

Better Business Modeling with IBM Tools

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 What keeps me **Rational**?



Session Summary

- There are a number of possible tools and techniques for doing business modeling using the IBM Rational Software Delivery Platform. This presentation provides best practices, including which tools to use, for effective business modeling. The session also demos the capabilities and the tight integration between IBM Rational RequisitePro, IBM WebSphere Business Modeler and IBM Rational Software Modeler.



Business Modeling

- The purposes of business modeling are:
 - ▶ To understand current problems in the target organization and identify improvement potentials.
 - ▶ To assess the impact of organizational change.
 - ▶ To ensure that customers, users, developers, and other parties have a common understanding of the organization.
 - ▶ To derive the software system requirements needed to support the target organization.
 - ▶ To understand how a to-be-deployed software system fits into the organization.

How do you use Business Modeling in your organization?

What are your best practices for Business Modeling?

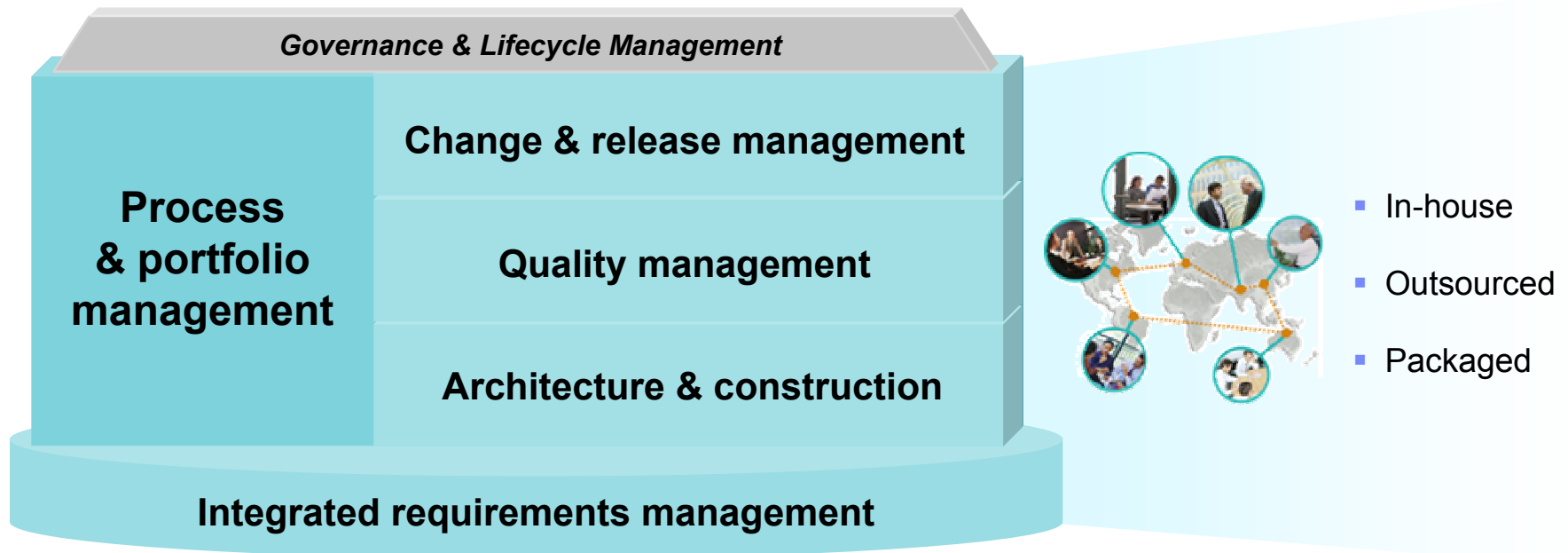


IBM Rational Software Delivery Platform

What we offer

Rational. software

Process design and implementation best practices based on a market leading solutions delivery platform



The demo example – JK Enterprises

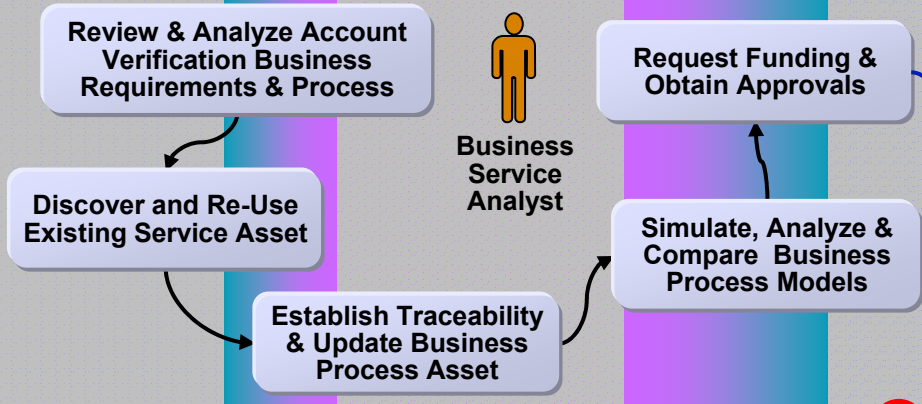
- For the purposes of this demo, I will play the role of a Business Service Analyst (and an Architect/Designer)
- JK Enterprises is under increasing pressure to reduce costs while improving their ability to serve their customers.
- At present, Credit Check activities are handled manually by a team of Account Coordinators who are notified via a paper form to phone or fax the "appropriate" credit reporting agency to retrieve the customer's credit score.
- JK Enterprises wishes to improve their ability to process requests for new accounts quickly.
- In the course of early analysis it became patently clear that Account Application and Account Verification were strategic reusable services whose improvement would greatly benefit the business.



