

Oracle® Fusion Middleware

Reference Process Models User's Guide for Oracle Application
Integration Architecture Foundation Pack

11g Release 1 (11.1.1.9.0)

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Describes the modeling approach and methodology used to create AIA reference process models. Describes symbols and annotations used in delivered reference process models. Provides an overview of the modeling tool and viewer.

Oracle Fusion Middleware Reference Process Models User's Guide for Oracle Application Integration Architecture Foundation Pack, 11g Release 1 (11.1.1.9.0)

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Preface

Welcome to the *Reference Process Models User's Guide*. This document describes the modeling approach and methodology used to create Oracle Application Integration Architecture (AIA) Foundation Pack reference process models. It also describes the symbols and annotations used in delivered reference process models and provides an overview of the modeling tool and viewer.

Audience

This document is intended for users of the reference process models delivered with Oracle AIA Foundation Pack.

Oracle AIA Guides

In addition to this *Reference Process Models User's Guide*, we provide the following Oracle AIA guides for this 11.1.1.9.0 release:

- *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Concepts and Technologies Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Infrastructure Components and Utilities User's Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Migration Guide for Oracle Application Integration Architecture*
- *Oracle Fusion Middleware Product-to-Guide Index for Oracle Application Integration Architecture Foundation Pack*

Related Guides

The following guides are relevant to Oracle AIA development activities and are provided as a part of the overall Oracle Fusion Middleware 11.1.1.9.0 documentation library:

- *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite*
- *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*

- *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*
- *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*

Documentation Accessibility

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

What's New in This Guide for Release 11.1.1.9.0

This guide has no updates for Release 11.1.1.9.0.

For a list of known issues (release notes), see the "Known Issues for Oracle SOA Products and Oracle AIA Foundation Pack" at

<http://www.oracle.com/technetwork/middleware/docs/soa-aiafp-knownissuesindex-364630.html>.

Oracle Business Process Modeling and Analysis Overview

This chapter provides an overview of the Oracle Application Integration Architecture (AIA) Reference Process Models (RPM) that are delivered with an Oracle AIA release, and describes our understanding of Business Process Management (BPM).

For a complete list of the models delivered with an Oracle AIA release, see My Oracle Support article ID 824633.1 entitled *Oracle Application Integration Architecture 2.0.1 - 11gR1x: List of Delivered Reference Process Models*:

<https://support.oracle.com/epmos/faces/DocumentDisplay?id=824633.1>.

This chapter includes the following sections:

- [Our Understanding of Business Process Management](#)
- [What is the Challenge?](#)
- [What is the Answer?](#)
- [What is a Business Process?](#)

1.1 Our Understanding of Business Process Management

BPM includes a set of activities that organizations perform to either optimize their business processes or adapt them to new organizational needs.

Important elements include business process modeling and analysis (BPA), orchestration (BPEL), and business activity monitoring (BAM).

This guide focuses on the BPA element, outlines Oracle's approach and methodology, and describes the business process models delivered with an Oracle AIA release.

1.2 What is the Challenge?

Coordinating business processes is not simple or linear as might be portrayed in the world of traditional task management.

Business is constantly changing, messy, unordered and chaotic; work activities and tasks have to be processed in parallel.

Coordination requires the spawning and asynchronous execution of nested tasks and parallel activities.

And it is not just tasks that occur in parallel, but decision-making, distributed computation and the movement of information within the company and across the value chain.

1.3 What is the Answer?

The best way to understand how your business is running is to understand your processes.

The first step in doing that is to model your business processes.

Oracle has created and delivered business process models for those processes supported by Oracle AIA releases. These business process models will enable you to see and understand how Oracle AIA provides application integration solutions for your business processes.

1.4 What is a Business Process?

A business process is a set of coordinated tasks and activities, involving both human and system interactions, that will lead to accomplishing a set of specific organizational goals. Characteristics of business processes include the following:

- Large, complex, long running.
- Widely distributed and customized.
- Dynamic.
- Automated.
- Both business and technical in nature.
- Cross boundaries within and between businesses.
- Dependent on and supportive of human intelligence and judgment.
- Difficult to recognize.

Modeling Approach and Methodology

This chapter discusses Oracle's approach to business process modeling and analysis, and explains the methodology and organization of process models.

This chapter includes the following sections:

- [Oracle's Approach to Business Process Modeling and Analysis \(BPA\)](#)
- [Methodology and Organization](#)

2.1 Oracle's Approach to Business Process Modeling and Analysis (BPA)

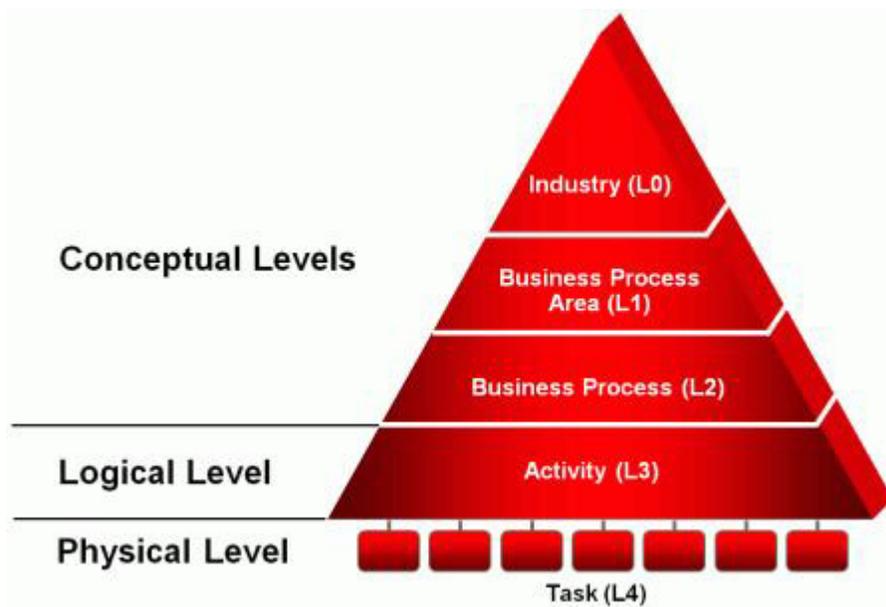
Oracle combines the business view of the business analyst with a glimpse of the technical view of the technical analyst. A standard modeling method is used with technical artifacts added to the models at the lowest level of decomposition.

2.2 Methodology and Organization

Oracle uses accepted standard modeling methods and notation and adds Oracle-specific information on the most detailed level of the models. Oracle models:

- Use horizontal, role-based swimlane workflow modeling method based on the Rummler-Brache diagramming technique.
- Are BPMN-compliant at the lowest level.
- Include both human and system lanes.

