

WebSphere Business Modeler

Version: 6.0.1

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1. Product Overview

IBM WebSphere Business Modeler is a critical component of IBM's Business Process Management (BPM) Suite that enables you to model, design, simulate and analyze your business processes, integrate your new and revised workflows, and define and document your organization, resources, and business items.

WebSphere Business Modeler also provides Web-based publishing and collaboration functionality through the use of an add-on product, WebSphere Business Modeler Publishing Server, enabling teams of subject matter experts to clearly define, communicate and optimize business models. Organizations can model business processes, then deploy, monitor, and take actions based upon key performance indicators (KPIs), alerts, and triggers for continuous optimization. Business processes can also be linked with strategic corporate objectives.

WebSphere Business Modeler allows users with different scopes of interest and expertise to build process models designed to meet a range of business objectives. From the business analyst who requires a high-level view of a process to drive strategic decisions, to a software architect or developer who uses a process model as the framework for a new application, Business Modeler offers a versatile and user friendly modeling tool that has the flexibility to meet the needs of both business and technical users. In short, WebSphere Business Modeler provides a tool that business users can use to model and simulate their processes, and then seamlessly hand them off to IT for subsequent implementation.

Table 1 provides an overview of WebSphere Business Modeler, which consists of two different versions and several add-on options for Web publishing and collaboration.

WebSphere Business Modeler Basic is designed to provide an affordable, entry-level modeling tool. It is intended for individual users and enterprise departments that do not require the full enterprise capabilities of WebSphere Business Modeler Advanced version. Business Modeler Basic provides basic modeling capabilities for capturing data. You can use it to model, validate, and document business processes. Business Modeler Basic provides three modeling modes—"basic", "intermediate", and "advanced"—which enable users to determine the level of detail displayed in diagrams, dialogs, and wizards, thus offering users a choice as to how much information they want visualized.

Business Modeler Basic also includes a reporting tool and a set of static documentation reports, which provide an easy way to publish and present information to process stakeholders.

WebSphere Business Modeler Advanced includes all the features of Business Modeler Basic, along with complex model simulation and analysis and design capabilities. Business Modeler Advanced provides functionality for process, enterprise, essential data and artifact, organization, resource, timeline and location modeling, and business process analysis. In addition to the three modes supported by Business Modeler Basic, Business Modeler Advanced also includes a mode for

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WebSphere Business Modeler, Ver. 6.0.1

the Business Process Execution Language (BPEL) for either the WebSphere Business Integration Server Foundation or the WebSphere Process Server Runtime, and a mode for IBM WebSphere MQWorkflow Flow Definition Language (FDL). BPEL and FDL support enable users to work in the mode in which a company plans to deploy the process. In short, with WebSphere Business Modeler Advanced, IT users can export models to multiple build-time environments to help jump start application development.

Table 1—Overview of WebSphere Business Modeler 6.0.1

WebSphere Business Modeler 6.0.1 Basic	Low-cost, easy-to-use BPM tool. Provides basic modeling, validation, and documentation capabilities. Designed for enterprise departments and individual users who do not require the full capabilities of WebSphere Business Modeler Advanced.
WebSphere Business Modeler 6.0.1 Advanced	Enterprise-class business BPM tool that provides all the capabilities and features of Business Modeler Basic. In addition, its is designed to bridge the gap between business and IT, providing robust functionality for process modeling, enterprise modeling, essential data and artifact modeling, organization modeling, resource modeling, timeline and location modeling, as well as simulation and business process analysis. Also provides comprehensive reporting and support for workgroup development.
WebSphere Business Modeler Publishing Server Version 6.0.1	Enhances Business Modeler by providing a way to publish business processes and related business information, such as organization diagrams, to a secure Web site, thus supporting the development, documentation, and dissemination of business process models on an enterprise/worldwide scale. Allows review and development by multiple subject matter experts simultaneously through a standard Internet browser. Also provides the ability to publish business process models to a portlet-based server—enabling new employees to gain a high-level view of their role in the company and identify tasks they're expected to perform. Helps to ensure more accurate and concise models.
WebSphere Business Modeler Publishing Edition Version 6.0.1	Enterprise-class offering consisting of 10 WebSphere Business Modeler Advanced licenses, along with one WebSphere Business Modeler Publishing Server license.
Pre-Built Models and Templates	Currently, no frameworks are provided as part of the WebSphere Business Modeler toolset. However, a large number of sample processes are available from the SOA Business Catalog: www.ibm.com/soa/soabusinesscatalog a single, comprehensive on-line directory of hundreds of reusable SOA assets from IBM and select business partners. Additionally, the IBM Industry Solutions team has created industry content that can help jumpstart projects in Banking and Insurance for process, integration, and data models. eTOM and process content are also currently under development. Other pre-built/pre-defined processes are also offered by IBM partners.

WebSphere Business Modeler Publishing Server is designed to enable users to publish business process models to a portlet-based server, so that multiple subject matter experts can review the information simultaneously through a standard browser. In addition, IBM offers an enterprise package—**WebSphere Business Modeler Publishing Edition**—which bundles 10 Business Modeler Advanced licenses along with one Publishing Server license.

WebSphere Business Modeler Publishing Server is accessed through the Web using WebSphere Portal technology, which provides the benefits of both personalization and role-based access. Personalization enables review content to be viewed by users in a format that is personalized to them. Role-based access ensures that only the information relevant to a specific role is exposed to the

corresponding users.