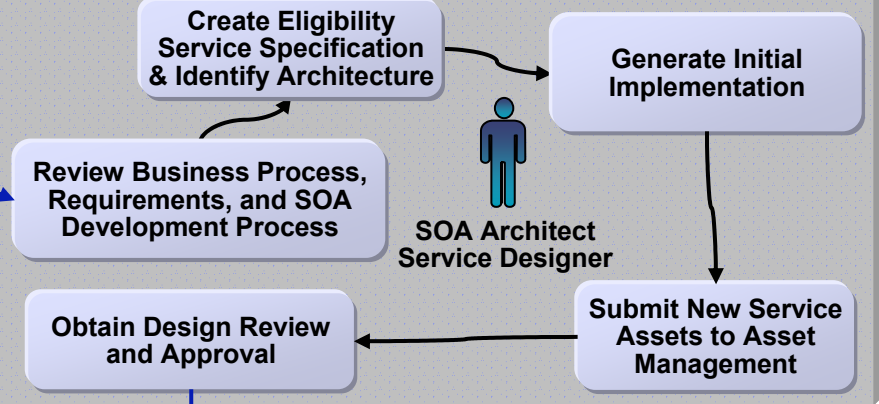
Business Driven Service Lifecycle Management

Activity Flow

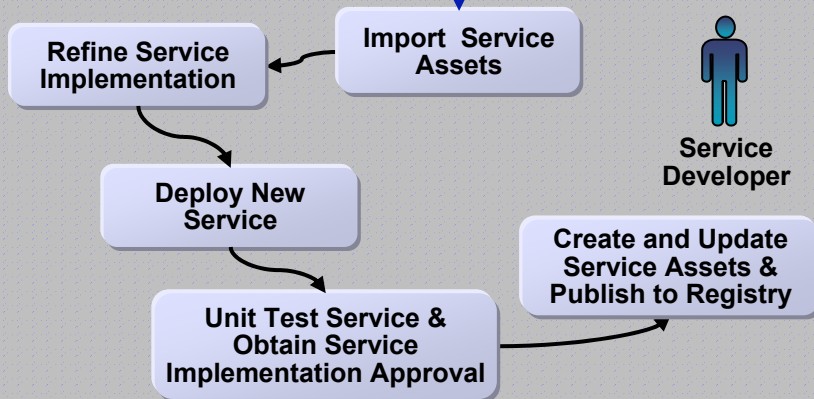
Business Service Analysis



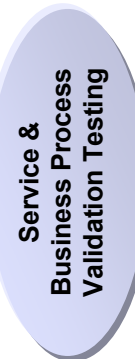
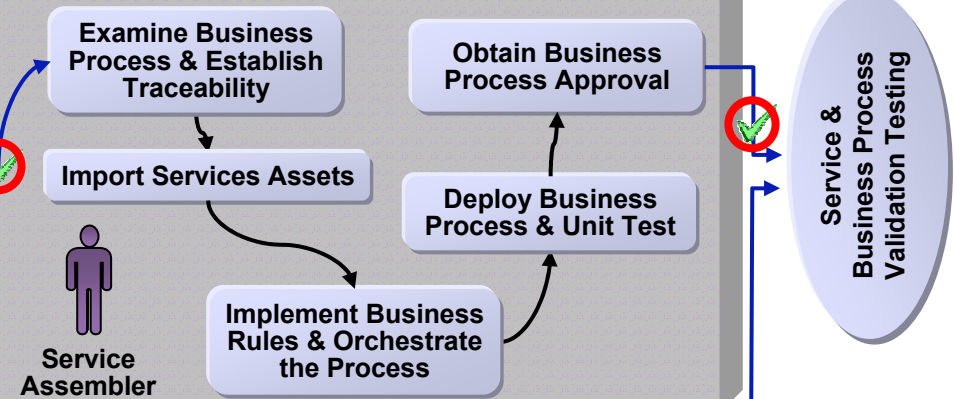
Service Modeling & Design



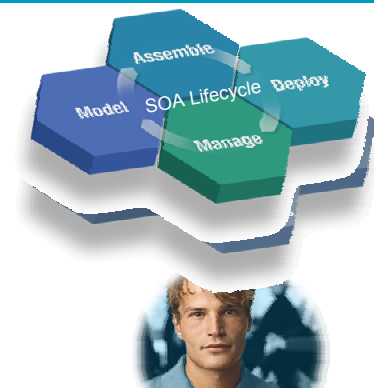
Service Development



Process Implementation

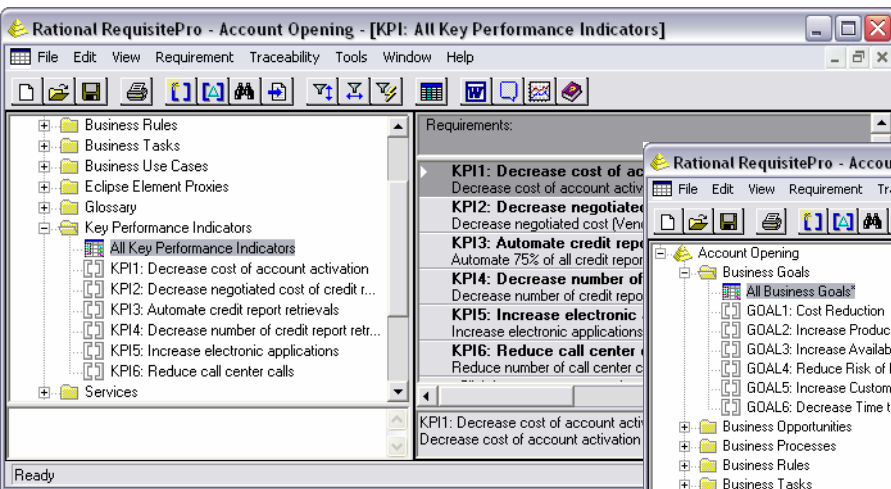
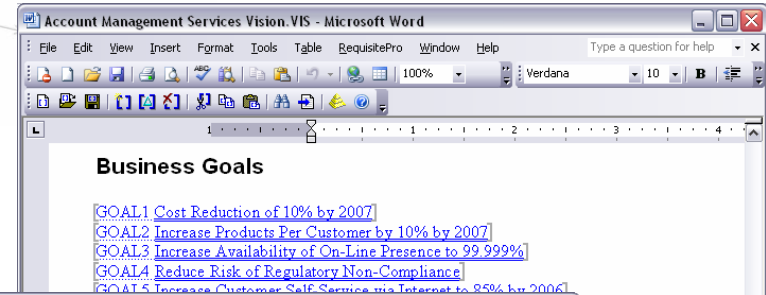
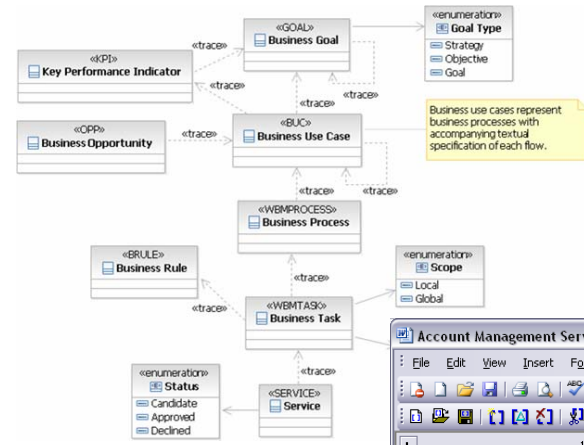
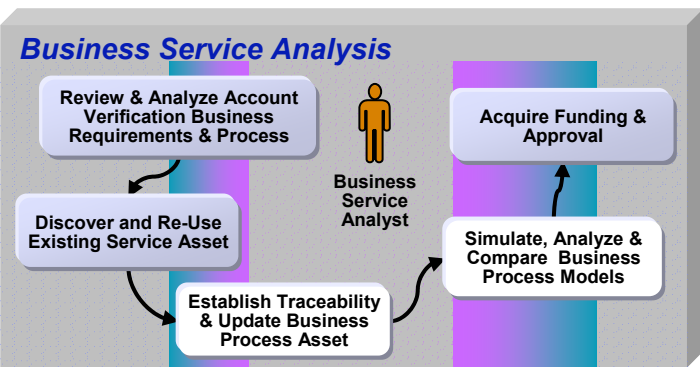


