

Better Business Modeling with IBM Tools

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IBM Rational Software Development Conference 2007



What keeps me **Rational**?



9 October – Johannesburg & 11 October – Cape Town

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?

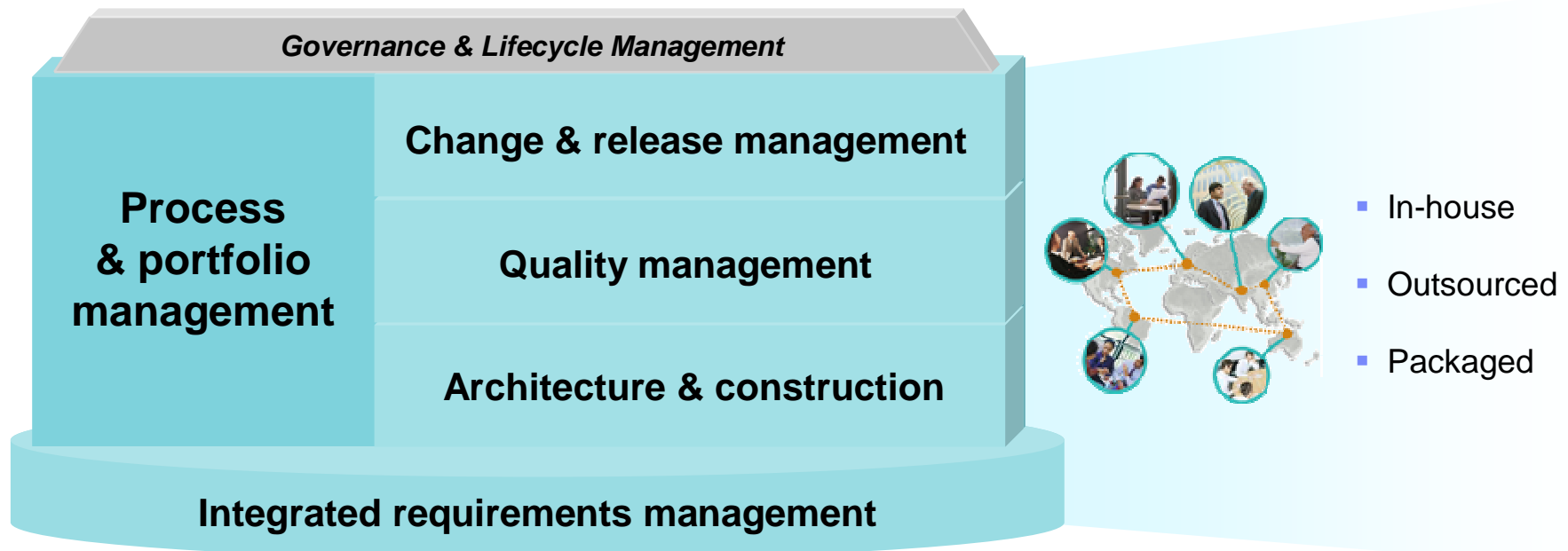


IBM Rational Software Delivery Platform

What we offer

Rational. software

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



Building SOA Solutions using the Rational SDP

The screenshot shows a web browser window with the following content:

- Table of Contents (Left Panel):**
 - Front cover
 - Contents
 - Notices
 - Preface
 - Chapter1.Introduction
 - Chapter2.JK Enterprises case study
 - Chapter3.SOA governance
 - Chapter4.Architecture and design
 - Chapter5.Process and methods
 - Chapter6.Modeling and tools
 - Chapter7.Business modeling
 - Chapter8.Requirements
 - Chapter9.Service and design model w
 - Chapter10.Service identification
 - Chapter11.Service specification
 - Chapter12.Service realization
 - Chapter13. Service implementation
 - Chapter14.Service testing
 - Chapter15.Creating reusable assets
 - Chapter16.Pattern-based engineering
 - AppendixA.Additional material
 - Related publications
 - Index
 - Back cover
- Main Content Area:**
 - Title:** Building SOA Solutions Using the Rational SDP
 - Sub-topics:**
 - SOA service identification, specification, realization, and implementation
 - SOA foundation from modeling to implementation to testing
 - Service-oriented architecture in practice
 - Authors:** Ueli Wahli, Lee Ackerman, Alessandro Di Bari, Gregory Hodgkinson, Anthony Kesterton, Laura Olson, Bertrand Portier
 - Redbooks logo**
 - URL:** ibm.com/redbooks

<http://www.redbooks.ibm.com/redbooks/SG247356/wwhelp/wwhimpl/js/html/wwhelp.htm>

Business Driven Service Lifecycle Management



You're invited

Discovering the Value of Business Driven Service Lifecycle Management

AN IBM PROOF OF TECHNOLOGY

INTRODUCTION

Service Oriented Architecture (SOA) isn't a new concept, but because of today's rapidly changing marketplace, complexity in information technology infrastructures, and the race to remain competitive, SOA has emerged as a key tool to help clients create solutions that meet organization's requirements today while remaining flexible to quickly adapt to future needs. When you use business requirements to drive all downstream development activities, you close the gap between IT and business. In the context of service oriented design and development, the result is exceptionally flexible solutions that you can rapidly adapt to meet changing business needs and priorities.

Business Driven Service Lifecycle Management addresses two of the key challenges facing many business leaders — improving responsiveness and aligning IT with business goals. Business flexibility is a fundamental need for companies seeking to react to a rapidly changing landscape that includes emerging competitive threats, shifting compliance and regulatory requirements, mergers, acquisitions, and evolving technology. Just as important is the ability to align a core businesses process — software development — with business needs and priorities.

OBJECTIVE

The objective of this session is to implement a business driven approach to SOA using the IBM® SOA Foundation. IBM's SOA Foundation solution provides a SOA governance model and service lifecycle management infrastructure tools, which together, can help you realize the full potential of your SOA investments.