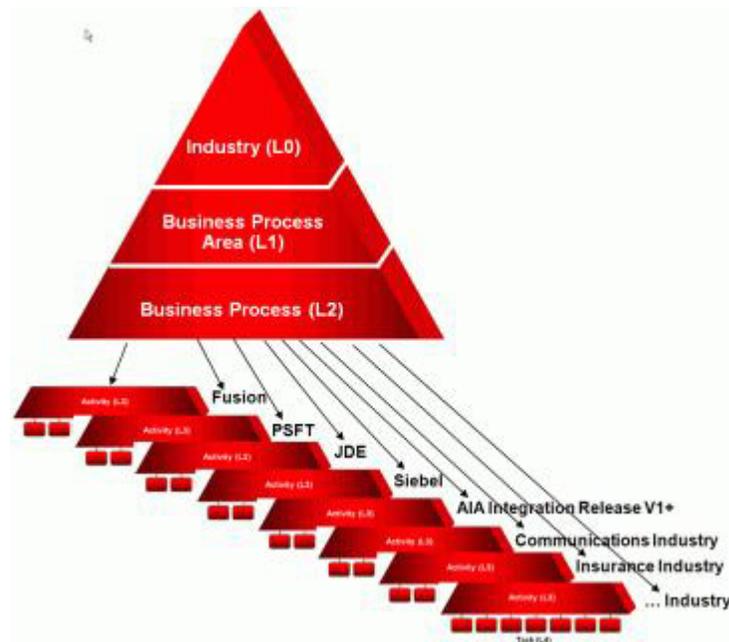
Oracle has organized its model content using four levels of hierarchical decomposition as shown in [Figure 2-1](#).

Figure 2–1 Hierarchical Organization of Model Content

- The top three levels are conceptual.
- The conceptualization of SOA services can be observed on the third level.
- The fourth level is implementation-specific.
- Process integration points and AIA artifacts appear on lowest level.

Oracle has created many sets of the lowest level models that correspond to particular implementation solutions, as shown in [Figure 2–2](#). AIA provides solutions that join together pieces of application functionality between two or more Oracle product families.

Oracle has also created industry-specific variations of their models for many of the industries that Oracle supports.

Figure 2–2 Multiple Sets of Implementation-Specific Models

Model Types

Oracle creates and delivers the following types of models:

- Reference Process Models (RPMs): horizontal, functionally scoped business process models that depict all of the aspects of the processes supporting a particular function (Marketing, Sales, and Order Fulfillment, for example).
- Industry Reference Process Models: industry-specific business process models that combine industry processes with relevant horizontal processes and variations of horizontal processes.
- Composite Business Flows: end-to-end processes that are comprised of parts of several functional business processes (Order to Cash, Procure to Pay, and Design to Release, for example).

2.2.1 Authoritative and Guiding Sources for Industry Process Best Practices

The TeleManagement Forum enhanced Telecom Operations Map® (eTOM®) was used as a reference to frame the conceptual levels of the Communications industry business process models.

Oracle continues to determine current external best practice and governing sources and uses them as references to frame and influence our business process models, including:

- Supply Chain Council (SCOR).
- Value-Chain Group (VCG).
- Federal Enterprise Architecture Business Reference Model (FEA).
- Other external industry best practice sources.

Modeling Standards and Notation

This chapter includes examples of a model for each level as well as a list of the symbols and annotation used on each level.

This chapter includes the following sections:

- [Level 0](#)
- [Level 1](#)
- [Level 2](#)
- [Level 3](#)
- [Level 4](#)
- [Functional Allocation Diagram](#)

3.1 Level 0

[Figure 3-1](#) is an example process model for level 0.

Figure 3-1 Sample Model: Level 0

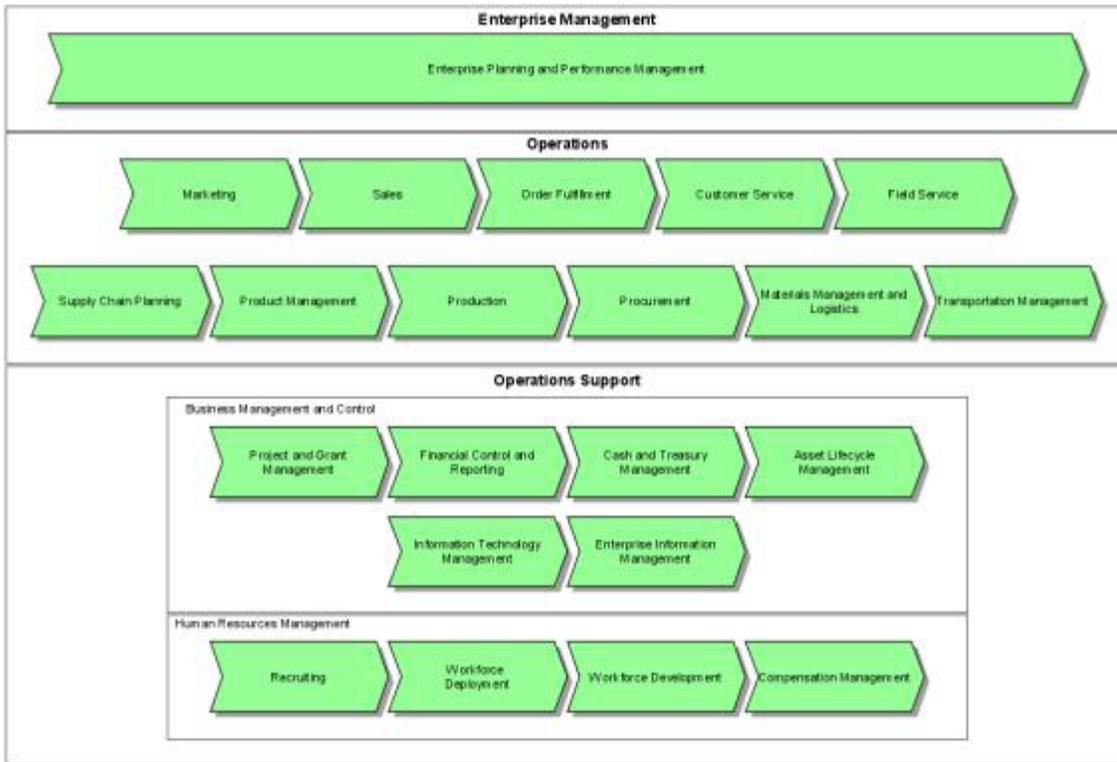
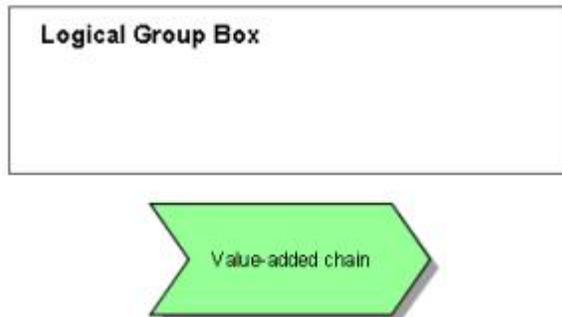


Figure 3-2 shows the symbols and annotation used on level 0.

Figure 3-2 Allowable Symbols: Level 0



3.2 Level 1

Figure 3-3 is an example process model for level 1.