- RP
- CC
- CQ
- RSA
- RAD
- RAM
- RUP
- WSRR
- WID
- WBM
- Validation Point



Business Service Analysis

Define business requirements

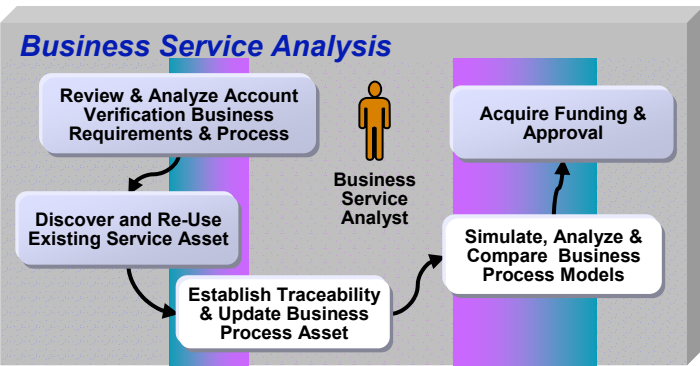
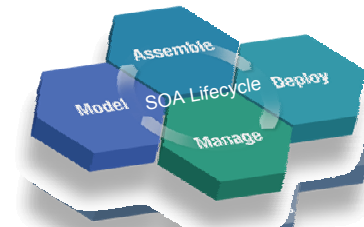


Rational RequisitePro - Account Opening - [GOAL: All Business Goals]

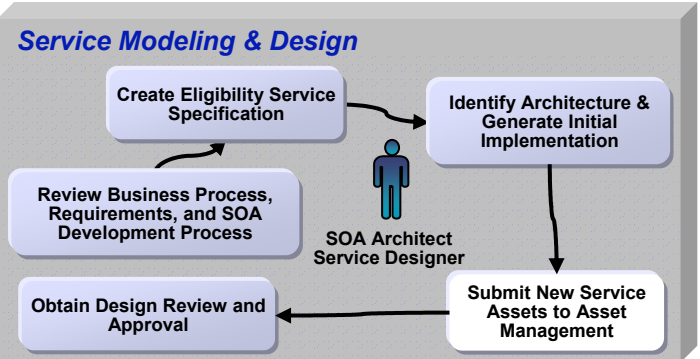
Requirements:	ROI	Cost	Benefit	Priority
GOAL1: Cost Reduction Cost Reduction of 10% by 2007	1000000	20000	1020000	High
GOAL2: Increase Products Per Customer Increase Products Per Customer by 10% by 2007	250000	50000	300000	Medium
GOAL3: Increase Availability Increase Availability of On-Line Presence to 99.999%	25000	15000	40000	Low
GOAL4: Reduce Risk of Regulatory Non-Compliance Reduce Risk of Regulatory Non-Compliance	100000	20000	120000	Medium
GOAL5: Increase Customer Self-Service Increase Customer Self-Service via Internet to 85% by 2006	50000	5000	55000	Low
GOAL6: Decrease Time to Market Decrease Time to Market for New Products by 10% by 2007	250000	30000	280000	Medium
* <Click here to create a requirement>				Medium

Business Service Analysis

Model the business (& identify the services)



UML



Rational RequisitePro - Account Opening - [BUC: All Business Use Cases]

Requirements	Priority	Status	Difficulty
BUC1: Activate Account	Medium	Approved	Medium
BUC2: Apply for Account	Medium	Approved	Medium
BUC3: Open Account	Medium	Approved	Medium
BUC4: Verify Account	High	Approved	Medium
BUC5: Set Up New Customer	Medium	Approved	Medium
BUC6: Increase Products For Customer	Medium	Approved	Medium
BUC7: Increase Availability for New Compliance	Medium	Approved	Medium
BUC8: Increase Customer Self-Service	Medium	Approved	Medium
BUC9: Decrease Time to Market	Medium	Approved	Medium