AUDIENCE

This session is specifically designed for IT Executives including Chief Information Officers, Chief Technology Officers, Chief Architects, Application Development Executives, Lead Business Analysts, Line of Business Executives, and Project Managers. No prerequisite knowledge of IBM Rational® or WebSphere® platforms is required. However, it is recommended that participants have a thorough understanding of traditional software development lifecycle, business needs, and current IT technologies.

COST

This session is offered free of charge. Complimentary refreshments including continental breakfast and lunch will be provided. However, participants are responsible for their own business travel expenses.



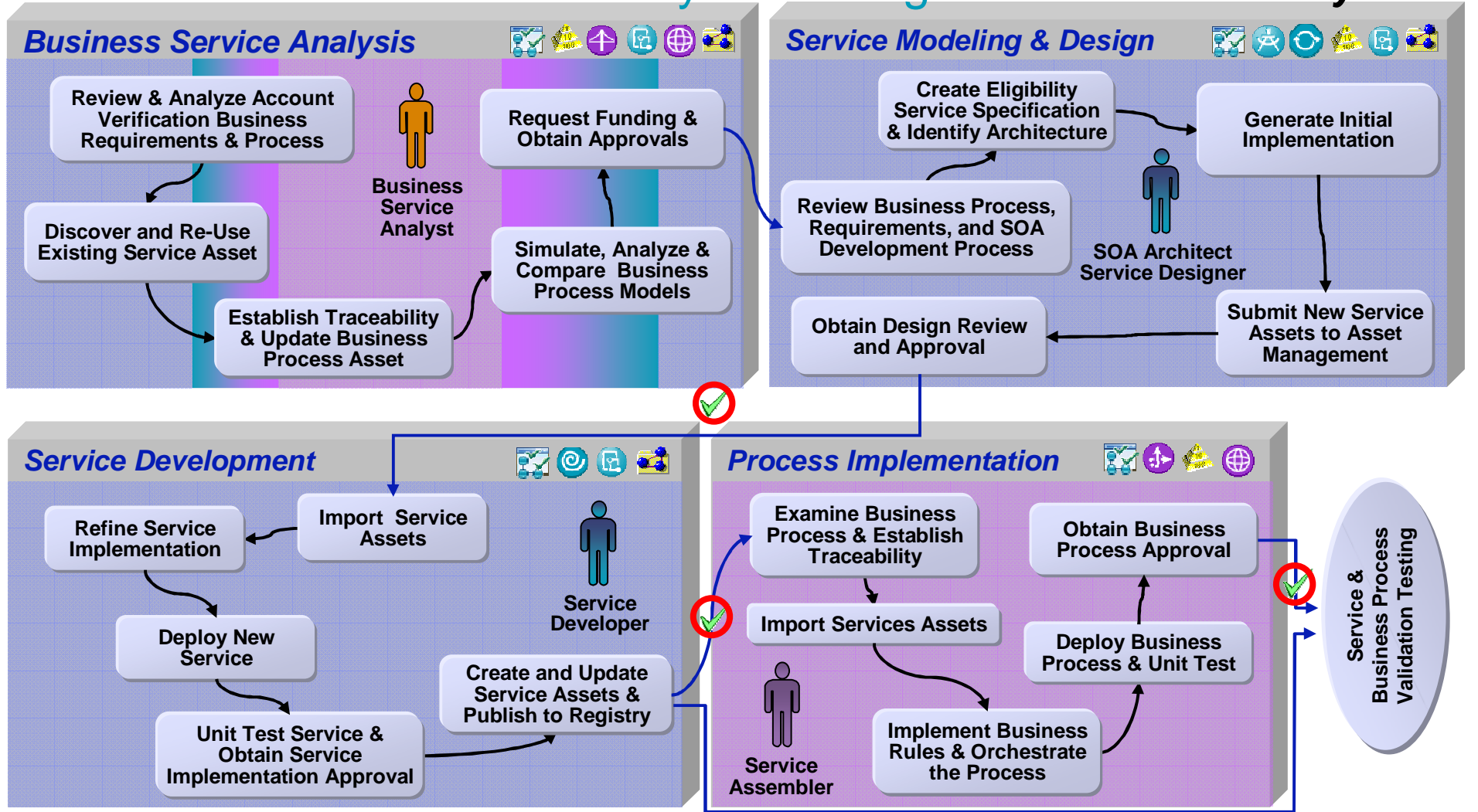
The demo example – JK Enterprises

- 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.



