



IBM Software Group

IBM Software Development Platform

Seminario Rational.

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Rational. software



@business on demand software

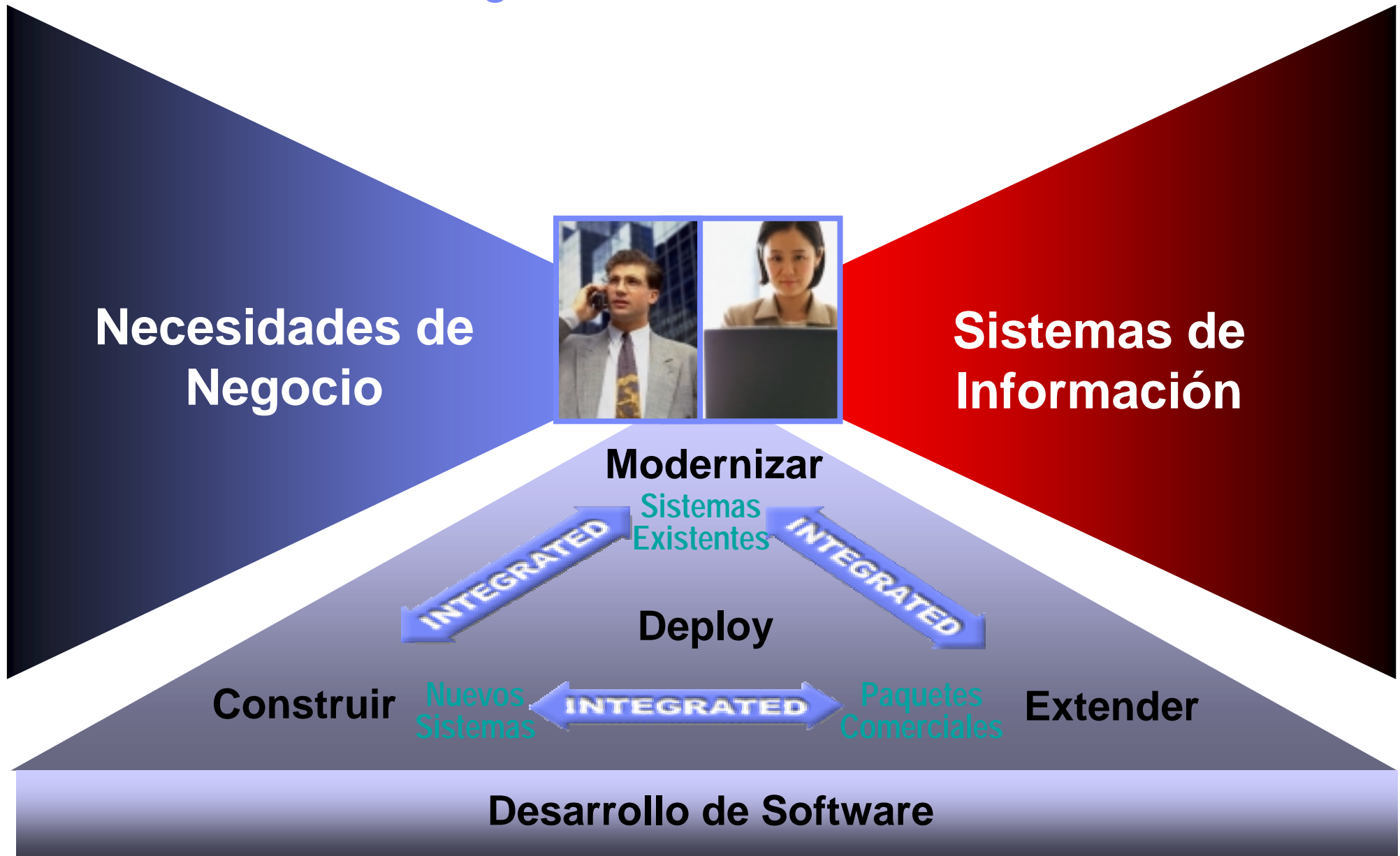
Agenda

1. Introducir plataforma de desarrollo de IBM.
2. DEMO: Construcción de aplicaciones J2EE con RAD.
3. Café (11:30 – 12:00)
4. DEMO: Análisis estático y dinámico de código Java.
5. DEMO: Análisis y diseño UML 2.0 con RSA.
6. Caso éxito. NEXTEL Engineering.



Desarrollo de Software:

Interface entre negocio con los sistemas de la información

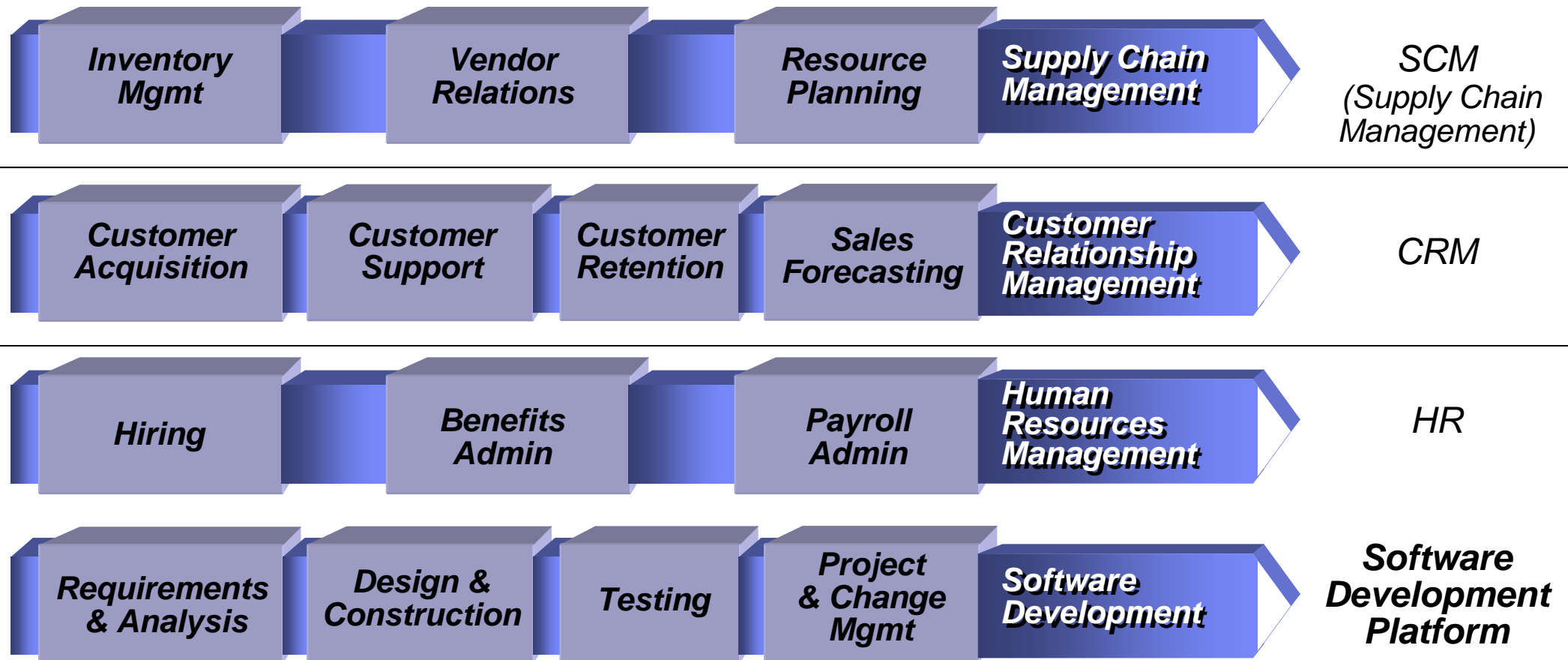


Desarrollo de Software como proceso de negocio.

