

The Oracle logo, consisting of the word "ORACLE" in a bold, red, sans-serif font, is centered within a thin black rectangular border.

# **Oracle Product Lifecycle Analytics**

Oracle PLA Configurator and  
Data Mapping Guide

v.3.3.0.1

Part Number E24210-01

July 2011

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# Preface

Oracle's Agile PLM documentation set includes Adobe® Acrobat PDF files. The [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technetwork/documentation/agile-085940.html) <http://www.oracle.com/technetwork/documentation/agile-085940.html> contains the latest versions of the Agile PLM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM Documentation folder available on your network from which you can access the Agile PLM documentation (PDF) files.

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**Note** To read the PDF files, you must use the free Adobe Acrobat Reader version 9.0 or later. This program can be downloaded from the [Adobe Web site](http://www.adobe.com) <http://www.adobe.com>.

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The [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technetwork/documentation/agile-085940.html) <http://www.oracle.com/technetwork/documentation/agile-085940.html> can be accessed through **Help > Manuals** in both Agile Web Client and Agile Java Client. If you need additional assistance or information, please contact My Oracle Support (<https://support.oracle.com>) for assistance.

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**Note** Before calling Oracle Support about a problem with an Agile PLM manual, please have the full part number, which is located on the title page.

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## Readme

Any last-minute information about Agile PLM can be found in the Readme file on the [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technetwork/documentation/agile-085940.html) <http://www.oracle.com/technetwork/documentation/agile-085940.html>.

## Agile Training Aids

Go to the [Oracle University Web page](http://www.oracle.com/education/chooser/selectcountry_new.html) [http://www.oracle.com/education/chooser/selectcountry\\_new.html](http://www.oracle.com/education/chooser/selectcountry_new.html) for more information on Agile Training offerings.

## Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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## Introduction

### This chapter includes the following:

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- About this Guide ..... 1
- Overview of Agile Product Lifecycle Management Data Mapping ..... 3
- Overview of Agile PLM for Process Extensibility ..... 4
- The Agile PLM Oracle PLA Configurator ..... 4
- What's New for Oracle PLA Configurator in this Release ..... 4

In order to support enterprise reporting and analysis needs, accurate operational data encompassing millions of product records must be made available for use within analytics applications. This data must be organized and formatted in meaningful ways to support different query modes and ensure that business users derive the right information for decision making.

Typically, Extract-Transform-Load (ETL) processes are used to reorganize source data before loading it into the target system. Field-level data mappings need to be carried out to resolve any differences in the field names.

## About this Guide

This document is intended for data warehouse administrators who are familiar with *Agile Product Lifecycle Management 9.x* application (**Agile PLM 9**) and *Agile PLM for Process* application administrators who have database warehousing skills.

## Acronyms Used in This Document

The table below lists the acronyms used in this document.

Acronym	Expansion
BI	Business Intelligence
CAPA	Corrective and Preventive Action
CRM	Customer Relationship Management

<b>Acronym</b>	<b>Expansion</b>
<b>DM</b>	Data Mart
<b>ECO</b>	Engineering Change Order
<b>ECR</b>	Engineering Change Request
<b>ETL</b>	Extract-Transform-Load
<b>FS</b>	Fact Staging
<b>MCO</b>	Manufacturing Change Order
<b>MDS</b>	Multi-Dimensional Schema
<b>NCR</b>	Non-Conformance Report
<b>OBIEE</b>	Oracle Business Intelligence Enterprise Edition
<b>ODI</b>	Oracle Data Integrator
<b>ODM</b>	Operational Data Mart
<b>Oracle PLA</b>	Oracle Product Lifecycle Analytics
<b>PLM</b>	Product Lifecycle Management
<b>PLM BI</b>	Product Lifecycle Management Business Intelligence
<b>PLM DM</b>	Product Lifecycle Management Data Mart
<b>PPM</b>	Product Portfolio Management
<b>PQM</b>	Product Quality Management
<b>PR</b>	Problem Report
<b>SCM</b>	Supply Chain Management
<b>SS</b>	Stop Ship

## Related Documentation

The documents that you may need to reference during the data mapping process, mainly the Oracle Product Lifecycle Analytics (Oracle PLA) product installation documentation and the database schema documentation, are available on Oracle Technology Network (<http://www.oracle.com/technology/documentation/agile.html>).

- *Oracle Product Lifecycle Analytics Setup Guide* - Describes the installation and deployment of BI product components.
- *Oracle Product Lifecycle Analytics Data Reference Manual* - Describes the entities of the published model of the MDS schema.
- *Oracle Product Lifecycle Analytics User Guide* - Oracle PLA helps you to analyze business data, assess business impact, make timely decisions, and conduct trend analysis.

## Overview of Agile Product Lifecycle Management Data Mapping

The Oracle Product Lifecycle Analytics (Oracle PLA) application queries data for reports and dashboards from the Multi-Dimensional Schema (MDS) database. The MDS database schema contains a set of tables and columns to support PLM business reporting and analytics requirements. The data for this MDS schema is sourced from Agile Product Lifecycle Management (Agile PLM).

You define fields in Agile PLM according to your business process requirements. The Oracle Product Lifecycle Analytics application retrieves accurate field data for analysis *only* if the data in the MDS fields and the data in the Agile PLM fields are synchronized. Additionally, you should map the source custom-defined fields (Page Two and Page Three) of Agile PLM business objects.

Data type mapping is available in all three models - PC, PQM, and PPM.

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**Note** For more information on Oracle Product Lifecycle Analytics architecture, see the *Oracle Product Lifecycle Analytics Installation and Setup Guide*.

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## Overview of Agile PLM for Process Extensibility

Oracle Product Lifecycle Analytics (Oracle PLA) solution framework for Agile PLM for Process source allows you to customize and extend the out-of-the-box solution by providing configuration and customization capabilities.

Data flows from Agile PLM for Process to the presentation layer within Oracle PLA happens in the following order:

1. Source to Staging
2. Staging to Multi-Dimensional Schema (MDS)
3. MDS to the presentation layer of the OBIEE repository

## The Agile PLM Oracle PLA Configurator

The Oracle PLA Configurator tool allows you to map attributes from the **Agile PLM** application to fields in the data layer of the Oracle Product Lifecycle Analytics application. With an easy-to-use graphical interface, the Oracle PLA Configurator simplifies the process of mapping fields from Agile PLM to the tables and columns in the MDS database schema. These saved field-level mappings are used by the ETL process to load data into the target MDS database schema.

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**Note** When you open an object in the Agile PLM Web Client or Java Client, you see a tabbed window with fields. In Agile PLM these fields are called **attributes**. For complete information on Agile PLM attributes, refer to the *Agile Administrator Guide*.

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**Important** The Oracle PLA Configurator tool is used *only* for Agile PLM application data mapping.

## What's New for Oracle PLA Configurator in this Release

A new change class called **Deviations** has been added in this release. Deviation allows analysis of volumes, cycle times, aging across categories, and reasons for change.



# Mapping the Agile Product Lifecycle Management Data

### This chapter includes the following:

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- Data Mapping Process ..... 7
- What's Configurable in Agile PLM ..... 8
- Mappings Supported in this Release ..... 9

This chapter relates to Agile PLM for information on configuration (attribute mapping) related to Agile PLM for Process see [Extending the Agile PLM for Process Data](#) on page 45.

## Data Mapping Process

The Oracle PLA Configurator's configuration capabilities includes the mapping of Cover Page, Page Two, Page Three, and Flex attributes of supported Agile PLM classes, as follows:

- MDS fact fields to Agile PLM source fields.
- MDS dimension fields to Agile PLM source lists that are assigned to the Agile PLM fields.

Data accessed by the tool is located in the MDS and ODM database tables.

**Important** Any changes to the Data Dictionary definitions in Agile Oracle PLA staging schema or MDS impacts the tool.

Please refer to the latest published model as documented in the relevant *Data Reference Manual* available on the Oracle Technology Network.

The Oracle Product Lifecycle Analytics reports derive data from fixed target columns within the

database tables. Using the Oracle PLA Configurator, the data elements (in the fixed target columns) are mapped to the source columns. Data is derived from these source columns.

For these changes to take effect, you must perform the following actions in the order given:

1. Before you start mapping, at least one successful completion of a Stage ETL run.
2. After you finish mapping, at least one successful ETL run on MDS.

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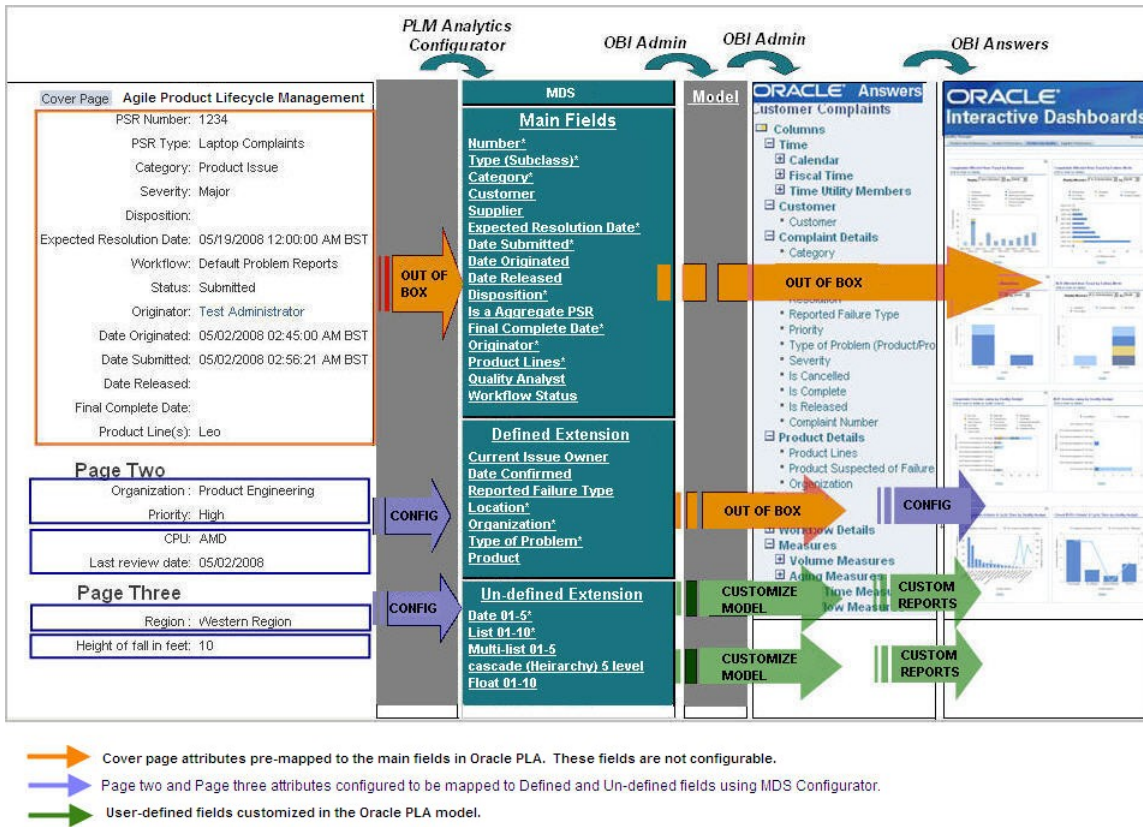
**Note** The Oracle PLA Configurator is purely a mapping tool. Data is retrieved and updated through the ETL processes. If there are any configuration mapping changes, MDS ETL is automatically set to **Full Load**. When you change the PLM version, set MDS ETL to **Full Load** by using **ETL Configurations > Runtime Options**.

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## What's Configurable in Agile PLM

The MDS has three field types:

1. **Main fields (Not configurable)** - These fields correspond to an object's Cover Page attributes in the Agile PLM application. Some Cover Page attributes, such as multi-text fields, are not relevant for analysis and are excluded from the MDS. Since these fields have a predefined meaning they are embedded in the OBIEE model and used to compute relevant predefined metrics.  
  