Search for Assets

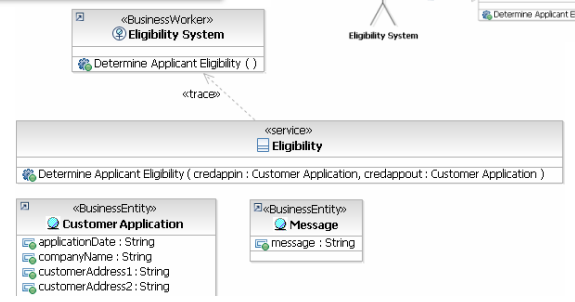
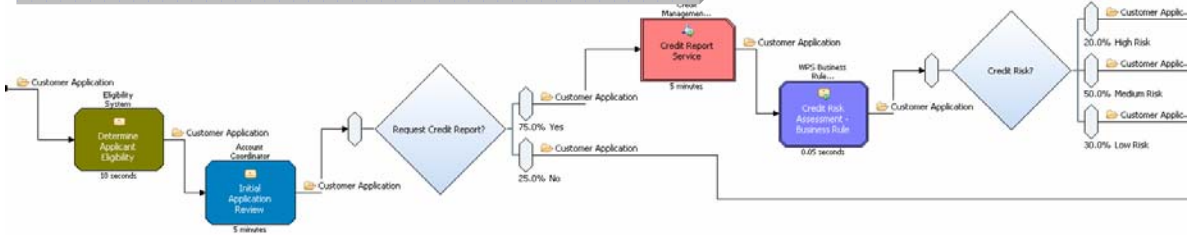
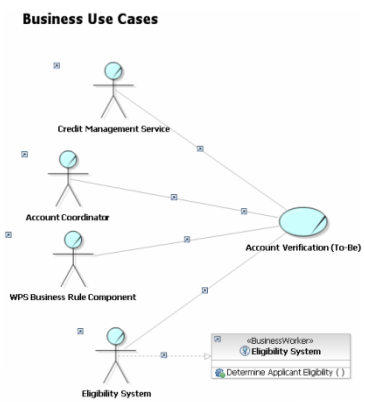
Eligibility Search within artifacts [Advanced >>](#)

Filters: none

Search Results - 3 assets found

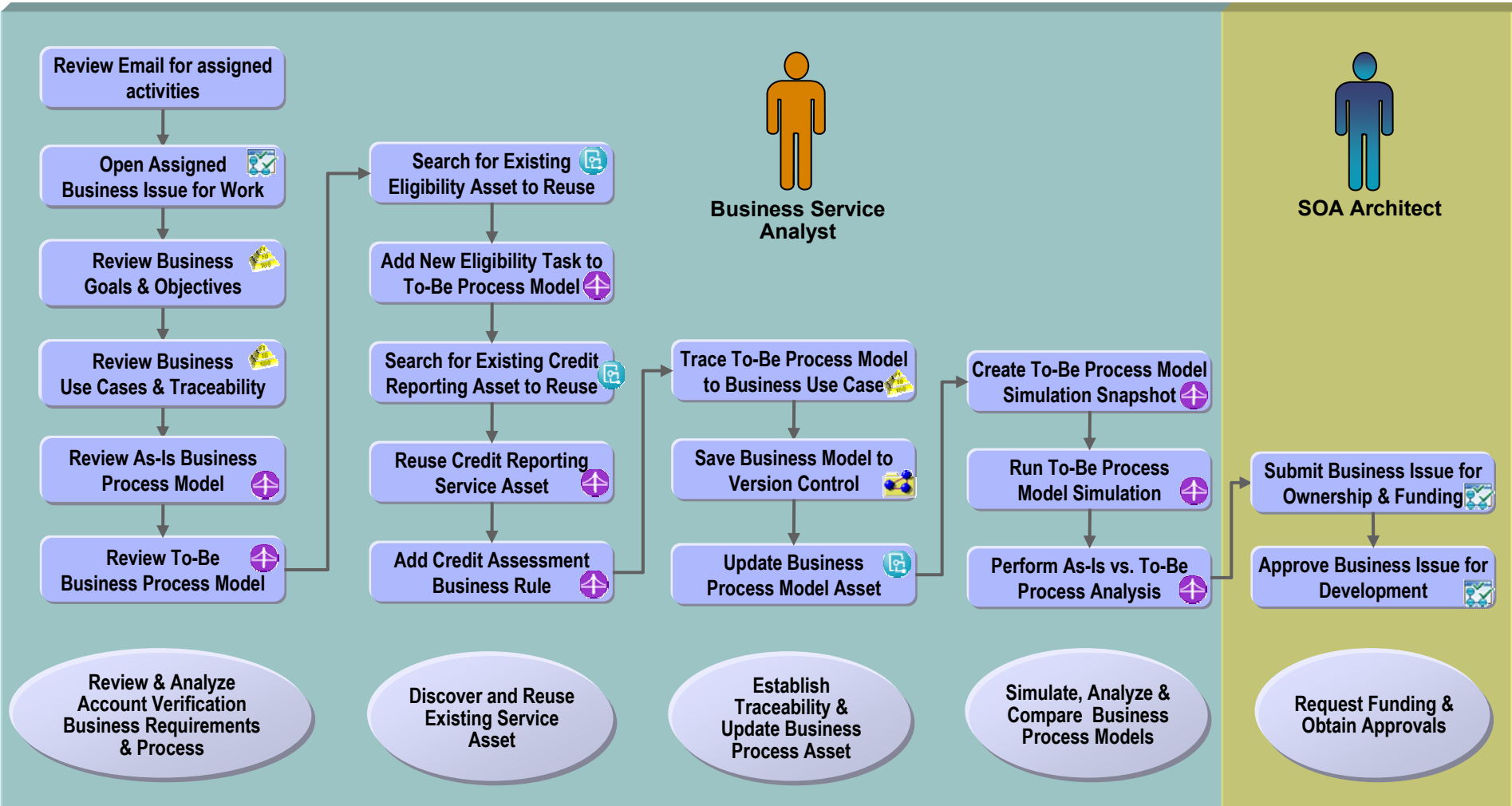
Name	Version	State	Community	Rating	Modified	Relevance
Credit Report Service Design	1.0	Approve	Service Development	★★★★★	Jun 20, 2007	
Account Opening Business Process Model	1.0	Approve	Service Analysis	★★★★★	Jun 20, 2007	
Account Management Business Process	1.0	Approve	Service Analysis	★★★★★	Jun 15, 2007	

3 assets found [Select columns...](#)



What keeps me Rational?