Figure 3-3 Sample Model: Level 1

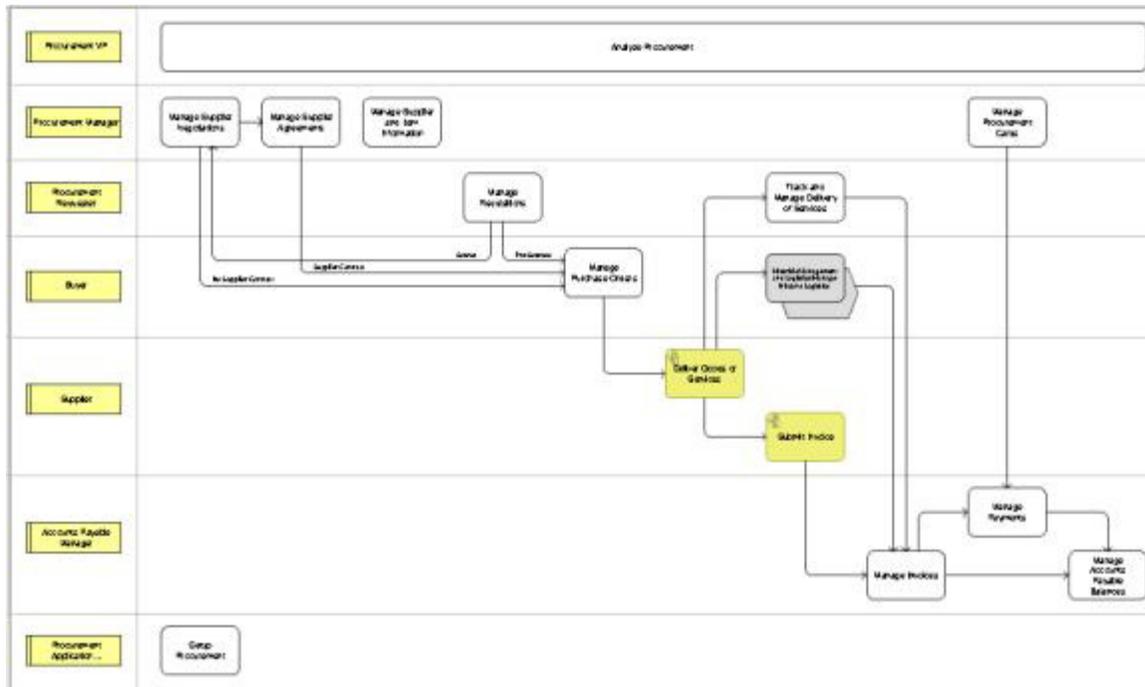
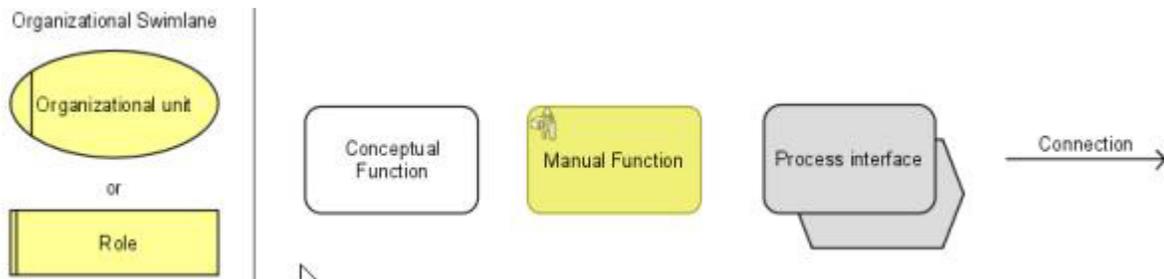


Figure 3-4 shows the symbols and annotation used on level 1.

Figure 3-4 Allowable Symbols: Level 1



3.3 Level 2

Figure 3-5 is an example process model for level 2.

Figure 3-5 Sample Model: Level 2

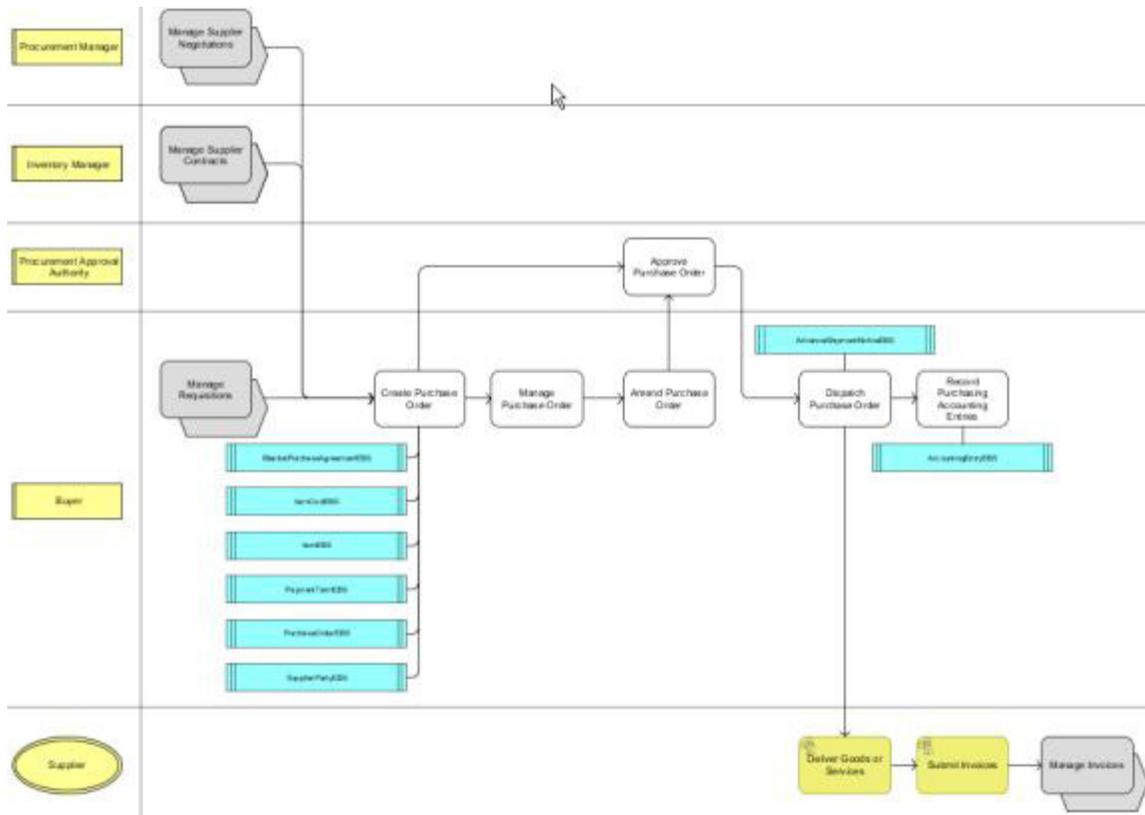
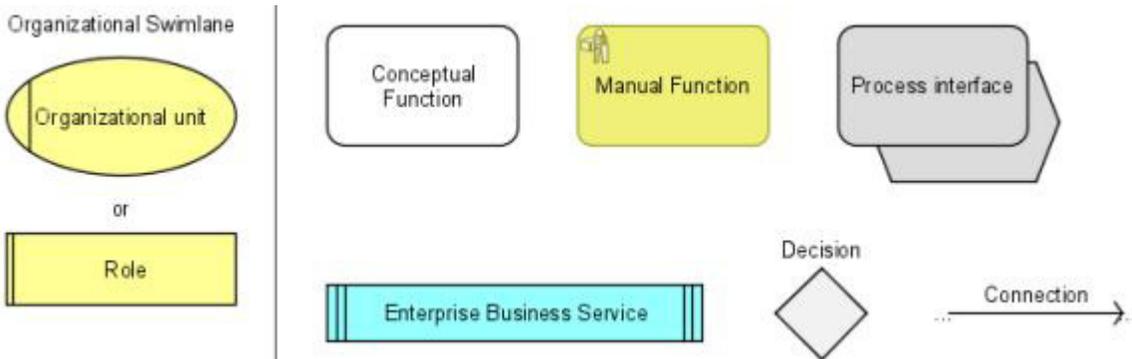


Figure 3-6 shows the symbols and annotation used on level 2.

