' pane with a list of actions: 'Launch Browser', 'Enter Address http://', 'Logon For Trading', 'Navigate to Trading', 'Sell Mutual Fund', and 'Verify Transaction in'. An orange arrow points from the 'Launch Browser' statement to the text box on the right.

IBM Rational Functional Tester  
IBM Rational Manual Tester



# Deploy

Plan capacity and ensure service level compliance



Tester evaluates the scalability of the new application based on Service Level Agreements captured in business model



Deployment team builds capacity plans based on performance tests

IBM WebSphere Studio Application Monitor  
IBM Rational Performance Tester





# Manage



Monitor service levels with a centralized view into your network, systems, middleware, and application performance



Operations Manager monitors application performance and is automatically notified of problems, enabling fast triage to the right stakeholders (application, DB, network, etc.)

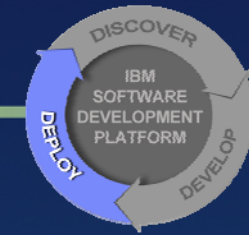
Time Received	Class	Hostname	Severity	Status	Message
October 11, 2004 4:23:33 PM...	TMTP-MS-Event	was60-332a	Minor		IBM Tivoli Monitoring for Transaction Performance - Microsoft Internet Explorer
October 11, 2004 4:23:01 PM...	TMTP-STI-POLICY-VIOLATION	was60-331b	Warning		
October 11, 2004 4:22:00 PM...	WebSphereAS_high_Serviet_Resp...	was60-332a	Warning		
October 11, 2004 4:22:00 PM...	WebSphereAS_high_CPU_Utilizati...	was60-332a	Warning		
October 11, 2004 4:21:48 PM...	TEC ITS_SUBNET_CONNECTIO...	sw519241-cs	Warning		
October 11, 2004 4:20:59 PM...	TMW_LowAvailCausingManyProble...	was60-332a	Critical		
October 11, 2004 4:18:43 PM...	Domino_Database_Corruption	wma-dsvr	Warning		
October 11, 2004 4:17:10 PM...	TMW_ProcessHandleLeak	wma-dsvr	Warning		
October 11, 2004 4:17:02 PM...	TMW_ProcessHoggingCPU	was60-332a	Critical		

Time Received	Class	Hostname	Severity	Status	Message
October 11, 2004 4:20:59...	TMW_LowAvailCausingMa...	was60-332a	Critical		
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October 11, 2004 4:23:33...	TMTP-MS-Event	was60-332a	Minor		
October 11, 2004 4:18:43...	Domino_Database_Corru...	wma-dsvr	Warning		
October 11, 2004 4:17:10...	TMW_ProcessHandleLeak	wma-dsvr	Warning		
October 11, 2004 4:22:00...	WebSphereAS_high_Ser...	was60-332a	Warning		
October 11, 2004 4:22:00...	WebSphereAS_high_CPU...	was60-332a	Warning		
October 11, 2004 4:23:01...	TMTP-STI-POLICY-VIOLA...	was60-331b	Warning		
October 11, 2004 4:21:48...	TEC ITS_SUBNET_CONN...	sw519241-cs	Warning		
October 11, 2004 4:16:58...	TEC_Start	tk39snv1	Harmless		
October 11, 2004 4:16:23...	TEC ITS_NODE_STATUS	148.84.105.74	Harmless		
October 11, 2004 4:16:19...	TEC ITS_PHYS_ADDR_C...	m1a.rtp.ibm.com	Harmless		
October 11, 2004 4:13:31...	WebSphereAS JVMRuntim...	patcc39	Harmless		
October 11, 2004 4:12:40...	TEC_Start	tk39snv2	Harmless		
October 11, 2004 4:11:28...	PCP_EVENT_SYNC	jacobb	Harmless		
October 11, 2004 4:09:15...	PCP_EVENT_SYNC	jacobb	Harmless		

IBM Tivoli Enterprise Console  
IBM Tivoli Monitoring for Transaction Performance



# Optimize



Verify delivery of expected benefits; fine-tune business processes and iteratively improve business performance



Analyst compares projected to actual improvement in business performance, and fine-tunes business process to optimize results

**Workflow Dashboard** Help

Randomize by  %  Views

[Select Business Measures](#) [Set Filter](#) Process  [Process Diagram](#)

