Agile PLM Business Intelligence

Agile PLM BI User Guide

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Preface

The Agile PLM documentation set includes Adobe® Acrobat PDF files. The Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.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.

Note	To read the PDF files, you must use the free Adobe Acrobat Reader version 7.0 or later. This program can be downloaded from the Adobe Web site http://www.adobe.com.

The Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.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 support http://www.oracle.com/agile/support.html (*http://www.oracle.com/agile/support.html*) for assistance.

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/technology/documentation/agile.html

Agile Training Aids

Go to the Oracle University Web page 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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This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Chapter 1

About this guide

Objective

The Agile PLM Business Intelligence User guide enables you to understand the scope and usage of PLM BI applications.

Note	This document describes only the delivered pre-built dashboards, reports, subject areas, and security setup for PLM BI. We recommend you to read the *Oracle Business Intelligence Enterprise Edition* documentation in the Oracle Technology Website for information on the underlying architecture, before you proceed with this document.

Related documentation

The Oracle Technology Network web site has the following documents related to PLM BI:

- Agile PLM Business Intelligence 3.1 Readme
- Agile PLM Business Intelligence Installation and Upgrade Guide
- Agile PLM Business Intelligence User Guide
- Agile PLM Business Intelligence Data Reference and Mapping Guide
- Agile PLM Business Intelligence Capacity Planning Guide
- Agile PLM Business Intelligence Configurator Guide

The Oracle Technology Network web site has the following documents related to PLM Datamart:

- Agile PLM Data Mart Setup Guide
- Agile PLM Data Mart Data Reference Guide
- Agile PLM Data Mart 3.0.1 Readme

The Oracle Technology Network web site has the following documents related to OBIEE:

- Oracle Business Intelligence Infrastructure Installation and Configuration Guide
- Oracle Business Intelligence Server Administration Guide
- Oracle Business Intelligence Presentation Services Administration Guide
- Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide

Oracle Business Intelligence Infrastructure Installation and Configuration Guide

This guide provides information on installation and configuration of the infrastructure or platform components of Oracle Business Intelligence on certified Operating systems and deployments. This release of the User Guide applies to infrastructure (platform) releases of Oracle Business Intelligence Enterprise Edition.

Note	The Oracle Business Intelligence Infrastructure Installer installs the platform components. Refer the *Agile PLM Business Intelligence Installation* guide for instructions to install the application components.

Oracle Business Intelligence Server Administration Guide

This is an infrastructure guide that contains post-installation and configuration information that pertains to setting up the Oracle Business Intelligence Server (Oracle BI Server). The guide discusses how to plan, create, and administer the physical, business model, mapping, and presentation layers in the Oracle BI Repository. The guide primarily covers tasks that are performed in the Oracle BI Administration Tool utility.

Oracle Business Intelligence Presentation Services Administration Guide

This guide provides post-installation configuration and administration procedures for Oracle BI Presentation Services, Oracle BI Answers, Oracle BI Delivers, Oracle BI Interactive Dashboards, and the Oracle BI Presentation Catalog and Catalog Manager. In addition, the guide discusses Oracle BI Presentation Services security, logging, user interface, and integration using HTTP.

Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide

This guide is for Oracle BI report and dashboard designers and end users of PLM BI Applications. This guide contains information about using Oracle’s Answers, Delivers, and Interactive Dashboards applications to organize and present data for making critical and timely business decisions.

Acronyms

A list of acronyms used in this document is provided here for your reference.

Acronym	Expansion
BI	Business Intelligence
DM	Data Mart
ODM	Operational Data Mart
ETL	Extract-Transform-Load
MDS	Multi-Dimensional Schema
OBIEE	Oracle Business Intelligence Enterprise Edition
ODI	Oracle Data Integrator
PLM	Product Lifecycle Management
PLM DM	Product Lifecycle Management Data Mart
PQM	Product Quality Management
ECO	Engineering Change Order
MCO	Manufacturing Change Order
ECR	Engineering Change Request
SS	Stop Ship
PR	Problem Report
NCR	Non-Conformance Report
CAPA	Corrective and Preventive Action
MTBF	Mean Time Between Failures
MTBC	Mean Time Between Cycles

Common Elements Used in This Book

Dimensions

Dimensions represent the organization of logical columns (attributes) that belong to a single logical dimension table. Examples of dimensions are Time periods, Product lines, Customers and Suppliers.

Subject Areas

Oracle Business Intelligence presents data in subject areas. A subject area contains columns that represent information about the areas of your organization's business or about groups of users within your organization. Subject areas usually have names that correspond to the type of information they contain Example: Quality and Change Management.

Measures

Measures refer to a measure or calculated data, such as number of problem reports or affected items that can be specified in terms of dimensions. For example, you might want to determine the number of new complaints for a product line in a given time period.

Filters and Prompts

Filters are built into requests and are used to limit the results that appear on a dashboard. A report that appears on a dashboard shows only those results that match the filter criteria. Filters are applied on a column-level basis. Certain filters inherit the values that users specify in dashboard prompts.

A prompt is another type of filter that applies to all items in a dashboard. Some prompts, such as date or period, are common to some dashboards. Other prompts, such as CAPA type, are unique to a specific dashboard. Prompts are synonymous with parameters.

Note	See *Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide*, 'Filtering Requests in Oracle BI Answers' for further information.

Folders

In the Oracle BI Presentation Services user interface, the Folders provide the ability to organize an Oracle BI Web Catalog and its contents, such as reports.

Guided Navigation

These are links to navigate to the transaction processing application, another dashboard, or a URL. This link can be set up to appear conditionally based on the results of a report or Key Performance Indicator.

Key Performance Indicator (KPI)

KPIs are key metrics that indicate how well the organization is performing an activity that is critical to success of organization.

Example: Example

Current month performance in terms of Complaints Cycle time compared to last 12 months.