Figure 3-6 Allowable Symbols: Level 2



3.4 Level 3

Figure 3-7 and Figure 3-8 show an example process model for level 3.

Figure 3-7 Sample Model (1 of 2): Level 3

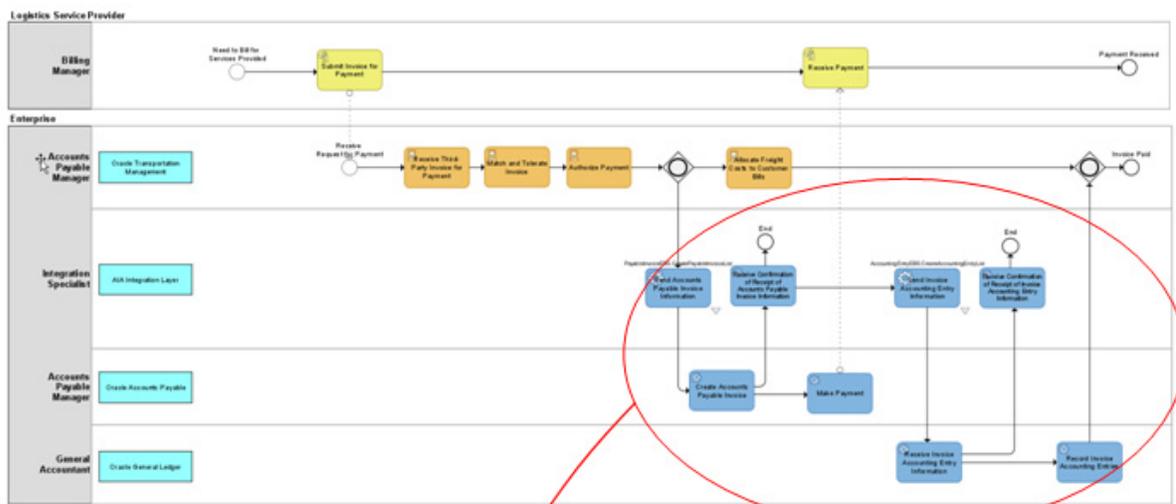


Figure 3-8 Sample Model (2 of 2): Level 3

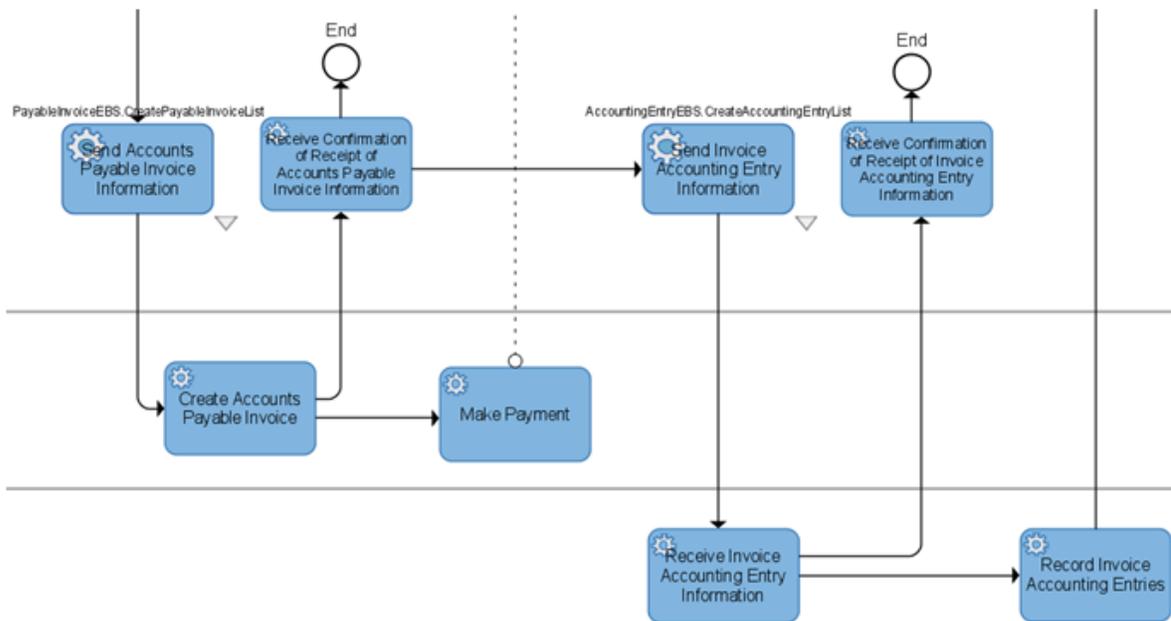
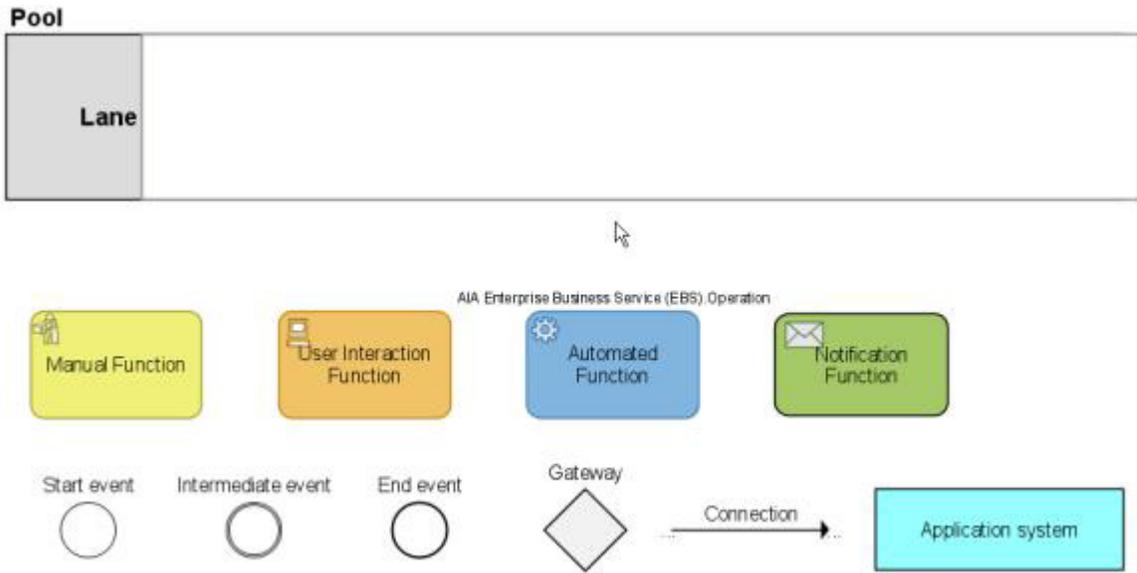


Figure 3-9 shows the symbols and annotation used on level 3.

Figure 3–9 Allowable Symbols: Level 3



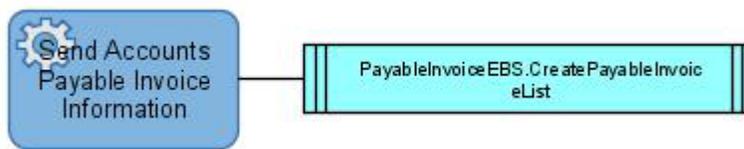
3.5 Level 4

Level 4 is not a model level. It is the tasks that appear on the models at level 3; level 4 is the leaves at the bottom of the branch of the tree.