These are exposed in the presentation layer of the model as measures and dimensions. Reports created using these measures and dimensions are embedded in the out-of-the-box role-based and functional dashboards.
2. **Defined extensions (Configurable)** - Defined extension fields in each fact or subject area capture important information about the subject area. They have predefined semantics and in Agile PLM are configurable to the Cover Page, Page Two, Page Three, and flex attributes. Out-of-the-box, they are not mapped to any Agile PLM attribute. These defined fields are mapped as dimensions and measures in the OBIEE model.
3. **User-defined extensions (Configurable)** - User-Defined extension fields in each fact or subject area are used to capture important information about the subject area. They have predefined semantics, and in Agile PLM are configurable to the Cover Page, Page Two, Page Three, and flex attributes. Out-of-the-box, they are not mapped to any Agile PLM attribute. If you want to use these fields you need to customize the model. Contact your Oracle PLA administrator for further information.



The figure above illustrates the following:

1. How each type of MDS field is mapped from one layer to the next.
2. Shows the field that you can configure or customize.

**Note** Use the OBIEE Admin features for additional configuration and customization.

## Mappings Supported in this Release

The table below shows the data sources for the target MDS tables. The *Target Fact Table* column lists the target MDS table name. The *Classes* column lists the attribute groups (from where the data is sourced).

Target Fact Table	Classes	Subclasses	Supported Source Attribute Groups
Core Fact Table	<ul style="list-style-type: none"> <li>▫ PR</li> <li>▫ NCR</li> <li>▫ CAPA</li> <li>▫ Change Orders</li> <li>▫ Change Requests</li> <li>▫ Manufacturing Change Orders</li> <li>▫ Stop Ship</li> <li>▫ Deviations</li> </ul>		<ul style="list-style-type: none"> <li>▫ Cover Page, Page Two attributes, Page Three attributes of subclasses</li> <li>▫ Flex attributes</li> </ul>
	<ul style="list-style-type: none"> <li>▫ Mfr Part</li> <li>▫ Mfr</li> </ul>		<ul style="list-style-type: none"> <li>▫ Cover Page attributes, Page Two attributes, Page Three attributes of subclasses</li> <li>▫ Flex attributes</li> </ul>
	<ul style="list-style-type: none"> <li>▫ Item Mfr Part</li> <li>▫ Item Product Performance</li> </ul>		<ul style="list-style-type: none"> <li>▫ Item AML flex attributes</li> <li>▫ Read through of dimensions configured on Item facts and Mfr Part fact</li> </ul>
	Gate		<ul style="list-style-type: none"> <li>▫ Cover Page attributes, Page Two attributes, Page Three attributes of Gate subclasses configured as Gate domain.</li> <li>▫ Gate subclass Flex attributes</li> <li>▫ Team tab P3 and Flex attributes</li> </ul>

Target Fact Table	Classes	Subclasses	Supported Source Attribute Groups
	Activity	<ul style="list-style-type: none"> <li>▫ Program</li> <li>▫ Project</li> <li>▫ Phase</li> <li>▫ Portfolio</li> </ul>	<ul style="list-style-type: none"> <li>▫ Cover Page attributes, Page Two attributes, Page Three attributes of Activity subclasses configured as different domain values.</li> <li>▫ Activity subclass Flex attributes</li> <li>▫ Team tab P3 and Flex attributes</li> </ul> <p><i>For every supported domain (Program, Portfolio and Phase), you can map only the subclasses that are configured as domain attributes.</i></p>
Affected Item Fact Table	<ul style="list-style-type: none"> <li>▫ PR</li> <li>▫ NCR</li> <li>▫ CAPA,</li> <li>▫ Audit, ECO</li> <li>▫ ECR</li> <li>▫ MCO</li> <li>▫ SS</li> <li>▫ Deviations</li> </ul>		<p>All Attributes configured on the Affected Item tab.</p> <p><b>Note</b> Excludes Item read-through attributes.</p>
Single Materialized view consisting of subclass	<ul style="list-style-type: none"> <li>▫ Audit</li> <li>▫ CAPA</li> <li>▫ NCR</li> <li>▫ PR</li> <li>▫ Change Order</li> <li>▫ Engineering Change Request</li> <li>▫ Manufacturing Change</li> <li>▫ Stop Ship</li> <li>▫ Deviations</li> </ul>		<p>Read through of dimensions configured on Item facts, subclass facts</p>

## PPM-Specific Mappings

The table below describes how the Oracle Product Lifecycle Analytics Configurator (Oracle PLA Configurator) provides mapping ability to Agile PLM Product Portfolio Management (PPM) source data.

OPLA Configurator		MDS Target table	
Configurator Subject Area	Mapping Description	Fact Table	Dimension Table
Portfolio	Oracle PLA Configurator provides the ability to map Cover Page/P2/P3/Flex attribute of any Activity subclass. Choose the attributes relevant to the Portfolio domain subclasses as configured in domain look up.	Portfolio fact: PPM_PORTFOLIO_F	Portfolio Dimensional attribute: PPM_PORTFOLIO_D
Program	Oracle PLA Configurator provides the ability to map Cover Page /P2/P3/Flex attribute of any Activity subclass. Choose the attributes relevant to the Program domain subclasses as configured in domain look up.	Program fact: PPM_PROGRAM_F	Program Dimensional attribute: PPM_PROGRAM_D

OPLA Configurator		MDS Target table	
Configurator Subject Area	Mapping Description	Fact Table	Dimension Table
Project	Oracle PLA Configurator provides the ability to map Cover Page /P2/P3/Flex attribute of any Activity subclass. Choose the attributes relevant to Activities subclasses that are considered as Projects according to the Phase domain configured in domain value lookup.	Project Summary fact: PPM_PRJ_SUM_F	The Project dimensional attribute: PPM_PROJECT_D
Phase	Oracle PLA Configurator provides the ability to map Cover Page /P2/P3/Flex attribute of any Activity subclass. Choose the attributes relevant to the Phase domain subclasses as configured in domain look up.	Phase Gate fact: PPM_PHASE_GATE_F	Phase dimensional attribute: PPM_PHASE_D
Activity	OPLA Configurator provides the ability to map Cover Page /P2/P3/Flex attribute of any Activity subclass. Also, the P3 and Flex attributes of Team tab.	Activity base fact: PPM_ACTIVITY_F	Activity dimensional attribute: PPM_ACTIVITY_D

OPLA Configurator		MDS Target table	
Configurator Subject Area	Mapping Description	Fact Table	Dimension Table
Gate	<p>Oracle PLA Configurator provides the ability to map Cover Page /P2/P3/Flex attribute of any Gate subclass. Also, the P3 and Flex attributes of Team tab.</p> <p>Choose the attributes relevant to the Decision Gate domain subclasses as configured in domain look up or any Gate subclass if you are planning to bring it across to Detailed areas</p>	<p>Phase Gate fact: PPM_PHASE_GATE_F</p>	<p>Gate dimensional attribute: PPM_GATE_D</p>

## Supported Data Types

The table below lists the supported data type mappings.

Target: MDS Table/Column Type	Source: Agile PLM Attribute Type
Dimension	<ul style="list-style-type: none"> <li>▫ List</li> <li>▫ Multi-list</li> <li>▫ Cascade</li> <li>▫ Single-select dynamic list</li> </ul> <p><b>Note</b> Cascade lists are not supported for the PPM module in Oracle Product Lifecycle Analytics Release 3.3.</p>

Target: MDS Table/Column Type	Source: Agile PLM Attribute Type
Bridge	<ul style="list-style-type: none"><li>▫ Multi-list</li><li>▫ Multi-list cascade</li><li>▫ Multi-list dynamic</li></ul>
Date	Date
Number	Number
Float	Money
Text	Alphanumeric text
Money	Also known as Cost



# Using the MDS Configurator

### This chapter includes the following:

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This chapter relates to Agile PLM for information on configuration (attribute mapping) related to Agile PLM for Process see [Extending the Agile PLM for Process Data](#) on page 45.

## Key Features

The Oracle Product Lifecycle Analytics (Oracle PLA) Configurator interface consists of the following two basic panes:

1. **Subject Area pane** - Displays the Agile PLM module and its subject areas. It is located on the left-hand-side of the Oracle PLA Configurator.
2. **Mapping Table pane** - Displays the target and source destinations for all the PLM attributes that can be configured. It is located on the right-hand-side of the Oracle PLA Configurator.

The screenshot shows the Oracle Product Lifecycle Analytics Configurator interface. On the left is the 'Options' pane with a tree view of 'Subject Areas'. The 'Deviations' sub-area under 'Product Collaboration' is selected. On the right is a 'Mapping Table' with two tabs: 'Base Fact' and 'Affected Items'. The 'Affected Items' tab is active, displaying a table with columns for 'Target Column', 'Mappable PLM Attribute Type', 'PLM Attribute Name', and 'Target Dimension'. The table lists 35 items, each with a checked checkbox in the first column.

Target Column	Mappable PLM Attribute Type	PLM Attribute Name	Target Dimension
<input checked="" type="checkbox"/> DEV_USRDEF_COST0	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST1	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST2	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST3	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST4	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST5	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST6	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST7	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST8	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_COST9	MONEY		
<input checked="" type="checkbox"/> DEV_USRDEF_DATE0	DATE		
<input checked="" type="checkbox"/> DEV_USRDEF_DATE1	DATE		
<input checked="" type="checkbox"/> DEV_USRDEF_DATE2	DATE		
<input checked="" type="checkbox"/> DEV_USRDEF_DATE3	DATE		
<input checked="" type="checkbox"/> DEV_USRDEF_DATE4	DATE		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST0	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST1	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST10	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST11	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST12	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST13	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST2	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST3	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST4	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST5	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST6	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST7	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST8	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_LIST9	LIST		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER0	NUMBER		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER1	NUMBER		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER2	NUMBER		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER3	NUMBER		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER4	NUMBER		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER5	NUMBER		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER6	NUMBER		
<input checked="" type="checkbox"/> DEV_USRDEF_NUMBER7	NUMBER		

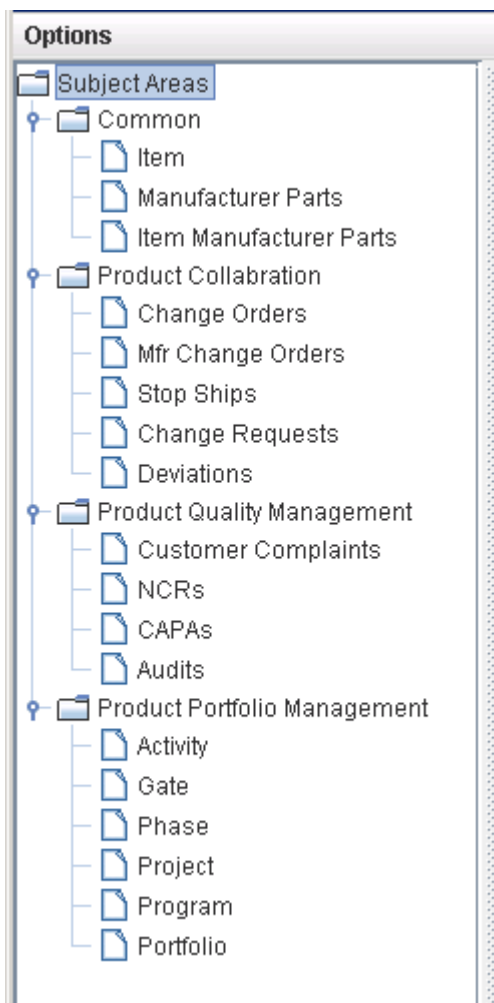
You can customize the default values for the Subject Area pane and the Mapping Table pane as per your requirements.