Oracle Business Intelligence Answers (Oracle BI Answers)

Oracle BI Answers are components within the Oracle BI Enterprise Edition that provide answers to business questions. You can use Oracle BI Answers to create ad-hoc queries into an organization's data.

This interface allows PLM BI users with the appropriate permissions to build and modify Reports or Requests that enable PLM BI users to:

- Explore and interact with information
- Present and visualize information using charts, pivot tables, and reports.

Requests can be saved in the form of reports, and shared, modified, formatted, or embedded in a dashboard.

Oracle Business Intelligence Enterprise Edition (OBIEE)

OBIEE is a comprehensive suite of enterprise business intelligence products that contain the programs, servers, and tools to support broad, self-service access across the organization. OBIEE is the foundation for Agile PLM Business Intelligence application.

Oracle Business Intelligence Delivers (Oracle BI Delivers)

Oracle BI Delivers is the interface used to create Oracle Business Intelligence Alerts based on analytics results. This is a pro-active intelligence solution that enables monitoring of business activities. Results specific to out-of-tolerance situations can be detected within reports. The subscribers and target owners can be notified immediately through Web, Wireless, and Mobile communications channels.

Oracle Business Intelligence Interactive Dashboards (Oracle BI Interactive Dashboards)

Oracle Business Intelligence Interactive Dashboards provide access points for analytics information. When a PLM BI user accesses Oracle BI, the user’s default dashboard appears. Dashboards display reports that contain content specific to the needs of individual PLM BI users or groups. You can merge the historical and current data sources into a single dashboard. PLM BI users with the appropriate permissions can place results from Oracle BI Answers into dashboards for use by PLM

BI users.

Oracle Business Intelligence Presentation Catalog (Oracle BI Presentation Catalog)

The Oracle BI Presentation Catalog stores content created with Oracle BI Answers and Oracle BI Interactive Dashboards. Content can be organized into folders that are either Shared or Personal. Types of content that can be stored in the Presentation Catalog include Requests created with Oracle BI Answers and HTML content link to other images, documents, and sites.

Requests (Reports)

Requests are the building blocks of business intelligence dashboards. These requests are created using Oracle BI Answers to retrieve and display an organization's data. Data can be displayed in a variety of graphical formats. Links can be established in the chart or table of a report to launch another report to offer guided analysis.

Star Schema

Star Schema is a relational database schema which contains a fact table associated with a series of multi-dimensional tables.

Chapter 2

Understanding PLM Business Intelligence

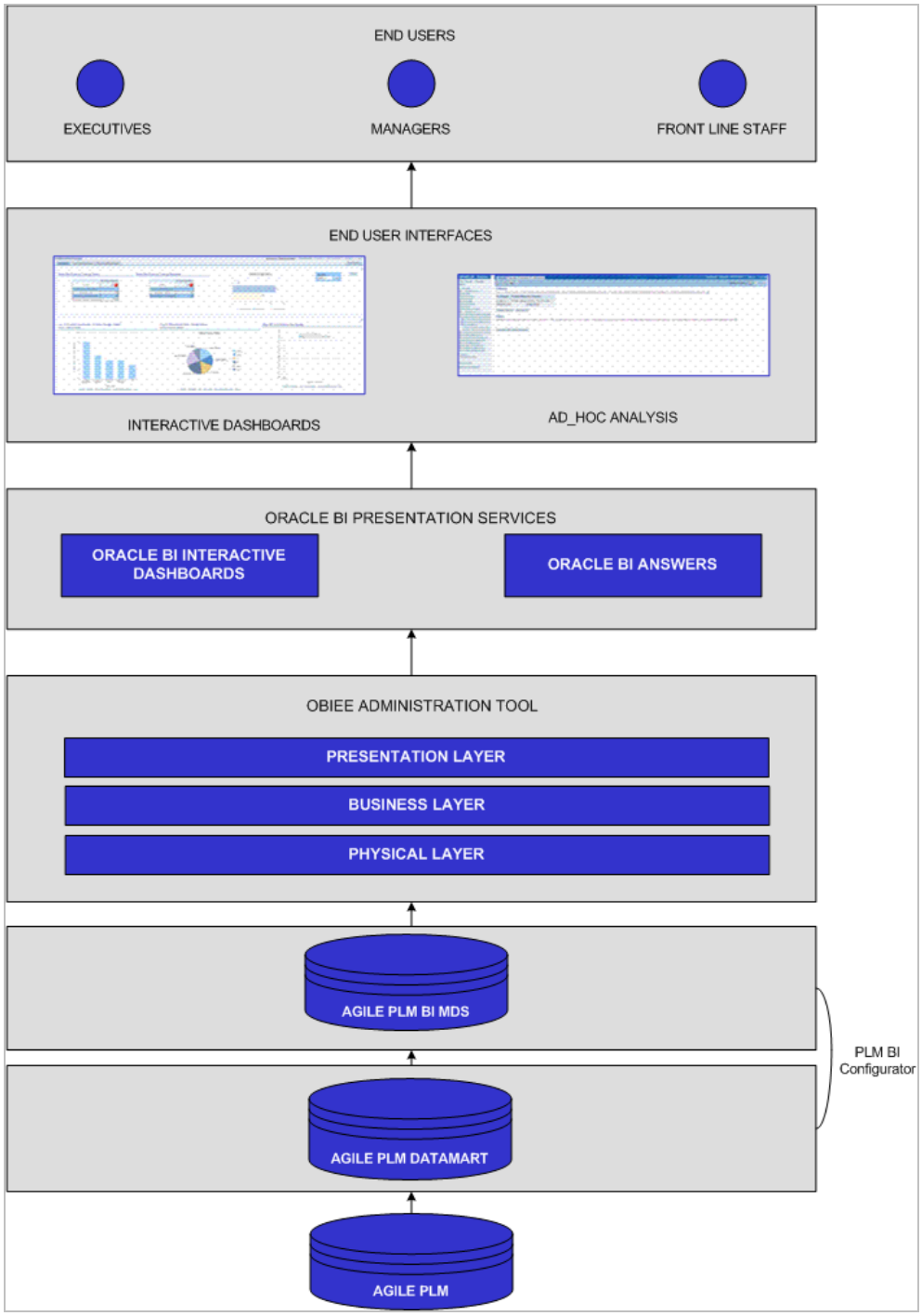
The Agile PLM Business Intelligence contains interactive, comprehensive analytical applications that offer insight into your PLM data.