1-5 of 5 Jump to #

Activity Instance	Admin Action	PI Diagram	State	Starting Time	Working Duration	Elapsed Duration	Cost	Is Delayed	Account ID	Customer ID
			Running	2002-06-26 12:04 PM	2.82 h	50.50 h	\$0		1234	DOE
			Running	2002-06-26 02:39 PM	5.5 s	47.92 h	\$0		45435	SMITH
			Running	2002-06-26 02:39 PM	0.26 s	47.91 h	\$0		2147483647	BASRAI
			Running	2002-06-26 02:40 PM	0.24 s	47.89 h	\$0		3454353	WEAVER
			Running	2002-06-26 05:43 PM	0.26 s	44.85 h	\$0		0	MARIA111

IBM WebSphere Business Monitor



# Manage Change and Assets: Project Challenges



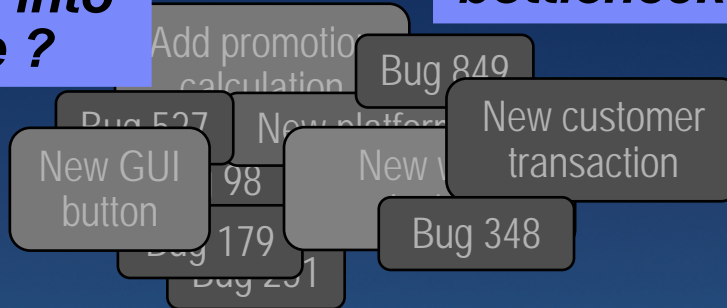
**Did requirement 462 make it into this release ?**

Analyst

**Where's the bottleneck?**



Project Manager

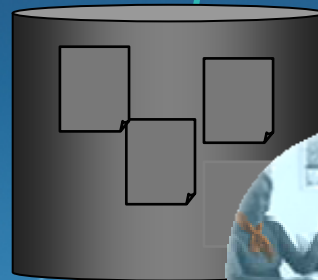


**Of course I didn't forget a file...**



Developers

**Why did the build break?**



Integrator

**Are the requirements I need to test in this build?**



Testers



# Activity-Based Change Management

*Ensure predictable results*



- Simplifies key SCM functions and workflows
- Easy to adopt
- Optimized for team productivity
- Based on hundreds of successful CM implementations