For more information on how to customize the default values, see [Customizing the Interface](#) on page 21.

## Understanding the Subject Area Pane

A Subject Area is a group of configurable fact tables in the MDS schema. These configurable fact tables correspond to subject areas of PLM Analytics modules within the Oracle Product Lifecycle Analytics (Oracle PLA).

The Subject Area pane has a hierarchical tree structure. The first level shows the Agile PLM module name, and the second level shows the supported subject areas for that module.



Each subject area can be associated with one or more Fact types. Each fact type appears as a tab on the right pane, where its corresponding attributes are displayed.

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**Note** In Product Portfolio Management, for the Program, Phase and Portfolio subject areas, the Cover page, Page Two, and Page Three attributes specific to the corresponding domains appear on the right pane. For example, the Phase subject area displays only the Phase-specific P3 attributes. For Gate, Activity and Project subject areas, the P3 attributes of all the subclasses are displayed.

---

## Understanding the Mapping Table Pane

In the Oracle PLA Configurator the right side shows the Mapping Table pane. It is a fact table where the target and source information is displayed.

Some tips on the Mapping Table pane:

1. Some target values are auto-populated.
2. Source data for each row needs to be selected manually from the options provided.
3. Target columns show the target field name and dimension table where applicable.
4. User-defined fields are prefixed with 'USR\_DEF'.

Column	Description
<b>Target Column</b>	Column name within the Fact table in MDS schema to which the PLM Attribute is mapped.
<b>Mappable PLM Attribute Type</b>	Type of PLM Attribute (or Field) that can be mapped to the corresponding column in the Fact table. Possible Values: Number, Date, List, Multi-list, and Money.
<b>PLM Attribute Name</b>	Name of the PLM Attribute (or Field) that is mapped to the corresponding column in the Fact table.

Column	Description
<b>Target Dimension Table</b>	<p>Name of the dimension table in the target MDS schema. It is used only if the PLM Attribute Type is "List" or "Multi-List".</p> <p><b>Note</b> The user cannot change the Target Dimension Tables for the user-defined "List" attributes of PPM, as all the user-defined columns for PPM are maintained in a single dimension table. Refer Oracle Product Lifecycle Analytics Data Reference Manual for the database tables.</p>
<b>Target Map Table</b>	<p>Name of the bridge table in the target MDS schema. It is used only if the PLM Attribute Type is "Multi-List".</p>

## Customizing the Interface

You can customize the data elements (in the user interface) to suit your requirements. The customizable settings are described in the table below.

---

**Note** All configuration files are located at <install directory>\config.

---

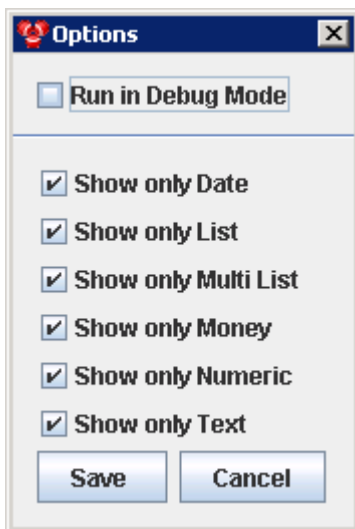
To configure the following settings	Edit the following file
User Interface button names	Messages_en_US.properties
Table column headers	Messages_en_US.properties
Logging levels	log4j.properties

## Display Preferences

The right pane displays the columns from the **Base Fact** tab or the **Affected Items** tab pertaining to a chosen subject area.

You can view columns by the following attribute types:

- Date
- List
- Multi-List
- Money
- Numeric
- Text



## Setting the Display Preferences

To set the display preferences:

1. Click **Options > Preferences**.

2. Select the attribute types you want displayed in the right pane.
3. Click **Save**.

---

**Note** To view the Source columns corresponding to the displayed Target columns in the right pane, select **Run in Debug mode**.

---

## Extend User-Defined (Configurable) Fields

You can increase the number of the available user-defined (configurable) fields in the schema.

You can add columns to enhance the MDS Schema if the available user-defined configurable fields in the tables are not sufficient to accommodate your business requirements.

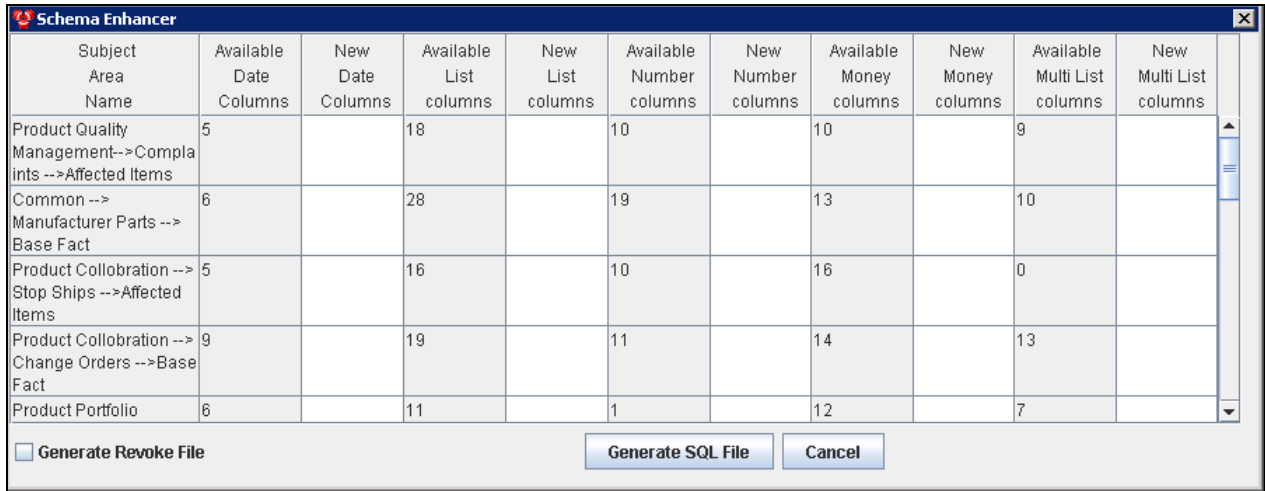
The supported attribute types are:

- Date
- List
- Multi List
- Number
- Money or Cost
- Text

## Adding New User-Defined Columns in the MDS Schema

To add new user-defined columns in the MDS Schema:

1. Click **Options > Add user-defined Fields**. The **Schema Enhancer** dialog box appears.



The **Schema Enhancer** dialog box lists the tables that have Date, List, Number, Money, Multi-List, and Text columns and the count of each of these columns for every table.

2. In the **New** columns cell, enter the number of additional columns of the attribute type you need in the table.
3. Click **Generate SQL File** to generate the SQL script that enables you to alter the tables to include the additional columns.
4. Save the generated file with a .sql extension.
5. Run the generated SQL file manually on the MDS database schema user, to include the additional user-defined columns in the specific table. The Oracle PLA Configurator displays the new columns as rows.

---

**Note** Select **Generate Revoke File** checkbox to generate a script that retains the existing table structure. If you want to reverse the addition of new fields, execute the revoke file.

---

You can associate PPM sub classes with domains such as Portfolio, Program, Project, and Phase. Agile PPM allows you to create multiple sub classes within the Activity class. You can associate more than one of these sub classes to a specific domain. The differentiation of the attributes

specific to each of these similar sub classes requires the addition of Fact Staging (FS) tables in the schema design. Refer to the *Oracle Product Lifecycle Analytics Data Reference Manual* for information.

The ETL propagates data from the Source to the FS tables and then to the target Fact tables. The Schema Enhancer generates scripts to create additional columns for Fact tables, FS tables, and Dimension tables. It also generates appropriate meta data information for the Dictionary table.

## Adding User-Defined Dimension Tables to the Schema

You can manually add new user-defined dimension tables to the MDS schema if the available dimension tables are not sufficient to accommodate your business requirements.

### To add new user-defined dimension tables to the schema:

1. Using the structure given below, you can create new dimension tables in the MDS Schema:

```
CREATE TABLE USRDEF_L<xxx>_D
(
  USRDEF_L<XXX>_ID      NUMBER(22)          NOT NULL,
  NAME                  VARCHAR2(4000 CHAR) NOT NULL,
  LEVEL0                NUMBER(22) ,
  LEVEL1                NUMBER(22) ,
  LEVEL2                NUMBER(22) ,
  LEVEL3                NUMBER(22) ,
  LEVEL4                NUMBER(22) ,
  LEVEL0_NAME           VARCHAR2(256 CHAR) ,
  LEVEL1_NAME           VARCHAR2(256 CHAR) ,
  LEVEL2_NAME           VARCHAR2(256 CHAR) ,
  LEVEL3_NAME           VARCHAR2(256 CHAR) ,
  LEVEL4_NAME           VARCHAR2(256 CHAR) ,
  USRDEF_TEXT0          VARCHAR2(256 CHAR) ,
  USRDEF_TEXT1          VARCHAR2(256 CHAR) ,
  USRDEF_TEXT2          VARCHAR2(256 CHAR) ,
  USRDEF_DATE0          DATE ,
  USRDEF_DATE1          DATE ,
  USRDEF_DATE2          DATE ,
  USRDEF_NUMBER0        NUMBER ,
  USRDEF_NUMBER1        NUMBER ,
```

```
    USRDEF_NUMBER2      NUMBER,
    LAST_MODIFIED_DATE  DATE,
    LIST_ID             NUMBER(22),
    ENABLE              NUMBER(1)          DEFAULT 1,
    INTEGRATION_ID      VARCHAR2(80 CHAR),
    ROW_ID              NUMBER(22),
    DATASOURCE_NUM_ID   NUMBER(22)
)
```

---

**Note** The table is named in the following format:

```
    USRDEF_ XXX
```

Where XXX represents the dimension table name.

---

2. Add the newly created table name as an XML element into `<installdir>\config\Configurator.xml`

```
<usrdimensionTables>
<!--Existing entries
  <list name="USRDEF_L01_D" dimcol="USRDEF_L01_ID"/>
  <list name="USRDEF_L02_D" dimcol="USRDEF_L02_ID"/>
  <list name="USRDEF_L03_D" dimcol="USRDEF_L03_ID"/>
<!--New Entry-->
<list name=" USRDEF_L<xxx>_D " dimcol=" USRDEF_L<XXX>_ID"/>
</usrdimensionTables>
```

3. Save the **Configurator.xml** file.

## Setting Up the ETL Run Time Configuration

PPM provides a flexible project management platform to organize your projects in a way that suits your business and operations. However, to obtain meaningful analytical reports on your projects, Oracle Product Lifecycle Analytics (Oracle PLA) recommends that you organize your projects according to structured templates. These templates are an outcome of proven best practices in project management. For information on these best practices, see the *Oracle Product Lifecycle Analytics (Oracle PLA) User Guide*. The comprehensive out-of-the-box reports in Oracle Product Lifecycle Analytics (Oracle PLA) are based on these best-practice templates.

In Agile PLM-PPM, Activity and Gate are the two Classes in PPM. You can configure the subdivisions in your project as sub classes of the Activity or Gate Classes.

These user-configured sub classes need to be mapped into one of the following domains, so they adhere to the best practice templates:

- Portfolio
- Program
- Phase
- Decision Gate

Oracle Product Lifecycle Analytics (Oracle PLA) uses domain values to determine Portfolio, Program, Project, Phase, Tasks, and Decision Gates to report and analyze against the Subject Areas.

Projects and Tasks are identified using the Phase domain value. An activity that is one level above a Phase is considered a Project, and activities that are one or more levels below a Phase are considered Tasks. Decision gates for a project are identified using the Decision Gate domain values.

A root Project in PLM can be identified as a Project in Oracle PLA only if you configure domain values. If you do not configure domain values, the ETL run does not populate the Phase-Gate Fact table and you receive a warning notification on email.