Agile PLM Business Intelligence contains role-based and functional dashboards that help you quickly analyze key performance indicators, spot trends using reports and metrics and determine the current state of product quality. They also provide a library of pre-built reports, dashboard prompts, and filters that present data in interactive charts, graphs, and grids. You can grant each role access to specific objects, such as subject areas, dashboards, and reports. In addition, you can control access to specific data rows by using secured dimensions.

Agile PLM Business Intelligence applications include a single, pre-built repository that contains the metadata for the Multi Dimensional Schema. The repository consists of physical, business mapping and presentation metadata layers that contain common definitions of metrics, hierarchies, and calculations against the data. For more details on the Multi-Dimensional Schema, see *Agile PLM Business Intelligence Data reference Manual*.

The servers, programs, and tools in Oracle BI Enterprise Edition provide the infrastructure foundation for Agile PLM Business Intelligence applications. The metadata repository file and Web Catalog file are objects in Oracle BI Enterprise Edition. Oracle BI Answers and Interactive Dashboards are used to create the dashboards, reports, and certain Key Performance Indicators.

Agile PLM Business Intelligence Architecture



Oracle BI Administration Tool

Oracle BI Administration tool enables you to build, manage and maintain an Oracle BI Repository. It provides graphical representation of the Physical, Business model, and Presentation layers of the repository.

Repository File

Pre-built metadata content is maintained in the metadata repository file named PLMA.rpd.

Following are the subject areas contained in the .rpd file:

- PLM Quality-Customer Complaints
- PLM Quality- NCRs
- PLM Quality- CAPAs
- PLM Quality-Audits
- PLM Quality-Item Quality
- PLM Change - Change Orders
- PLM Change - Change Requests
- PLM Change - Item Changes
- PLM Change - Mfr Change Orders
- PLM Change - Stop Ships
- PLM Product - Item
- PLM Product - Item and AML
- PLM Product - Manufacturer Parts
- PLM Product - Product Performance

The Oracle BI Administration Tool is the user interface for the layers in the repository. The repository contains the Physical, Business Model and Mapping, and Presentation layers that are discussed in the following sections.

Physical Layer

Physical layer is the first later built in repository, which contains the objects representing the physical data sources (PLMBIMDS schema). The database object is the highest object in the physical layer. Each database object in the physical layer contains a connection pool.

A connection pool has information about the connection between Oracle BI Server and data source. In addition, the connection pools also have schema folders which contain tables, columns, and keys for a physical schema. These keys provide the metadata necessary for Oracle BI server to access

the actual physical source with SQL requests.

Business Model and Mapping Layer

The Business Model layer represents the logical structure of the information in the repository. The physical schemas are simplified and reorganized based on the users' view of the data. The business models contain logical columns arranged in logical tables (logical dimension tables and logical fact tables), logical joins, and dimensional hierarchy definitions. This layer also contains the mapping from the logical columns to the source data in the Physical layer.

The Business Model and Mapping layer appears in the middle pane of the Oracle BI Administration Tool. Generally, each logical display folder in this layer represents a business area. Each folder has a shortcut (reference) to all of the logical dimension and fact tables that are joined together in a star schema.

Presentation Layer

Presentation layer is the last layer of repository which contains presentation objects that provide a customized view of business model to PLM BI users. This layer organizes the business model in a way that the PLM users can query it for information. Presentation layer objects are Presentation catalog, Presentation table and Presentation column.

Oracle BI Presentation Services

See *Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide* in Oracle Technology Network: http://www.oracle.com/technology/index.html

Oracle BI Answers

Oracle BI Answers provides user interface for creating and modifying ad-hoc reports.

Oracle BI Answers is the embedded reporting tool that allows users with the appropriate permissions to build and modify reports that let end users explore and interact with information, and drill in place to source data. You can access these reports either from the delivered dashboards or from the Oracle Answers Catalog pane on the Oracle Answers page.

On the Oracle Answers page, you can also access the subject area folders that coincide with Oracle BI Presentation Catalog folders. The fact and dimension folders and columns appear in a subject area folder, just as they do in the Presentation Catalog.

Note	See Also "Basics of Working with Requests in Oracle BI Answers" and *Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide* in Oracle Technology Network: http://www.oracle.com/technology/index.html

Oracle BI Dashboards

The Oracle BI Dashboards user interface is part of the Oracle BI Presentation Services component of Oracle BI Intelligence.

Interactive Dashboards provide points of access for analytics information. A dashboard is made up of sections of information that can contain items such as results from Oracle BI Answers, external Web content, HTML text, graphics, and links to other dashboards. Dashboard content is logically organized into pages. The pages appear as tabs across the top of the screen in Oracle BI Interactive Dashboards. A dashboard page is designed to meet the needs of a particular role.

To access a dashboard, your user ID must be assigned to the appropriate Presentation Catalog group in Oracle BI Intelligence 'Setting up Security'.

Every dashboard or report can have a set of prompts that determine the data that appears. When you change the value of a prompt on a dashboard, and click the Go button, the system automatically refreshes the data on the dashboard. Changing a prompt can affect the amount of data, the column headings, the KPI values, and the graph formats.