## Unified Change Management

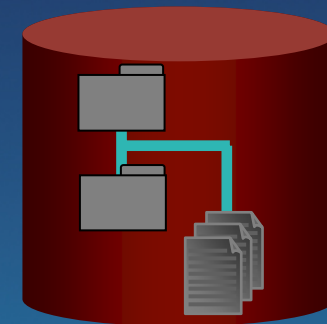
### Manage Activities

- To Do Lists
- Automated Workflow

### Manage Assets

- Versioning: code, models, XML, HTML
- Parallel development

## Manages High-level Objects



- ✓ Components
- ✓ Streams
- ✓ Baselines
- ✓ Activities

*IBM Rational ClearCase and IBM Rational ClearQuest*

# Manage Change in *Your* Environment

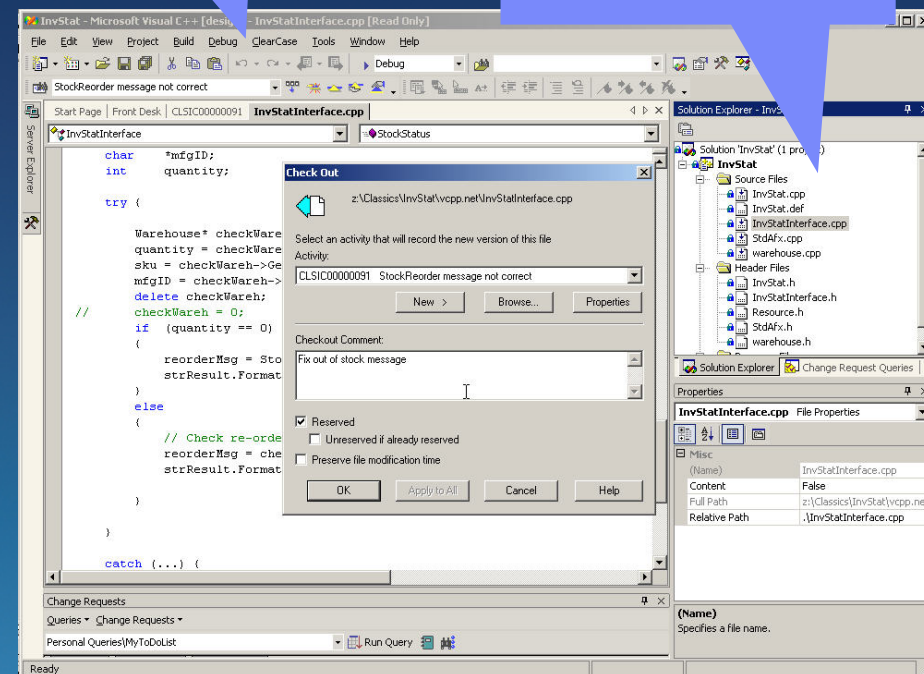
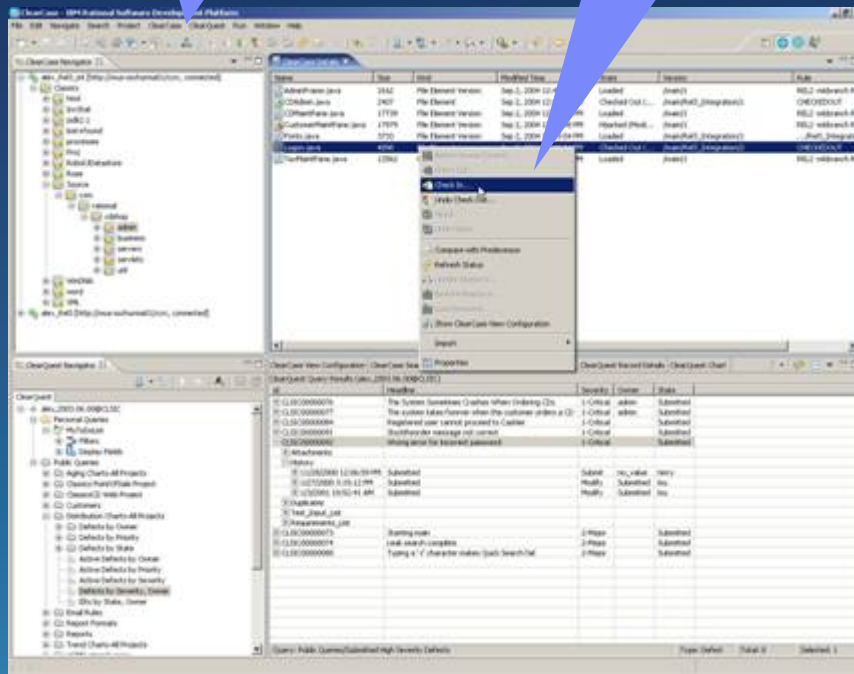


Rational ClearCase and Rational ClearQuest Menu and Toolbar

Context sensitive menus

Rational ClearCase and Rational ClearQuest Menu and Toolbar

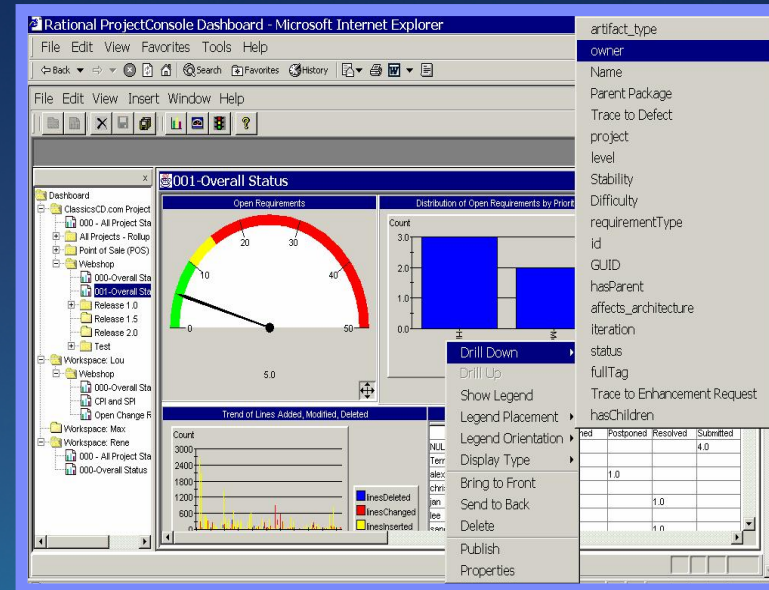
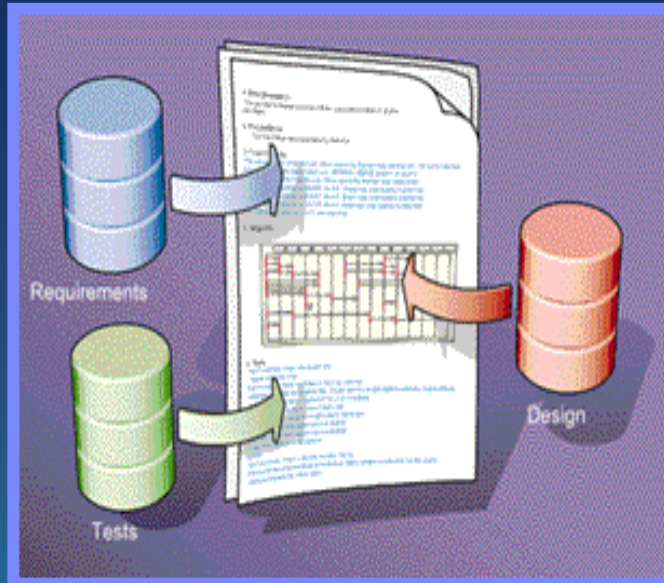
Context sensitive menus