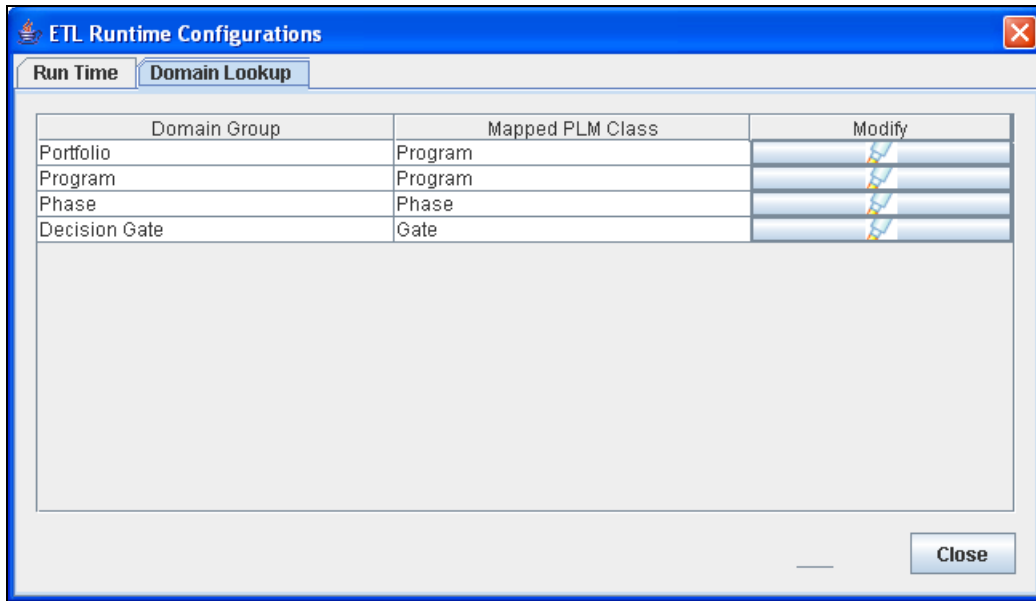
The ETL Runtime Configuration window enables you to:

- Configure the Domain values for all the sub classes using **Domain Lookup** tab
- Set the ETL properties at run time using the **Run Time** tab

## Configuring the Domain Values

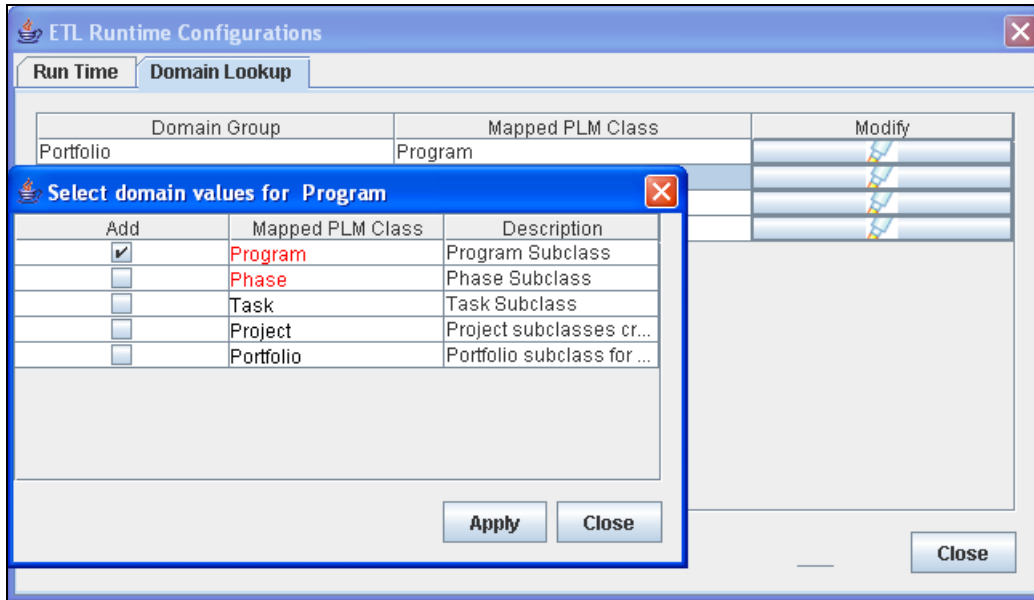
To configure the Domain values:

1. Click **Options > ETL Configurations**. The ETL Run Time Configuration Window appears - as shown below.



In the **Domain Lookup** tab, the **Domain Group** column lists all the available domain groups. The **Mapped PLM Class** column displays the PLM sub classes mapped to the domain groups.

- Click the **Add** icon on a domain group row. This is the domain group for which you want to configure a corresponding PLM subclass. For example, *Program*. The **Select Domain values for Program** popup window is displayed.



The sub classes displayed in the **Select Program Domain Values** popup window are specific to the Activity class. This applies to Project, Portfolio, and Phase Domain Groups.

---

**Note** If you had clicked the Add icon on the Gate Domain Group row in the **Domain Lookup** tab, only sub classes specific to the Gate class appear in this window.

---

- Select the checkbox in the Add column to choose the PLM subclass.

---

**Note** You can select any sub class that belongs to Activity class.

---

- Click **Apply**.

The selected PLM subclasses are appended into the target domain group and saved into the database. If a subclass is already mapped to another domain, a warning message appears. If you are a 9.2.2.x user, it is recommended that you create separate sub classes for your 'Program' and 'Portfolio', and configure both these subclasses to 'Program' domain. This ensures meaningful analytical reports.

## Setting the ETL Run Time Properties

To set the ETL run time properties:

1. Click **Options > ETL Configurations**. The *ETL Runtime Configuration* Window appears.
2. Click the **Run Time** tab. The ETL Runtime properties appears as follows:



The screenshot shows the 'ETL Runtime Configurations' window with the 'Run Time' tab selected. The window contains a table with two columns: 'Property Name' and 'Property value'. The table lists various ETL runtime properties and their current values. At the bottom right of the window, there are 'Apply' and 'Close' buttons.

Property Name	Property value
STAGE ETL Load Type	Full
MDS ETL Load Type	CDC
Mail server to use	mail.oracle.com
From mail ID to send ETL Notification	PLM_BI@oracle.com
Mail ID to send ETL Notification	vishal.kotowar@oracle.com
Calendar to use	Default Calendar
Fiscal Calendar Start Date	01/Apr/2009
Fiscal year offset	0
Logging level	ERROR
Snapshot Frequency Type	No SnapShot
Snapshot to run on	

---

**Note** **Calendar to use** parameter:  
Out-of-the-box the default variable is **Fiscal Calendar**.  
Choose the **Default Calendar** option to see the traditional January to December calendar.

---

3. Double-click on the Property value column against a Property Name.
4. Enter or modify the ETL Run time property.
5. Click **Apply**.

These properties come into effect only after the ETL has been run.

**ETL Run Time Property Names**

Property Name	Description
<b>STAGE ETL Load Type</b> and <b>MDS ETL Load Type</b>	<p>You can set this property to run ETL as any of the following:</p> <ol style="list-style-type: none"> <li>1. Full Load (<b>Full</b>)</li> <li>2. Incremental Load (<b>CDC</b>)</li> <li>3. Disable (<b>Disable</b>)</li> </ol> <p>The very first time you use the Oracle PLA Configurator for new mappings, the ETL run type is always <b>Full Load</b> irrespective of the value of this property.</p>
<b>Mail server to use</b>	Enter a valid mail server name. Use the server that sends email notifications for the ETL execution status.
<b>From mail ID to send ETL Notification</b>	Enter the e-mail ID from which the ETL execution status emails are to be sent.
<b>Mail ID to send ETL Notification</b>	Enter the e-mail IDs of the users who need to receive emails of the ETL execution status.
<b>Calendar to use</b>	If you are a Time Utility Member choose <b>Fiscal Calendar</b> as your default calendar. You can change this parameter manually if you want to use <b>Default Calendar</b> .

Property Name	Description
<b>Fiscal Calendar Start Date</b>	Enter the start date of the Fiscal year. This setting allows you to perform analysis of Business Intelligence data based on your organization's fiscal or calendar year.
<b>Fiscal year offset</b>	<p>This parameter specifies the offset for the fiscal calendar year with reference to the <b>Default Calendar</b> year.</p> <p>Values are:</p> <ul style="list-style-type: none"> <li>▫ <b>0</b> - The dates and year for the <b>Fiscal Calendar</b> match the dates and year of the <b>Default Calendar</b>.</li> <li>▫ <b>1</b> - The dates and year for the <b>Fiscal Calendar</b> is one year ahead of the current calendar year.</li> <li>▫ <b>-1</b> - The dates and year for the <b>Fiscal Calendar</b> is one year behind the current calendar year.</li> </ul> <p>For example, if your fiscal calendar year for 2011 starts on April 1, 2010, then for the <b>Fiscal year offset value</b> choose <b>1</b>.</p>
<b>Logging level</b>	<p>This parameter indicates the debugging level required to log the run time ETL messages into the VLOG table.</p> <p>Options are:</p> <ul style="list-style-type: none"> <li>▫ <b>ERROR</b></li> <li>▫ <b>WARNING</b></li> <li>▫ <b>INFO</b></li> <li>▫ <b>DEBUG</b></li> <li>▫ <b>ALL</b></li> </ul>

Property Name	Description
<b>Snapshot Frequency Type</b>	<p>Based on the project summary snapshot, this setting is used to perform analysis of BI data.</p> <p>Options are:</p> <ul style="list-style-type: none"> <li>▫ <b>Month</b> - Snapshot fact table populated monthly.</li> <li>▫ <b>Week</b> - Snapshot fact table populated weekly</li> <li>▫ <b>No Snapshot</b> - Snapshot fact table never populated.</li> </ul>
<b>Snapshot to run on</b>	<p>Based on the project summary snapshot, this setting is used to perform analysis of BI data. You select which day of the week you want to run the ETL to take a snapshot of the project summary table.</p> <p>Options are:</p> <ul style="list-style-type: none"> <li>▫ <b>SUNDAY</b></li> <li>▫ <b>MONDAY</b></li> <li>▫ <b>TUESDAY</b></li> <li>▫ <b>WEDNESDAY</b></li> <li>▫ <b>THURSDAY</b></li> <li>▫ <b>FRIDAY</b></li> <li>▫ <b>SATURDAY</b></li> </ul> <p>If you have choose <b>Month</b> as your <b>Snapshot Frequency Type</b>, and the day of the week you choose for the <b>Snapshot to run on</b> field does not occur in that month, then the snapshot will run on the last day of the month.</p>

## Accessing the Software

The Oracle PLA Configurator is a standalone executable provided with the Oracle Product Lifecycle Analytics (Oracle PLA) installation software. When you install Oracle Product Lifecycle Analytics, the executable is automatically downloaded to the *bin* folder (within the Oracle PLA installation directory) on your computer. All dependent files are downloaded to the *lib* folder. Configuration files are downloaded into the *config* folder, while the configuration logs are stored in the *log* folder.

For information on running the Oracle PLA Configurator, see [Running the MDS Configurator](#) on page 35.

## Connection Information

The Oracle PLA Configurator uses database authentication to connect to the Staging Schema and MDS databases. No additional database privileges are required.

Connection information is maintained in the property file -  
<install dir>/config/DataMartConfig.properties.

The password used for the connection is encrypted as per the prescribed Oracle Agile algorithm.

## Changing the Password

**To change the password:**

1. Run the *DMEncoder.bat* file available at the path <install directory>\bin and enter the password string for ODM / Oracle PLA MDS database users.
2. Copy the generated strings for ODM\_USER\_PASSWORD and MDS\_USER\_PASSWORD respectively.
3. Open the <install directory>\config\DataMartConfig.properties file where the password is initialized for the MDS database schema user.
4. Replace the copied strings as values for ODM\_USER\_PASSWORD and MDS\_USER\_PASSWORD respectively.
5. Save changes and close the file.