Actividades

Proceso de negocio

Sistema de información



The IBM Software Development Platform



Analista

**Análisis y
definición de
procesos de
negocio**



Arquitecto

**Diseño y
modelado de
arquitecturas**



Desarrollador

**Construcción
y generación
de código**



Probador

**Diseño y
ejecución de
pruebas**



**Project
Manager**

**Control y Seguimiento de Proyectos
Gestión de la configuración y el cambio
Guía metodologica**



**Directores
ejecutivos**

Toma de decisiones Gestión de la demanda Gestión del porfolio



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Arquitecto



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Ing.de pruebas

Rational
RequisitePro

Rational
Software
Modeler

Rational
Software
Architect

Rational Web
Developer

Rational
Application
Developer

Rational
Software
Architect

Rational Manual
Tester

Rational
Funcional
Tester

Rational
Performance
Tester

ECLIPSE / Integración .NET



**Project
Manager**

Rational Unified Process
Rational ClearCase Rational ClearQuest Rational Project Console



**Directores
ejecutivos**

Rational Portfolio Manager



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Rational Portfolio Manager

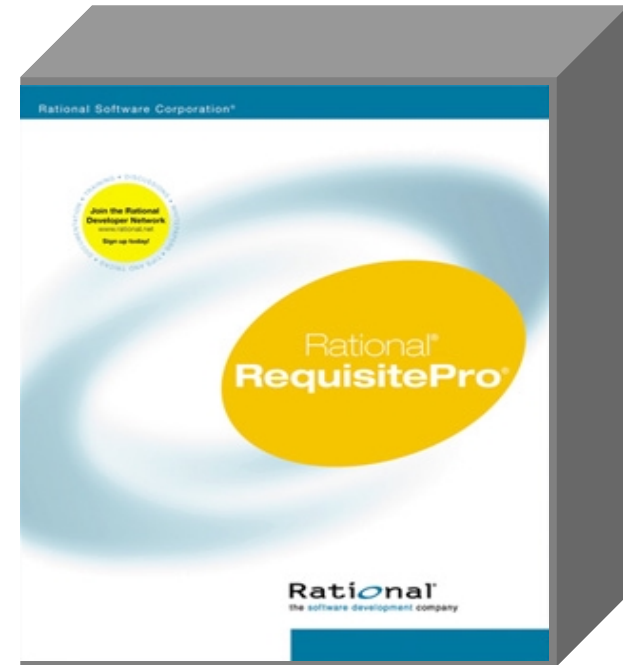


Gestión de requisitos

Una aproximación sistemática a

- ▶ Identificación
- ▶ organización
- ▶ documentación
- ▶ y gestión

de los requisitos de una aplicación de software.



Utilización conjunta con Word

The image shows two windows side-by-side. The left window is 'RequisitePro Views - [FEAT: Features]' and the right is 'Microsoft Word - Classics_Vision.VIS'. A blue arrow points from the 'FEAT1: Point of Sale System' entry in the RequisitePro table to its corresponding section in the Word document.

Requirements:	Priority	Status	Reason
<input checked="" type="checkbox"/> FEAT1: Point of Sale System	High	Approved	Requirement created.00
FEAT1.1: Cash register functions	High	Approved	PRIORITY: Medium - High
FEAT1.3: Supporting multiple cash...	High	Approved	PRIORITY: Medium - High
FEAT1.4: Initiating orders to...	High	Approved	
<input type="checkbox"/> FEAT2: Order Processing System	High	Approved	
FEAT2.1: Provide for both automated...	High	Approved	
<input type="checkbox"/> FEAT3: Warehouse system	Medium	Approved	
FEAT3.1: Manage receiving,...	Medium	Approved	
FEAT3.2: Provide real-time control...	Medium	Approved	
FEAT3.3: Interface with other...	Medium	Approved	
FEAT3.4: Interface with external...	Medium	Approved	
<input type="checkbox"/> FEAT4: Home Shopping e-commerce...	Medium	Proposed	
FEAT4.1: An online catalog for web...	Medium	Proposed	
FEAT4.2: A customer account...	Medium	Proposed	
FEAT4.3: An order-entry capability...	Medium	Proposed	
FEAT4.4: An order status inquiry...	Medium	Proposed	

The Word document shows a bulleted list of requirements:

- A point of sale (POS) system
- An Order Processing system
- A Warehouse System
- A Home Shopping e-commerce system that will initiate Classics Inc.'s presence on the World Wide Web

The document content is structured as follows:

[FEAT1 Point of Sale System]

The point of sale system includes:

- **[FEAT1.1 Cash register functions]**

5.2 **[FEAT2 Order Processing System]**

The Order Processing system includes facilities to:

- **[FEAT2.1 Provide for both automated and human-assisted order entry]**

5.3 **[FEAT3 Warehouse system]**

Page 6 Sec 2 6/10 At Ln Col REC TRK EXT OVR WPH U

Sincronización
automática

RequisitePro en Eclipse

The screenshot displays the Eclipse IDE interface with several windows:

- Requirement Explorer:** Shows a hierarchical tree of requirements. A yellow callout box points to it with the text: "Requirements Explorer for viewing requirements in Eclipse." The tree includes folders like "Coverage Analysis", "Features and Vision", "Glossary", "Impact Analysis", "Supplementary Requirements", "Use Cases", "Arrange Shipment", "Check Order Status", and "Purchase CD". Under "Arrange Shipment", "UC1 Arrange Shipment" is selected.
- UML Model:** Shows a package structure for "jp". A red arrow points from "UC1 Arrange Shipment" in the Requirement Explorer to "UseCase1" in the UML Model. A yellow callout box explains: "Associate requirements and model elements using Drag-and-Drop".
- Requirement Traceability (top):** Shows a traceability view for "FEAT11 Ability to check on customer orders". It lists associated model elements: "Class1", "Class2", "Class3", "Class4", "Class5", and "Class6".
- Requirement Traceability (bottom):** Shows a traceability view from the model perspective. It lists requirements: "FEAT12 Maintain customer information", "FEAT13 Generate reports", and "FEAT11 Ability to check on customer order". A yellow callout box states: "View requirements traceability from the perspective of the model or the requirements database."



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Rational Portfolio Manager



Herramientas de Diseño y Construcción

Añade

Añade

- Modelado UML 2.0
- Reutilización de patrones
- Reutilización de Assets

Rational Software Architect

Rational Software Modeler

Model driven:

- Transformaciones de código basadas en UML.
- Control y revisión de arquitecturas.