IBM Rational ClearCase and IBM Rational ClearQuest



# Tracking project status, quality and documentation



➤ **Document Process**

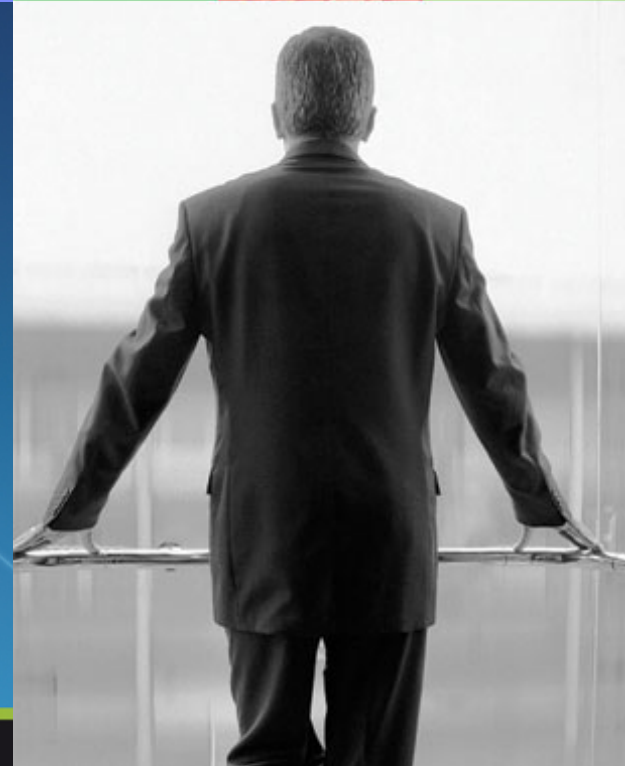
➤ **Measure Progress and Quality**

IBM Rational SoDA and IBM Rational Project Console



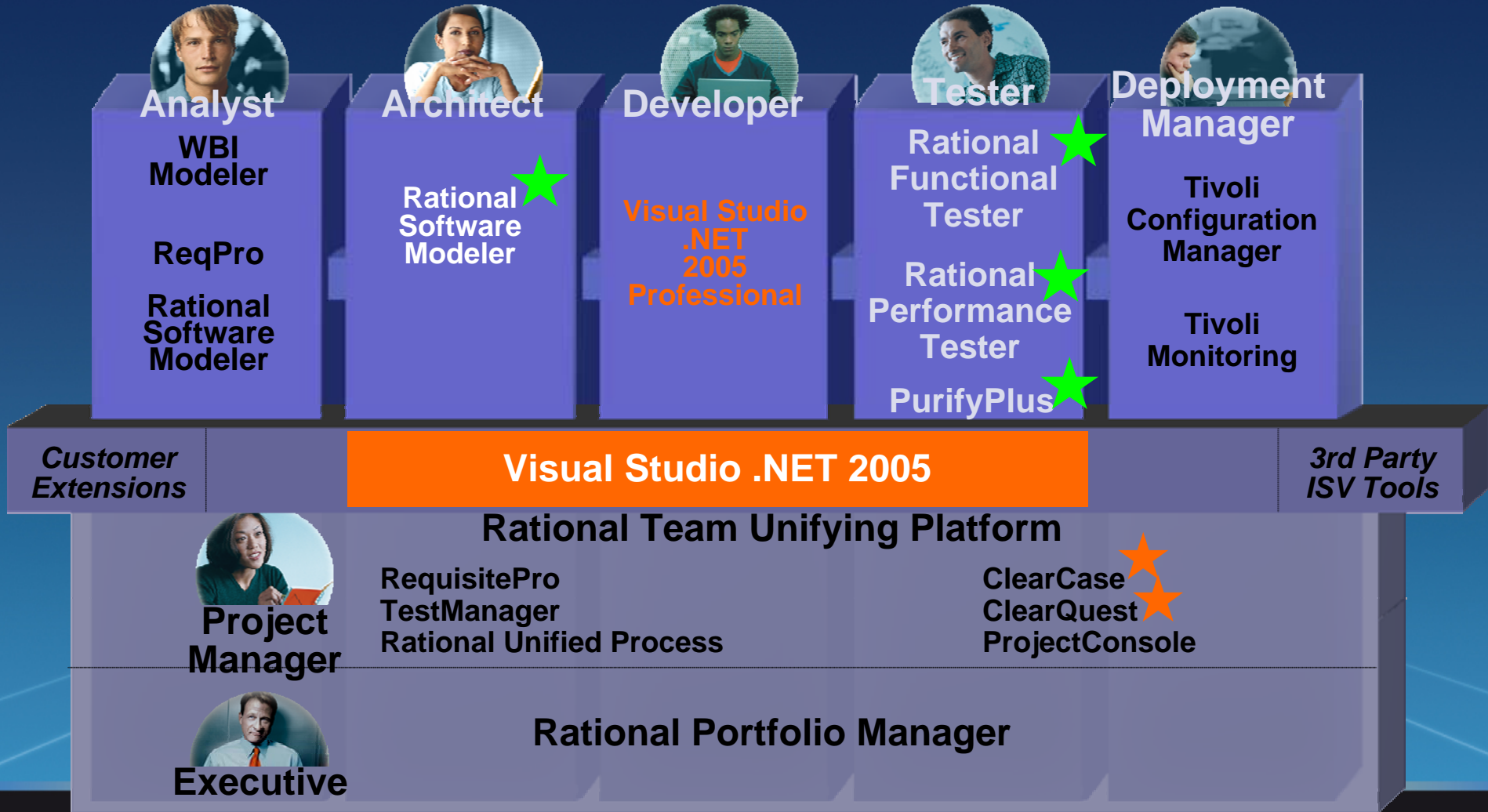
# Agenda

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- ● ● Business Driven Development
- ● ● “P” is for Platform



# The IBM Rational Software Development Platform for VS 2005

★ Integration exposed within Visual Studio 2005 GUI   ★ Other integration with VS 2005