WebSphere Publishing Server also features an administration page that allows an administrator to define user access, edit and remove business processes, and edit and remove comments. In addition, the review facility of WebSphere Business Publishing Server enables users to comment on the various aspects of a process model and then store the comments so they are available to the appropriate users who then can take action based on those comments.

The remainder of this report focuses primarily on the features and functionality of the WebSphere Business Modeler Advanced toolset and its various add-on options.

2. Product Architecture

2.1 Architecture Overview

Figure 1 provides an overview of the functionality of WebSphere Business Modeler Advanced and shows how it operates in concert with other products in IBM's BPM Suite. WebSphere Business Modeler is a key component of IBM's overall BPM Suite, which includes offerings that allow businesses to model, assemble, deploy, and manage their processes.

Figure 1 provides an overview of WebSphere Business Modeler Advanced's functionality as well as how it operates in concert with other products in IBM's BPM Suite. WebSphere Business Modeler is a key component of IBM's overall BPM Suite, which includes offerings that allow businesses to model, assemble, deploy, and manage their processes.

Business Modeler functionality includes models and editors designed to support process, resource, information, organization, analysis, and business measures modeling and simulation. The bottom of Figure 1 shows how Business Modeler interacts with other IBM BPM software offerings, including WebSphere Process Server, WebSphere MQ Workflow, WebSphere Business Monitor, and the Rational Software Architect application development environment. WebSphere Business Modeling Publishing Server provides Web publishing and collaboration capabilities. While version management requires the use of a configuration management system (CMS) such as CVS, or Rational ClearCase.

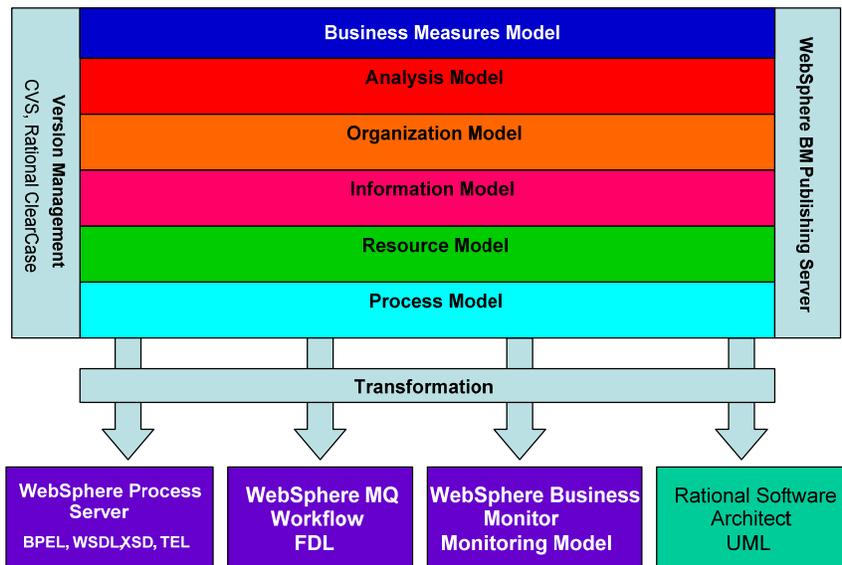


Figure 1. Overview of WebSphere Business Modeler architecture and functionality

Finally, WebSphere Business Modeler operates as a desktop-modeling environment. The WebSphere Business Modeler Publishing Server (which functions as a Web-based collaborative environment for

viewing and annotating models) is a portal application that uses corporate LDAP servers.

