

# WebSphere Business Modeler V7.0

## Overview of what is new



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This presentation provides an introduction to WebSphere® Business Process Modeler V7.0.

The focus of this presentation is on new features and enhancements. If you are new to WebSphere Business Modeler then see the IBM Education Assistant modules for V6 or if you already have the product, work with the tutorials and examples available in the on-line help.

## Goals

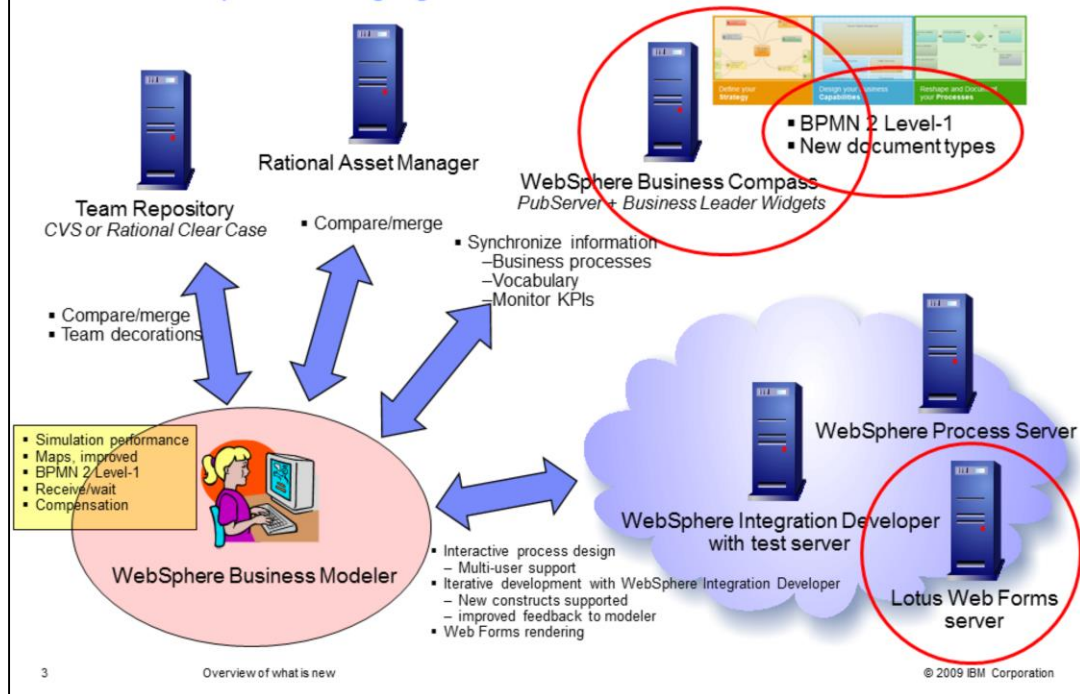
- Goal of this presentation
  - Introduce new features for WebSphere Business Modeler V7.0 in these areas:
    - Team Modeling
    - Simulation and analysis
    - New modeling constructs
    - Enhanced mapping support
    - BPMN2 level-1 rendering
    - Business process monitoring
    - Interactive process design improvements
    - Iterative development enhancements

WebSphere Business Modeler V7.0 provides an incremental step from the previous version.

The areas listed here are the areas where the enhancements and new features have been added into WebSphere Business Modeler to support key Business Process Management scenarios.

This presentation will take you through each of these areas of the product and discuss the new features.

## The landscape is changing



From this slide you can see that WebSphere Business Modeler can interact with many other software development tools and servers.

Not all of the tools that WebSphere Business Modeler interacts with are shown here. These are the areas that are relevant to the new features and enhancements in V7.

Starting at the lower left corner you see business modeler. The yellow box lists the features that are specific to WebSphere Business Modeler. The arrows point to the external systems. The first two, moving clockwise, are the source code control repositories that are supported. The labels on the arrows indicate that the area of enhancement has to do with compare, merge, and team decorations.

Moving clockwise, next is WebSphere Business Compass. WebSphere Business Compass is the new name for the WebSphere Business Modeler Publishing server and reflects the shift toward the Business Leader components. What is new for Modeler in this area is the ability to import BPMN 2 Level-1 business processes directly from the Compass repository.