Rational Application Developer

Añade

Desarrollo Visual:

- Desarrollo rápido WEB. JSFs
- Desarrollo de servicios WEB
- Desarrollo de Clientes ricos.
- Conectividad con Bases de datos. SDO.
- Generador de java.

Rational Web Developer

Eclipse

Desarrollo basado en código:

- Desarrollo J2EE/EJB & desarrollo de portales.
- Pruebas unitarias.
- Validación de código y análisis en tiempo de ejecución.
- Gestión de Configuración.



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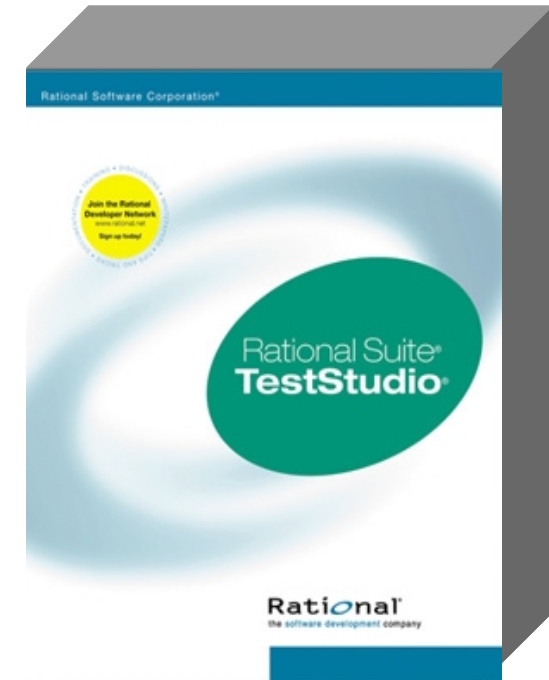
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Rational Portfolio Manager

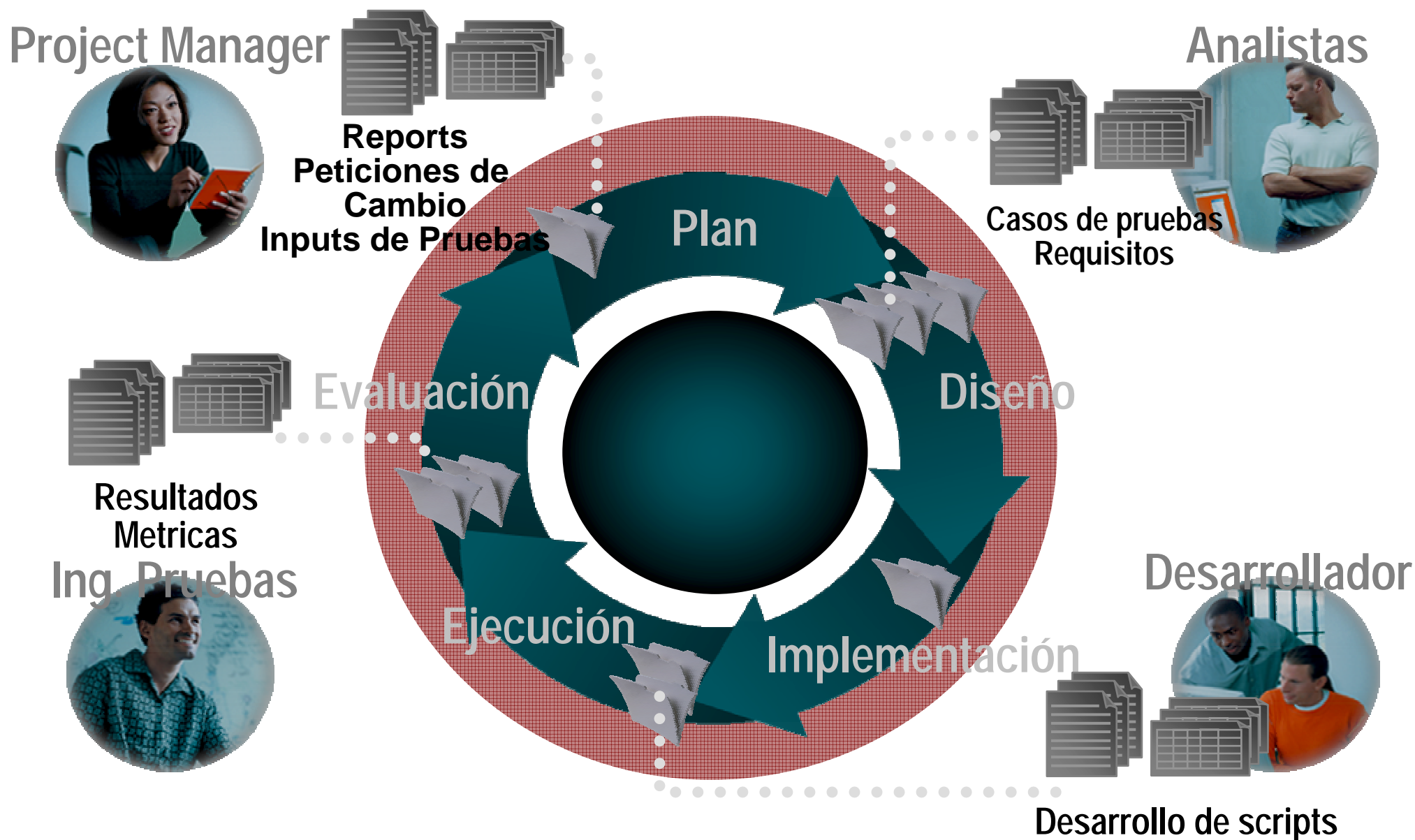


Rational Functional / Performance Tester.

- Probar Software es muy difícil
- Metodología de pruebas.
- Automatización de pruebas.
- Tipos de pruebas.
 - Funcionales
 - De carga

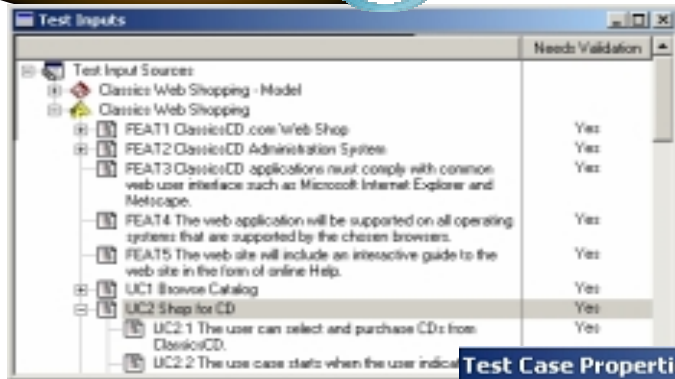


Problema: Necesidad de centralizar las actividades de pruebas



Planificación: ¿Qué define un plan de pruebas?