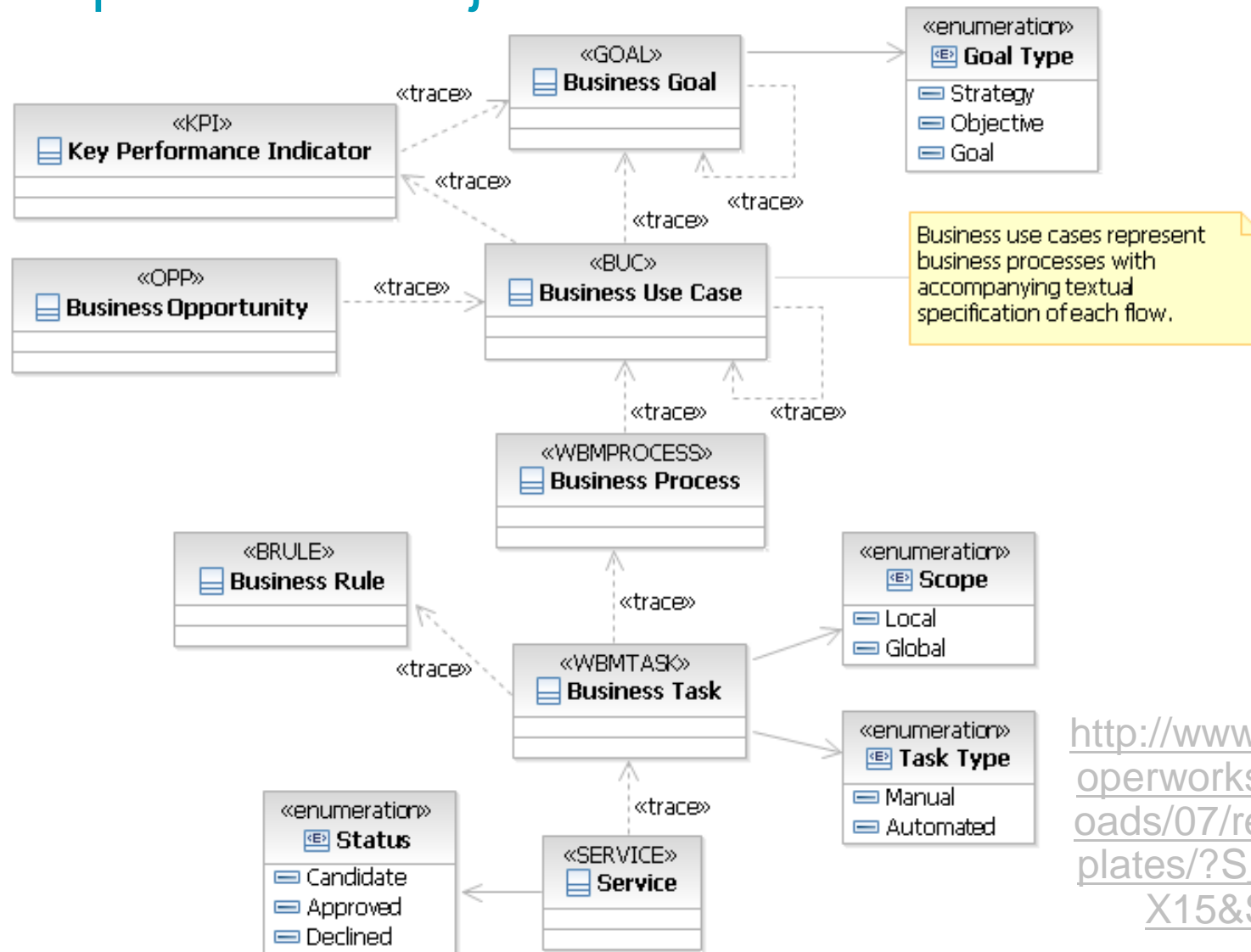
Business Driven Service Lifecycle Management

Activity Flow



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

RequisitePro Project Structure



http://www.ibm.com/developerworks/rational/downloads/07/reqpro_proj_templates/?S_TACT=105AGX15&S_CMP=LP

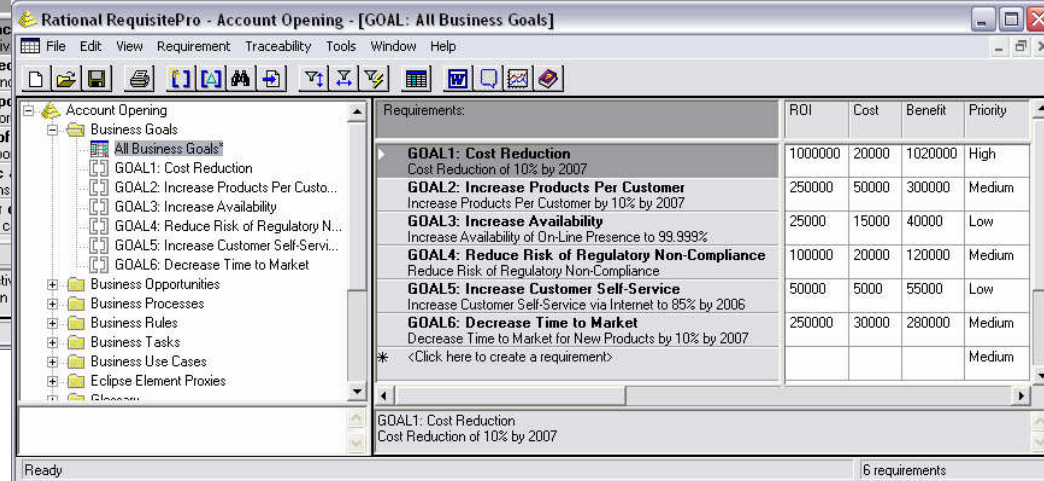
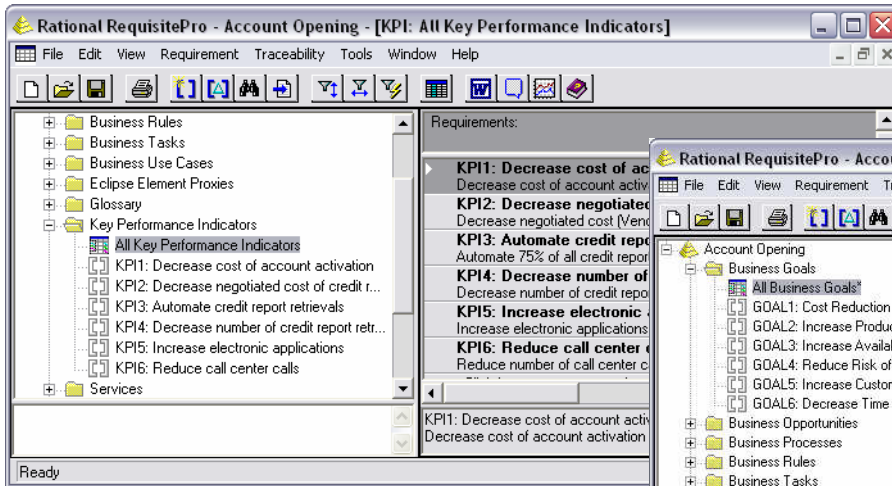
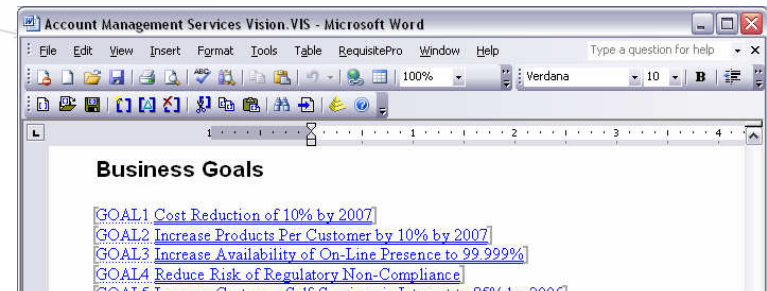
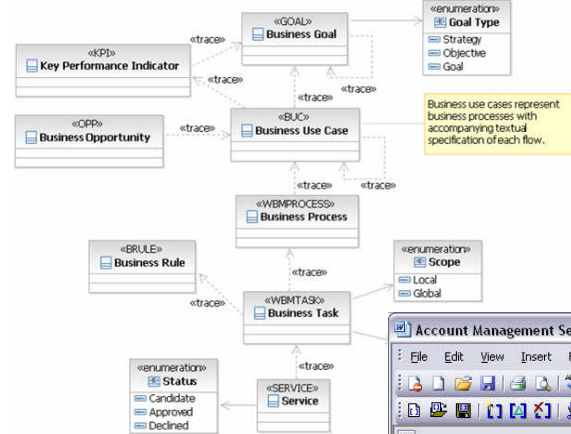
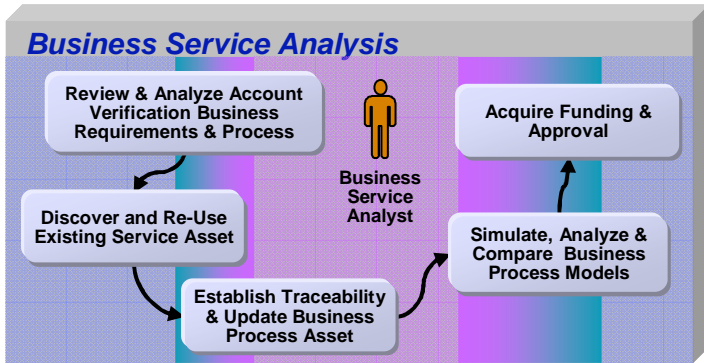
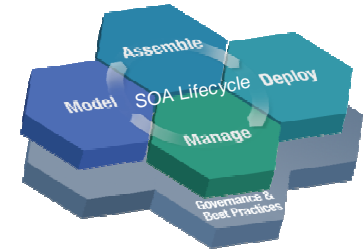
RequisitePro v7 Integration Summary