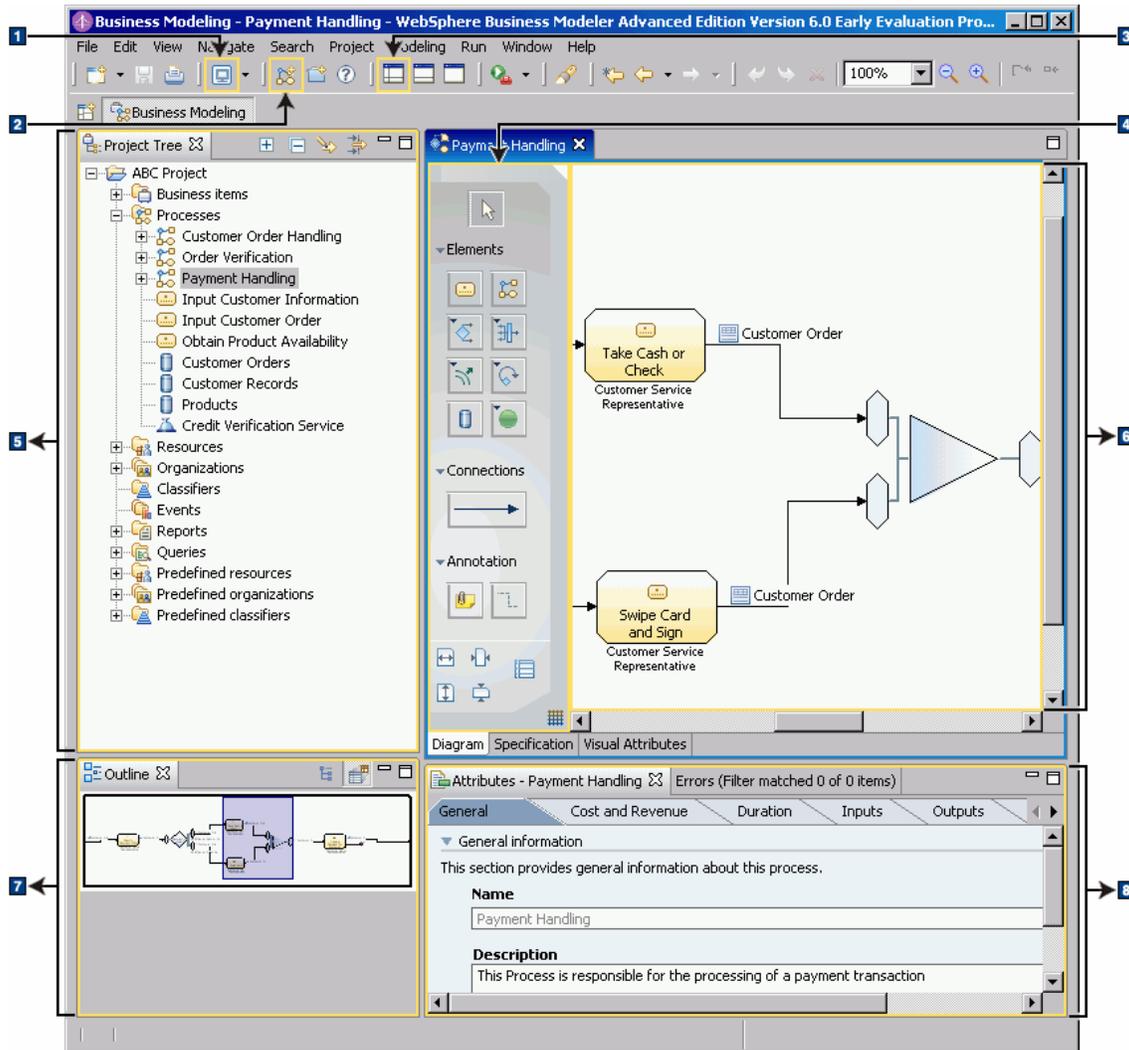


Figure 2. WebSphere Business Modeler GUI displaying four main work panes

2.2 Usability and User Interface

Figure 2 shows the WebSphere Business Modeler GUI, which offers a palette of visual items from which to build process models, as well as various wizards designed to guide the user through the various steps required to create a model—including creating the model artifacts and business measures (KPIs). In addition, WebSphere Business Modeler features the ability to import processes via Microsoft Visio, Excel, and other tools, and it provides modeling jumpstart capabilities. The tool’s functionality is also enhanced by the ability to color-code model elements according to role, classification, or organization units.

As shown in Figure 2, the WebSphere Business Modeler GUI features four main work panes or views:

- Process Editor (i.e., diagram view)
- Attributes View
- Project Tree View, and
- Outline View

Process Editor View

The Process Editor view is the largest pane on the screen and is where most diagramming work is performed. The Process editor enables users to visually compose a process flow. Figure 2 shows the process “Payment Handling” being modeled. Users can also add existing reusable elements to a process diagram by dragging them from the Project Tree (discussed below) onto the Process Editor pane. Such elements include Tasks, Processes, Repositories, and Services.

The Process Editor supports both free-form layout and swim lane layout. Free-form layout allows users to add and position elements in any manner they feel. The swim lane layout organizes diagrams according to the characteristics of your activities. For example, if you want to view all of your process tasks according to the roles in the organization, you could arrange the swim lane editor by role. Each role that has been defined will be represented as a row in the swim lane layout, and the activities performed by a role will also be included in that row. In addition to letting users display a model according to role, they can also use the swim lane view to display a model by resource, organization unit and classifier. Users can also edit a model in the swim lane view.

Finally, users can use the Process Editor view to create structure diagrams for modeling the organization or to create report templates for generating reports.

Attributes View

The Attributes view (bottom right, Figure 2) shows the details of any element when selected in a diagram. Clicking on the tab lets users view more information about the element. For example, Figure 2 shows part of the Attributes view for a task named “Payment Handling.” Also provided is a brief description, in this case, indicating that “this process is responsible for the processing of a payment transaction.” To view more information about the task, a user only needs to click on the various tabs (i.e., Cost and Revenue, Duration, Inputs, and Outputs).

Project Tree View

The Project Tree (top left, Figure 2) presents a structured view of the various elements that make up a project. Basically, the Project Tree lets users select elements for editing or to perform functions like exporting. The Project Tree also features a wizard to assist the user when creating a new item, for example, prompting you to enter a name, description, and other basic details for the item. All items created in the Project Tree (below the level of catalogs and projects) are reusable.

The Project Tree uses a default structure to organize the information used to model a project. At the highest level, the Project Tree requires that users create a project to contain the artifacts that they will create. Within the project, the Project Tree creates a library that contains folders for organizing model elements. Within these folders users can add their own specific catalogs, each of which holds a related set of items. Users can also create catalogs within catalogs, in case they want to organize information hierarchically. Projects typically contain business items (data), processes, resources, organizations, etc. The Project Tree displayed in Figure 2 shows an Activity Based Costing (ABC) project and its catalogs, with “Payment Handling” highlighted indicating that this work is currently opened.