# The IBM Software Development Platform *Summary*



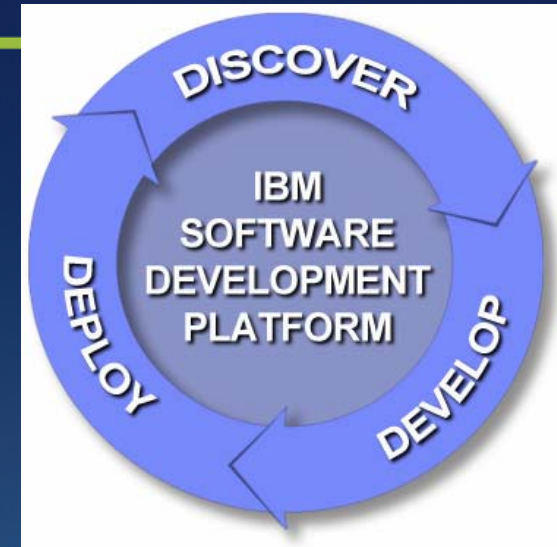
The most complete, open, modular, and proven development solution

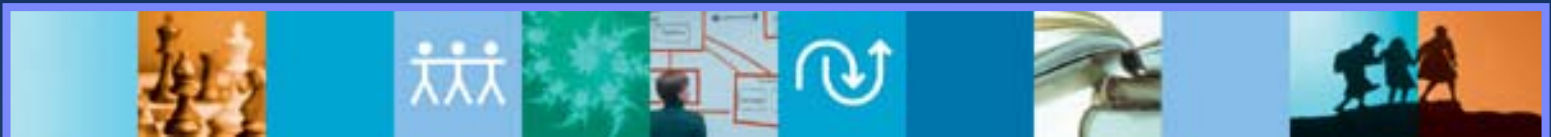


The *only* solution that enables business-driven development by unifying business, operations and development teams



The *only* solution with a comprehensive strategy for improving application quality and availability post-deployment





# Questions

Un breve messaggio....