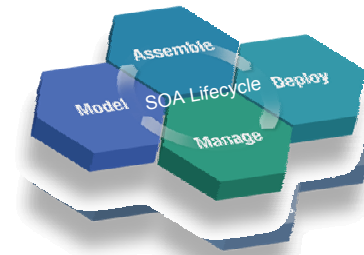
Business Service Analysis



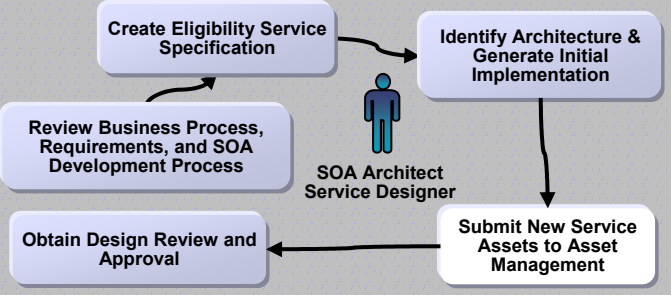
RP
 CC
 CQ
 RAM
 WBM

Service Modeling & Design

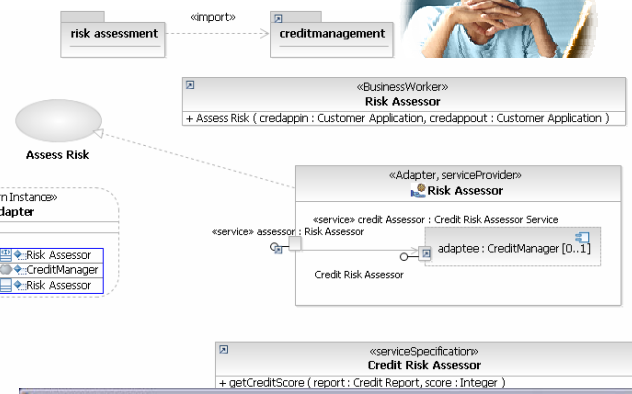
Design the Services Architecture



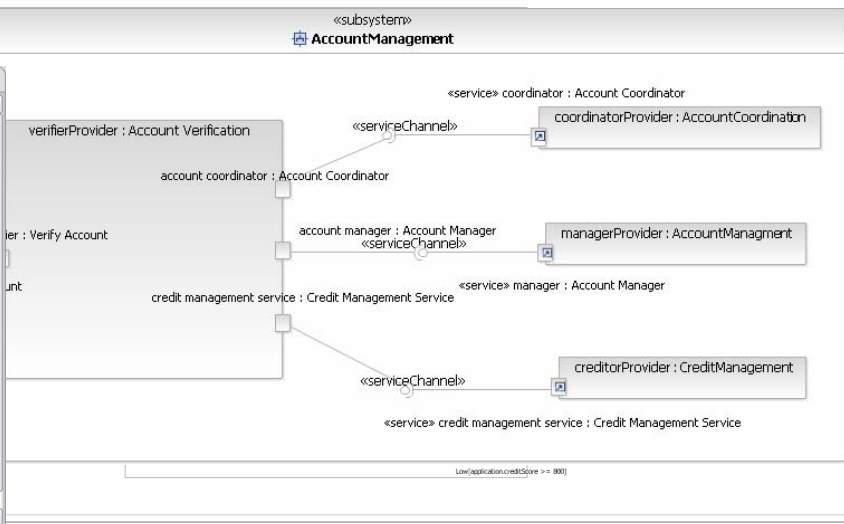
Service Modeling & Design



The screenshot shows the Rational Software Architect - C interface. The **Requirement Explorer** on the right lists requirements such as BUC1 Activate Account, BUC2 Apply for Account, BUC3 Open Account, BUC4 Verify Account, and BUC6 Set Up New Customer. The **Project Explorer** on the left shows the project structure for 'Account Opening'.



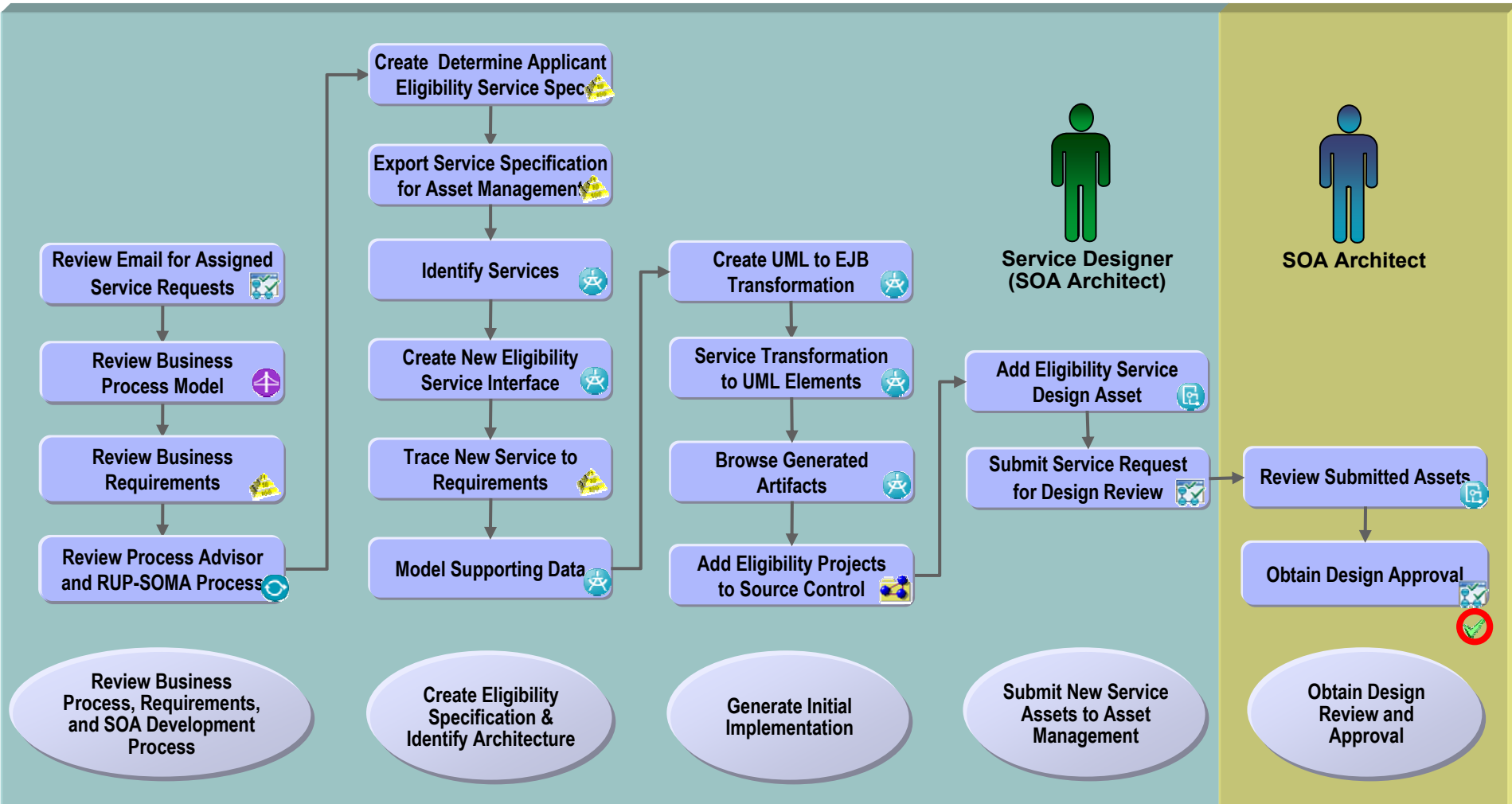
The **Pattern Explorer** window displays a list of design patterns and transformations, including Behavioral, Creational, and Structural patterns, as well as various transformations like 'C++ To UML' and 'UML to SOA'.