## Running the Oracle Product Lifecycle Analytics Configurator

To run the Oracle Product Lifecycle Analytics Configurator, follow these steps:

1. In the Oracle PLA installation folder, navigate to the bin folder.
2. Double-click the **Configurator.bat** file. (On Solaris/Linux, run *Configurator.sh*). The **Oracle Product Lifecycle Analytics Configurator** interface is displayed.
3. From the **Options** menu in the **Oracle Product Lifecycle Analytics Configurator**, select **ETL Configurations**. This opens the **ETL Runtime Configurations** window.
4. In the **ETL Runtime Configurations** window, select the **Run Time** tab.
5. From the **Property Name** column, select the **MDS ETL Load Type** row.
6. From the **Property value** column (and the **MDS ETL Load Type** row) select **Disable**.
7. From the **Property Name** column, select the **STAGE ETL Load Type** row.
8. From the **Property value** column (and the **STAGE ETL Load Type** row) select **Full** or **CDC**.
9. In the **ETL Runtime Configurations** window, first select **Apply**, and then **Close**.
10. Click **OK**, in the **ETL Parameters Updated** message box.

The next step is to execute the ETL from the Oracle Data Integrator (ODI).

## Execute the Staging ETL from the ODI

To load data into the MDS from the Agile PLM source database, you must carry out a data integration using the Operator feature in Oracle Data Integrator.

For more information on how to install and use the Oracle Data Integrator (ODI), see the ODI documentation in the Oracle Technology Network (<http://www.oracle.com/technology/documentation/agile.html>).

## Executing ETL Using ODI

To execute the ETL using the Operator feature in ODI, and run the staging schema, follow these steps:

1. Go to **Start > Oracle Data Integrator > Operator**.
2. From the **Oracle Data Integrator Login** window, select your **Login Name**, and enter your **User name** and **Password**.
3. Click **OK**.
4. From the **Windows** menu select **Show View > Scenarios**.
5. Select **ANALYTICS\_ETL\_Version001**, and right-click.
6. From the **ANALYTICS\_ETL\_Version001** context menu select **Execute**.
7. In the **Execution** dialog box, select **MDS** for the **Context** attribute.
8. In the **Execution** dialog box, select **Local (No Agent)** for the **Agent** attribute.
9. In the **Execution** dialog box, select **5** for the **Log Level** attribute.
10. In the **Execute** dialog box, select the required attributes, and click **OK**.

You have now finished executing the staging ETL, and can now proceed to configurator mapping.

## Viewing ETL Process Status

To view the status of the ETL process:

**Log in to the ODI Operator.**

11. In the **Sessions List** tab, select **All Executions** in the left frame - to view all running tasks.  
Alternatively, in the **Hierarchical Sessions** tab, select **Status** or **All Executions** in the left frame to check overall progress.

## Increasing the Operator Display Limit in ODI

You can increase the **Operator Display Limit** to 1000 (default value is 100) to view the status of all the tasks that are under execution in ODI.

**To increase the Operator Display Limit, in ODI Operator, follow these steps:**

1. Go to **File > User Parameters > Set Operator Display Limit**.
2. Set the value for Operator display limit to 1000.

## Executing ETL from the Windows Command Prompt

**To execute ETL from the Windows Command Prompt, follow these steps:**

1. From the Command Prompt navigate to the **bin** folder, for example, *<install\_dir>/bin*.
2. Enter the following command:

For Windows:

```
startdm ANALYTICS_ETL 001 MDS
```

For Linux, Solaris, AIX and HP-UX:

```
sh startdm.sh ANALYTICS_ETL 001 MDS
```

where:

startdm: is the batch file that executes ODI tasks

ANALYTICS\_ETL is the ETL package

001 is the version number associated with the ETL package

MDS is the ETL context

The ETL process starts.

---

**Note** After the Configurator changes, the MDS ETL runs in FULL ETL mode.

---

You have now finished executing the staging ETL, and can now proceed to configurator mapping.

## Mapping PLM Attributes

**Important** You need a thorough understanding of the Agile PLM classes and the attribute definitions in the source environment, in order to perform an accurate mapping of PLM attributes.

You must also be a power user of the Agile Java Client.

### Before you begin:

- Make sure you have a complete working environment that includes the following layers:
  - Agile PLM Java Client
  - Agile PLM MDS schema and ETL components
  
- To verify the mapping, keep any database SQL editor open.
  
- Understand the color coding used in the Oracle PLA Configurator:
  - Blue text: Indicates attributes that have already been mapped.
  - Red text: Indicates attributes that are disabled in PLM.
  
- Keep a copy of the *Oracle Product Lifecycle Analytics MDS Data Reference Manual* handy to verify target tables used by the BI Reports. You can download this manual from Oracle Technology Network.
  
- You must have completed a staging FULL load ETL.

## How to Map Attributes


### How to Locate Attributes in Agile Java Client Admin Module

In the Agile Java Client Admin module:

1. Open the **Setting > Data Setting > Classes** node.
2. Open the class or subclass tab from which you wish to source attributes for the MDS target tables.
3. Under **User Interface Tabs**, select an attribute group, for example, Page Two.
4. View the attributes and enter details in the Mapping Reference Sheet provided at the end of this manual.

### Mapping Attributes in Oracle PLA Configurator

In the Oracle PLA Configurator:

1. In the left pane, expand the subject area category node, and click the subject area corresponding to the Agile PLM class. For example, under **PQM**, click **NCR**.
2. In the right pane, select either the **Base Fact** or the **Affected Items** tab.
3. Select the Target Column row for the attribute type you wish to map, and click . The **Edit the selected Row** dialog box opens. Alternatively, you can right-click on a target cell.

**Edit the selected Row**

Subject Area: Non-Conformance Reports  
Fact Type: Base Fact

**Source (Agile PLM)**

Attribute Type: LIST  
Attribute Group: NCR.Cover Page, P2 and P3 attributes  
Attribute Name: Non-Conformance Reports.Current Issue Owner

**Target**

Column Name: Non-Conformance Reports.Current Issue Owner  
Dimension Table Name: Non-Conformance Reports.PSR Type, Product Non Conformance.Quality Management Section, Non-Conformance Reports.Type of Problem, Non-Conformance Reports.Quality Analyst, Product Non Conformance.NCR Cause, Non-Conformance Reports.Organization, Non-Conformance Reports.Resolution

4. In the **Edit the selected Row** dialog box, select options from the drop-down lists to map the field or column to PLM attributes as per the details you entered in the mapping reference sheet:
  - a. In the **Attribute Group** list, select the PLM attribute group from which you wish to source attributes. The list of attribute groups is different for Base Fact and Affected Items. For details, see Supported Mappings.
  - b. In the **Attribute Name** list, select the attribute name that you want to map. The list shows the options that you have enabled in Java Client. If a list ID has already been mapped to a target dimension table, only those attributes associated with the same list ID are displayed for selection.

If you choose a user-defined list, you are now provided the option to map it to a target dimension table. This is not applicable to user-defined list attributes of PPM.

---

**Note** The Attribute Name list displays only the attribute names that correspond to the Attribute Group you select.

---

- c. From the **Dimension Table Name** list, select a target dimension table for the mapping. You can map the same list /multi-list attribute to any number of target dimension table names, but a list ID can be associated with only one target dimension table. You cannot map a cascade list to any user-defined list.
- d. Click **OK**.
- e. Click **Save**.

---

**Note** If you are a 9.2.2.7 user, you need to configure the multi-list attribute in PPM\_ACTIVITY\_PLM\_REFERENCE table, for Program or Portfolio analysis. This multi-list attribute is available in **PPM > Activity > Activity Fact Tab**.

---

## Validating the Mappings

Click **Validate**, to validate your attribute mappings.

You will see an **Errors and Warnings** dialog box if you have any errors or warnings, or if any of the following conditions occur:

- **Column already used for mapping** - In MDS an Agile PLM attribute is mapped to more than one target column.
- **Attribute disabled in PLM after configuration** - In Agile PLM, a previously mapped Agile PLM attribute is now disabled.
- **List modified in PLM after configuration** - An Agile PLM attribute previously configured to a conforming dimension has been modified in Agile PLM to use a non-conforming source list.

If you get any of these errors, you must change the mapping for the attribute identified in the error message.

Errors are also logged in the *Configurator.log* file. The *Configurator.log* file is located in **<install directory>/logs/**.

You can also save the errors to a .csv file, click **Save to File**.

## Validating the Data

After you finish mapping, run the MDS ETL (full load). This ensures that the data loads from the source tables in Agile PLM Data Mart to MDS as per your mapping.

---

**Note** To learn how to run the ETL, see [Executing the MDS ETL](#) on page 42.

---

Data loads into the newly configured tables after the MDS ETL runs.

After the ETL run, verify the records in the target table by using any database SQL editor to connect to the MDS database.

## Executing the MDS ETL

To execute the MDS ETL, you must first open the Oracle PLA Configurator, select the pertinent property names and their respective values. After this is done, you need to run the required attribute in Oracle Data Integrator Operator feature.

To run the MDS ETL, follow these steps:

1. In the Oracle PLA installation folder, navigate to the **bin** folder.
2. Double-click the **Configurator.bat** file. (On Solaris/Linux, run *Configurator.sh*).  
The **Oracle Product Lifecycle Analytics Configurator** interface is displayed.
3. From the **Options** menu in the **Oracle Product Lifecycle Analytics Configurator**, select **ETL Configurations**.  
This opens the **ETL Runtime Configurations** window.
4. In the **ETL Runtime Configurations** window, select the **Run Time** tab.
  - a. From the **Property Name** column, select the **STAGE ETL Load Type** row.
  - b. From the **Property value** column (and the **STAGE ETL Load Type** row) select **Disable**.
  - c. From the **Property Name** column, select the **MDS ETL Load Type** row.
  - d. From the **Property value** column (and the **MDS ETL Load Type** row) select **CDC**.
  - e. In the **ETL Runtime Configurations** window, first select **Apply**, and then **Close**.
5. Click **OK**, in the **ETL Parameters Updated** message box.

6. Go to **Start > Oracle Data Integrator > Operator**.
7. From the **Oracle Data Integrator Login** window, select your **Login Name**, and enter your **User name** and **Password**. Click **OK**.
8. From the **Windows** menu select **Show View > Scenarios**.
9. Select **ANALYTICS\_ETL\_Version001**, and right-click. From the **ANALYTICS\_ETL\_Version001** context menu select **Execute**.
10. In the **Execution** dialog box, select the following:
  - a. **MDS** for the **Context** attribute.
  - b. **Local (No Agent)** for the **Agent** attribute.
  - c. **5** for the **Log Level** attribute.
  - d. Click **OK**.

After you complete the above steps the data populates into the MDS, and you can now start analysis in OBIEE.

If you are a user of custom user defined dimension and measures you must first complete RPD customizations.



# Extending the Agile PLM for Process Data

### This chapter includes the following:

---

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▪ NPD Project Metrics .....	48
▪ Extended Attributes .....	56

## General Solution

For all areas of extension the general solution is characterized by an initial setup. This setup is then used by the overall ETL process every time data is transferred.

The initial setup comprises of the following:

- In the staging schema tables, custom-data mappings are created to specific predefined user-data columns.
  
- Use the OBIEE Administrator to:
  - Customize and add the MDS user-defined columns to the already existing Physical Layer tables, Logical/Business Layer objects, and Presentation Layer objects within a given Subject Area.
  - Customize the names of these columns and fields.

If there are any errors in the data in the mapping tables (for example, non-existent NPD Project Metrics, non-existent Extended Attributes, and/or misnamed target DB tables or columns, and so on.) they will cause the overall ETL run to fail. Error messages are logged in the TLOG table.