3.6 Functional Allocation Diagram

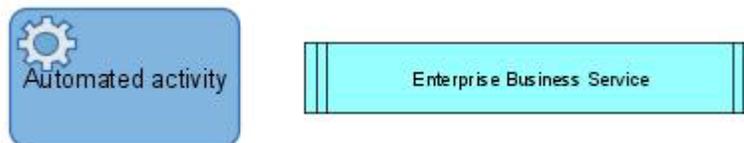
Like level 4, the Functional Allocation Diagram (FAD) is not a model level. The FAD diagram is used to depict the Enterprise Business Services and operations that are used by AIA for a particular integration. [Figure 3–10](#) is a sample FAD diagram.

Figure 3–10 Sample FAD Diagram



[Figure 3–11](#) shows the allowable symbols.

Figure 3–11 Allowable Symbols: FAD

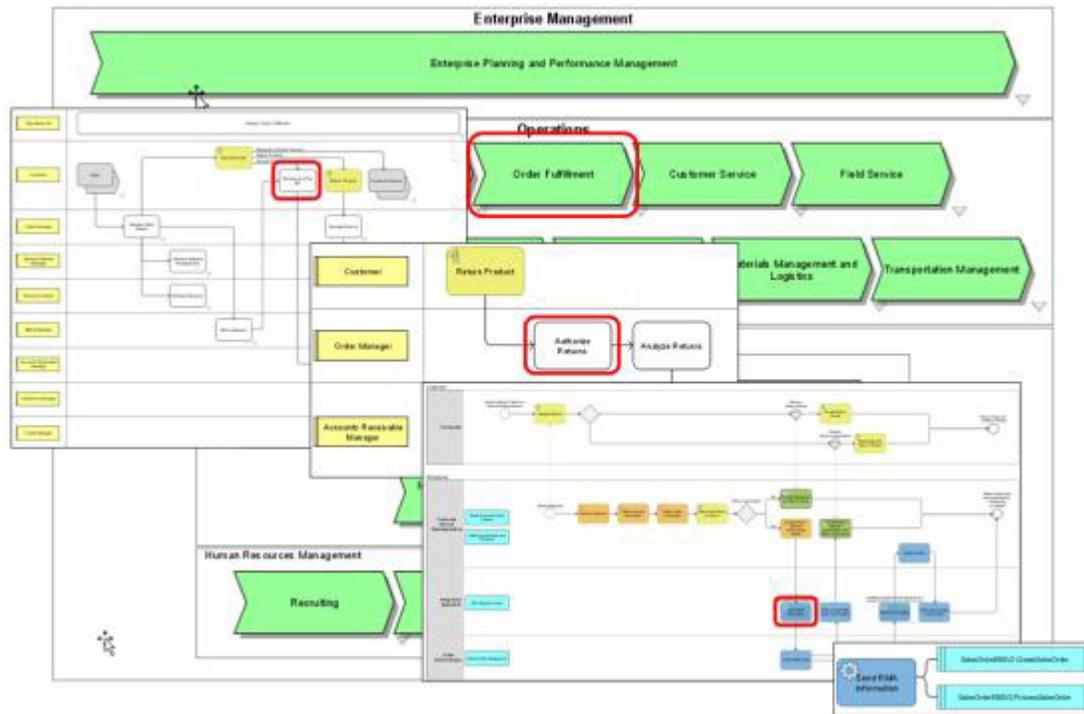


Functional and Composite Business Process Views

Our reference process models depict functionally scoped business processes.

Figure 3–12 depicts a functional business process view drilldown for all four levels (Order Fulfillment) as well as the FAD.

Figure 3–12 Functional Business Process View Drill-down, All Four Levels (Order Fulfillment) and the FAD



Our composite business flows depict end-to-end processes that span portions of several functional business processes (Order to Cash, Procure to Pay, and Design to Release, for example).

Figure 3–13 depicts the composite business process view drill-down at level 0 (Order to Cash).

Figure 3–13 Composite Business Process View Drill-Down, Level 0 (Order to Cash)

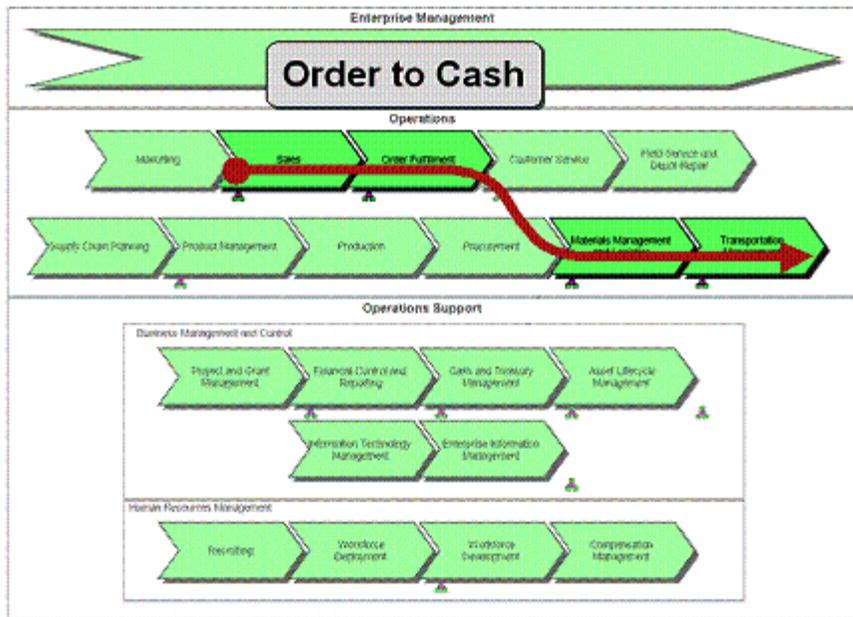
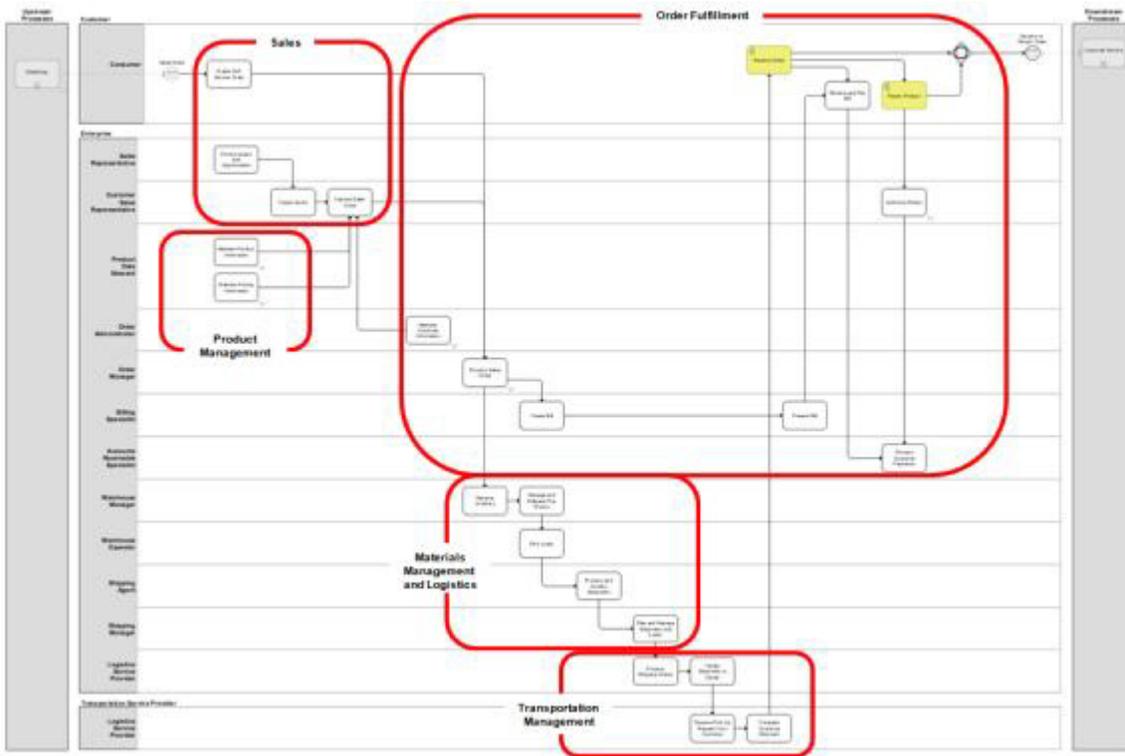