The screenshot shows the Rational Unified Process (RUP) documentation page, specifically the 'Concept: Developing Service-Oriented Solutions' section. It includes a diagram showing the flow from **Functional Requirements** through **Service Identification** to **Service Specification**, **Service Realization**, and **Service Deployment**.

What keeps me Rational?

Service Modeling & Design



RP
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 WBM
 Validation Point



Demo



Highlevel script

- Show the Business Modeling template on DeveloperWorks and its use in RequisitePro
- Open the business vision document and show addition of a new goal, and change and update of another – show version history, revision
- Create a new BUC, and specification document
- Create a new BUC process in WBM, and edit the html requirement text
- Open the BUC process in RSA, and create a Business Analysis Model
- Transform the model from UML2 to EJB





Questions



More Information

- Business Modeling RequisitePro project template
 - ✓ http://www-128.ibm.com/developerworks/rational/downloads/07/reqpro_proj_templates/
- Business Integration
 - ✓ <http://www.ibm.com/software/info/topic/perform/busintegration.html>
- Information on IBM WebSphere Software
 - ✓ www.ibm.com/software/websphere
- Information on IBM Rational Software
 - ✓ www.ibm.com/software/rational/
- Building SOA Solution using the Rational SDP Redbook
 - ✓ <http://www.redbooks.ibm.com/abstracts/sg247356.html>





Thank You

Robin Bater



Artifact: Common business glossary

RequisitePro View

The screenshot shows the Rational RequisitePro interface. The main window, titled "Rational RequisitePro - Learning Project - Use Cases - [TERM: All Glossary Terms]", displays a table of glossary terms. The table has columns for the term name, its definition, and its ambiguity level. The terms listed are:

Term	Definition	Ambiguity
TERM1: Administrator	AdministratorAn administrator is defined as an employee of Classics Inc who may be responsible for maintaining the status of orders and modifying Club Member information, among other activities.	Low
TERM2: Shopper	ShopperA Shopper is anyone who accesses the Classics WebShop system for the purpose of finding information about CDs or purchasing CDs.	High
TERM3: Catalog	CatalogThe catalog includes all CDs that are available for sale on the ClassicsCD.com Web site.	Medium
TERM4: Customer ID	CustomerIDThe customerID is used to identify a Shopper.	Low

A callout box in the bottom right corner contains the text: "Use RequisitePro to create business glossary".



Artifact: Business Vision

RequisitePro View

The screenshot displays the Rational RequisitePro interface. The main window shows a document titled "vision.VIS - Microsoft Word" with a menu bar including File, Edit, View, Insert, Format, Tools, Table, RequisitePro, Window, and Help. The RequisitePro window is overlaid, showing a project tree on the left and a table of requirements in the center.

Rational RequisitePro - Learning Project - Use Cases - [FEAT: All Features]

Requirements:	Type	Package	Priority
FEAT1: Secure payment method Secure payment method	Functional	Web Shop System	Must
FEAT2: Easy browsing Easy browsing for available titles	Functional	Web Shop System	Should
FEAT3: Search by multiple criteria Ability to search for CDs by multiple criteria		Web Shop System	Must
FEAT4: Ability to check status of an order Ability to check the status of an order	Functional	Web Shop System	Should
FEAT5: E-mail notification of new titles of interest E-mail notification for Shoppers w... interest them are added to the co...	Functional	Web Shop System	Could

At the bottom of the RequisitePro window, it says "Ready" and "15 requirements".

Use RequisitePro
to create a business vision
to determine priorities

Artifact: Business Rules

RequisitePro View

Rational RequisitePro - Learning Project - Use Cases - [RULE: Business Rules]

File Edit View Requirement Traceability Tools Window Help

Learning Project - Use Case...

- Business Goals
- Business Rules
 - Business Rules*
 - RULE1: Minimum of...
 - RULE2: Maxium of ...
 - RULE3: If the inven...
- Business Use Cases
- Coverage Analysis
- Features and Vision
- Glossary
- Impact Analysis
- Supplementary Require...

Requirements:	Author	Revision
RULE1: Minimum of 3 CDs free shipping	Unknown	1.0001
RULE2: Maxium of 10 CDs, results in a 10% discount	Unknown	1.0001
RULE3: If the inventory # of a particular CDs falls below 3,...	Unknown	1.0002
* <Click here to create a requirement>	Unknown	1.0000

Requirement RULE3 modified

RULE3: If the inventory # of a particular CDs falls below 3, then an automatic re-order shall happen

Business Rule

A declaration of policy or a condition that must be satisfied

Use RequisitePro to create business rules



Artifact: Business Goals

RequisitePro View

Rational RequisitePro - Learning Project - Use Cases - [GOAL: Business Goals]

File Edit View Requirement Traceability Tools Window Help

Business Goals

- Business G...
- GOAL1: Sel...
- GOAL2: Gr...
- GOAL3: De...
- GOAL4: De...
- GOAL5: All...
- Business Rules
- Business Use C...