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**Global Rational Community**

**Nasce** : Rational User Group Italia - RUGI

# Rational User Group Italia - RUGI



La *Global User Group Rational Community* coinvolge sviluppatori, business partner, consulenti IBMers (tecnici, supporto e vendite), utenti e vendor - insomma tutti coloro che costantemente usano e gestiscono per il loro business i tool, i prodotti e le soluzioni Rational.

Lo *Rational User Group Italia* ha l'obiettivo di promuovere l'utilizzo efficace delle soluzioni Rational attraverso una "comunità di collaborazione" attiva tra professionisti IT. In particolare, la community mette a disposizione un forum per:

comunicare apertamente, esprimere idee e condividere esperienze;  
presentare opportunità educative e soluzioni di IBM e business partner;  
fornire percorsi di specializzazione tecnica relativi all'utilizzo della famiglia di prodotti Rational.

Come essere coinvolti:

La *Global User Group Rational Community* è una comunità "aperta". Aderendo allo User Group della propria area geografica (Italy – Rational User Group Italia RUGI) si entra in contatto con i clienti e gli sviluppatori Rational che costantemente presenziano i meeting. Per registrarsi:

<http://www.rational-ug.org/groups.php>.

È inoltre possibile iscriversi alla Newsletter Mensile che fornisce, in maniera regolare, informazioni sulle attività dello User Group: <http://www.rational-ug.org/newsletter.php>.

Speaker Bureau dà invece la possibilità di essere diretto protagonista con un proprio speech durante i meeting dello User Group locale: <http://www.rational-ug.org/speakers.php>.

È poi previsto un programma di sponsorizzazione che consente di mettere in evidenza la propria azienda all'interno di una comunità qualificata: <http://www.rational-ug.org/sponsorship.php>.

# Rational User Group Italia - RUGI



<http://www.rational-ug.org/groups.php?groupid=104>

**User Groups**

- Find a User Group
- Join a User Group
- Attend a User Group Meeting
- Start a User Group
- Leader's area

**News and Events**

- News
- Events
- Newsletters
  - >> Latest issue
  - >> Subscribe

**User Group Resources**

- Featured IBM Offers for Developers & Testers *New!*
- References
- Useful Links
- Vendor Zone
- Presentations
- Speaker Bureau
- Downloads
- ListSers & Newsgroups
- Education Zone
- Member Benefits
- Business Partners
- Become a Sponsor

**Need Help?**

**User Groups by Geography**

Asia Pacific | Europe, Middle East and Africa | Latin America | North America |

**Jump to:** Choose a User Group

**Italy - Rational User Group Italia (RUGI)**

**Contact:** [ Carlo Torre ]

**Cities covered:** All

**Group Detail:**

**\*\* Italian version \*\***

RUGI è il gruppo italiano che partecipa alla rete di attività locali (User Group) che coinvolge gli sviluppatori con i business partners, consulenti, IBMers (tecnico, supporto & vendite), clienti e fornitori, tutti quelli che aderiscono, che costantemente valutano e discutono i tools, i prodotti e le soluzioni Rational per risolvere i problemi di business.

Qual'è il VALORE?

Promuovere l'utilizzo efficace delle soluzioni Rational attraverso una Comunità di collaborazione attiva tra clienti, partners e professionisti IT.

Qual è lo SCOPO?

Fornire un forum per:

- (1) Comunicare apertamente, esprimere idee e condividere esperienze
- (2) Presentare opportunità educative e soluzioni di IBM/Business Partner
- (3) Fornire percorsi di specializzazione tecnica relativi all'utilizzo della famiglia di prodotti Rational, alle soluzioni e relativi prodotti e servizi.