Note	See Also 'Using Oracle BI Interactive Dashboards' in *Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide* in Oracle Technology Network: http://www.oracle.com/technology/index.html

Web Catalog Folder

The Oracle BI Web Catalog stores the application dashboards, report definitions, and contains information regarding permissions and accessibility of the dashboards by groups. The definitions or pre-built and customized dashboards and reports are available in Web Catalog folder.

Roles

The role of a user in the organization controls the user's access to objects (such as dashboards, reports, and catalog folders) in the Oracle BI Presentation Catalog. Presentation Catalog groups are defined by the system or by a PLM BI administrator. You assign specific users to Presentation Catalog groups, and that group membership determines the users' access to Presentation Catalog object.

Presentation Catalog groups Permissible Subject Area Folders

See 'Managing Oracle BI Presentation Services Security' in *Oracle Business Intelligence Presentation Services Administration Guide*.

Navigation

Users with the appropriate permissions can log into PLM BI links to view Dashboards, Answers, More Products, Settings, and My Account. The views that you can access are determined by your membership in a Presentation Catalog group.

Note	See 'Using Oracle BI Interactive Dashboards' in *Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guid*e.

Pre-built Reports

PLM BI delivers reports that provide end users with key metrics and measures for specific, pre-defined subject areas. These reports are available in the Oracle BI Answers Catalog and integrated into pre-built dashboards.

Note	See Also *Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide*, 'Basics of Working with Requests in Oracle BI Answers'

Request Filters

During the creation of an Oracle BI request, you can use column filters to constrain the request to obtain results which answer a particular question. Together with the columns that you include on the answer, a column filter determines what the results will contain. For example, depending on the industry you work in, you can use column filters to find out who the top ten performers are, sales for a particular brand, most profitable customers, and so on.

A column filter consists of a column to filter, a value to use when applying the filter, and an operator that determines how the value is applied. You can also prevent the filter from being replaced during navigation and prompting.

Note	See 'Filtering Requests in Oracle BI Answers' in *Oracle Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide*, for additional information on using column filters in an Oracle BI request.

Chapter 3

Understanding PLM Business Intelligence Subject Areas

This section provides an overview of the subject areas in Agile PLM Business Intelligence.

When you click the Answers link from any location in an Agile PLM Business Intelligence application, the Oracle Answers start page appears with a list of subject areas in the workspace. A subject area contains columns that represent dimensions and measures that help analyze specific business processes.

Users with right levels of access can create new reports using these dimensions and measures. In addition, these users can save and share content. Subject areas contain columns that can be combined to create ad-hoc reports using the Answers. They can also use the graphical capabilities of Answers to create charts and graphs.

For more details on creating ad-hoc reports, see *OBIEE User guide*.

PLM Business Intelligence supports analysis in the following areas:

- Quality management
- Change performance
- Product risk management

Quality Management Subject Areas

Quality Management Subject Areas are:

- PLM Quality - Customer Complaints
- PLM Quality - Non-Conformance Reports
- PLM Quality - Corrective and Preventive Actions
- PLM Quality - Audits
- PLM Quality - Item Quality

PLM Quality - Customer Complaints

This subject area provides the ability to analyze volume, cycle time and aging of Customer Complaints across customer, supplier, product lines, severity, status and resolution. Within volume analysis, it provides the Volume of complaints with CAPA and Volume of expected closed complaints.

Cycle time analysis consists of 'Originate' to 'Release' and 'Workflow cycle time' between and within statuses. Aging analysis provides aging buckets of 5-90 days. The source data for this subject area comes from relevant cover page attributes of the PLM class, Problem Reports.

PLM Quality - NCR

This subject area provides the ability to analyze volume, cycle time and aging of NCR across customer, supplier, product lines, severity, status and resolution. Within volume analysis, it provides the volume of NCR with CAPA and volume of expected closed NCR. Cycle time analysis consists of 'Originate' to 'Release' and 'Workflow cycle time' between and within statuses. Aging analysis provides aging buckets of 5- 90 days. The source data for this subject area comes from relevant cover page attributes of PLM class Non-conformances.

PLM Quality - CAPA

This subject area provides the ability to analyze volume, cycle time and aging of CAPA across customer, supplier, product lines, category and status. Within volume analysis, it provides the volume of CAPA with complaints or NCR. Cycle time analysis consists of 'Originate' to 'Release' and 'Workflow cycle time' between and within statuses. Aging analysis provides aging buckets of 5-90 days. The source data for this subject area comes from relevant cover page attributes of PLM class Corrective and Preventive Action.

PLM Quality - Audits

This subject area provides the ability to analyze volume, cycle time and aging Audit across customer, supplier, product lines, and status and audit result .Within volume analysis, it provides the 'Volume of complaints with NCR'. Cycle time analysis consists of 'Originate' to 'Release' and 'Workflow cycle time' between and within statuses. Aging analysis provides aging buckets of 5-90 days. The source data for this subject area comes from relevant cover page attributes of PLM class Audits.

PLM Quality - Item Quality

This subject area provides the ability to analyze the Items affected by Complaints, NCR, CAPA and Audits separately. Item part dimensions that are supported are Failure mode, Item type, Item Product line, Item commodity, and Item part family. With Complaints affected item and NCR affected item, it supports failure mode and affected item and quantity affected analysis. With CAPA and Audits it supports affected item analysis. The source data for this subject area comes from relevant attributes on Agile PLM Affected Item tab of Problem Reports, NCR, CAPA and Audits.

Change Management Subject Areas

Change Management Subject Areas are:

- PLM Change - Change Orders
- PLM Change - Mfr.Change Orders
- PLM Change - Change Requests
- PLM Change - Stop Ships
- PLM Change - Item Changes

PLM Change - Change Orders

This subject area provides the ability to analyze Volume, Cycle Time and Aging of Change Orders across key dimensions such as Product line, Category and Reason for Change. It also provides ability to analyze the sign-off cycle time by sign-off users.