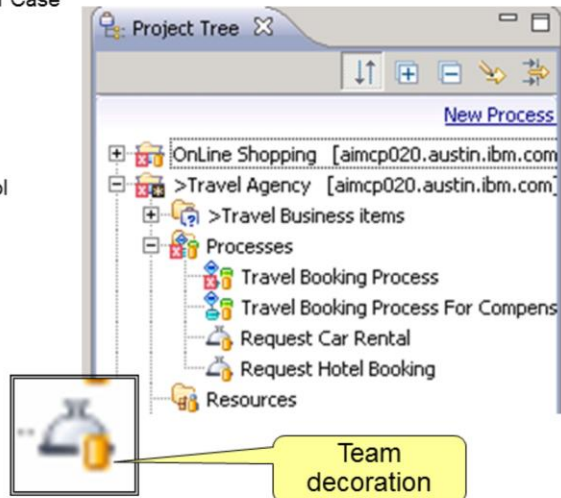
Continuing around the clock to the group in the lower right quadrant, you see there are several kinds of servers. The new server that is being introduced with V7 is the Lotus Web Forms server. This is an alternative to the Lotus Forms Viewer for rendering web forms associated with human-centric business processes. There are also improvements in the area of the interactive process design as shown by the arrow.

All of these areas will all be discussed further in this presentation.

## Support for team development

Process automation

- Team decorations for CVS and Rational® Clear Case
- Visual compare and merge in Modeler
  - .mar
    - modeler archive file
  - RAM
    - Rational Asset Manager
  - CVS and Clear Case
    - the two supported source code control systems
  - Business design files
    - From Compass



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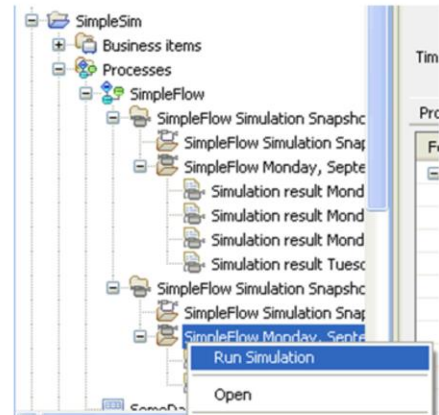
In the area of team development, there are two categories of changes. The first, known as team decorations, refers to the icon decorations that are associated with the modeling artifacts in the project tree. The decorations are specific to the source code control system being used. Shown here are the decorations used when CVS is the source code control system. There is another set of decorations for Rational Clear Case. The team decorations are in the lower right section of the artifact icon. Each decoration provides a visual cue to the state of the modeling artifact. The decoration shown in the inset indicates that the item is under CVS source code control. The greater-than symbol and the team decoration associated with the Travel Agency project indicate that something has changed in the artifact since it was checked out. It has been marked as changed or dirty. Details of the team decorations are covered in subsequent education modules and they are also described in the online documentation.

The second category is the area of compare-and-merge. When working with a team, the models are shared using various mechanisms. It can be a modeling archive file, Rational Asset Manager, one of the supported source code control systems, or a business design file from Compass. Whatever mechanism is used, the persisted model will diverge from the model currently being worked on. With V7, when a model is imported using any of these mechanisms, the visual compare-and-merge wizard is invoked. This allows you to see the differences and choose which changes to merge into your working copy, or to reject.

## Simulation improvements

### Process improvement

- Process Improvement scenario
- Manage larger models
  - Engine performance
  - Dynamic analysis preprocessing performance
  - Simulation without the simulation editor
    - To reduce memory and cpu requirements
- The new *enhanced Map* can be used in a simulation



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In the area of model simulation, the changes are not as visible as changes in other areas. The focus in this area is on performance and scalability.

With WebSphere Business Modeler V7 you can run larger models faster, using less memory and processor capacity.

You can now run long simulations with more than 5,000,000 process instances.

Simulation execution time has been dramatically reduced.

Dynamic analysis preprocessing times are greatly improved especially when using DB2®.

You can now start a simulation without having the process itself opened within the simulation profile.

This reduces memory and helps speed up simulation in very large models.

The map element, for mapping disparate data types, is also improved for WebSphere Business Modeler V7 and it can be used in your simulations.

It is a great way to verify the correctness of the map.