Products	RequisitePro Integrations
IBM Rational Data Architect	✓
IBM Rational Software Modeler	✓
IBM Rational Software Architect	✓
IBM WebSphere Business Modeler	✓
IBM WebSphere Information Developer	✓
IBM Rational ClearCase/ClearQuest/CQTM	✓
IBM Rational Portfolio Manager	✓

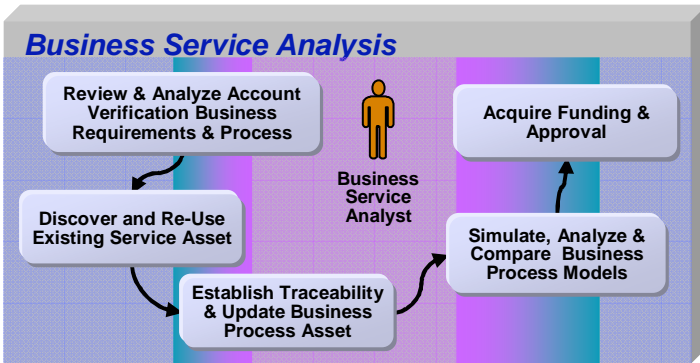
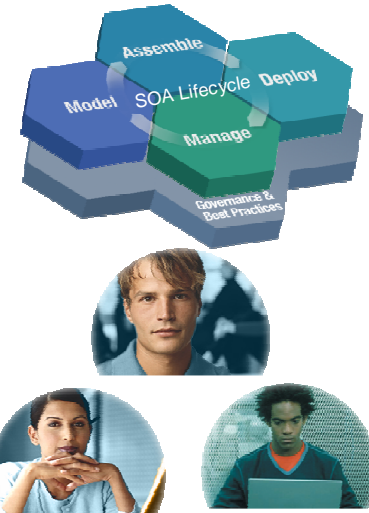
Business Service Analysis

Define business requirements

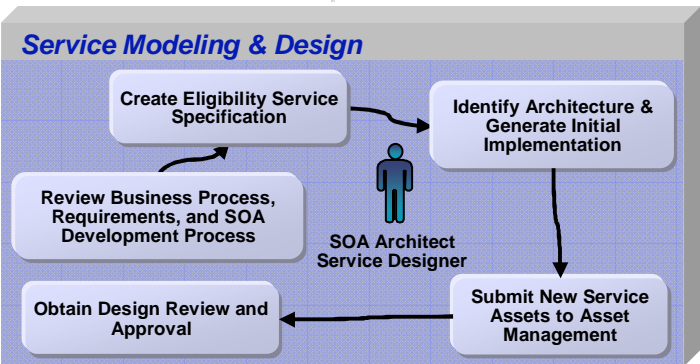


Business Service Analysis

Model the business (& identify the services)