PLM Change - Mfr Change Orders

This subject area provides the ability to analyze Volume, Cycle Time and Aging of Manufacturer Change Orders across key dimensions such as Product line, Category and Reason for Change. It also provides ability to analyze the sign-off cycle time by sign-off users.

PLM Change - Change Requests

This subject area provides the ability to analyze Volume, Cycle Time and Aging of Engineering Change Requests across key dimensions such as Product line, Category and Reason for Change. It also provides ability to analyze the sign-off cycle time by sign-off users.

PLM Change - Stop Ships

This subject area provides the ability to analyze Volume, Cycle Time and Aging of Stop Ships across key dimensions such as Product line, Category and Reason for Change. It also provides ability to analyze the sign-off cycle time by sign-off users.

PLM Change - Item Changes

This subject area provides ability to analyze affected items on Change Orders, Manufacturer

Orders, ECR, and Stop Ship on key Item dimensions such as Product line and assess the impact of change.

Product Risk Management Subject Areas

Product Risk Management Subject Areas are:

- PLM Product - Item
- PLM Product - Item and AML
- PLM Product - Manufacturer Parts
- PLM Product - Product Performance

PLM Product - Item

This Subject area provides the ability to analyze the Item Part Risk by key Item dimensions such as Life Cycle, Product line and Part Family. It also provides the ability to analyze the volume of released items by their Life cycle, Product line and Part Family.

PLM Product - Item and AML

This subject area provides ability to analyze key Item Measures such as volume by Manufacturer dimensions and Manufacturer measures such as number of manufacturer by Item dimensions based on certain rules. It also provides ability to analyze key risk metrics such as number of manufacturer parts per Item.

PLM Product - Manufacturer Parts

This Subject area provides the ability to analyze the Manufacturer Part Risk & volume by key dimensions such as Manufacturer, Life Cycle and Part Family.

PLM Product - Product Performance

This Subject area provides the ability to analyze and benchmark Items and Affected Items by Mean time between changes and failure. It also provides an ability to analyze Change and Quality incidents by key Item dimensions such as Product line and Type based on certain rules

Folders

Every Subject Area has a corresponding Folder structure on the left Selection pane in the BI Answers window. The Column folder contains groups of folders within it which have two main categories: Dimensions and Measures.

- Time dimension
- Dimensions (non-time related)
- Defined fields
- Measures
- Defined Measures

For information on valid combinations of the Measures and Dimensions in any category of Subject Area, refer Model Matrices.

For information on the Dimensions and Measures specific to PLM Quality – Item Quality Subject Area, refer Dimensions and Measures for Subject Area: PLM Quality-Item Quality

Time Dimension

Time dimension is common across all subject areas.

The Standard categories of Time Dimensions are:

- Calendar
- Fiscal
- Time Utility Members

The Calendar time depicts results as on the Gregorian calendar where the year begins on the first day of January.

The Fiscal time depicts results as on the Fiscal Calendar of your Organization. When you install the application, you need to specify the Fiscal Calendar details for your organization.

Use the Calendar and Fiscal Time columns in combination with a Measure to obtain results for a chosen time bucket – Year, Quarter, Month, Week, and Day.

The Time Utility Members have time buckets that provide results with reference to the current date. For example, select Previous Week Column in the Time Utility Members folder to obtain results specific to the last seven days from the current day. Rolling time provides results for the last N Months/Weeks/Quarters where N is a number.

Note	Following discussions assume knowledge of Agile PLM classes, workflow and their attributes.

Non- time related dimensions

These dimensions are generally mapped to an Agile PLM class cover page attribute. Examples include Customer, Product lines and Type (Sub-class), Category, Supplier, User and Complaint Number.

Flags

These dimensions typically indicate 'Yes' or 'No' and can be used to filter the reports.

Following sample dimension flags indicate current state of the object:

- Is Released: Returns 'Yes' if the Cover page 'Date Released' has been populated
- Is Complete: Returns 'Yes' if the Cover page 'Date Complete' has been populated
- Is Cancelled: Returns 'Yes' if the Object workflow is in 'Cancelled' state

Following sample relationship flags indicate if the object has been linked with another object in the relationship tab (This flag indicates 'Yes' whether or not a rule has been associated.)

- Has Audit: Indicates if the object (PR or NCR) has Audit associated with it.
- Has CAPA: Indicates if the object (PR or NCR) has CAPA associated with it.
- Aggregate PSR: Indicates if the object (PR or NCR) is an aggregate PSR and has child (PR or NCR respectively) associated with it.

Defined Fields

Defined fields are set of fields that can be mapped to an Agile PLM Page 2, Page 3 attribute using the PLM BI Configurator. Once mapped, these dimensions can be used like any other dimension to create reports. For more information, refer *Agile PLM BI MDS Configurator and Data Mapping Guide*.

Workflow Dimensions

The following are the Workflow dimensions:

Workflow Status Cycle Time Dimension: Used in combination with Workflow status cycle time measures to create cycle time reports for individual statuses. For more information on Workflow status cycle time measure, see Workflow measures on page 22.

Note	These dimensions work with Sign-off Cycle time measures.

Workflow Total Cycle Time Dimension: Used in combination with Workflow total cycle time measures to create cycle time reports between two steps in a workflow. For more information on Workflow total

cycle time measure, see Workflow measures on page 22.

Measures

Agile PLM BI application has various measures in each of the subject areas. Similar measures from various subject areas are grouped into different types of measures.

The following measures apply to PLM Quality, PLM Change Subject Areas:

- Volume Measures
- Cycle Time Measures
- Work Flow Measures
- Aging Measures
- Defined Measures
- Item-related Measures

The following measures apply to Change Order, Mfr Order, Stop Ship and Engineering Change Requests only.