Figure 3–14 depicts the composite business process view drill-down at level 1 (Order to Cash).

Figure 3–14 Composite Business Process View Drill-Down, Level 1 (Order to Cash)



Modeling Tool and Viewer

This chapter provides an overview of the modeling tool and viewer, and describes the modeling tool and viewer user experience.

This chapter includes the following sections:

- [Overview of the Modeling Tool and Viewer](#)
- [Describing the Modeling Tool and Viewer User Experience](#)

4.1 Overview of the Modeling Tool and Viewer

The modeling tool is our own Oracle Business Process Analysis (OBPA) Suite. The components in the OBPA Suite include:

- **Business Process Architect**
Standards-based tool for process modeling. Uses various standards-based notations and templates such as BPMN, EPC, and so on.
- **Business Process Repository Server**
Server component for sharing the process repository across multiple users in a collaborative environment.
- **Business Process Simulator**
Tool for simulating the process models based on a set of discrete events to do "what if" analysis.
- **Business Process Publisher**
Publishes process models to a large audience outside of the core team designing the process models.
- **Oracle Extensions for SOA**
Allows bi-directional integration with Oracle SOA Suite.

The Business Process Architect and the Business Process Repository Server components are used to create the models. The Business Process Publisher component is then used to publish the models in HTML format. Oracle provides the Business Process Publisher along with the Oracle AIA release media pack for you to be able to view the published set of models. Once installed and implemented, you can allow business and technical analysts in your entire enterprise to view the models with a web browser. The published models include hyperlinks to entries in the Oracle Enterprise Repository (OER) where technical details are described for the AIA integration artifacts.

4.2 Describing the Modeling Tool and Viewer User Experience

Following is a walk through of the published model experience.

Log on to the Business Process Publisher:

Your implementation specialist will provide a URL to the logon page, as shown in [Figure 4-1](#).

Figure 4-1 Business Process Publisher Logon Page



Enter the following information

User name: *AIA*

Password: *Welcome1*

Choose a language:

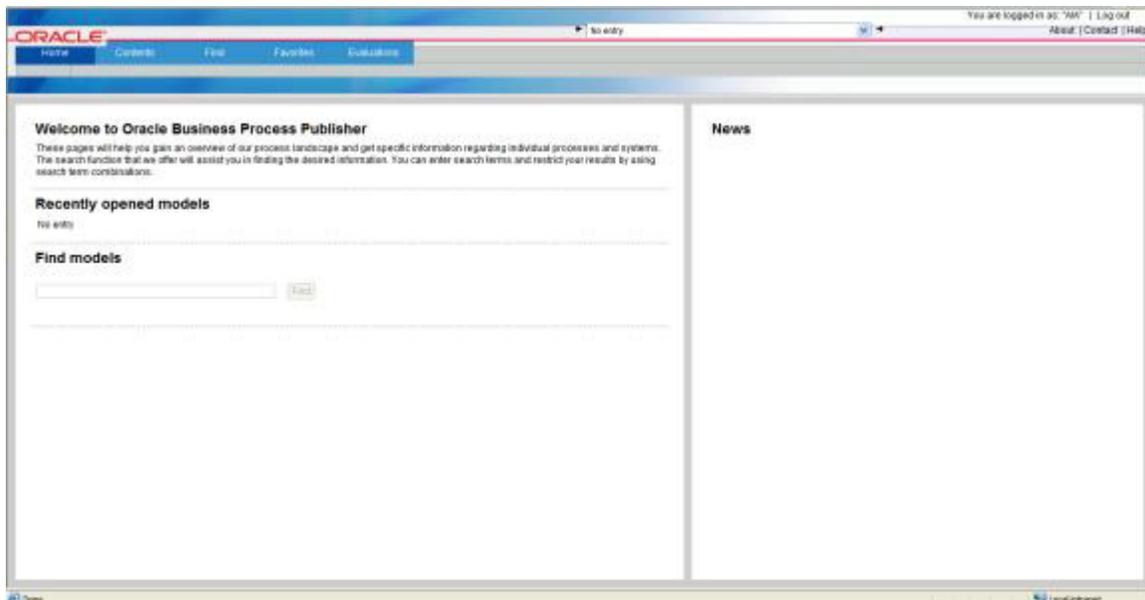
Select the required language from the list, as shown in [Figure 4-2](#)

Figure 4–2 Business Process Publisher Language Selection

Note: Only available in English at this time.

Access Business Process Publisher homepage:

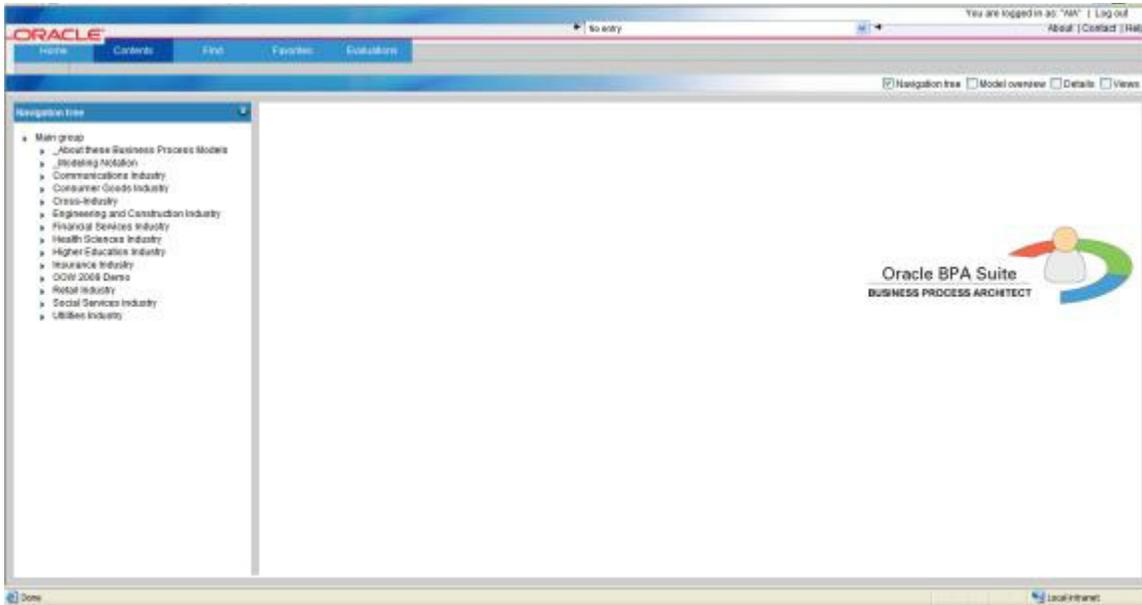
The homepage is displayed, as shown in [Figure 4–3](#), after you select your language and click OK.