Outline View

The Outline view displays a thumbnail of the diagram currently opened in the Process Editor. As demonstrated in Figure 2 (bottom left), the Outline view provides a convenient way for users to view specific sections of large, complex diagrams in the Process Editor by simply dragging the highlighted area of the thumbnail displayed in the Outline view.

End Users

WebSphere Business Modeler features a choice of modes of operation, which are designed to support varying levels of detail and complexity depending on the end user's technical skills and/or role. Using the Basic mode, business analysts requiring a high-level view of processes can easily create

and display their work flow. While more technically oriented users who need to apply a higher degree of business logic complexity to their processes can define their specifications and expressions using the Intermediate mode. Finally, software and IT architects can focus their technical skills and experience on the invocation characteristics, instance correlations, and complex expressions available in the Advanced mode.

2.3 Repository Options/Team Development

To support team development and collaboration, Business Modeler provides a built-in capability to connect to a separate IBM product, WebSphere Business Modeler Publishing Server. This option enhances Business Modeler by providing a way to publish business processes and related business information (e.g., organization diagrams, reports, etc.) to a secure Web site. This capability allows the development, documentation, and dissemination of business process models on an enterprise scale. By publishing business processes in a Web-based format, multiple people on multiple teams can view and contribute to the development of the business processes using a standard Web browser.

Besides just reviewing business processes, WebSphere Business Modeler Publishing Server enables authorized users to comment on a diagram or its supporting information. Because the comments are visible and other reviewers can respond to the comments, Publishing Server provides a forum for discussing and resolving issues related to developing a business process. Comments and responses are tracked by originator, date, and time of creation. Users can then export these comments and responses to permit the modeling team to update the model, thus helping to make it more accurate.

WebSphere Business Modeler Publishing Server consists of three main components:

- Publisher, which acts as a gateway to the publishing server
- Publishing Server, which hosts published business-modeling projects
- Client, which is a standard browser with the Scalable Vector Graphics (SVG) Viewer plug-in, enabling users to zoom in and out of process diagrams

For collaborative business modeling, WebSphere Business Modeler requires the use of a Configuration Management System (CMS) that supports project versioning so as to allow project team members to work from a common source and track changes to a model as it evolves.

The addition of a CMS in conjunction with Business Modeler provides a centralized repository of modeling project information. Team members can use the system to check out specific versions of model elements and submit (commit) new versions of model elements. Project versioning provides a way to view the history of a project element's modifications and compare versions to see what has changed. Thus, companies can distribute the effort of modeling or modifying an entire project to a team of modelers.

The CMS stores each modification of a model element such as a process, resource, or catalog as a distinct version of the original item in the repository. By versioning each submission that a team member makes, the version control system prevents data loss if two members submit different changes to the same model element. Both sets of changes remain available, so that a team member can identify which version the team will use, or reconcile the two versions to create a third (combined) version.

Supported CMSs include CVS (Concurrent Versions System) and IBM Rational ClearCase.

2.4 Integration with Other Products

WebSphere Business Modeler has a number of core features that allow interoperability with other products, along with the use of a range of standards-based import/export formats. These include import /exports through BPEL, XMI, XML, VDX, WSDL, WebSphere MQ BuildTime (.fdl),

Microsoft Visio, and an XML bridge from IDS Scheer Aris.

Users can also generate models from Visio diagrams using the Visio Import feature.

3. Analysis and Process Modeling

3.1 Enterprise and Organization Models

Enterprise Architecture Models

WebSphere Business Modeler supports a variety of modeling methodologies and is generic enough to handle multiple approaches to different enterprise architectures, organizational structures, and business processes. WebSphere Business Modeler uses user-defined categories that are not specific to any type of framework. An editor is provided for defining resources, roles, organizations, and locations. An editor is also provided for defining categories that process elements can belong to.

Organization Models

WebSphere Business Modeler provides the ability to model any identifiable organization within a business, such as companies, divisions, or departments. You can also save organization definitions within a project in order to reuse and revise them as your organizations evolve.

Resource and Cost Modeling

WebSphere Business Modeler provides the ability to model a broad range of resource categories, including employees, computers, vehicles, or electricity. Basically, any person, equipment, or material used to perform a task or a project can be represented and used in process models. Depending on the level of complexity required in your process models, you can also specify roles, costs, and timetables for resources.

Mapping Organization Strategies to Performance Measures

Business Modeler includes the ability to generate business-measure models and to define KPIs and metrics. These features enable Business Modeler to support IBM WebSphere Business Monitor software (a separate product) by allowing users to take a snap shot of a modeled process and update it with KPI and metric information. Users can also define Business Situations (that can be used as part of the Business Modeler) that allow WebSphere Business Monitor to determine that a situation has occurred and that an action must be taken. For example, an alert can be triggered when an order exceeds a threshold, or a certain customer order requires special handling. WebSphere Business Monitor also contains a Balanced Scorecard capability.