- FTR Measures
- Sign-off Measures
- Redline Measures

Volume Measures

Volume measures provide counts of objects by specified time buckets and help assess trends and necessary action that needs to be taken.

For example, in Customer Complaints Subject Area, the Volume Measures provide responses to the following questions:

- How many new Complaints were reported last month? Is it trending up?
- How many Complaints are currently open?
- How many Complaints closed in Q3 2007? What is the Trend?
- How many Complaints are expected to close in January 2009?
- How many Complaints are currently overdue?

Agile PLM BI has the following types of Volume Measures:

- New

- Closed
- Expected Closed
- Open
- Overdue

New Measures

New measures indicate the trend of reported objects such as Customer complaints. Increasing or decreasing trends are signs that an action needs to be taken or action taken was successful.

Note	New indicates the number of new objects originated (based on originate date) in a specific period such as week, month, quarter, year arranged by originated date

Closed Measures

These Measures provides count of objects that closed in a given period. Cumulative counts provide count of all the objects till a specific time interval. Trend Charts of 'Closed' indicate if there is a rise or fall in the rate of closure.

Note	'Closed' indicates the number of objects which are in 'Closed' status (based on release or complete date) in a specific period such as week, month, quarter, year arranged by release date.

Expected Closed Measures

These Measures provide count of objects which are expected to close in a period. Expected closed measures are not available for CAPA and Audit objects since the Agile PLM class does not contain the 'Expected Resolution Date'.

Open Measures

These Measures provides count of objects which are in 'Open' status at the end of a period. The Trend charts of 'Open' indicate if the rate of closure is parallel to the 'New' objects.

Note	'Open' indicates the number of objects which are in 'Open' status (not released or not complete) as on a date arranged by 'Originated date'.

Overdue Measures

These measures provide count of objects that are overdue with respect to the expected resolution date. These are available for Complaints and NCRs only.

Aging Measures

Aging Measures enable you to measure the number of objects that have been in a specific workflow status for a pre-defined period or Aging bucket. Examples of Aging buckets are 11-20 days, and < 5 days.

Agile PLM BI has the following types of Aging Measures:

- Closed Aging
- Open Aging
- Overdue Aging

Open Aging

This measure provides count of 'Open' objects in each Aging bucket. Age is based on duration calculated from object 'Originate' date to 'Current' date.

Closed Aging

This measure provides count of 'Closed' objects in each Aging bucket. Age is based on the duration calculated from object 'Originate' date to 'Release' date.

Overdue Aging

This measure provides count of the 'Overdue' objects in each Aging bucket. The age is based on duration calculated from object 'Originate' date to 'Current' date when Release date is greater than Expected Resolution Date. Overdue aging measures are available only for Customer Complaints and NCR.

Note	Aging Measures cannot combine with Time Dimension.

Cycle Time Measures

Cycle Time Measures enable you to analyze the average duration between various combinations of the 'Start' and 'End' date of the workflow statuses of objects. Examples of such combinations are 'Originate to Release', 'Originate to Complete', 'Submit to Release' and 'Submit to Complete'.

These types of measures are called 'Cycle time based on system dates' to distinguish them from workflow cycle time measures. The other Cycle Time measures in this category are:

- Average days overdue
- Expected cycle time

Note	All cycle time measures are expressed in terms of calendar days. Weekends are included.

Cycle Time based on System Dates

This Measure refers to the Cycle time calculations on the basis of 'Start' and 'End' Dates of various statuses in any business Work Flow. PLM system auto-populates the Start dates (Originate or Submit) and End dates (Released or Complete) on objects.

Note	There are measures available that provide cycle time deducting the 'hold' duration. If an object has more than one Submit date then the cycle time calculation considers the latest submit date.

The Cycle Time Measures provide answers to questions such as 'What is the current status of Open Complaints? How long have they been in 'Current' status?'

Cycle time measures assume 'End' date to be Current date if the 'End' state such as 'Released' or 'Complete' have not been reached for an object.

Average Days Overdue

This Measure refers to the Average number of Days that the objects are past the 'Expected Resolution Date'. The Average Days for which any object is 'Overdue' is as on date for 'Open' objects and as on 'Released Date' for 'Released' objects.

Expected Cycle Time

This Measure refers to the Expected Cycle time for Complaints and NCRs on the basis of 'Expected Resolution Dates'.

Work Flow Measures

Workflow measures enable you to measure durations for specific statuses in a workflow.

Agile PLM BI has the following types of Workflow Measures:

- Total Cycle Time
- Total Cycle Time in-process
- Status Cycle Time
- Status Cycle Time in-process

Consider the following example workflow with statuses as given below. Assume that the object is currently in 'Investigated' step.

Identified > Acknowledge > Define Issue > Determine Root Cause > Investigated > Implement > Validate > Preventive Action > Close > Notify

Notes on Total Cycle Time:

- Time spent in Hold status is included in the calculations
- For statuses of Type ‘Complete’ and ‘Cancel’, Entry Date = Exit Date
- Calculations are valid in forward direction of workflow. Example: You can expect measure values when a workflow moves from ‘Pending’ to ‘Complete’ status. However, measures will not return results in 'reverse' direction. For example, if an object is demoted from Review to Pending, it returns incorrect results.

Total Cycle Time

The Total Cycle Time Measure provides the average cycle time for every valid combination of the 'FROM' and 'TO' statuses.

In the given example workflow, the duration between 'Acknowledge' status and ' Determine Root cause' status in a Workflow constitutes the 'Total Cycle Time'.

Condition:

- You can select the start status dimension (FROM) and end status dimension (TO) in combination with this measure.
- Statuses are the status names configured for a specific Workflow.

Result:

Total Cycle Time = Earliest date on which the object entered the ‘FROM’ state minus the Latest date on which the object exit from the ‘TO’ state.