The screenshot shows the IBM Business Modeler interface. At the top right is the IBM logo. The main title is "New constructs". A pink callout box says "Hand off to IT". Below this is a list of new constructs:

- Receive in mid process
  - Wait for input from outside the process
  - Correlation key can be specified in modeler or it can be deferred to WebSphere Integration Developer
- Endpoint reference type
  - Used with *asynchronous one-way* calls
    - For the callback
- Compensation
  - Model 'undo' operations

A green box highlights two additional constructs:

- Collaboration scopes
  - A WebSphere Integration Developer concept
- Case handling
  - Add a document or image to a case folder which is used as input to a task or process

On the right, there are two panels. The top one is a tree view showing "Activities" with sub-items: Task, Human Task, Receive Task (highlighted), Business Process, and Process. A tooltip for "Receive Task" says: "Identify a place where the process needs to wait for data from an external source." The bottom panel is titled "Compensations" and lists: Intermediate Event, Activity, and End Event. Below these is a dialog box titled "Import Technical Types" with the instruction "Select a Predefined Technical Type". It explains that imported types are added to a catalog. A table shows "Predefined Types" with checkboxes for "Endpoint reference type (ws-addr-2005)" and "Case folder type" (highlighted).

The area called 'new constructs' deals with modeling elements that are used when modeling for implementation.

The mid-process receive gives you the ability to model interactions with processes or services where you need to wait for a response. The correlation key is the unique identifier used by the external system to respond back to the running business process. For the special case where a one-way asynchronous call is used, there is a special data type called the 'endpoint reference'. The 'endpoint reference' provides the return address in the message so the caller can perform the callback.

Compensation provides the capability of undoing steps in a business process when something goes wrong. The compensation pattern is fully BPMN 2.0 compliant. The 'end event' triggers the compensation. The 'intermediate event' marks the task that needs to be undone. And the 'activity' is the task that is invoked to perform the undo action.

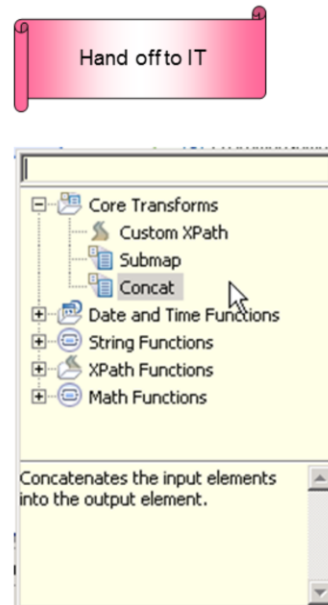
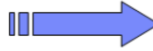
The last two features - highlighted in the green box - are actually separate features that are designed to work together in a scenario known as 'Case Handling'.

With case handling, information can be added to a common folder that is passed from task to task. There is special data type called the 'Case folder type' that is available for this purpose. Another key feature of the case handling scenario is the ability of the person working the case to redirect the process flow dynamically. The 'collaboration scope' provides the boundary demarcating the part of the process flow that can use this dynamic collaboration feature.

These new constructs provide the business modeler with modeling patterns that are already available in WebSphere Integration Developer. These patterns can now be modeled using WebSphere Business Modeler, allowing for a smoother transition from design to implementation.

## Enhanced mapping support

- Support for *Global* reusable maps
- More mapping functions
- Imported to WebSphere Integration Developer as an XML data map
- Same as what is provide in WebSphere Integration Developer
- Can be used in simulations



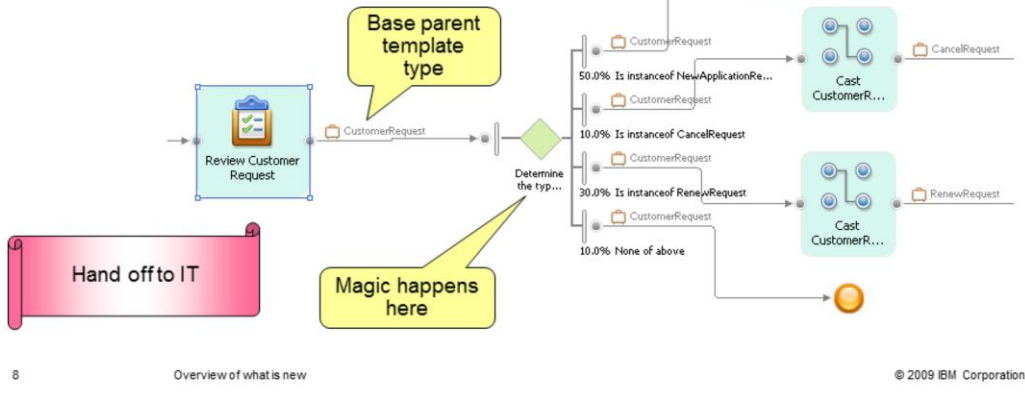
In previous versions of WebSphere Business Modeler, a map element was transformed into a BPEL assign when it was imported into WebSphere Integration Developer. With WebSphere Business Modeler V7 an XML data map is created instead.