Por qué? **2**

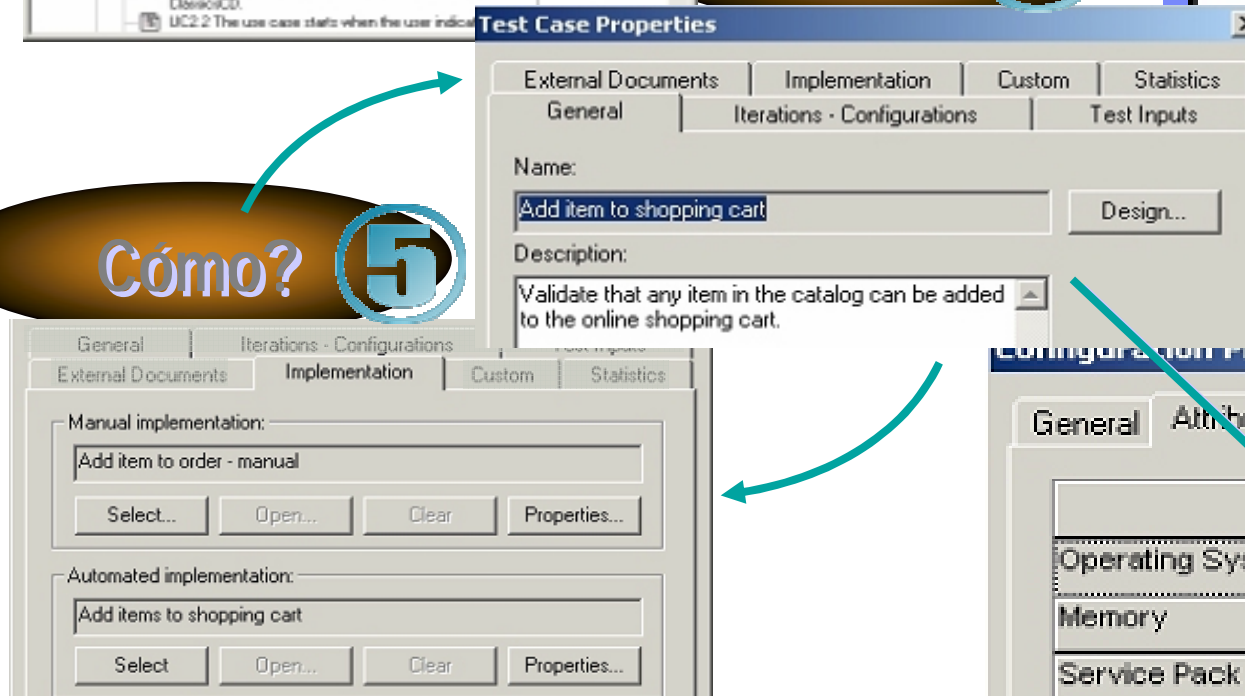


Qué? **1**

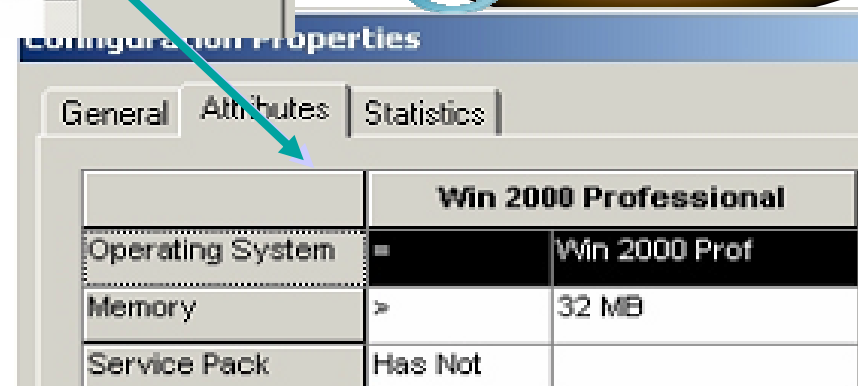
3 Cuándo?



Cómo? **5**



4 Dónde?



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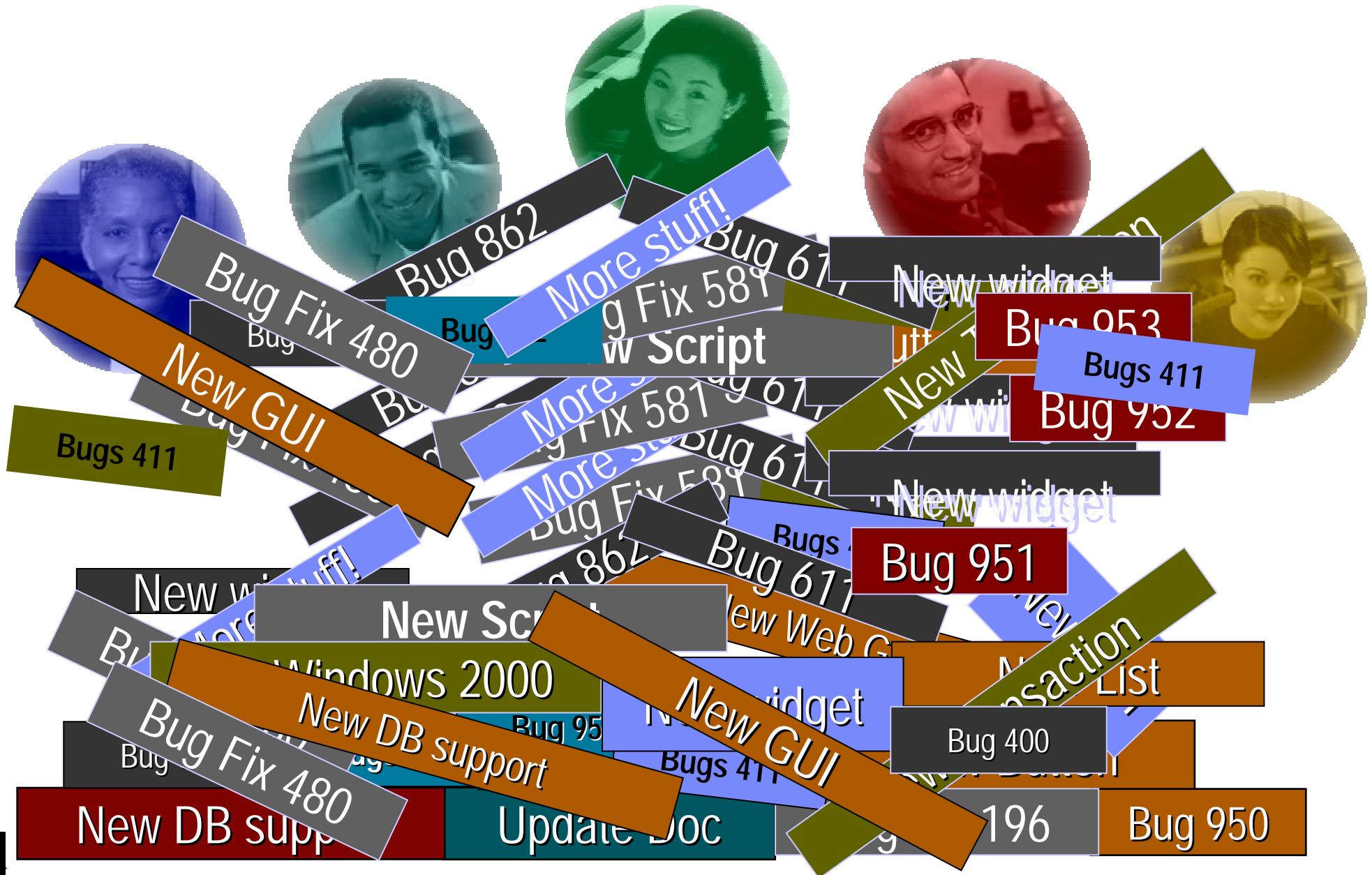