Note	The calculation does not consider rejections during the workflow.

Special considerations:

- When FROM = Any State and TO = Cancel, whether or not the Cancel state has an Exit Date, the Measures consider, Entry Date = Exit Date.
- When FROM = Any State and TO = Complete, whether or not the Complete state has an Exit Date, the Measures consider, Entry Date = Exit Date.

Total cycle time - in process

Total Cycle Time in-process indicates the total time that an object has taken to reach the current state from any other state. The object is assumed to be currently 'Open'.

In the given example work flow, total cycle time is the duration between 'Identified' and 'Investigated' status.

The objects that have FROM status but no corresponding TO status are considered to be ‘In-Process’ and are considered for Total Cycle Time – In Process calculations.

Total Cycle Time – In Process = ETL Run Start Date – FROM Date

Special Considerations:

Objects in Complete and Cancel states, are also considered to be in the 'In-Process' state.

Status cycle time

Status Cycle Time helps determine the cycle time for each status step. This is the response to questions such as 'How long was the object in 'Determine root cause' state?'

General Business Rule: Only the traversed states are considered for the Status Cycle Time Calculations.

A workflow can enter and exit states multiple times. In all conditions, the following formula applies:

Status Cycle Time for a Status = Latest Exit date from the Status minus Earliest Entry Date into the Status

Status cycle time- in process

This measure returns the duration spent in state that the object is currently in.

Status cycle time in process for a status =ETL run start date minus the earliest entry date into the status.

In the example work flow, the time spent in 'Investigated' state is the Status cycle time in-process.

FTR Measures

First Time Right Measures enable you to identify the number of objects that are currently in a closed state without a single rejection. When compared with total number of closed objects, this metric provides an insight on the agreement that the initiator and sign-off approver have on the routed document. Agile PLM BI has the following types of FTR Measures:

Closed FTR

These measures provide a count of the FTR objects in the ‘Closed’ state. You can obtain information about the Closed FTR objects which are in the ‘Complete’ and ‘Released’ state. In addition, these measures provide a count of the FTR objects that are closed without any rejection.

Cumulative FTR

These measures provide a cumulative count of the FTR objects. Cumulative counts are available for ‘New’, ‘Complete’ and ‘Released’ states.

Open FTR

These measures list the number of FTR objects which are in the ‘Open’ state. You can view the count of Open FTRs which are in the ‘Not Complete’ and ‘Not Released’ state.

Sign-off Measures

Sign off Measures enable you to gain insight on the average time taken to sign-off the routed Change objects. In addition, they provide the following information:

- Number of approvers
- Number of approvals
- Number of rejected objects
- Number of reviewers
- Percentage of approvers that signed off on the routed objects

These calculations are on the basis of general business rules or conditions specific to every sign-off measure.

Note	Time stamps (combination of date and time) are used in the calculations. Sign-off cycle time takes into account the date only while Workflow cycle time considers Time stamps.

The various sign-off measures are:

- Sign off Cycle Time
- Sign off Cycle Time – in process

Sign-off Cycle time

Condition 1:

- User is on the list of approvers or observers when the routable object enters the sign off status.
- The user is not removed from the list of reviewers from the date on which the routable object enters the sign off status

Result:

Sign-off Duration = Sign-off date minus the date on which the object entered the sign-off status

Condition 2:

User is added to the list of approvers or observers after the routable object enters the sign-off status.

Result:

Sign-off Duration = Sign-off date minus the date on which the user was last added to the list of approvers or observers.

Sign-off Cycle Time – in Process

Condition 1

- User is on the list of approvers or observers when the routable object enters the sign off status
- The user is not removed from the list of reviewers from the date on which the routable object enters the sign off status

Result:

Sign-off Duration = Current date minus the date at which the object entered the sign-off status.

Condition 2:

User is added to the list of approvers or observers after the routable object enters the sign-off status.

Result:

Sign-off Duration = Current date minus the date on which the user was last added to the list of approvers or observers.

Redline Measures

For a Change or a set of Changes, Redline Measures provide a count of row modifications in the Bill of Material or Approved Manufacturers List. These measures provide the number of BOMs and AMLs added, modified, and deleted for a specific dimension. You can also obtain an average of the number of items that change as a result of a redlining activity.

Measures in Subject Areas

The following matrix displays the various Measures applicable to the Subject Areas:

SUBJECT AREAS	Customer Complaints	Non-Conformance Reports	Corrective and Preventive Actions	Audits	Item Quality	Change Orders	Change Requests	Manufacturer Change Orders	Stop Ships	Item Changes	Item	Item- AML	Manufacturer Parts	Product Performance
MEASURES														
Volume Measures	x	x	x	x		x	x	x	x					
Defined Measures	x	x	x	x		x	x	x	x		x	x	x	
Cycle Time Measures	x	x	x	x		x	x	x	x					
FTR Measures						x	x	x	x					
Item Measures					x						x	x		x
Manufacturer Part												x	x	x
Manufacturer												x		
Item Manufacturer Part												x		
Redline Measures						x				x				
Sign-off Measures						x	x	x	x					
Workflow Measures	x	x	x	x		x	x	x	x					
Item Volume											x			x
Item Age											x			x
Mean Time														x
Affected Item					x					x				x
Item Risk											x			x

Model Matrices

The Model Matrices illustrate the valid combination of Measures and Dimensions when you create reports. This section consists of Model Matrices for all subject areas except Item-AML and Item Subject Areas.

Note:

Refer the section ‘Working with Item AML and Item Subject Areas’ for detailed explanation and model matrices for these two subject areas.