Managing Process Portfolios

WebSphere Business Modeler provides various features for actively managing a portfolio of processes. This functionality is available via the various views in the Business Modeler GUI. For example, the Project Tree view uses a default structure to organize the information used to model a project. The Project Tree library also allows users to create folders for organizing model elements. Within these folders users can add their own specific catalogs, each of which holds a related set of items. Users can also create catalogs within catalogs, in case they want to organize information hierarchically. (For more on available functions for creating and managing projects in Business Modeler see Section 2.2)

3.2 Defining Processes

Defining Processes

WebSphere Business Modeler provides extensive support for graphical process design. This includes the ability to perform free form (i.e., unrestricted) process design or to use user-defined swim lanes (i.e., via classifications). The free-form layout gives users maximum flexibility to arrange their process diagrams the way they want. The swim lane layout arranges elements in rows according to characteristics specified by the user, such as by organization unit, location, resource definition, role or

classifier.

Business Modeler also offers unrestricted annotation support and simultaneous visualization of up to five dimensions for a single process diagram. The product also provides the ability to model resources, roles, timetables, decisions, organizations, business items, and nested processes. Repository support is provided, as well as canned template reports and a report building framework.

A process can contain multiple branching paths based on decisions made during the process execution. A process can also contain sub processes. Users can use the tool to visually compose process models by dragging elements into a process flow diagram. You can select these elements either from the palette, or from the reusable processes, tasks, and repositories that have already been created in the Project Tree (see Section 2.2 for more on the tool's usability and UI).

Process Information Storage and Integrity

Business Modeler utilizes a repository for storing and managing project models and their associated data and information. To maintain model/information integrity for collaborative business modeling efforts, Business Modeler requires the use of a configuration management system (CMS). (For more on the use of CMS with Business Modeler see Section 2.3 and Section 9).

Graphical Notations

The WebSphere Business Modeler uses a hybrid UML 2.0 and BPMN notation.

3.3 Subprocesses and Activities

Handling Subprocesses and Activities

WebSphere Business Modeler allows users to define inputs and outputs and the criteria for managing those inputs and outputs down to all sub process levels. Inheritance is determined based on the flow of the models themselves.

Defining Activities

WebSphere Business Modeler allows detailed information to be associated with the activities that are performed in the context of processes and process areas. The product provides three modeling modes—"basic", "intermediate", and "advanced"—which enable users to determine the level of detail displayed in diagrams, dialogs, and wizards, thus offering users a choice as to how much information they want visualized.

Documenting Decision Rules

Rules support comes in terms of documenting rules for attributes and decision rules of a process. The WebSphere Integration Developer product also allows the author to define an externalized set of business rules, which can be adjusted at execution time. For instance, the ability to set "customer discount rate for gold customers" on the fly, after the solution has been deployed.

Rules Entry

Discussed above.

Activity Costs, Resources, and Time Data

WebSphere Business Modeler allows end users to associate data about costs, resources, and processing times with specific activities. This information is then stored in the tool's repository. Business Modeler also provides a wide variety of analysis functions that are useful for analyzing business processes, including costs analysis, resource analysis, and time data. (See Section 3.4 on Simulation for more on WebSphere Business Modeler's analysis capabilities.)

Costs are associated to resources, which are then associated to activities whose durations and costs are used for simulation. In addition, you can have different durations such as waiting durations or execution durations to reflect all of the various time components of a process/activity.

3.4 Simulation

Simulation Capabilities

WebSphere Business Modeler supports extensive simulation capabilities, including:

- “What-if” scenarios
- Random, probability-based, or data-driven simulation modes
- Cost, and time parameterization of activities, and resources
- Resource allocation based on individual/bulk resources, and roles
- Built-in distribution functions, and business artifact creation and initialization
- Expression evaluation, and subsequent data based routing
- Timetable token creation

Business Modeler’s simulation capabilities include decision paths based on defined probabilities, and data based expressions. Selected variables can be modified during simulation.

During the simulation run, Business Modeler animates the business flow execution. Transmission of business artifacts, queues, and execution points are graphically presented to the user (Figure 3). The immediate results are displayed in a separate view, and they are reported based on different categories, such as process, task, or connection. The results can be viewed, printed, and analyzed using a large number of custom and template reports.

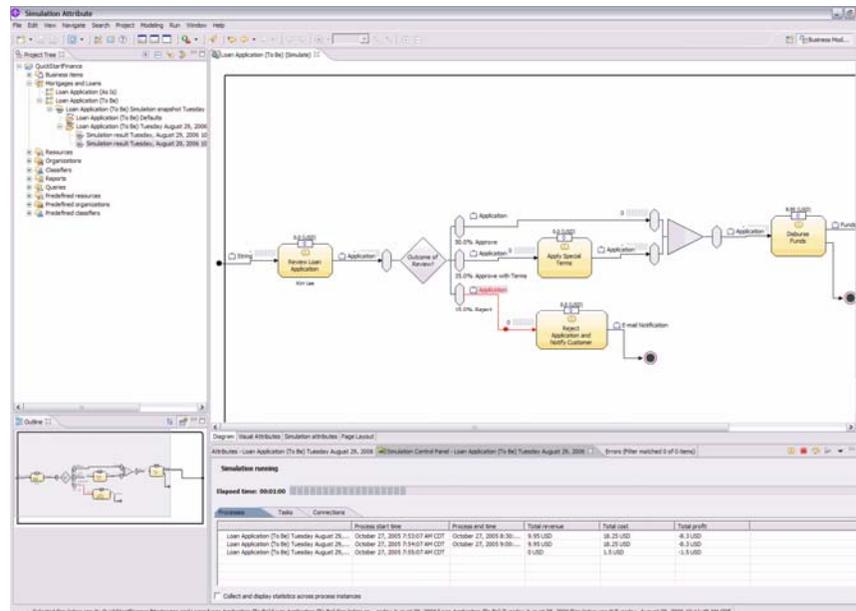


Figure 3. Simulation in WebSphere Business Modeler.