**Directores
ejecutivos**

Rational Portfolio Manager



Gestión del cambio: Proceso basado en actividades



Gestión del cambio: Proceso basado en actividades



- Bug Fix 480
- New Graphics
- Bug Fix 480
- New GUI
- Bugs 411
- New widget



- Integration
- Bug Fix 581
- New widget
- Bug 862
- New GUI
- New List



- Bugs 411
- Bug 611
- More stuff!
- MS Win 2000
- Bug 396
- DB support



- New Script
- New GUI
- DB support
- New button
- Bug Fix 196



Gestión del Cambio : IBM Rational ClearQuest

Submit Defect SAMPL0000041

Requirements		Unified Change Management	
Main		Attachments	
Test Data		Environment	
ID:	SAMPL0000041	State:	Submitted
Headline:			
Repository Project:		Keywords:	
Priority:		Symptoms:	
Severity:			
Owner:			
Description:			

OK Cancel Values

CLSIC - Mozilla

http://localhost/cqweb/main/USE_CASE=px_nain

Rational ClearQuest Web

CLSIC

- Personal Queries
- Public Queries
 - Aging Charts-All Projects
 - Classics PointOfSale Project
 - ClassicsCD Web Project
 - Distribution Charts-All Projects
 - Email Rules
 - Report Formats
 - Reports
 - Trend Charts-All Projects
 - UCMSystemQueries
 - UCMUserQueries
 - All Change Requests
 - All Defects
 - All Enhancement Requests
 - All Unresolved Defects
 - Defects Needing Verification
 - Defects Query on Headline
 - Defects by Submitter
 - Defects for Specified Requirement
 - ERs Query on Headline
 - Requirements for Unresolved Defects
 - Resolved Defects by Fixed Build
 - Submitted High Severity Defects

New: Defect

Defect: CLSIC00000136 (Action: Submit)

Main Test Data Environment Attachments Iterations Notes

Unified Change Management Requirements

ID: CLSIC00000136 State: Submitted

Headline: The payroll entry form has misspelled words

Site Project: UCM Project: Owner: alio: Priority: 1-Resolve Immediately Severity: Customer Priority: Medium

Description: The labels for "Mental Status" and "Deductions" are wrong.

* red text indicates required information



Gestión del Cambio en Eclipse

The screenshot displays the Rational Defect and Change Tracking (DCT) application within the Eclipse IDE. The interface is divided into several key areas:

- Workspace view:** Located on the left, it shows a tree structure of project elements, including 'ClearQuest', 'Personal Queries', 'Public Queries', 'Aging Charts', 'Customers', 'Distribution Charts', 'Email Rules', 'PrintReportFormats', 'Report Formats', 'Reports', 'State Query', 'Defect Detail (State)', 'Defect Summary (State)', 'Defect Summary (All)', 'Defect Notes (All)', 'Trend Charts', 'All Defects', 'Keyword Search', 'My Hot List', and 'My To Do List'.
- Result Set view:** The central pane displays a table of defect results. The table has columns for Name, Headline, Owner, and Priority. A context menu is open over the table, showing options like 'Change State', 'Validate...', 'Reject...', and 'Duplicate...'.
- Properties view:** Located at the bottom left, it shows a list of properties and their values for the selected defect. Properties include customer, customer_severity, Description, Headline, id, is_duplicate, Keywords, Note_Entry, Notes_Log, old_id, Owner, Priority, Project, rat_ownership, record_type, and Resolution.
- Record Details, Chart and Report views:** The bottom right pane shows a detailed view of a specific defect record. It includes fields for ID, State, Headline, Project, Severity, Priority, Owner, and Description. There are also buttons for 'Apply' and 'Revert'.
- Console view:** Located at the bottom, it shows the output of the application, including the text '(Defect and Change Tracking)'.

Workspace view

Result Set view

Properties view

Console view

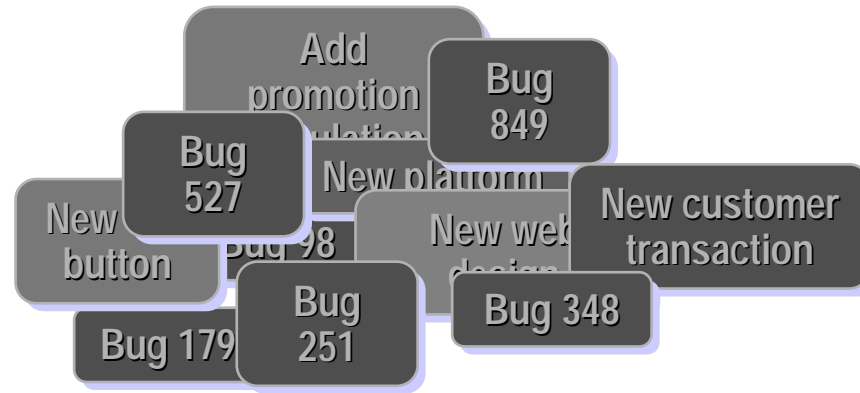
Record Details, Chart and Report views



Gestión de Configuración. Trabajo en equipo.