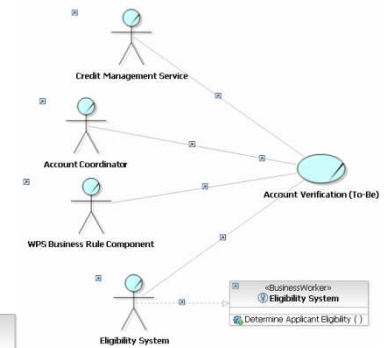


UML

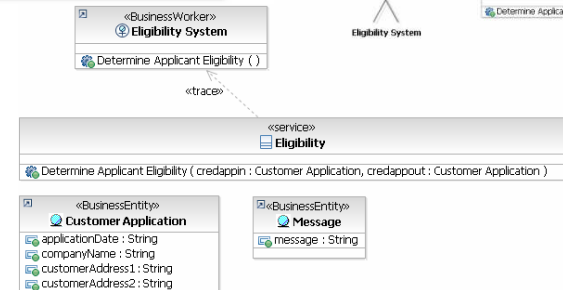
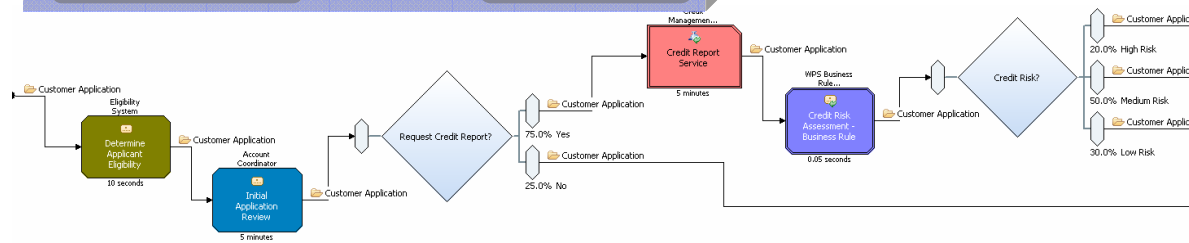


Requirements:	Priority	Status	Difficulty
BUC1: Activate Account	Medium	Approved	Medium
BUC2: Apply for Account	Medium	Approved	Medium
RUC3: Open Account	Medium	Approved	Medium
Verify Account Business Use Case	High	Approved	Medium
	Medium	Approved	Medium
	Medium	Approved	Medium
	Medium	Approved	Medium

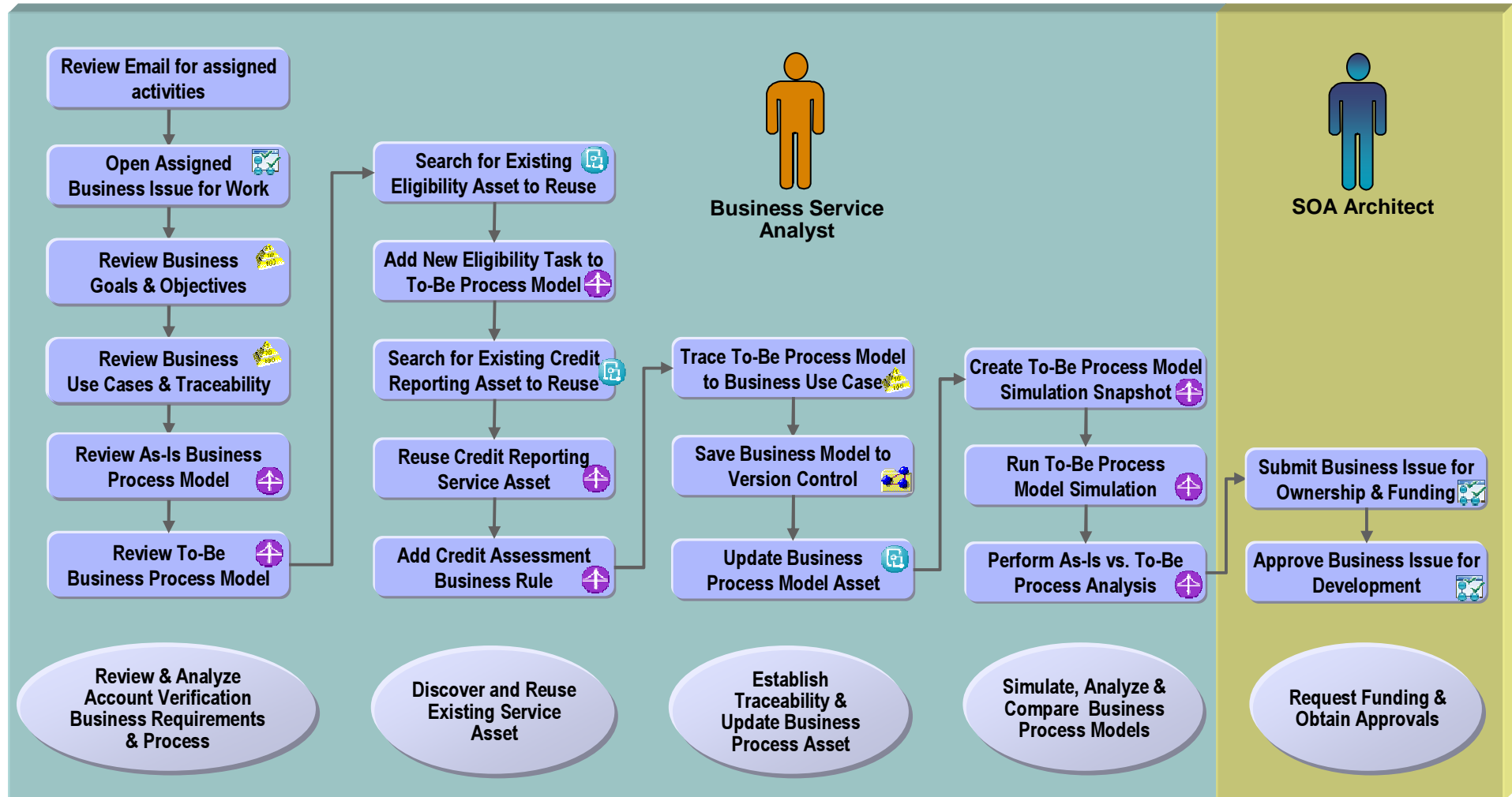
Business Use Cases



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	



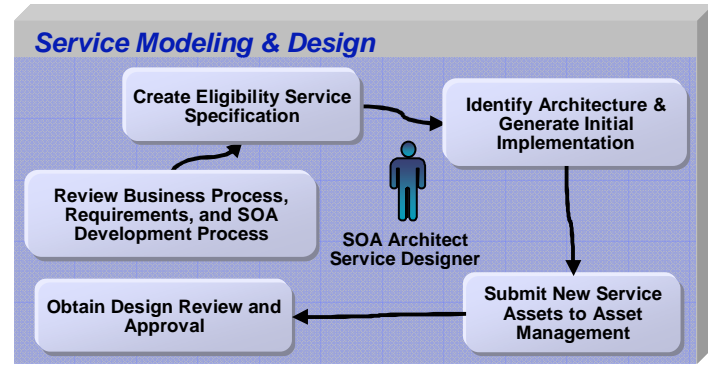
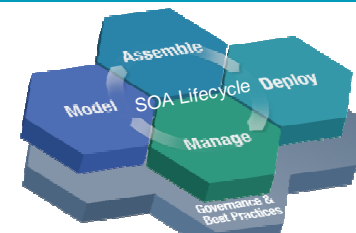
Business Service Analysis