Business Modeler’s simulation function lets you simulate and analyze processes under any set of circumstances. When you simulate runtime processing, Business Modeler provides an animated view of the business process in action. You can specify a variety of different conditions for the simulation, including the rate and composition of process inputs and the number of personnel and system resources available to handle the process. Through simulation you can determine how the performance of a business process is affected in various real or hypothetical conditions.

Analytic Capabilities

WebSphere Business Modeler provides a variety of analysis capabilities that are useful for extracting information from one or more elements within a modeling project. There are two main categories of analysis that you can perform: static analysis and dynamic analysis.

Static analysis provides information on models in their static form. There are more than thirty types of static analysis. The following examples highlight some of the ways you can use static analysis to extract information on resource models, organizational models, data models, and process models:

- **Resource roles analysis**—displays a list of resources and shows the associated roles for each resource.
- **Type hierarchy analysis**—displays all the occurrences of a specified organization definition within a set of structure definitions.
- **Type instance matching analysis**—displays a type specified by the user, such as a location definition or a business item, and all the instances (locations or business item instances) based on this type.
- **Activity throughput analysis**—displays the productivity per time unit of activities in a process.

Dynamic analysis provides information on the results of one or more process simulations. Dynamic analysis reflects not only the underlying process model and other model elements that are used in simulations, but also the simulation results based on attributes that you specify for a particular simulation profile.

When processes are executed, each execution of the process is a process instance. You can use dynamic analysis to extract information on specific process instances or on all process instances together. You can also perform comparative analysis on the results of two different simulations.

There are more than twenty types of dynamic analysis. The following illustrate some of the ways you can use dynamic analysis to show aggregate results of process activities, results related to specific process instances created during simulation, process results based on all process instances in a simulated process, and comparative analysis of the process results of two different simulations:

- **Activity cost analysis**—displays the average costs for the activity instances for each activity used in a process, including the average revenue, execution cost, idle cost, allocated resource cost, total cost, and profit.
- **Process instance resource allocation analysis**—displays the task instances involved in a specific process instance, including the resources allocated per task instance, the allocation duration, shortage, and cost.
- **Process cost analysis**—displays a list of process cases (alternative processing paths for the simulated process) and the average revenue, average execution cost, average idle cost, average allocated resources cost, and average profit for the process instances that match each case. This analysis also displays a weighted average of the analyzed costs across the various process cases. The relative weighting for each process case depends on its probability of occurrence.
- **Processes cost comparison analysis**—displays the process costs for two processes, including the revenue, execution cost, idle cost, allocated resource cost, total cost, and profit for each process. This analysis also shows the difference between the corresponding values of the two processes.

Real-time Data Utilization

WebSphere Business Modeler animates the flows in a step-by-step simulation allowing you to see real-time data. You can move from the modeling phase to the simulation phase by entering metric information (such as costs and time, etc.) into the model why it is being modeled in the Process Editor.

There is also a linkage between Business Modeler and the WebSphere Business Monitor (a separate IBM product) to retrieve actual analysis information for use as part of a simulation. The KPI's

modeled can also be deployed to the Monitor environment.

Model Distribution and Simulation on Enterprise Networks

Distribution of simulations is limited to users distributing screen captures.

Statistical Fit/Data Analysis

Business Modeler version 6.0 features a number of new distributions including Weibul, Continuous, Beta, Erlang, Johnson, and Triangular that support more statistical types of analyses and which are applicable across industries.

Capture and Reporting of Simulated Metrics

To support large simulations, Business Modeler includes usability and performance features that allow users to obtain simulation results quickly and store them in a relational database.

4. Business Process Methodologies

4.1 Business Process Methodologies

WebSphere Business Modeler's meta model was designed to support various methodologies with a strong slant on process improvement methodologies such as ABC (activity based costing) and Six Sigma. The product allows for modeling and the creation of supporting documents as well as the ability to associate any external document for additional review. Through the publishing capabilities users can comment and respond to comments to affect process change. Comments are organized based on actions needing to be performed.

IBM has significant practice methodologies from its services organizations ISSW and GBS. Those from IBM Software Service for WebSphere (ISSW) include Governance / Compliance: documenting the processes, activities, resources, and systems that are required for fiscal or regulatory compliance. At the minimum, this identifies the elements that enable compliance or characterize non-compliance; BPM Methodology and Approach: Helps clients new to BPM understand BPM as a discipline, the components of a successful lifecycle and provides ways to adopt it in their organization. For practitioners already engaged in BPM, this offering provides the ability to improve their techniques and methods using IBM's recommended practices. It provides a medium to incorporate the commonly used methodologies including: Six Sigma, LEAN, LOVEM, Kaizen, etc., with IBM's tools and offerings; and Risk Management Optimization.

IBM Global Business Service (GBS): LOVEM practice - Line of Visibility Enterprise Modeling (LOVEM) allows you to work with many other methods and approaches, such as TQM, Information Engineering, Strategic Planning, Data Modeling, Knowledge Management, and Organizational Analysis.

4.2 Six Sigma Support

IBM does not provide and specific models for Business Modeler to support Six Sigma, but IBM does support this methodology as indicated above in Section 4.1.