**\*\* English version \*\***

RUGI is the italian group that participates to the network of local activity (User Group) involving developers with business partners, consultants, IBMers (technical, support & sales), customers and vendors, all endorsing, constantly evaluating, and discussing Rational tools, products and solutions to solve business problems.

What is the VALUE?

Promote the effective use of Rational software solutions through an active collaborative Community of customers, partners and IT professionals.

What is the PURPOSE?

Provide a forum to:

- (1) Communicate openly, express ideas and share experiences
- (2) Present educational opportunities and IBM/Business Partner solutions
- (3) Provide paths to technical expertise related to the use of Rational family of

**Join this User Group**

**Register for Meetings:**

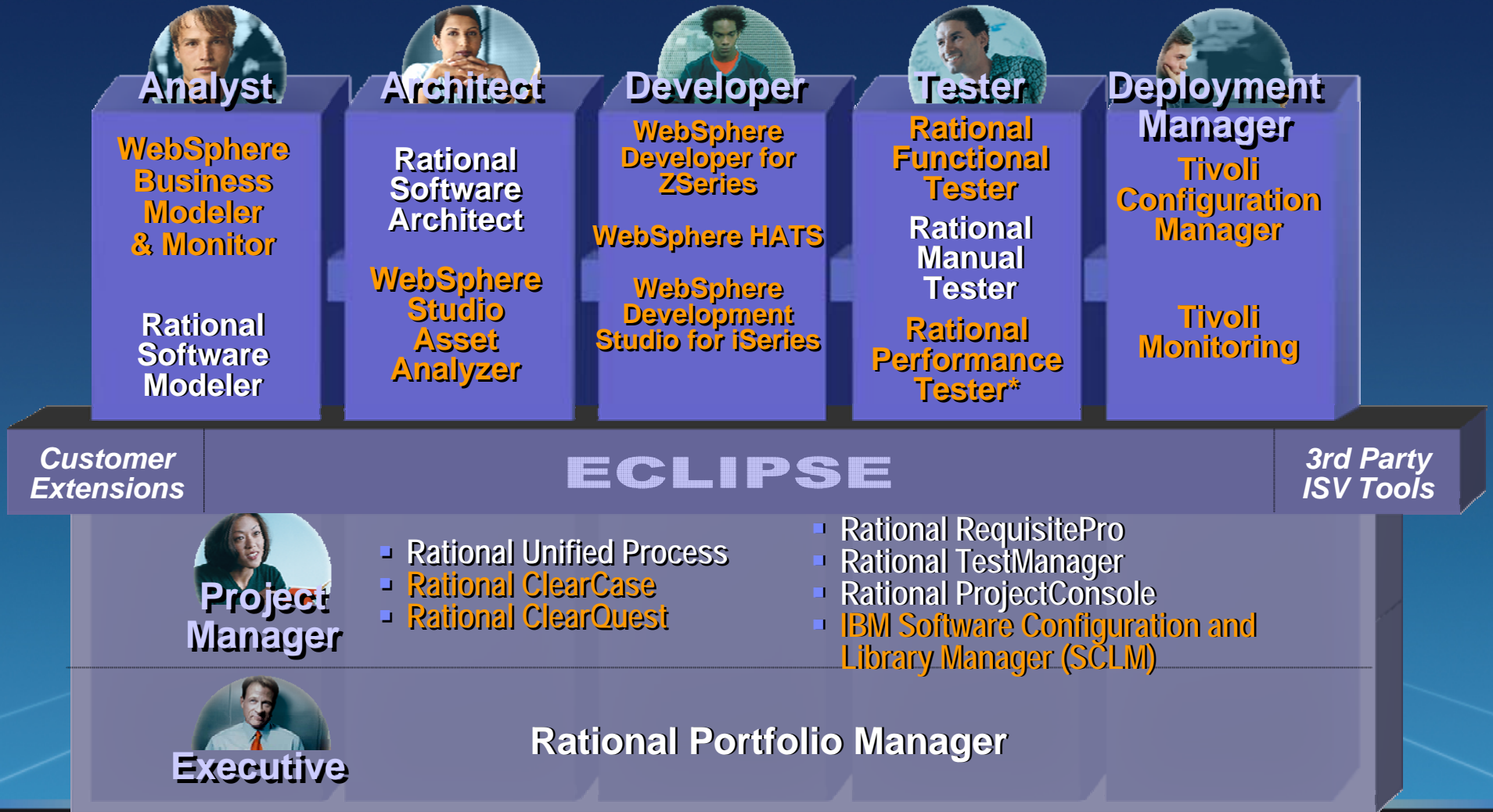
No upcoming meeting for this user group. Please check back later.