Requirements:	Measure	Change Value	Change Kind	Verif
GOAL1: Sell Classic CDs over the internet	Qualitative	25	Percent	
GOAL2: Grow business	Quantitative	100	Percent	Pur
GOAL3: Decrease the time to order CDs	Quantitative	-200	Percent	Com
GOAL4: Decrease the number staff	Quantitative	3	Direct	Red
GOAL5: Allow order business to the entire...	Qualitative	5	Direct	Reduced components
* <Click here to create a requirement>				

GOAL5: Allow order business to the entire company

Modifications to requirement GOAL5 are pending

Business Goal
A requirement that must be satisfied by the business. Business Goals describe the desired value of a particular measure at some future point in time and can therefore be used to plan and manage the activities of the business

Use RequisitePro to create business goals



Artifact: Business Use Cases (outline)

RequisitePro view

The screenshot shows the Rational RequisitePro application window titled "WBI-ReqPro - WBI-ReqPro - [BUC: All Business Use Cases]". The interface includes a menu bar (File, Edit, View, Requirement, Traceability, Tools, Window, Help), a toolbar, and a tree view on the left showing the project structure. The main area displays a table of requirements.

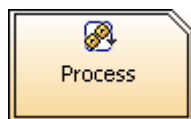
Requirements:	Priority	Status	Assigned To	Unique ID	Location	Package	Authc
[-] BUC11: Apply For Loan				30	Apply For Loa	Apply for Loan	pat
BUC11.1: Applicant Information	Medium	Approved		20	Apply For Loa	Apply for Loan	pat
BUC11.2: Applicant Interview	Medium	Approved		21	Apply For Loa	Apply for Loan	pat
BUC11.3: Check Application	Medium	Approved		22	Apply For Loa	Apply for Loan	pat
▶ BUC11.4: Financial Information	Medium	Approved		23	Apply For Loa	Apply for Loan	pat
BUC11.5: Borrowing Calculation	Medium	Approved		24	Apply For Loa	Apply for Loan	pat
BUC11.6: Locate Loan	Medium	Approved		25	Apply For Loa	Apply for Loan	pat
BUC11.7: Provide lender list	Medium	Approved		26	Apply For Loa	Apply for Loan	pat
BUC11.8: Select Lender	Medium	Approved		27	Apply For Loa	Apply for Loan	pat
BUC11.9: Submit Loan	Medium	Approved		28	Apply For Loa	Apply for Loan	pat
BUC11.10: Document Loan	Medium	Approved		29	Apply For Loa	Apply for Loan	pat
* <Click here to create a requirement>	Medium	Approved		empty	Database	None	pat

The status bar at the bottom left shows "Ready". A blue callout box points to the table with the text: "Use RequisitePro to determine priority of business use cases".

Use RequisitePro to determine priority of business use cases



Artifact: Business Use Cases (flows)



WB Modeler view



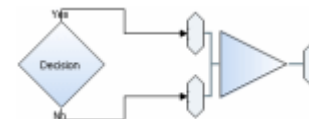
Role



Start/Stop

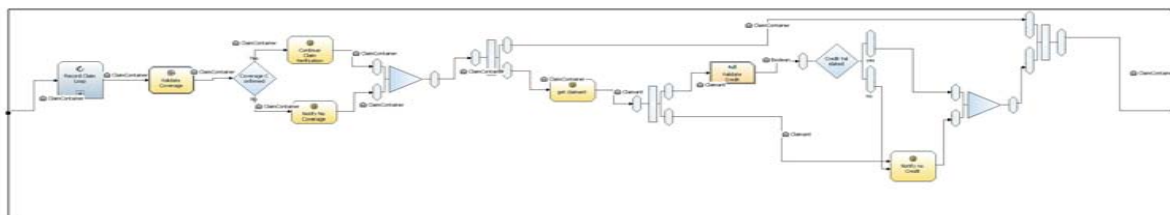


Task invocation



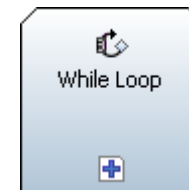
Decision/Merge

Process

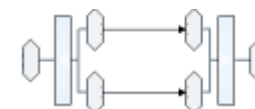


Connection

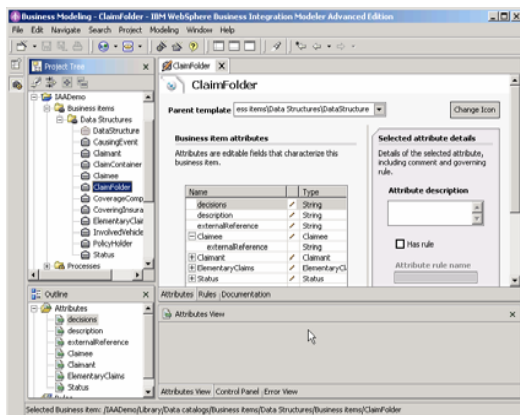
Document the process with information kept in the repository about the tasks, roles, assets, and costs



Loop



Fork/Join



Business Item(s)

Use WB Modeler to discover and capture key business process to determine opportunities for software automation



Artifact: Business Use Case (detailed)

RequisitePro View

This maybe redundant, depending upon the WBM model completeness of, assigning role resources responsible for performing tasks

Requirements:	Priority	Status	Assigned To	Unique ID	Location	Package	Auth
BUC11: Apply For Loan	Medium	Approved		30	Apply For Loa	Apply for Loan	pat
BUC11.1: Applicant Information	Medium	Approved		20	Apply For Loa	Apply for Loan	pat
BUC11.2: Applicant Interview	Medium	Approved		21	Apply For Loa	Apply for Loan	pat
BUC11.3: Check Application	Medium	Approved		22	Apply For Loa	Apply for Loan	pat
BUC11.4: Financial Information	Medium	Approved		23	Apply For Loa	Apply for Loan	pat
BUC11.5: Borrowing	Medium	Approved		24	Apply For Loa	Apply for Loan	pat
BUC11.6: Locate Loan	Medium	Approved		25	Apply For Loa	Apply for Loan	pat
BUC11.7: Provide lender list	Medium	Approved		26	Apply For Loa	Apply for Loan	pat
BUC11.8: Select Lender	Medium	Approved		27	Apply For Loa	Apply for Loan	pat
BUC11.9: Submit Loan	Medium	Approved		28	Apply For Loa	Apply for Loan	pat
BUC11.10: Document Loan	Medium	Approved		29	Apply For Loa	Apply for Loan	pat
				empty	Database	None	pat

BUC11.4: Financial Information
The applicant enters the dollar amount of the proposed loan and the total dollar value that will be used for a down payment.