5. Report Generation and Document Management

WebSphere Business Modeler's report builder can automatically generate written, numerical, and graphical reports. These reports provide valuable guidance for process analysis and redesign, and deliver a detailed weighted-average analysis to validate and optimize the processes that have been defined.

Business Modeler also supports customization of reports. Users can design their own report templates, and copy the predefined report templates to a different report catalog and then customize

them using the Report Designer. Users can customize any element defined in a report template, as well as visual elements like headers and footers, charts, table of contents, and others. By using the Crystal Report linkage, users can also generate reports using a Crystal Report template, as well as combine business process information with other critical reports or supporting documentation that is relevant to a particular process or project.

Business Modeler can also generate formatted process documentation in PDF format.

As noted previously, Business Modeler can also publish models to the Web using the WebSphere Business Modeler Publishing Server option, which allows all project stakeholders to view and comment on these models using a standard Web browser (See Section 2.3 for more on WebSphere Business Modeler Publishing Server functionality).

6. Development Environment

6.1 Language of Tool

WebSphere Business Modeler is developed in Java.

6.2 Product Support, Maintenance, and New Versions

New versions are typically released on a yearly basis. IBM external Web sites provide information about new versions when they are announced, with announcement letters posted at IBM.COM/COMMON/SSI. High severity fixes are made available immediately, and then are subsequently batched together and distributed as Fix Packs.

IBM Web sites contain Information Centers, where users can view and download online documentation, tutorials and samples, including informative Redbooks and Redpieces. For WebSphere Business Modeler, this URL is: <http://www-306.ibm.com/software/integration/wbimodeler/library/>. Sample models can be found here, with instructions on how to import them into the Modeler tool.

7. Software Modeling and Code Generation

From an integration perspective, WebSphere Business modeler can generate the following:

- UML for Rational Software Architect Support
- BPEL for WebSphere Process Server Support
- BPEL for WebSphere Integration Developer
- FDL for WebSphere MQ Workflow Support

7.1 UML Model Generation

Users can import a WebSphere Business Modeler project into Rational Software Modeler or Rational Software Architect and work with it as a UML model. When used together with Rational Software Architect or Rational Software Modeler, users can create UML diagrams (e.g. Activity diagrams, etc) that use the models created in WebSphere Business Modeler.

7.2 BPEL Generation

WebSphere Business Modeler enables you to transform business process models to IT-level models. For example, you can export a Business Process Execution Language (BPEL) version of a business process model. You can then use WebSphere Integration Developer to import the BPEL model and use this as a basis to create an application. You can also export in Flow Definition Language (FDL) format. You can then import the FDL model into the WebSphere MQ Workflow Buildtime tool, which you can use to enhance the process definition so that the process can be automated in a

WebSphere MQ Workflow runtime environment.

8. Templates and Frameworks

A large number of sample processes are included as part of the WebSphere Business Modeler product. There are also a number of IBM partners creating new industry specific content that can be provided to Business Modeler customers.

Vertical: The IBM Industry Solutions team has created industry content that they use with customers to sell the overall value of modeling and which they provide to help jumpstart customer projects. In addition, IBM has industry content for Banking and Insurance, including for process, integration, and data models. In addition, eTOM and other process content is also currently under development.

Horizontal: Currently, IBM has developed some Order to Cash processes that are provided by their Partner Gateway tool (WebSphere Partner Gateway Allows users to connect to their global trading partners and other businesses via electronic data interchange (EDI). The product enables business communications by transforming data between ROD, XML and EDI formats.) Additional processes are provided by IBM partners.

Frameworks: Currently, no frameworks are provided as part of the Business Modeler toolset.

9. Systems Administration and Security

WebSphere Business Modeler provides various features and functions to support systems administration and security, including audit trails, version tracking and management, and check-in/check out capabilities.

Design collaboration is supported by the ability to view and comment on the models via a Web interface as well as the ability to get an audit trail of changes made to the models through the repository capabilities.

Business Modeler stores and retrieves projects and projects elements, which include all process and process elements. It also tracks and manages multiple versions of process elements but does not track or manage multiple streams. Annotations, in the form of comments, documentation, and attachments, can also be versioned. Versioning is performed at the project element level, which means it can retain changes to the attribute level of elements.

Check-in/check-out functionality is available with Business Modeler via the integration with CVS and Rational ClearCase change management systems. All changes can be tracked across versions.

10. Scalability

WebSphere Business Modeler can scale to support multiple users with the addition of the WebSphere Business Modeler Publishing Server, which provides a Web-based collaborative environment for viewing and annotating models. Modeler Publishing Server is basically a portal application that uses corporate LDAP servers. The Modeler Publisher Server is used to publish final models and work in progress for collaborative feedback.

11. Platforms

WebSphere Business Modeler runs on Windows 2000 and Windows XP. The repository can be setup on any platform supported by CVS or ClearCase change management systems.

12. Pricing

List pricing and support policies for Business Modeler are:

- ◆ WebSphere Business Modeler Basic US \$1250.00 per user
- ◆ WebSphere Business Modeler Advanced US \$9,950.00 per user
- ◆ WebSphere Business Modeler Publishing Server US \$52,645.00 per CPU
- ◆ WebSphere Business Modeler Publishing Edition (10 copies of Advanced, 1 of Publishing Server) US \$85,855.00 per CPU

Annual maintenance cost is 20% of the one-time-charge.