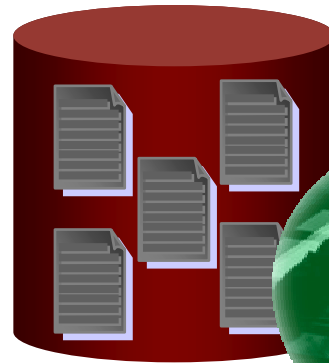
Analyst



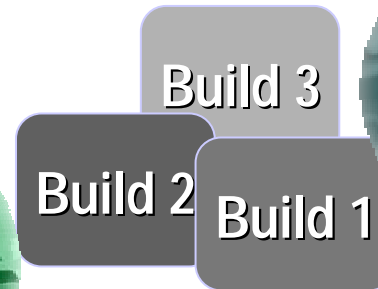
Project Manager



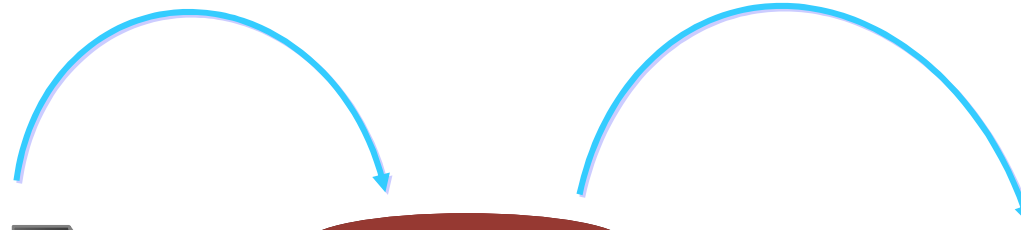
Developer



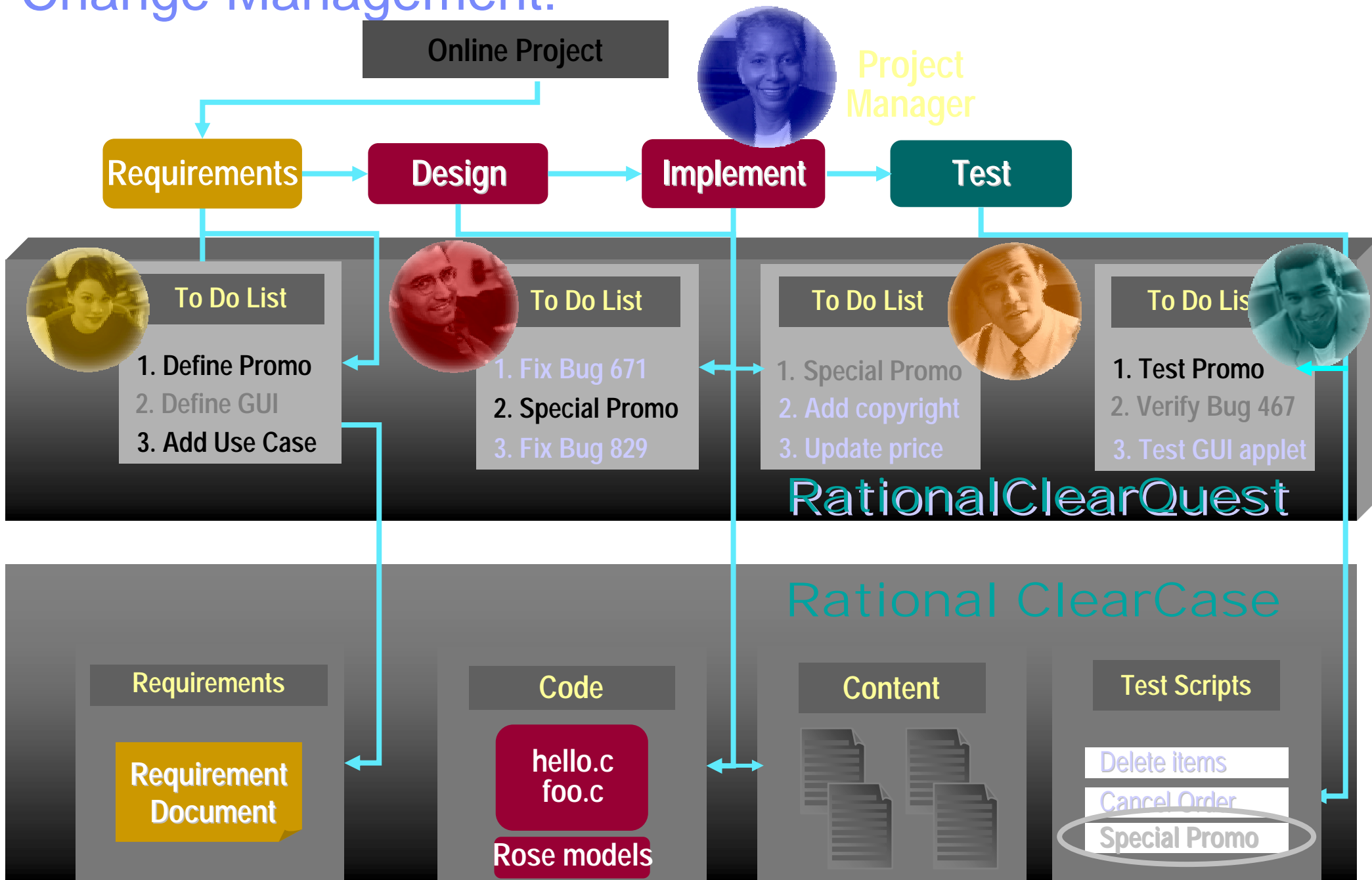
Integrator



Tester

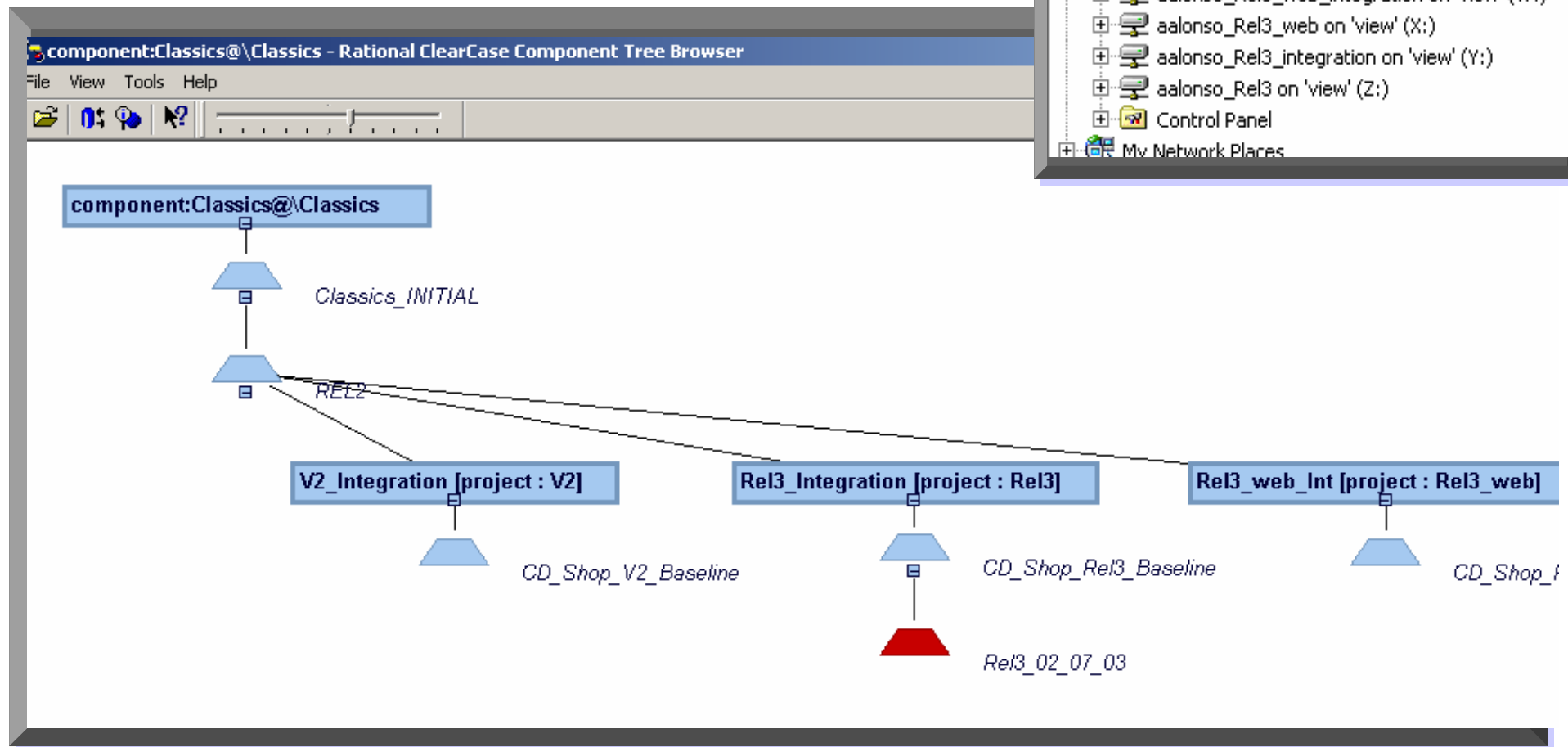
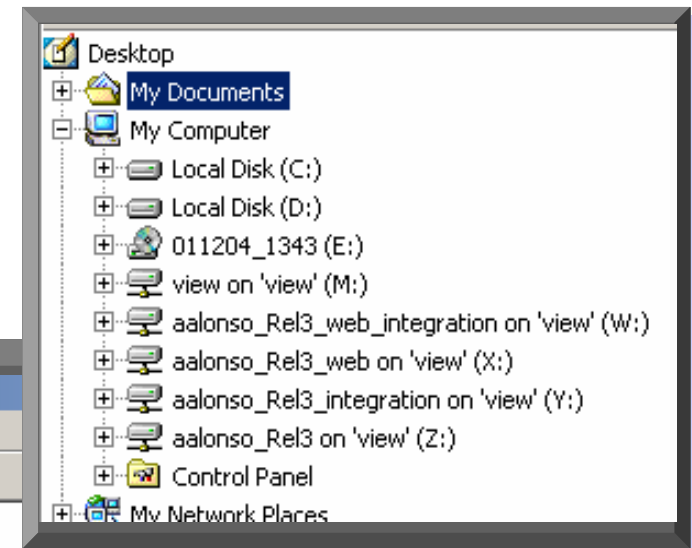