RP
 CC
 CQ
 RAM
 WBM

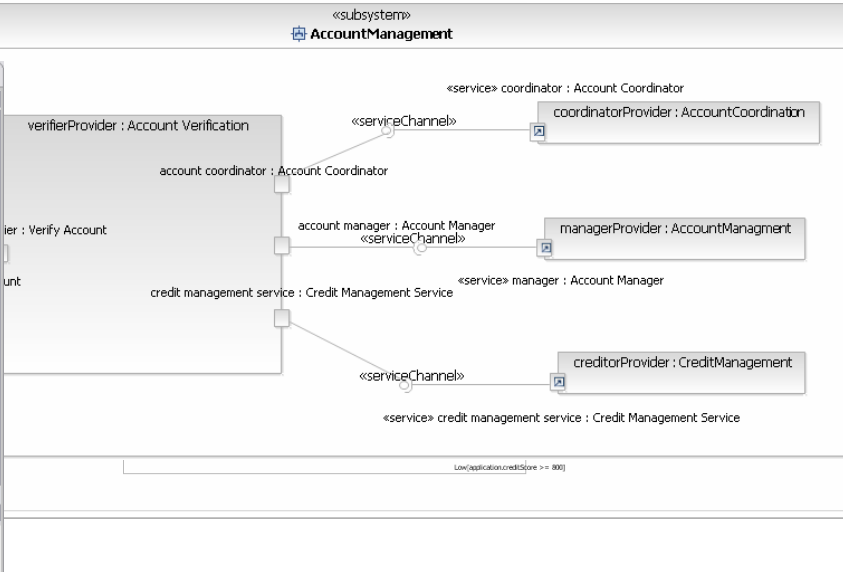
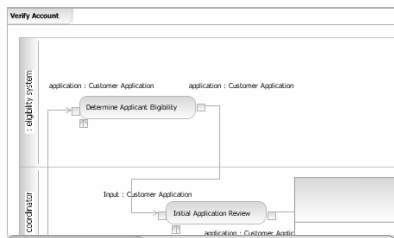
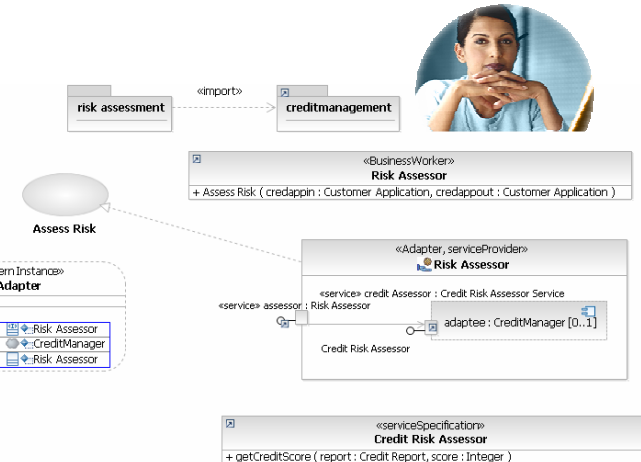
Service Modeling & Design

Design the Services Architecture



Requirement Explorer: Account Opening, Business Goals, Business Opportunities, Business Processes, Business Rules, Business Tasks, Business Use Cases, Verify Account Business Use Case, All Business Use Cases, BUC1 Activate Account, BUC2 Apply for Account, BUC3 Open Account, BUC4 Verify Account, BUC5 Set Up New Customer.

Properties: Requirement, Priority, Requirement Query Results, Requirement.



Design Patterns: Behavioral, Creational, Structural, Transformations.

Transformations: Authoring Editor project updater, Business Process to Service Model, com.ibm.xtools.transform.uml2.cpp.jet2, Generate JET Taglib Documentation, IBM Rational Transformation Authoring Jet Templates, Java to UML, LDM to UML, UML to CORBA, UML to EJB, UML to Java V1.4, UML to Java V5.0, UML-to-LDM, UML to SOA, UML to WSDL, UML to XSD, UML to XSD (Deprecated).