13. Company, Product Positioning, and Support

13.1 Company Background Information

Founded in 1991, IBM is a global software and IT services company, serving the needs of enterprises and institutions worldwide. IBM seeks to deliver clients success by enabling their own capacity to innovate, so that they may differentiate their organizations to create unique competitive advantage.

To help its clients achieve growth, productivity, efficiency, and the realization of greater value through innovation, IBM draws upon the world's leading systems, software and services capabilities to turn enterprises of all sizes, in every major industry, into on demand businesses. An on demand business is an enterprise that is integrated end-to-end, and, with its business ecosystems of partners, suppliers and clients, is able to manage that extended network dynamically to address new opportunities, respond to changes in demand or threats to its business, enhance flexibility, speed execution and ultimately achieve profitable growth.

In IBM's view, being on demand is the most comprehensive way to enable a company to innovate — and thus differentiate itself — consistently over time. IBM views enterprise innovation not only in terms of products and services, but across all dimensions of a business: its business processes, business model, management systems, culture, and role in society.

IBM offers an extensive line of BPM products designed to support organizations with all their BPM needs, from modeling, analyzing and optimization, to assembling, deploying, and managing their processes. These products are fully globalized and translated into 17 different languages.

13.2 Positioning

IBM has positioned WebSphere Business Modeler to support a range of enterprise architecture modeling and business process change activities, including:

- Enterprise architecture modeling and analysis
- Process modeling and analysis, redesign, and improvement
- IT/software development/automation activities
- Human performance improvement initiatives
- Development of management and measurement systems
- Detailed process modeling and analysis through simulation

WebSphere Business Modeler's extensive features make it well suited for conducting almost any kind of enterprise or business process modeling initiative. In addition, Business Modeler is well positioned because of its multi-faceted and intuitive user interface that allows users with different scopes of interest and expertise to build process models designed to meet a range of business objectives. In short, Business Modeler is a versatile tool that business users can use to model and simulate their

processes, and then seamlessly hand them off to IT for implementation.

13.3 Product Training

Business Modeler training is dependent on the user's level of skill and business need. Depending on the degree of function a user wishes to exploit, a user can create simple process maps and documentation without training. In addition, product documentation provides many tutorials to help users learn more sophisticated functions, for example, modeling geared toward running simulations or preparing processes that will be deployed to a runtime engine. For in-depth understanding of the product's full capabilities, classroom training is recommended.

The education team works closely with IBM product developers and IBM services organizations to ensure that the courses offered provide the most current technical and product information. IBM courses place an emphasis on the advanced knowledge and insight that only these sources can provide. In addition, IBM can draw from a deep pool of technical experience in the development of its courses, and pass that knowledge on to its students.

A selection of the WebSphere Business Modeler courses available from the IBM education team include:

- BI182: WebSphere Business Modeler for Business Process Management
- BI184: Fundamentals of WebSphere Business Modeler
- BI186: WebSphere Business Integration - Model MQ Workflow Using Workbench V4.2.4
- BI809: WebSphere Business Modeler V6 Hands-on Preview (self-paced)
- BI810: WebSphere Business Integration Workbench - Introduction
- BI811: IBM WebSphere Business Modeler V5.x to V6.0 Delta (self-paced)
- BI816: WebSphere Business Integration Modeler Workbench 4.2.4
- BI818: Fundamentals of IBM WebSphere Business Modeler V6
- BI819: Advanced Features of IBM WebSphere Business Modeler V6 (Self-paced)
- BI881: Analysis Using Multiple Statistical Distributions
- BI883: Process Project Management

The education URL is: <http://www.ibm.com/developerworks/websphere/education/enablement/>

13.4 Business Process Consulting

IBM Software Services for WebSphere (ISSW) is a team of highly skilled consultants with broad architectural knowledge, deep technical skills, best practices expertise, and close ties with IBM research and development labs. Available services include skills transfer, implementation, migration, architecture and design services, and customized workshops and education to fit an organization's business needs. The URL is: <http://www-128.ibm.com/developerworks/websphere/services/>

14. Case Study: Italian Auto Club

An Italian auto club that provides automotive services to companies and individuals wanted to improve the efficiency with which it brought new products and services to market. The company, along with their IBM business partner, used WebSphere Business Modeler to clearly define all the processes involved with new product introduction, focusing particularly on their customer care processes.

The company found benefit in using Modeler because the business owners were able to clearly describe the processes and provide their IT owners with a set of comprehensive business requirements by using IBM's tools and methodology. The company is currently in the middle of a project to revamp the critical processes and automate them with IBM Process Server.

15. Company Offices

IBM is a global company with offices and distribution partners everywhere. Visit ibm.com for specific locations.

Additional WebSphere Business Modeler Resources

WebSphere Business Modeler URL:

<http://www-306.ibm.com/software/integration/wbimodeler/>

BPM with SOA URL:

<http://www-306.ibm.com/software/info/bpmsoa/>

WebSphere Business Modeler Advanced V601 Trial Download and DEMO:

<http://www14.software.ibm.com/webapp/download/product.jsp?s=p&id=MMOY-633GQ7>

IBM SOA Business Catalog - Live with over 300 Components, Models, Extensions, & Services

<http://www.ibm.com/soa/soabusinesscatalog>