Figure 4–3 Business Process Publisher Homepage

Choose Contents module:

Click the Contents tab, which is located at the top of your homepage, as shown in Figure 4-4.

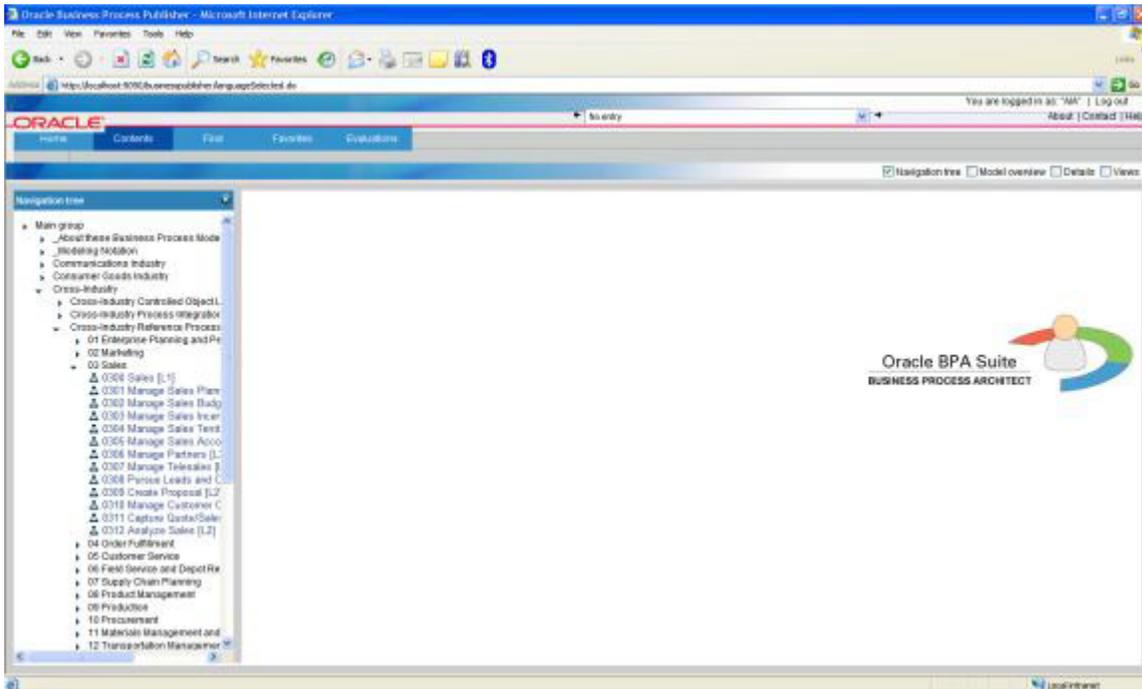
Figure 4-4 Contents Module Selection



Expand groups in Navigation tree:

Click the (+) icon in the Navigation Tree section of the page, as shown in Figure 4-5.

Figure 4-5 Expanded Groups in the Navigation Tree



Navigate to desired model and click it:

Model is displayed in model pane.

View model attributes in Model Information pane.

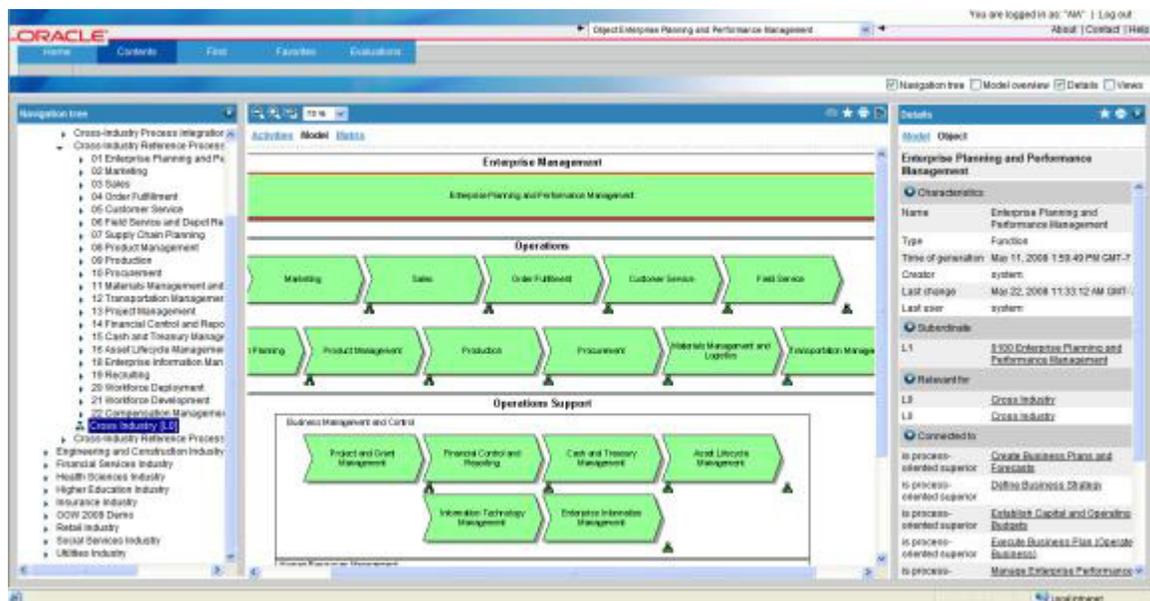
Use view controls, shown in [Figure 4-6](#), to zoom in and zoom out.

Figure 4-6 View Controls



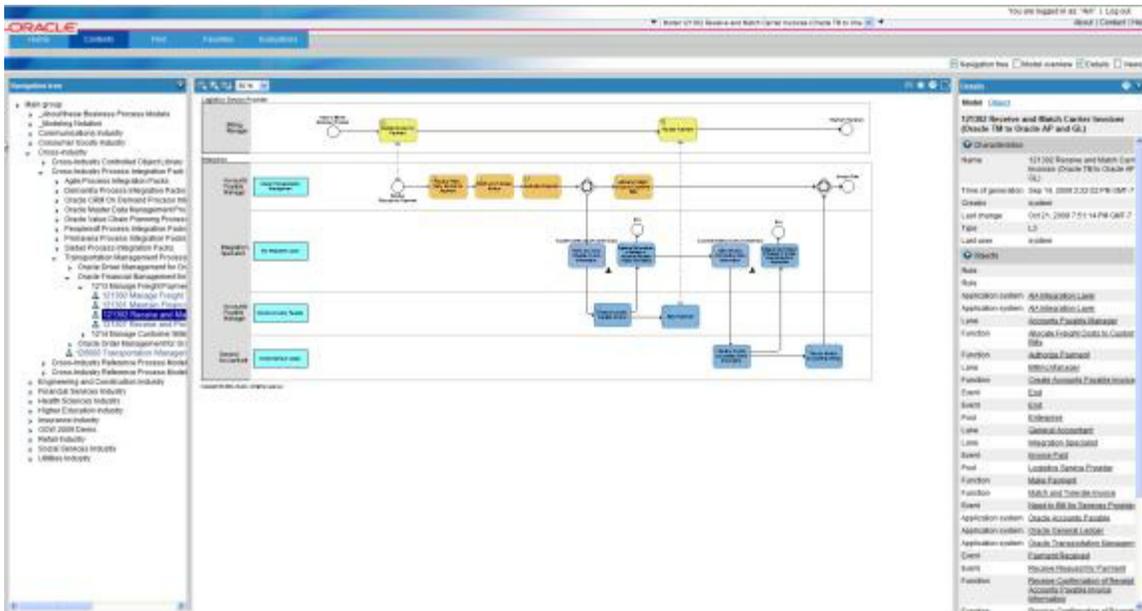
Navigate to a child model by clicking on the 'assignment icon' on the model, or by navigating to a model in the navigation pane, as shown in [Figure 4-7](#).