Change Management:



Gestión de configuración: ClearCase

Soporte desarrollo en paralelo.



Guía metodológica : IBM Rational Unified Process Platform

Rational Unified Process - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Go

Address C:\Program Files\Rational\RationalUnifiedProcess\index.htm

Where am I Getting Started Search Glossary Index Print Feedback

Overview

Rational Unified Process: Overview

Artifacts Examples Roles Roadmaps Site Map

Phases

Disciplines	Inception	Elaboration	Construction	Transition
Business Modeling	High	Low	Low	Low
Requirements	High	High	Low	Low
Analysis & Design	Low	High	High	Low
Implementation Test	Low	Low	High	High
Deployment	Low	Low	Low	High
Configuration & Change Mgmt	Low	Low	High	High
Project Management Environment	Low	Low	High	High

Iterations

Initial Elab #1 Elab #2 Const #1 Const #2 Const #N Tran #1 Tran #2

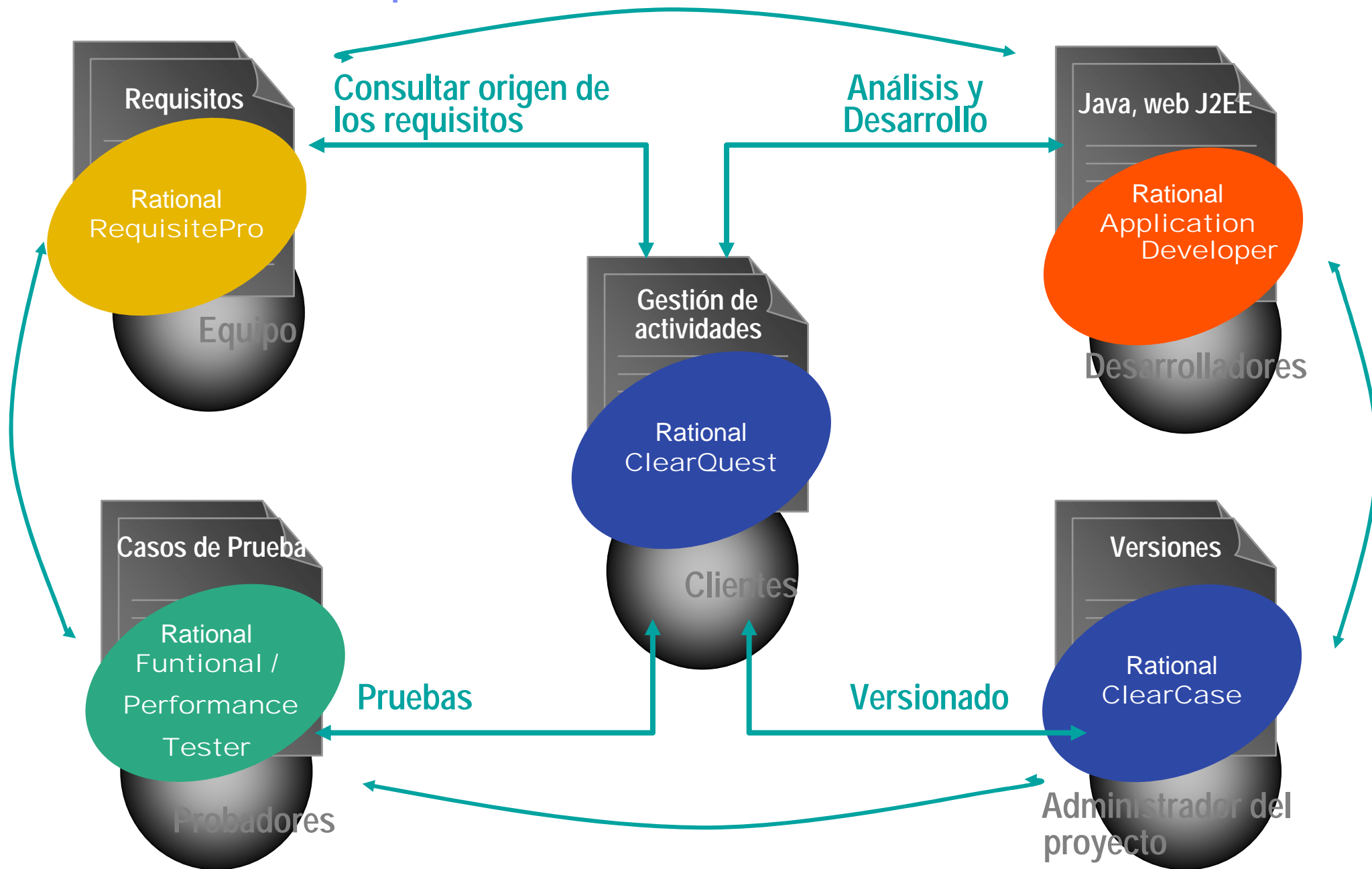
Click on an area of the screen for more information.

The Rational Unified Process® or RUP® product is a software engineering process. It provides a disciplined approach to assigning tasks and responsibilities within a development organization. Its goal is to ensure the production of high-quality software that meets the needs of its end users within a predictable schedule and budget.

My Computer



Software Development Platform: Trazabilidad.



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ejecutivos**

Rational Portfolio Manager



Portfolio Management: Planificación y Gestión de Proyectos

Estableciendo prioridades entre proyectos y recursos.