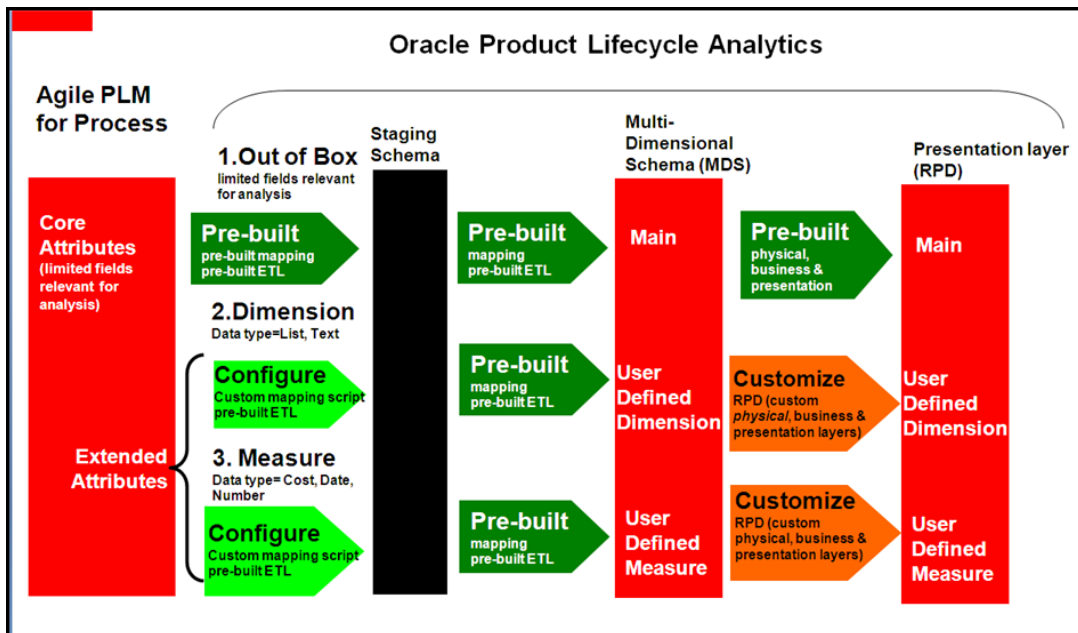
**Important** You must conduct a FULL extract run if you make any content changes to the P4P\_CONFIG\_EA table or to the P4P\_METRIC\_CONFIG\_MAP table.

A CDC (incremental) run does not pick up any changes made to the tables.

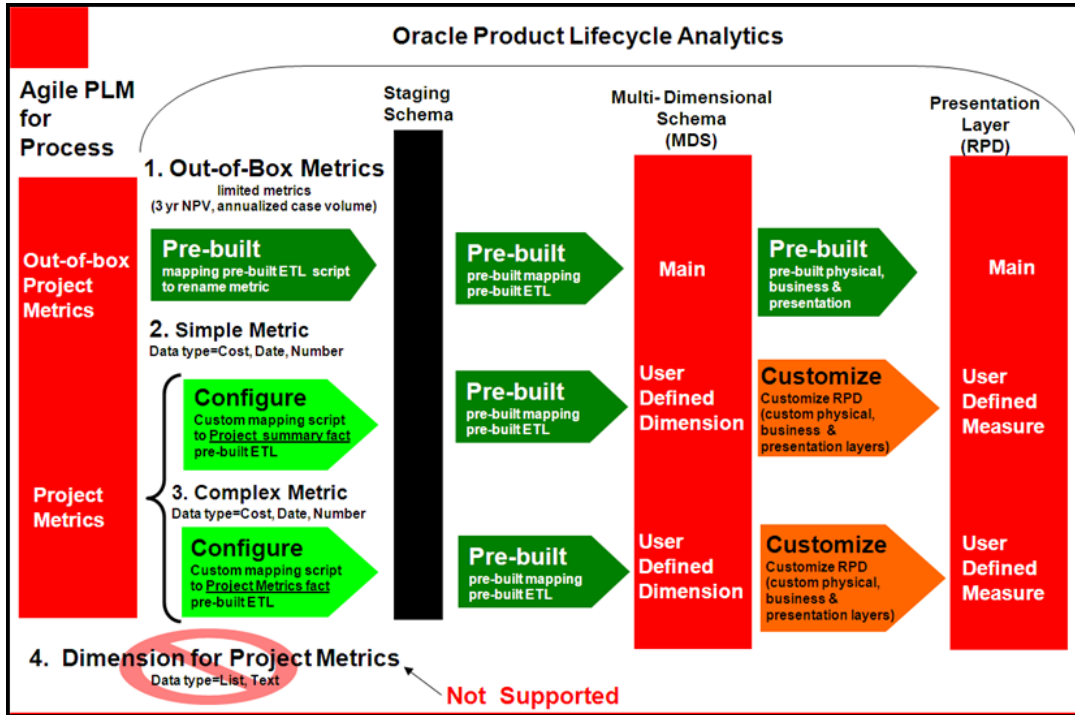
## What's Extensible in Agile PLM for Process

There are three key data elements from Agile PLM for Process to the Presentation layer:

1. **Core Attributes (Not Configurable):** Are attributes available from the Agile PLM for Process out-of-the-box solution. In Oracle Product Lifecycle Analytics (Oracle PLA) only the relevant attributes are brought out as measures and dimensions.
2. **Extended Attributes (Configurable):** In order to capture additional information – beyond core attributes, Agile PLM for Process allows you to add extra (extended) attributes. Oracle PLA provides configuration and customization steps that bring out dimension and measure fields.



3. **Project Metrics (Configurable):** Project metrics are definable in Agile PLM for Process. Project metrics allow you to capture information related to a project (for example, cost, revenue forecasts, and so on). Based on whether the metrics have basis, financial year, or category information, the measures are simple or complex. Oracle PLA provides configuration and customization steps to bring out the fields as measures (but not as dimensions).



**Important** Oracle PLA does not support Custom Sections.

## NPD Project Metrics

**Important** Any changes to the content of the P4P\_CONFIG\_EA table or the P4P\_METRIC\_CONFIG\_MAP table must be followed by a FULL extract run. A CDC run will not pick up these changes.

Oracle Product Lifecycle Analytics (Oracle PLA) delivers two out-of-the-box metrics that correspond to Project Metrics in Agile PLM for Process:

- Three year NPV

- Annualized case volume

These metrics flow through the prebuilt ETL and mappings all the way to the presentation layer, provided certain naming conventions are adhered to. Even if the naming convention followed is different, you can replace names of these metrics via a custom script.

**Simple Metrics** are Project Metrics that have no phase, no basis, no category, and no fiscal year. These measures have to be mapped to the Project Summary fact. This mapping can be created using the custom script between Source to Staging. From Staging to MDS, prebuilt mapping & ETL exist. You need to customize the OBIEE RPD to expose the metric as a measure in the presentation layer.

**Complex metrics** are Project Metrics that are dimensionalized and have a phase, basis, category, or fiscal year. These measures have to be mapped to the Project Metrics fact (unlike Simple metrics). Other than that the process of customization/ configuration is similar to that of simple metrics.

**Important** The Project Metrics cannot be exposed as a dimension in the Presentation layer. The only dimensions that are supported for Complex metrics are Phase, Basis, Category and Fiscal Year.

## Mapping the NPD Project Metrics

There are three basic types of NPD Project Metrics mappings:

1. System-Defined replacements
2. Simple (dimensionless) User-Defined additions
3. Dimensionalized User-Defined additions

All types are mapped via inserting the name of the metric and the table and column to map it to into the meta-data table named: P4P\_METRIC\_CONFIG\_MAP.

Data is then transferred to the targeted table at ETL time for each NPD Project that contains that given named metric. Projects that do not have a value for that metric will have that column left "null".

The table below defines the P4P\_METRIC\_CONFIG\_MAP metrics mapping database table.

COLUMN	DATA TYPE	DESCRIPTION
METRIC_NAME	varchar2(200)	The NPD project metric ID.
TABLE_NAME	varchar2(40)	The destination table name. One of the following: <ul style="list-style-type: none"> <li>▫ P4P_PRJ_SUM_FS</li> <li>▫ P4P_PRJ_DET_FS</li> <li>▫ P4P_PRJ_METRICS_FS</li> <li>▫ P4P_PROJECT_DS</li> </ul>
COLUMN_NAME	varchar2(100)	The destination column name (for example, PRJ_USRDEF_DATE2, PRJ_USRDEF_LIST8, etc.)

The TABLE\_NAME is dependent upon the preferred BI Subject Area and the metric's data type. Use the table below to select the TABLE\_NAME.

TABLE NAME	BI SUBJECT AREA	DATA TYPE	EXPLANATION
P4P_PRJ_SUM_FS	Project Summary	Numeric	The available Project Summary FACT table column for numeric metrics.
P4P_PRJ_DET_FS	Project Detail	Numeric	The available Project Detail FACT table column for numeric metrics.
P4P_PRJ_METRICS_FS	Project Metrics	Numeric	The available Project Metrics FACT table column for numeric metrics.
P4P_PROJECT_DS	ALL of the above	Text	The available Project DIMENSION table column for text metrics.

The COLUMN\_NAME is dependent upon the TABLE\_NAME you choose.

If you chose P4P\_PRJ\_SUM\_FS as your TABLE\_NAME, then use the table below to select the COLUMN\_NAME.

COLUMN_NAME	DATA TYPE	DESCRIPTION
THREE_YR_NPV, ANNUAL_CASE_VOL	NUMBER(22, 7)	<ul style="list-style-type: none"> <li>▫ Only available in the P4P_PRJ_SUM_FS table.</li> <li>▫ Initially mapped to the simple (fully-qualified metric names) of THREE_YR_NPV_NOB_NOPH_NOFY and ANNUALIZED_VOLUME_CASES_NOB_NOPH_NOFY. However you can also override them as well. See examples.</li> <li>▫ These metrics are available already in the OBIEE Answers list under Project Summary subject area, Agile PLM for Process Metrics Measures as "3 Year NPV (No Basis, No Phase, No Year)" and "Annualized Case Volume (No Basis, No Phase, No Year)", so they will not have to be enabled via the Administrator like the USRDEF columns.</li> </ul>
PRJ_USRDEF_COST0 - PRJ_USRDEF_COST	NUMBER(22, 7)	10 user-defined decimal fields
PRJ_USRDEF_DATE0 - PRJ_USRDEF_DATE4	NUMBER(10)	5 user-defined date columns, formatted as: YYYYMMDD
PRJ_USRDEF_NUMBER0 - PRJ_USRDEF_NUMBER9	NUMBER(10)	10 user-defined integer fields

If you chose P4P\_PRJ\_DET\_FS as your TABLE\_NAME, then use the table below to select the COLUMN\_NAME.

<b>COLUMN_NAME</b>	<b>DATA TYPE</b>	<b>DESCRIPTION</b>
PRJ_USRDEF_COST0 - PRJ_USRDEF_COST	NUMBER(22, 7)	10 user-defined decimal fields
PRJ_USRDEF_DATE0 - PRJ_USRDEF_DATE4	NUMBER(10)	5 user-defined date columns, formatted as: YYYYMMDD
PRJ_USRDEF_NUMBER0 - PRJ_USRDEF_NUMBER9	NUMBER(10)	10 user-defined integer fields

If you chose P4P\_PRJ\_METRICS\_FS as your TABLE\_NAME, then use the table below to select the COLUMN\_NAME.