The new enhanced maps provide more mapping functions, the ability to create global maps and use them in other maps, and the ability to map arrays.

The new maps are fully compatible with WebSphere Integration Developer and can be easily used in modeling simulations.

## Multi-cast support

- Given a hierarchy of data types (templates)
  - Direct the flow to the proper sub-type based on the concrete business item flowing through the process



Multi-cast support provides the ability to use a hierarchy of types to route the business process flow to the proper sub-type based on the content of the message.

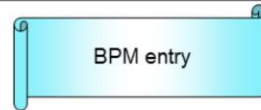
In the example shown here, the parent type is 'CustomerRequest' and there are three sub-types. 'CancelRequest', 'NewApplicationRequest', and 'RenewRequest'.

The Review Customer Request task will create one of the sub-types. At modeling time, you do not really want to model four different outputs. It is much better to use the generic parent type as the output, and then in the decision node, route the request to the proper map for conversion to the sub-type.

There are two things that permit this kind of modeling. First there is a new predicate in the decision gateway called 'is-instance-of', which lets you route based on the sub-type. Second there is the map, which lets you 'convert' from the parent type to the sub-type.



## BPMN2 2.0




- Business Process Modeling Notation V2.0
- Standard that is being accepted by the industry
- IBM software tools moving in this direction
  - Basic notation introduced with previous versions of WebSphere Business Modeler
  - Being expanded with V7.0
  - Synchronization with WebSphere Business Compass
    - Compass = Publishing Server + Business Leader Design

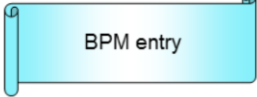
Business Process Management Notation 2.0 is the standard modeling notation that IBM is moving to for business modeling tools. The move is incremental. The first step was to allow the basic notation to be used in WebSphere Business Modeler. In V6.2 there is a switch so you can display the model in the classical modeler style or the new BPMN 2.0 style.

The next step was to introduce the business leader widgets in the WebSphere Business Modeler Publishing server as a feature pack.



The business leader widgets provide the new editing and document management environment for BPMN 2.0. With version 7, the publishing server is being renamed to the WebSphere Business Compass and the business leader widgets are being expanded to support a whole new range of capabilities. To learn more about WebSphere Business Compass see the module on WebSphere Business Compass.

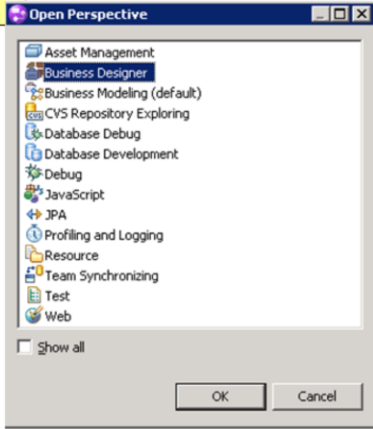


## BPMN2 level-1 rendering



- Level-1
  - Descriptive modeling
    - Start/stop, simple decision, activity
  - Available in WebSphere Business Modeler V7.0
    - Business Designer perspective
- Level-2
  - Analytical modeling
  - More details and specifications but still not executable
- Level-3
  - Executable modeling

 This is where IBM is today 



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There are three levels of BPMN 2.0; descriptive, analytical, and executable.

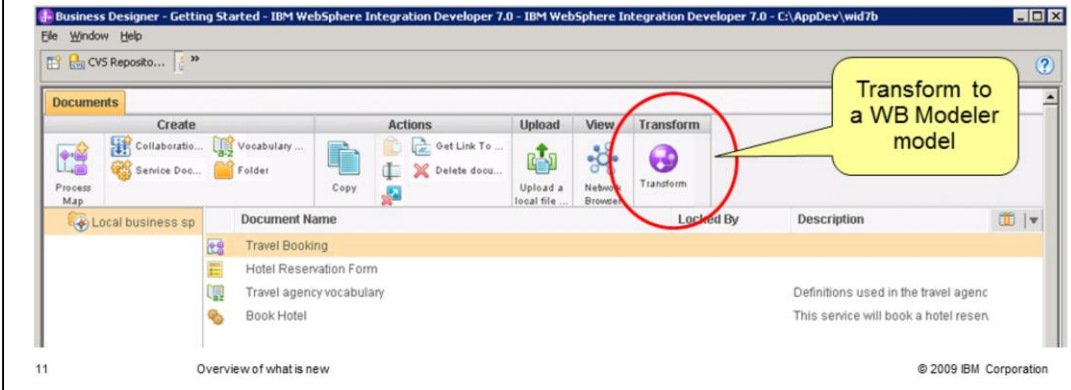
The first level, descriptive modeling, is available today with WebSphere Business Modeler V7 and WebSphere Business Compass V7.