Creates UML model from WBM model

RUP and Service Oriented Modeling and Architecture

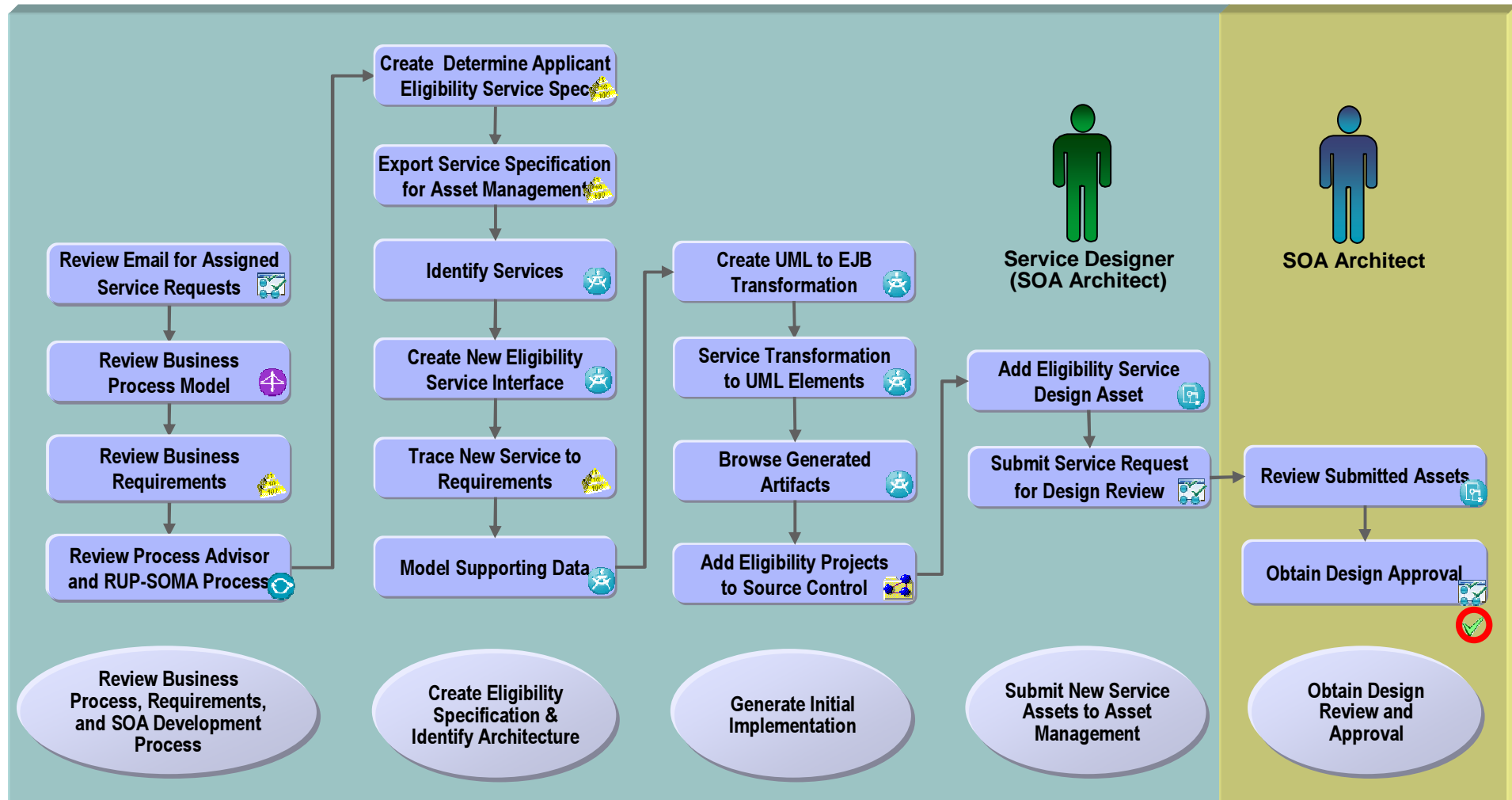
The SOMA method was developed as an engagement model within IBM's Global Business Services group, and while public papers and descriptions were available it was primarily a method used by consultants in the field and not available to IBM customers. On the other hand the RUP is a commercial product offered from IBM which customers use to develop their own software development processes. This integrated method offering, RUP/SOMA has been developed to bring the unique aspects of SOMA to the RUP commercial method and make these available to commercial customers.

Work Products: Initial Service Model, Detailed Service Model, Service Implementation, Security Services Set.

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Service Modeling & Design



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 Validation Point



High-level steps

- 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





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

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Artifact: Common business glossary

RequisitePro View

The screenshot shows a Microsoft Word document titled 'Glossary.GLS' with a menu bar including 'File', 'Edit', 'View', 'Insert', 'Format', 'Tools', 'Table', 'RequisitePro', 'Window', and 'Help'. The document content is as follows:

Wesley.

2. Definitions

2.1 [TERM1 Administrator]
An 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.

2.2 [TERM2 Shopper]
A Shopper is anyone who accesses the Classics WebShop system for the purpose of finding information about CDs or purchasing CDs.

2.3 [TERM3 Catalog]
The catalog includes all CDs that are available for sale on the ClassicsCD.com Web site.

2.4 [TERM4 CustomerID]
The customerID is used to identify a Shopper.

Overlaid on the Word document is the Rational RequisitePro interface. The 'Requirements' pane shows a tree view with 'Glossary' expanded to 'All Glossary'. The main pane displays the definitions for TERM1 through TERM4. A table on the right lists the ambiguity levels for each term:

Term	Ambiguity
TERM1: Administrator	Low
TERM2: Shopper	High
TERM3: Catalog	Medium
TERM4: CustomerID	Low

A blue callout box at the bottom right of the screenshot contains the text: 'Use RequisitePro to create business glossary'.

Artifact: Business Vision

RequisitePro View

The screenshot shows a Microsoft Word document titled 'vision.VIS' with a RequisitePro window overlaid. The RequisitePro window displays a table of requirements for a 'Web Shop System' project. The table has columns for 'Type', 'Package', and 'Priority'. The requirements listed are:

Type	Package	Priority
Functional	Web Shop System	Must
Functional	Web Shop System	Should
	Web Shop System	Must
Functional	Web Shop System	Should
Functional	Web Shop System	Could

The Word document content includes:

1. Introduction
 - 1.1 Purpose of the Vision Document

The purpose of this document is to define the problem addressed by the *ClassicsCD.com Web Shop* project and to define high-level business requirements, user needs, and features for that system. The ClassicsCD.com Web Shop system is an application available on the World Wide Web. ClassicsCD.com is intended to provide a new channel of sales for ClassicsCD, to supplement the existing bricks-and-mortar retail operation.
 - 1.2 Product Overview