Figure 4-7 Child Model Navigation

**Navigate to Level 3 model:**

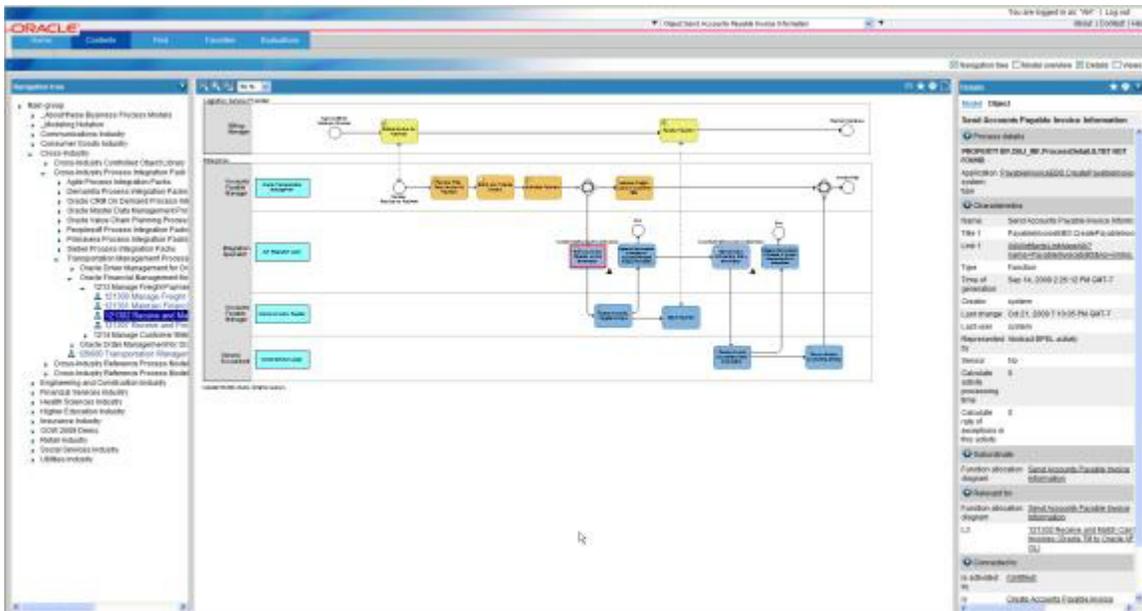
[Figure 4-8](#) shows how to use the navigation pane to navigate to a level 3 model.

Figure 4–8 Level 3 Model

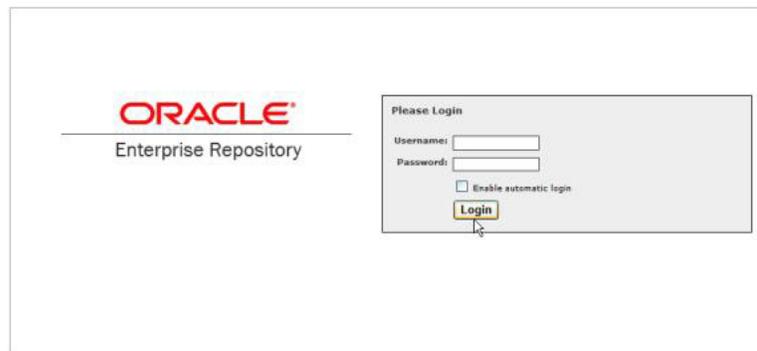


View object attributes in Object Characteristics pane:
 Figure 4–9 shows the Object Characteristics pane.

Figure 4–9 Object Characteristics Pane



Access Oracle Enterprise Repository for AIA artifact entry.
 Click the AIA artifact link to open the Oracle Enterprise Repository (OER) Login page, as shown in Figure 4–10.

Figure 4–10 Oracle Enterprise Repository Login Page

Your implementation specialist will provide a User Name and Password for your OER implemented instance.

OER is delivered with Oracle AIA solutions. Our models include references to the AIA integration artifact metadata defined in Oracle Enterprise Repository as well as URL links to those OER entries.

Figure 4–11 is a sample of an AIA Enterprise Business Service artifact entry in Oracle Enterprise Repository.

Figure 4–11 AIA Enterprise Business Service Artifact Entry in Oracle Enterprise Repository

Operation	Description	REP
CreateCustomerParty	This operation is used to create a CustomerParty EBO.	REQUEST_ONLY
CreateCustomerPartyList	This operation is used to create a multiple CustomerParty EBOs.	REQUEST_ONLY
QueryCustomerParty	This operation is used to query a CustomerParty EBO.	SYNC_REQ_RESPONSE
QueryCustomerPartyList	This operation is used to query multiple CustomerParty EBOs.	SYNC_REQ_RESPONSE
UpdateCustomerParty	This operation is used to update a CustomerParty EBO.	REQUEST_ONLY
UpdateCustomerPartyList	This operation is used to update multiple CustomerParty EBOs.	REQUEST_ONLY
UpdateCustomerPartyAccount	This operation is used to update a CustomerParty EBO.	REQUEST_ONLY
DeleteCustomerParty	This operation is used to delete a CustomerParty EBO.	REQUEST_ONLY
DeleteCustomerPartyList	This operation is used to delete multiple CustomerParty EBOs.	REQUEST_ONLY
SyncCustomerPartyList	This operation is used to sync multiple CustomerParty EBOs.	REQUEST_ONLY
SyncCustomerPartyAccountList	This operation is used to sync multiple CustomerPartyAccounts.	REQUEST_ONLY
ProcessCustomerPartyList	This operation is used to process multiple CustomerParty EBOs.	REQUEST_ONLY
ProcessCreditEligibilityVerification	This operation is used to process CreditEligibilityVerification.	REQUEST_ONLY
CreateCustomerPartyResponse	This callback operation will be used to provide the Create Customer Party Response.	ASYNC_REQ_RESPONSE
CreateCustomerPartyListResponse	This callback operation will be used to provide the Create Customer Party List Response.	ASYNC_REQ_RESPONSE
UpdateCustomerPartyResponse	This callback operation will be used to provide the Update Customer Party Response.	ASYNC_REQ_RESPONSE
UpdateCustomerPartyListResponse	This callback operation will be used to provide the Update Customer Party List Response.	ASYNC_REQ_RESPONSE
UpdateCustomerPartyAccountResponse	This callback operation will be used to provide the Update Customer Party Account Response.	ASYNC_REQ_RESPONSE
DeleteCustomerPartyResponse	This callback operation will be used to provide the Delete Customer Party Response.	ASYNC_REQ_RESPONSE

For more information about using Oracle Enterprise Repository, see *Oracle Fusion Middleware User's Guide for Oracle Enterprise Repository*.

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