Attributes

Flow-of-Events

- 2.1 Basic Flow
 - 2.1.1 The Prospective Buyer asks to Apply For a Loan.
 - 2.1.2 The Prospective Buyer supplies the city and state in which they are applying for the mortgage loan and the mortgage type that they would like to apply for.
 - 2.1.3 The applicant fills out the loan interview questionnaire. The applicant is required to provide information on income, outstanding debts and loans, loan preference, and information on their credit history.
 - 2.1.4 The Realtor checks the application to see if it is complete.
 - 2.1.5 The applicant enters the dollar amount of the proposed loan and the total dollar value that will be used for a down payment.
 - 2.1.6 The Realtor then calculates the applicant's borrowing power based on the financial information and loan requirements provided by the applicant.
 - 2.1.7 If the applicant's borrowing power meets BC Realtor's criteria, the Realtor will enter all information into the Loan System, which will search for lenders that will offer a loan pre-approval to the applicant. The Loan System will return a loan term, interest rate, and monthly payment based on the applicant's financial data.
 - 2.1.8 The Realtor supplies the list of lenders to the Prospective Buyer, and saves the list in the buyer's Personal file.
 - 2.1.9 The Prospective Buyer selects one lender to work with. When the applicant selects a lender, he/she must provide approval to have a credit report generated.
 - 2.1.10 The Realtor submits the loan application to the Loan System.
 - 2.1.11 The Realtor prints a loan pre-qualification letter that contains the loan amount, assumed down payment, lender information, and applicant name. The Use Case ends.
- 2.2 Alternative Flows
 - 2.2.1 Applicant Does Not Meet Loan Criteria

If in the Basic Flow, the applicant's financial information does not meet the minimum standards for the loan amount that is being requested, the Realtor will explain that the applicant does not qualify for that loan. The Realtor will...

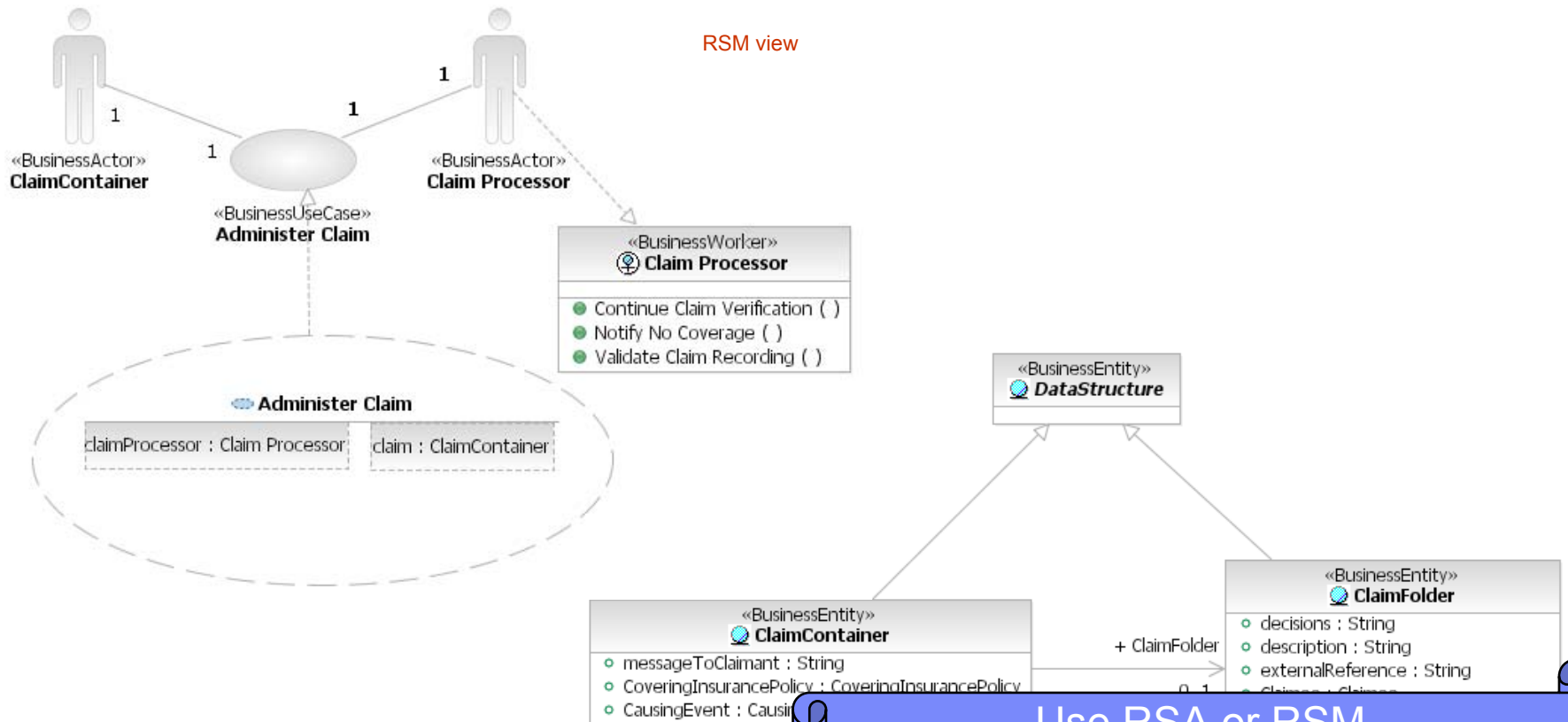
Specification

Relationships:	direct only	GOAL2: Reasonable Quality	GOAL2.1: Product Quality	GOAL2.2: Facility Quality	GOALS: Customer...	GOALS.1: Accessibility	GOALS.1.1: Ordering/Paym...	GOALS.1.2: Product	GOALS.2: Availability	GOALS.2.1: Improve Stocking	GOALS.2.2: Improved...	GOAL12: Market Share...	GOAL12.1: Pleain Customers	GOAL12.2: Attract more...
BUC11: Apply For Loan														
BUC11.1: Applicant Information														
BUC11.2: Applicant Interview														
BUC11.3: Check Application														
BUC11.4: Financial Information														
BUC11.5: Borrowing														
BUC11.6: Locate Loan														
BUC11.7: Provide lender list														
BUC11.4: Financial Information														
GOAL5: Customer Convenience														

Tracing

Use RequisitePro to create business use cases

Artifacts: Business Analysis Model



Use RSA or RSM to view the business contract to realize the contract using facilities of RSA