WebSphere Business Compass is the primary environment for collaborative development of the business models and supporting documents. This environment is available in WebSphere Business Modeler V7 from the 'Business Designer' perspective.

## Business Design perspective

BPM entry

- A subset of what is available in *WebSphere Business Compass V7.0*
  - No Strategy or Capability maps
- Extension of the BPMN 2.0 editor delivered in Publishing Server 6.2 feature pack

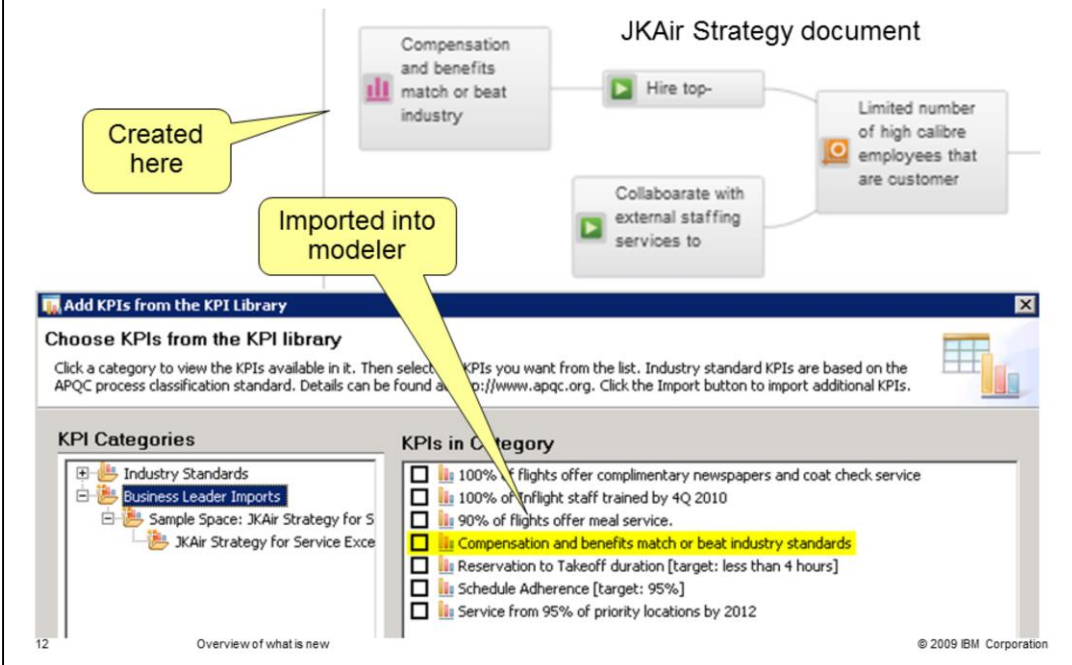


Shown here is the BPMN 2.0 modeling editor as it looks in the 'Business Designer' perspective. It is a subset of WebSphere Business Compass. The important things to note here are the absence of the strategy and capability documents and the addition of the transform button.

Only the documents that pertain to business process modeling are available in the Business Designer perspective.

The BPMN 2.0 models are different from the classical WebSphere Business Modeler models. There is not a direct 1-to-1 relationship, therefore a transformation step is required when moving a BPMN 2.0 model into WebSphere Business Modeler. If the BPMN 2.0 model is imported from Compass directly into Modeler, the transformation is done as part of the import. If the BPMN 2.0 model is created in the Business Designer perspective, the transform button will transform the model and put the results in your Business Modeler perspective as a project.

## Business measures from Compass



WebSphere Business Modeler supports creating key business measures for Monitor models.

With WebSphere Business Compass, business measures are also created as part of the strategy document.