<b>COLUMN_NAME</b>	<b>DATA TYPE</b>	<b>DESCRIPTION</b>
THREE_YR_NPV OR ANNUAL_CASE_VOLUME	NUMBER(22, 7)	These are not initially pre-mapped to any metrics. However they are available already in the OBIEE Answers list under the Project Summary subject area, P4P Metrics Measures as "3 Year NPV" and "Annualized Case Volume", so they will not have to be enabled via the OBIEE Administrator like the USRDEF columns.
USRDEF_COST0 - USRDEF_COST9	NUMBER(22, 7)	10 user-defined decimal fields
USRDEF_DATE0 - USRDEF_DATE4	NUMBER(10)	5 user-defined date columns, formatted as: YYYYMMDD
USRDEF_NUMBER0 - USRDEF_NUMBER9	NUMBER(10)	10 user-defined integer fields

---

**Note** The P4P\_PRJ\_METRICS\_FS table is only for the mapping of Base-Metric-Name metrics.

For more information, see "Base Metric Name - User-Defined NPD Project Metric-Set Additions".

---

If you chose P4P\_PROJECT\_DS as your TABLE\_NAME, then use the table below to select the COLUMN\_NAME.

COLUMN_NAME	DATA TYPE	DESCRIPTION
PRJ_USRDEF_LIST0 - PRJ_USRDEF_LIST14	VARCHAR2(1000 CHAR)	15 user-defined text fields (for example, for multi-value comma-delimited text lists)
PRJ_USRDEF_TEXT0 - PRJ_USRDEF_TEXT9	VARCHAR2(450 CHAR)	10 user-defined text fields

## System-Defined NPD Project Metric Replacements

A System-Defined NPD Project Metric does NOT require any use of the OBIEE Administrator tool.

System-Defined NPD Project Metrics are metrics where the predefined BI analytics mapping (from physical to logical to presentation) have been rationalized in the Project Summary Subject Area of the OBIEE Answers section.

There are two System-Defined NPD Project Metrics:

1. 3 Year NPV (pre-mapped metric ID: THREE\_YR\_NPV\_NOB\_NOPH\_NOFY)
2. Annualized Case Volume (pre-mapped metric ID: ANNUALIZED\_VOLUME\_CASES\_NOB\_NOPH\_NOFY)

The concepts for the above System-Defined NPD Project Metrics are common, but their names are not standard across customers.

For this reason, Oracle allows you to remap (replace) these metrics. For example, replace THREE\_YR\_NPV\_NOB\_NOPH\_NOFY with THREE\_YR\_NPV\_ABS\_PREL\_FY10.

**Example: SQL script for replacing the 3 Year NPV metric**

```
insert into P4P_METRIC_CONFIG_MAP (metric_name, table_name,
column_name) values ('THREE_YR_NPV_ABS_PREL_FY10', 'P4P_PRJ_SUM_FS',
'THREE_YR_NPV');
```

**Example: SQL script for replacing the Annualized Case Volume metric**

```
insert into P4P_METRIC_CONFIG_MAP (metric_name, table_name,
column_name) values ('BIGCORP_METRIC_AN_CS_VOL', 'P4P_PRJ_SUM_FS',
'ANNUAL_CASE_VOL');
```

## Simple (dimension-less) User-Defined NPD Project Metric Additions

Simple (dimension-less) user-defined NPD project metric additions are simple metrics for which no previous BI Analytics exists.

**Example SQL script** for adding the "Project Cost" metric to an available user-defined cost column in the Project Detail Subject Area:

```
insert into P4P_METRIC_CONFIG_MAP (metric_name, table_name,
column_name) values ('PROJECT_COST_NOB_POST_FY09', 'P4P_PRJ_DET_FS',
'PRJ_USRDEF_COST1');
```

---

**Note** To view the data in the Answers section, in OBIEE Administrator, enable the PRJ\_USRDEF\_COST1 column from the Project Detail Subject Area.

---

## Dimensionalized User-Defined NPD Project Metric-Set Additions

Dimensionalized User-Defined NPD Project Metric-Set Additions are metrics that allow you to analyze its different values (based on the intersection of the different dimensions that have defined it).

The different possible dimensions are:

- Fiscal Year
- Basis
- Phase
- Category

When you specify the METRIC\_NAME of this type, you should only specify the base or prefix of the ID.

For example, a metric with a base name of CONTRIBUTION; Fiscal Year values of FY08, FY09, and FY10; Phase values of Pre-Launch, Launch and Post-Launch; and Basis value of Absolute; it would have the following nine intersections of its dimensions:

- CONTRIBUTION\_ABS\_PREL\_FY08
- CONTRIBUTION\_ABS\_PREL\_FY09
- CONTRIBUTION\_ABS\_PREL\_FY10
- CONTRIBUTION\_ABS\_LNCH\_FY08
- CONTRIBUTION\_ABS\_LNCH\_FY09
- CONTRIBUTION\_ABS\_LNCH\_FY10
- CONTRIBUTION\_ABS\_POST\_FY08
- CONTRIBUTION\_ABS\_POST\_FY09
- CONTRIBUTION\_ABS\_POST\_FY10

**Example SQL script** for adding this CONTRIBUTION metric-set to the Project Metrics Fact group:

```
insert into P4P_METRIC_CONFIG_MAP (metric_name, table_name,  
column_name) values ('CONTRIBUTION', 'P4P_PRJ_METRICS_FS',  
'USRDEF_COST4');
```

## Extended Attributes

Extended Attributes (EAs) are optional custom-data feature available in Agile PLM for Process. EAs exist on both GSM Specifications and NPD Projects.

**Warning** If you install the optional Extended Attributes Denormalization feature on the PLM4P database AFTER you have already installed OPLA, then you need to rerun the appropriate db-type PLM4P source views script (that is, AllInOneViews.sql for SQL-SERVER source DB, and OracleAllInOneViews.sql for Oracle source DB) for any P4P\_CONFIG\_EA mappings to work.

Only *distinct* EAs can be denormalized, and therefore are the only candidates for mapping into BI.

Extended Attributes may require prebuilt content, mapping, and customization.

Prebuilt mappings and ETL exist between:

1. Source to Staging
2. Staging to MDS

After you have identified the Extended Attributes to bring in to Oracle PLA for analysis, you must map them between the Source to Staging. This is done by using a custom mapping script. After you have created the mapping and run the ETL this data flows from Source to Staging. The data then moves to MDS using prebuilt mappings between Staging to MDS. You must customize OBIEE RPD in order for the extended attributes to be exposed as a measure or a dimension in the presentation layer.

## EAs Process Steps

The steps for getting an EA into the BI solution are as follows:

1. **EA Denormalization:** the automated process where EAs are extracted into denormalization tables, for example, DENORM\_EA\_NUMERIC and DENORM\_EA\_TEXT.
2. **Mapping:** The manual configuration and mapping of which EAs to extract from the denormalized data into specific BI Subject Areas.
3. **ETL:** The automated process by which the data is moved from the source system to the target system. This data includes any optional EA denormalized data. This process also transfers specific EAs per the above Mapping step into the desired location(s).
4. **Enabling:** The manual configuration via OBIEE Administrator of the enabling of the targeted tables and columns in the desired Subject Area in the Answers section.

## EA Mapping Table and Column Choices

1. The extended attribute mapping table (P4P\_CONFIG\_EA) is defined as follows:

COLUMN NAME	DB-TYPE	DESCRIPTION
EA_DENORM_TABLE_NAME	VARCHAR2(256 CHAR)	Source EA denorm table name
EA_DENORM_COLUMN_NAME	VARCHAR2(256 CHAR)	Source EA denorm column name
ATTRIBUTE_ID	VARCHAR2(80 CHAR)	Source EA ID
OWNING_OBJECT_TYPE	VARCHAR2(256 CHAR)	Source Owning object type (that is, GSM or NPD)
DEST_TABLE_NAME	VARCHAR2(256 CHAR)	Destination table name

COLUMN NAME	DB-TYPE	DESCRIPTION
DEST_COLUMN_NAME	VARCHAR2(256 CHAR)	Destination column name

2. The EA\_DENORM\_TABLE\_NAME and EA\_DENORM\_COLUMN\_NAME depend on the type of the EA data. Specifically:

EA Data-Type	DENORM_TABLE_NAME	DENORM_COLUMN_NAME
Boolean	P4P_DENORM_EA_BOOLEAN	VALUE
Quantitative Range	P4P_DENORM_EA_QUANTITATIVERANGE	<ul style="list-style-type: none"> <li>▫ MIN</li> <li>▫ TARGET</li> <li>▫ MAX</li> <li>▫ MINBASE</li> <li>▫ TARGETBASE</li> <li>▫ MAXBASE</li> <li>▫ UOM</li> <li>▫ UOMBASE</li> <li>▫ MINPRECISION</li> <li>▫ TARGETPRECISION</li> <li>▫ MAXPRECISION</li> </ul>
Quantitative Tolerance	P4P_DENORM_EA_QUANTTOLERANCE	<ul style="list-style-type: none"> <li>▫ VALUE</li> <li>▫ TOLERANCE</li> <li>▫ UOM</li> <li>▫ VALUEBASE</li> <li>▫ UOMBASE</li> <li>▫ VALUEPRECISION</li> <li>▫ TOLERANCEPRECISION</li> </ul>
Date	P4P_DENORM_EA_DATE	VALUE
Text	P4P_DENORM_EA_TEXT	VALUE

EA Data-Type	DENORM_TABLE_NAME	DENORM_COLUMN_NAME
Number	P4P_DENORM_EA_NUMERIC	<ul style="list-style-type: none"> <li>▫ VALUE</li> <li>▫ UOM</li> <li>▫ VALUEBASE</li> <li>▫ UOMBASE</li> <li>▫ PRECISION</li> </ul>

1. The destination table name (DEST\_TABLE\_NAME) to choose depends on the desired owning object type (OWNING\_OBJECT\_TYPE), Subject Area, and EA data type. Specifically:

OBJECT TYPE	SUBJECT AREA & DATA TYPE	TABLE NAME
GSM	Specification numeric	P4P_SPEC_FS
	Specification text	P4P_SPEC_DS
NPD	Project Summary numeric	P4P_PRJ_SUM_FS
	Project Detail numeric	P4P_PRJ_DET_FS
	Project text	P4P_PROJECT_DS

2. The COLUMN\_NAME to choose depends on the TABLE\_NAME chosen as follows:
- a. P4P\_SPEC\_FS (the available GSM Specification FACT table columns for numeric EAs)

COLUMN_NAME	DB-TYPE	DESCRIPTION
SPEC_USRDEF_COST0 to SPEC_USRDEF_COST9	NUMBER(22, 7)	10 user-defined decimal fields

<b>COLUMN_NAME</b>	<b>DB-TYPE</b>	<b>DESCRIPTION</b>
SPEC_USRDEF_DATE0 to SPEC_USRDEF_DATE4	NUMBER(10)	5 user-defined date columns, formatted as: YYYYMMDD
SPEC_USRDEF_NUMBER0 to SPEC_USRDEF_NUMBER9	NUMBER(10)	10 user-defined integer fields

- b. P4P\_SPEC\_DS (the available GSM Specification DIMENSION table columns for text EAs)

<b>COLUMN_NAME</b>	<b>DB-TYPE</b>	<b>DESCRIPTION</b>
SPEC_USRDEF_TEXT0 to SPEC_USRDEF_TEXT9	VARCHAR2(450 CHAR)	10 user-defined text fields

- c. P4P\_PRJ\_SUM\_FS, P4P\_PRJ\_DET\_FS (the available NPD Project Summary and Project Detail FACT table columns for numeric EAs)

<b>COLUMN_NAME</b>	<b>DB-TYPE</b>	<b>DESCRIPTION</b>
PRJ_USRDEF_COST0 to PRJ_USRDEF_COST9	NUMBER(22, 7)	10 user-defined decimal fields
PRJ_USRDEF_DATE0 to PRJ_USRDEF_DATE4	NUMBER(10)	5 user-defined date columns, formatted as: YYYYMMDD
PRJ_USRDEF_NUMBER0 to PRJ_USRDEF_NUMBER9	NUMBER(10)	10 user-defined integer fields

- d. P4P\_PROJECT\_DS (the available NPD Project DIMENSION table columns for text EAs)

COLUMN_NAME	DB-TYPE	DESCRIPTION
PRJ_USRDEF_LIST0 to PRJ_USRDEF_LIST14	VARCHAR2(1000 CHAR)	15 user-defined text fields (for multi-value comma-delimited text lists)
PRJ_USRDEF_TEXT0 to PRJ_USRDEF_TEXT9	VARCHAR2(450 CHAR)	10 user-defined text fields

## EA Example

**Example SQL script** for adding the distinct numeric EA named *FPCalciumOverride* to an available user-defined cost column in the Specification Subject Area:

```
insert into P4P_CONFIG_EA
(Ea_Denorm_Table_Name, Ea_Denorm_Column_Name, Ea_Select_Value,
Attribute_Id, Owning_Object_Type, Dest_Table_Name, Dest_Column_Name)
Values ( 'P4P_DENORM_EA_NUMERIC', 'VALUE', 'VALUE',
'FPCalciumOverride', 'GSM Spec', 'P4P_SPEC_FS', 'SPEC_USRDEF_NUMBER3');
```



# Frequently Asked Questions

### This chapter includes the following:

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- Frequently Asked Questions Related to Agile Product Lifecycle Management..... 63
- Frequently Asked Questions Related to Agile PLM for Process..... 67

Answers to some frequently asked questions are provided here for your reference.