■ Para el director

- ▶ Analisis del portfolio de proyectos
- ▶ Ayuda en la toma de decisiones

■ Para los jefes de proyecto.

- ▶ Análisis de la carga de trabajo.
- ▶ Ocupación de recursos.
- ▶ Gestión de la demanda.
- ▶ Gestión del riesgo

■ Para los miembros del equipo

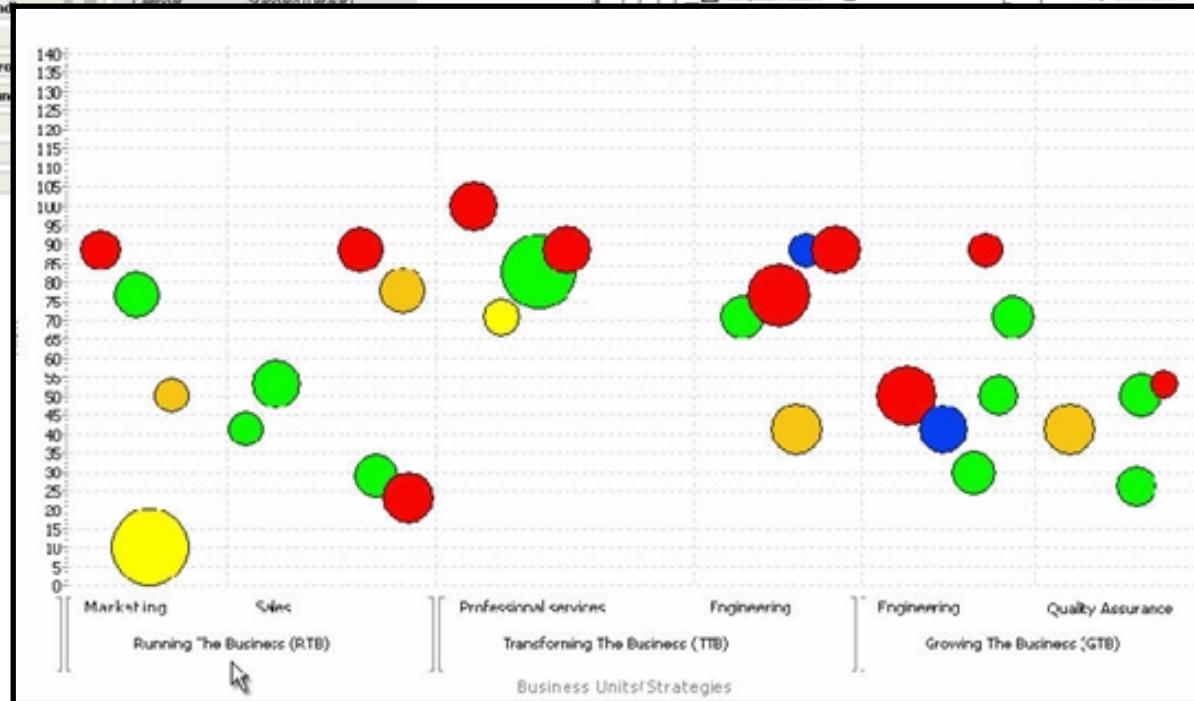
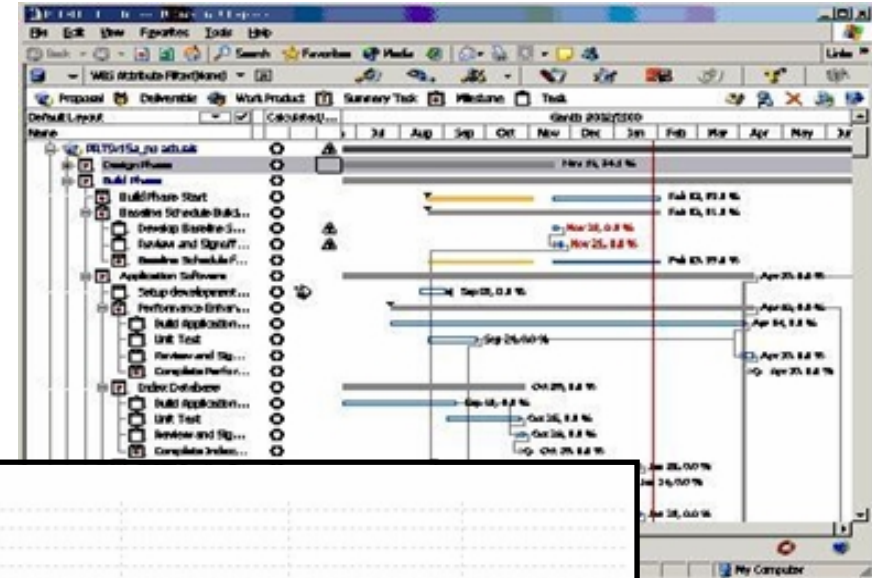
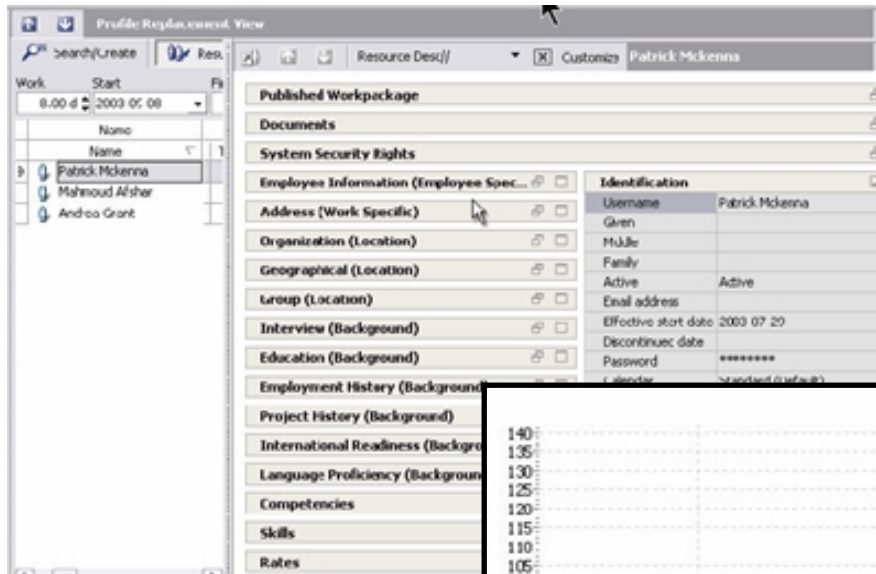
- ▶ Comunicación, coordinación y colaboración.



IBM Rational Portfolio Manager



Rational Portfolio Manager:



¿Cómo implementar metodologías y herramientas en una organización? ¡¡ Paso a paso!!



Conclusión

- RequisitePro Gestión de requisitos del sistema.
- RWD, RAD, RSM, RSA: Modelado, diseño y construcción.
- Funcional/Perform. Tester: Verificación de la calidad.
- ClearQuest Gestión de peticiones de cambio.
- ClearCase Gestión de configuración y trabajo en equipo
- RUP Metodología
- Portfolio Manager: Gestión del Portfolio de Proyectos