WebSphere Business Modeler V7 provides the capability of importing the business measures from Compass into a KPI library.

Measures in the KPI library are then associated with elements of any model. When the model is exported to WebSphere Integration Developer using the option to generate the Monitor model, these business measures are used to create the key performance indicators that are a part of the monitoring model.

## Interactive process design



- All of the new modeling constructs are fully supported
  - Case handling, collaboration scope, enhanced maps, mid-process receives, compensation
- Improvements
  - Visual stepping after the modeler has been closed
    - The modeler is no longer an active client after the process is deployed and started.
  - New widgets and widget layout for the *Visual Stepping*
  - Improved flexibility when using laptops
    - Switching from wireless to direct connection no longer a problem
    - Removed the dependency on the modeler client


With the interactive process design feature of WebSphere Business Modeler you can create a human centric business process model and run it directly on a WebSphere Process Server. This feature was introduced in WebSphere Business Modeler V6.2.

With V7 there are new Visual Stepping widgets and layouts that are more efficient and take advantage of the new V7 Business Space framework.

Improvements have also been made in the way WebSphere Business Modeler interacts with the Business Space. In V7 the modeler is no longer an active client. This means the modeler can be shutdown once the visual stepping session has started. This also allows for more flexible client topologies where the client is a laptop that is roaming around. You can now start your session using your laptop in one conference room and easily move to another location without disrupting your visual stepping session.

## Iterative development

### Process automation

- The feedback loop to modeler is being improved
  - Business items and Interface definitions changed in WebSphere Integration Developer can be factored back into the model
    - Uses visual compare and merge
    - Converted to Business Service Objects and Business Services
- The new constructs being introduced participate fully in the model synchronization (compare/merge) process
- Modeler annotations get carried forward as BPEL sticky notes 
- Support for schema facets
  - Contain restrictions for xsd elements
  - Used when creating the Lotus Forms for the human tasks



Iterative development is an application development style where the application is built in cycles, composed of several phases, analysis, design, implementation, test, and deployment.

It starts at the top with analysis, each phase feeding into the next. As the application develops there are decisions made in the intermediate phases that effect the previous phase and therefore must be communicated back up the chain.

With WebSphere Business Modeler V7 the feedback from the implementation model in WebSphere Integration Developer, to the design model in WebSphere Business Modeler, has been improved. Using the model synchronization feature, changes made in WebSphere Integration Developer which effect the design model in WebSphere Business Modeler can be captured in a 'change analysis report'. Using the 'change analysis report' in Modeler, the business analyst can use the visual compare and merge feature to accept or reject changes to interfaces or business objects that were made during the implementation phase.

With version 7, Modeler has added several new modeling constructs. These new constructs participate fully in the model synchronization process.

When creating models it is often desirable to annotate the model with notes that help clarify certain aspects of the model. In Modeler, these notes are called annotations. In WebSphere Integration Developer there is a similar feature called 'sticky notes'. Now in V7 the annotations in Modeler are transformed to the 'sticky notes' when imported into WebSphere Integration Developer.

There is one more feature that has been added to help with iterative development. Often the XML schema, which defines the data structures and interfaces, is not created by the business analyst or the implementation developer. It comes from an architecture group. With XML schema, the elements can be defined using restrictions. The restrictions qualify the data beyond the basic data types. They are used to define acceptable values for XML elements or attributes. Restrictions on XML elements are called facets.

When a schema with facets is imported into WebSphere Business Modeler V7, the restrictions are used in the Lotus Form to provide robust type checking when entering data into the form.

## Summary

- Changes and enhancements to support key BPM scenarios
  - Team modeling
  - Simulation and analysis
  - New modeling constructs
  - Enhanced mapping support
  - BPMN2 level-1 rendering
  - Interactive process design
  - Iterative development

WebSphere Business Modeler V7 provides many new features and enhancements to support key business process management scenarios.

The improvements are in many areas across the product, from modeling with teams to iterative development.

Some major areas of change in this release are:

- Enhancements to support large scale modeling efforts across an organization.
- Visual comparison of process models to manage and control changes made to process models.
- New compare and merge functions for comparing models from all of the import modes.
- Ability to import business measures from WebSphere Business Compass into the existing KPI library.
- Ability to view status information of a project or project element in the team repository through visual indicators in the Project Tree.
- Transformation of artifacts from WebSphere Business Compass to WebSphere Business Modeler format.
- Enhancements to iterative development and traceability.

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