## Frequently Asked Questions Related to Agile Product Lifecycle Management

Answers to some frequently asked questions are provided here for your reference.

### 1. Why are some PLM attributes not appearing in its attribute options list for mapping?

All attributes that are defined in the PLM database are not available for selection. Only those attributes that have corresponding mapping information defined in the Data Mart tables are displayed.

### 2. Can I map disabled attributes using the Configurator?

The Configurator does not support the mapping of disabled attributes. If a previously mapped attribute is subsequently disabled in PLM, the mapping is highlighted in red for your attention.

### 3. Why am I prompted to select a target dimension table only for certain attributes?

You can change the target dimension table only for list, multi-list, and user-defined attributes. For conforming dimension tables, you can only change the attribute name. In PPM module, you can change the target dimension table only for multi-list attributes.

**4. Why do some of the dimension table names in the list appear in blue?**

This indicates that the dimension table has already been mapped for the selected attribute.

**5. Only a few PLM attributes are displayed for the predefined dimension table names. Why?**

Some List IDs may already have been mapped to a predefined dimension table in another row or tab. In this case, only the attributes for the same List ID are displayed. A target dimension table can be mapped to only one List ID.

**6. Can I start the Configurator before the ODM ETL process runs?**

Yes, but Flex attributes will not be available for mapping.

**7. Can I use the Configurator while the MDS ETL is running?**

This is best avoided as it can interfere with the ETL process.

**8. Why are some of my flex attributes not displayed in the Oracle PLA Configurator?**

Newly created flex attributes should have been entered in the new columns using the Agile JavaClient or WebClient in order to be picked up by the ODM ETL process. Unless this is done, these attributes will not appear in the Oracle PLA Configurator.

9. **Will my changes to Agile PLM configuration require any changes to existing mappings?**

After you finish the initial mapping of PLM attributes, you will need to update the mappings whenever a mapped attribute is changed or disabled in Agile PLM.

10. **When I upgrade to Oracle PLA Configurator version 3.3, what happens to the configurations done using MDS Configurator version 3.0?**

See *Upgrade Considerations* section in *Oracle Product Lifecycle Analytics (Oracle PLA) Installation and Setup Guide*.

11. **In Oracle PLA Configurator, if I need more mappable fields what should I do?**

Use Options > Add user-defined fields menu to add more user-defined configurable fields. See Extending user-defined (Configurable) fields.

12. **Can I extend the number of User-defined dimension tables using Oracle PLA Configurator?**

No. For information on adding user-defined dimension tables to MDS Schema using Oracle PLA Configurator, refer section, **Adding User-defined dimension tables to the Schema**.

The Oracle PLA Configurator supports only the extension of columns in Fact tables and creation of corresponding bridge tables (wherever applicable).

13. **How do I get more elaborated logging messages in my log file?**

Oracle PLA Configurator uses Apache log4j libraries for logging messages. You can change log4j.properties file with different logging level (INFO, DEBUG, WARN, ERROR) to control the type of messages logged in the log file.

For more information see Apache log4j at <http://logging.apache.org/log4j/1.2/manual.html>.

- 14. When I upgrade from PLM BI 3.0 / 3.1 / 3.2 to Oracle PLA 3.3, can I retain all configurations done using the 3.0 version of the MDS Configurator?**

Yes. It is possible to retain all the configurations done using the 3.0 version of the MDS Configurator when you upgrade from PLM BI 3.0 to Oracle PLA 3.3.

- 15. Why do we have domain value lookup in Oracle PLA 3.3?**

You can configure your own PPM subclasses in Agile PLM. These subclasses can be used as Program, Project, and Portfolio according to the needs in your organization. You need to map these configured subclasses into respective domains to obtain meaningful reports.

- 16. What happens if I do not configure domains?**

If you do not configure domain values, the ETL run does not populate values in the Phase-Gate Fact Table. You will receive a WARNING email notification indicating that you have not configured Phase and Gate.

- 17. What are the mandatory domain values that need to be configured for PPM?**

You need to configure the Program, Portfolio, Phase and Decision Gate domain values for PPM.

- 18. Why are the source attributes not showing up in the PPM subclasses configuration in MDS Configurator?**

There are two answers to this question.

- a. The staging ETL did not run successfully.
- b. Before using PPM subclass configuration users should always configure the appropriate domains under Options--> ETL Configurations > Domain lookup tab.

## Frequently Asked Questions Related to Agile PLM for Process

1. **Why are there no records returned when I create an Answer by selecting in Project Summary Subject Area's P4P Metrics Measures for any projects in "3 Year NPV" nor "Annualized Case Volume"?**

There are no pre-mapped results for these Measures.

2. **Why are there no records returned when I create an Answer by selecting in Project Summary Subject Area's P4P Metrics Measures for any projects in "3 Year NPV (No Basis, No Phase, No Year)" nor "Annualized Case Volume (No Basis, No Phase, No Year)"?**

None of your NPD Projects use the expected pre-mapped Project Metric names of:  
THREE\_YR\_NPV\_NOB\_NOPH\_NOFY nor  
ANNUALIZED\_VOLUME\_CASES\_NOB\_NOPH\_NOFY. You can re-map these as needed.

3. **Why are there no records returned when I add the P4P Metrics Dimension of Basis Name (and/or Category Name, Metric Phase Name, Fiscal Year) to my Project Summary Subject Area's Answer with P4P Metrics Measures for any projects in "3 Year NPV (No Basis, No Phase, No Year)" nor "Annualized Case Volume (No Basis, No Phase, No Year)"?**

These Dimensions are only useful with the "3 Year NPV" and "Annualized Case Volume" measures (note that there is no parenthetical qualifying of Basis or Phase or Fiscal Year in their names).



# Troubleshooting Guidelines

### This chapter includes the following:

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- Troubleshooting Guidelines Related to Agile Product Lifecycle Management ..... 69
- Troubleshooting Guidelines Related to Agile PLM for Process ..... 71

Some common errors that can occur while using the MDS Configurator are outlined here along with suggested resolution.

## Troubleshooting Guidelines Related to Agile Product Lifecycle Management

### 1. The System cannot find the file specified.

Check if any of the following files are missing under the `<install.dir>/config` directory. If any are missing, reinstall BI.

- *BIDataLayerConfig.properties*
- *Configurator.xml*
- *Configurator.xsd*
- *log4j.properties*
- *Messages\_en\_US.properties*

### 2. TNS:listener does not currently know of SID given in connect descriptor.

Ensure that the SID provided in the following token within the *BIDataLayerConfig.properties* file is the same as the database SID.

```
TGT_DB_URL =jdbc:oracle:thin:@<machine name>:<port number>:<SID>
```

3. **Invalid user name/password; login denied.**

Check if the following tokens reflect the right user name and password information in the *BIDataLayerConfig.properties* file:

- ODM\_UN - user name for Data Mart database schema
- <ODM\_PASSWORD> - password for Data Mart database schema user
- BI\_USER\_NAME - user name for MDS database schema
- <BI\_PASSWORD> - password for MDS database schema user

Encode the Data Mart and MDS passwords and compare the values with the ODM\_PASSWORD and BI\_PASSWORD.

**TNS: listener could not hand off client connection.  
OR  
Error while saving records.**

Test your database connection and make sure the database server and listener have successfully started.

4. **userid: following logging levels are used in application**

**userid: fatal - The FATAL level designates very severe error events that will presumably lead the application to abort**

INFO-The INFO level designates informational messages that highlight the progress of the application at coarse-grained level.

ERROR-The ERROR level designates error events that might still allow the application to continue running.

DEBUG-The DEBUG Level designates fine-grained informational events that are most useful to debug an application.

## Troubleshooting Guidelines Related to Agile PLM for Process

1. I mapped an Extended Attribute or an Project Metric via an insert to the appropriate mapping table, but it did not show up in OBIEE.
  - a. Did you commit the insert? Oracle DB sessions by default do not commit any changes automatically.
  - b. Did you run the ODI Operator after the commit? See main guide for information on how to run ODI.
  - c. Did the ODI Operator run to successful completion? If not, then check the TLOG table for possible mapping error messages.
  - d. If the column you mapped to started with the text "USRDEF\_" then did you also modify the RPD file via OBIEE Administrator to enable the viewing of those fields in the appropriate Subject Area? If not, then please modify the RPD file.
  - e. Did you restart the OBIEE service and/or flush its cache after the all of the above? If not, then please do so.
  
2. If the TLOG table has a message that says:
  - a. **There is a config error in P4P\_METRIC\_CONFIG\_MAP. Unsupported Table. Use one of the following tables: P4P\_PRJ\_SUM\_FS, P4P\_PRJ\_DET\_FS, P4P\_PROJECT\_DS and P4P\_PRJ\_METRICS\_FS.** Inspect the records in the P4P\_METRIC\_CONFIG\_MAP table for an unsupported table, and fix.

- b. **There is a config error in P4P\_METRIC\_CONFIG\_MAP. Multiple metrics mapped into same column.**  
Inspect the records in the P4P\_METRIC\_CONFIG\_MAP table for two rows where the table\_name and column\_name values are the same. Remove or fix duplicates.
  
- c. **There is a config error in P4P\_METRIC\_CONFIG\_MAP. Project Metric mapped to same column as Extended Attribute.**  
Inspect and compare the table\_name and column\_name values of the records in the P4P\_METRIC\_CONFIG\_MAP and P4P\_CONFIG\_EA tables. Remove or fix duplicates.
  
- d. **There is a config error in P4P\_METRIC\_CONFIG\_MAP. XXXX.YYYY is not a valid column.**  
Please refer to the legal destination table and column names list elsewhere in this document.
  
- e. **Could not find Metric Definition for fully qualified metric: XXXXX.**  
Double-check the name of the NPD Project Metric in the Agile PLM for Process source projects. Remember it will probably have some underscore characters in it separating the Basis, Phase and Fiscal Year qualifications.
  
- f. **Could not find Metric Definition for metric base name: XXXXX.**  
Double-check the name of the NPD Project Metric in the Agile PLM for Process source projects. Remember it will have NO qualification suffixes attached to it for Basis, Phase nor Fiscal Year.
  
- g. **Attempt to map Text Metric to non-text column or Attempt to map numeric or date Metric to non-numeric column.**  
Inspect and verify the data-types of the table\_name and column\_name values of the records in the P4P\_METRIC\_CONFIG\_MAP table and the NPD Project Metrics that are mapped to them. Refer to the legal destination list elsewhere in this document.