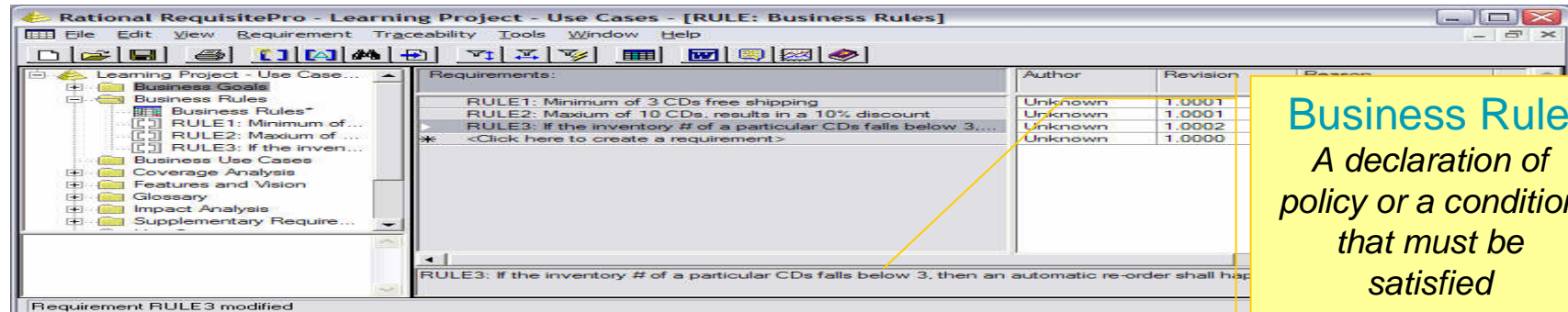
ClassicsCD wants to integrate its Web shop with the corporation's order processing and fulfillment system. We envision a smaller scale supply-chain management system that integrates the Web application with all the stores, suppliers, and warehouses. This includes the following:

 - A Home Shopping e-commerce system
 - A warehouse system

Use RequisitePro to create a business vision to determine priorities

Artifact: Business Rules

RequisitePro View



Business Rule
A declaration of policy or a condition that must be satisfied

Use RequisitePro to create business rules

Artifact: Business Goals

RequisitePro View

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

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

Use RequisitePro to create business goals

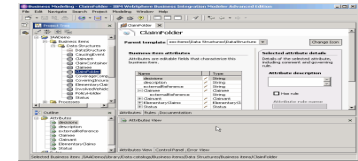
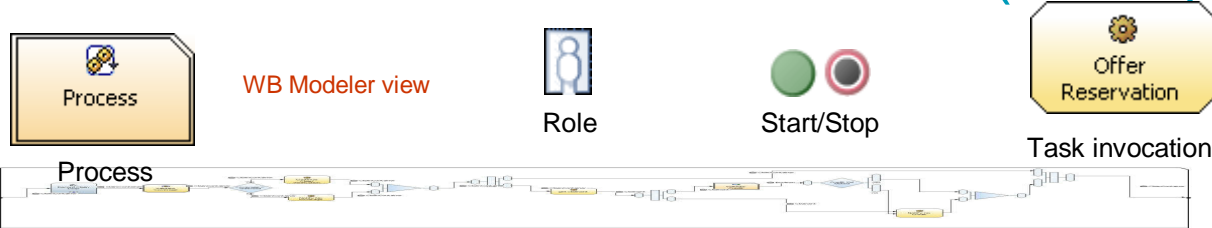
Artifact: Business Use Cases (outline)

RequisitePro view

The screenshot shows the Rational RequisitePro interface. On the left is a tree view of the project structure. The main area displays a table of requirements. The table has columns for Requirements, Priority, Status, Assigned To, Unique ID, Location, Package, and Author. The requirements listed are BUC11.1 through BUC11.10, all with a priority of 'Medium' and status of 'Approved'. A blue callout box with a scroll effect points to the table and contains the text: "Use RequisitePro to determine priority of business use cases".

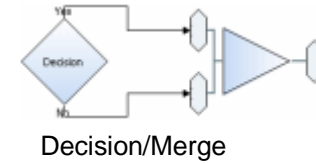
Requirements:	Priority	Status	Assigned To	Unique ID	Location	Package	Authc
BUC11: Apply For Loan	Medium	Approved		30	Apply For Loa	Apply for Loan	pat
BUC11.1: Applicant Information	Medium	Approved		20	Apply For Loa	Apply for Loan	pat
BUC11.2: Applicant Interview	Medium	Approved		21	Apply For Loa	Apply 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 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

Artifact: Business Use Cases (flows)

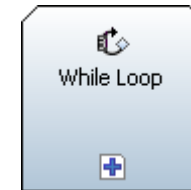


Business Item(s)

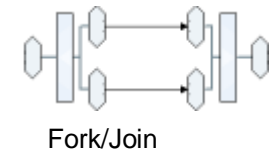
Document the process with information kept in the repository about the tasks, roles, assets, and costs



Connection



Loop



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 Power 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>				empty	Database	None	pat

Attributes

Flow-of-Events

- 2.1 → Basic Flow
 - 1 → BUC11.1: 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 → BUC11.2: 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.
 - 3 → BUC11.3: The Realtor checks the application to see if it is complete.
 - 4 → BUC11.4: The applicant enters the dollar amount of the proposed loan and the total dollar value that will be used for a down payment.
 - 5 → BUC11.5: The Realtor then calculates the applicant's borrowing power based on the financial information and loan requirements provided by the applicant.
 - 6 → BUC11.6: 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.
 - 7 → BUC11.7: The Realtor supplies the list of lenders to the Prospective Buyer, and saves the list in the buyer's Personal file.
 - 8 → BUC11.8: The Prospective Buyer selects one lender to work with. When the applicant selects a lender, she must provide approval to have a credit report generated.
 - 9 → BUC11.9: The Realtor submits the loan application to the Loan System.
 - 10 → BUC11.10: 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	GOAL2: Reasonable Quality	GOAL2.1: Product Quality	GOAL2.2: Facility Quality	GOAL5: Customer Convenience	GOAL5.1: Accessibility	GOAL5.1.1: Ordering/Pym...	GOAL5.1.2: Product Availability	GOAL5.2: Improve Stocking	GOAL5.2.2: Improved...	GOAL12: Market Share...	GOAL12.1: Retain 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 Power Calculation												
BUC11.6: Locate Loan												
BUC11.7: Provide lender list												
BUC11.9: Submit Loan												
BUC11.10: Document Loan												
GOAL5: Customer Convenience												

Tracing

Use RequisitePro to create business use cases

Artifacts: Business Analysis Model