**Past Meetings**

There was no past meeting for this user group.

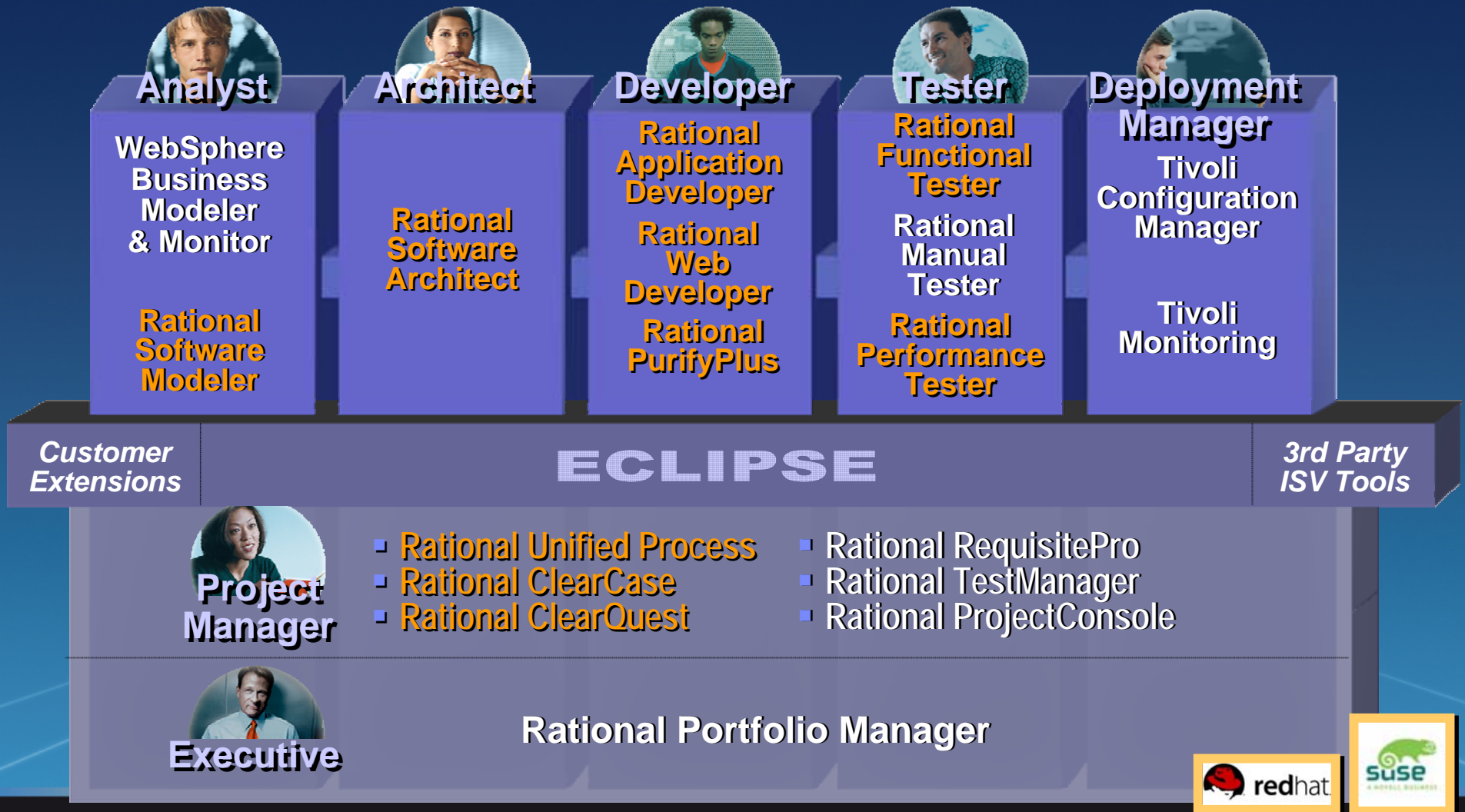
# SLIDE OPZIONALI

# Supporting Development for zSeries and iSeries





# Supporting Linux



# Supporting technical and embedded development

*Building the technical and embedded software that controls devices*