In the following matrices:

- x denotes valid combinations

- xx denotes valid combinations with restrictions. See **Note** below the matrix for explanation
- - denotes combinations that are not valid

Model Matrix for PLM Change Subject Areas

The following matrix indicates valid combinations of Measures and Dimensions for a PLM Change Subject Area. Example: Change Orders Subject Area

Dimensions > Measures v	Time	Change Orders	Product	People	Workflow	Flags	Defined Fields
Volume	x	x	x	x	x	x	x
Aging		x	x	x	x	x	x
Cycle Time	x	x	x	x	x	x	x
Workflow	x	x	x	xx	xx	x	x
FTR	x	x	x	x	x	x	x
Sign-off	x	x	x	xx	x	x	x
Redline	x	x	x	x	x	x	x
Defined Measures	x	x	x	x	x	x	x

Note:

In the People dimensions folder, Sign off User and Sign off User Groups are valid with Sign-off Measure.

In the Workflow dimensions folder,

Workflow (Status Cycle Time) dimension is valid with Workflow Measure >Status Cycle Time only

Workflow Start (Total Cycle Time) and Workflow End (Total Cycle Time) dimensions are valid with Workflow > Total Cycle Time measures only

Model Matrix for PLM Product Subject Areas

The following matrix indicates valid combinations of Measures and Dimensions for a PLM Product Subject Area. Example: PLM Product – Product Performance

Dimensions > Measures v	Time	Items	Flags	People	Defined Fields
Item Volume	x	x	x	x	x
Item Risk	x	x	x	x	x
Mean Time	x	x	x	x	x
Item Age	x	x	x	x	x

Model Matrix for PLM Change – Item Changes Subject Area

The following matrix indicates valid combinations of Measures and Dimensions for PLM Change – Item Changes Subject Area:

Measures > Dimensions v	**Change Orders Item Measures**	**Mfr Change Orders Item Measures**	**Change Requests Item Measures**	**Stop Ships Item Measures**
Time	x	x	x	x
Items	x	x	x	x
Change Orders	x	-	-	-
Mfr. Change Orders	-	x	-	-
Change Requests	-	-	x	-
Stop Ships	-	-	-	x
Flags	x	x	x	x
People	xx	xx	xx	xx
Workflow	xx	xx	xx	xx
Defined Fields	x	x	x	x

Note:

The following is the list of valid combinations of the People and Work Flow dimensions with the Measures:

- Change Orders and Workflow (Change Orders) dimensions are valid with Change Order Item measures only.
- Mfr Change Orders and Workflow (Mfr Change Orders) dimensions are valid with Mfr Change Orders Item measures only.

- Change Requests and Workflow (Change Requests) dimensions are valid with Change Requests Item measures only.
- Stop Ships and Workflow (Stop Ships) dimensions are valid with Stop Ships Item measures only.

Additional Notes on Item AML and Product Performance Subject Areas

It is important to understand the following common scenarios that form the basis of most of the Item, Mfr, and Item-AML reports.

Scenario 1:

When using Item-AML subject area, we recommend that you create Reports for the Global Items with latest effective revision that are not obsolete. Life cycle can be used as a dimension, but when there is more than one life cycle per revision, some aggregation of data may not be valid. Average of data may provide correct results in these use cases.

Use the out of the box filter, ‘filter-latest item revisions’ to create reports that filter only the latest revision of the Item.

The query used in the filter is as given below:

Site is equal to / is in Global
AND Change Class Type is equal to / is in Change Orders, Manufacturer Orders
AND Is Latest Rev is equal to / is in YES
AND Life Cycle is not equal to / is not in Obsolete
AND REV is not null
OR REV is not equal to / is not in Introductory

Recommended Dimension:

For simplified interpretation, we recommend you to use dimension and measure combinations from same dimension/measure group. For example Item dimensions with Item measures.
For other combinations, interpretations may be necessary. The contexts within each measure provide explanation as required.

Note:

Use Item Number, Rev, Site to get a detailed report by Item and revision. Use Item Number, Life cycle to get a detailed report of Items by life cycle.

Scenario 2:

Some measures are appropriate for reports analyzing the trend over time. For example, AML split distribution in the past vs. present. In such situations, all versions of the Item need to be included with the Time dimension. Even obsolete items need to be included to get the correct analysis.

Use the out of the box filter, ‘filter-all item revisions’ to create reports for all revisions of the Item.

The query used in the filter is as given below:

Site is equal to / is in Global
AND Change Class Type is equal to / is in Change Orders, Manufacturer Orders
AND REV is not null
OR REV is not equal to / is not in Introductory

Note:
Inclusion of this filter does not automatically consider count of every revision of the item. For example, if there are two items with three released revisions each, the result for # Items released displays 2. When you combine the # Items released with Item number and revision, all revisions of every item are counted.

Time dimension is not valid with measures such as Item Age within Item Subject Area and measures where aggregation is by averaging data.

Life cycle can be used as a dimension, but when there is more than one life cycle per revision, some aggregation of data may not be valid. Summation of data gives correct result.

Recommended filters:
Site = Global;
Class Type = Change Orders, Manufacturer Orders;
Rev not equal to' Introductory' or not equal to NULL;

Recommended Dimension: Time

Use Item Number, Rev, Site to get a detailed report by Item and revision
Use Item Number, Life cycle to get a detailed report of Items by life cycle.

Note: You can also filter the detailed report by a specific item number, to view the trend of items over revision or life cycle.

Important:

Do not use the recommended filters and dimensions with the following measures:

Item with Pending Changes
Items (Prelim)
Items (All)

Note	The filters in scenarios 1 and 2 may not give different results when combined with Item Measures and Item Dimensions. The results may be different when Item Measures are combined with Mfr or Mfr part dimensions. Similarly, the Mfr and Mfr Part measures exhibit different results when filters in scenarios 1 or 2 are used.

Agile PLM BI provides revision specific information for few measures and dimensions. Example: Description and AML. Calculations specific to the remaining Measures and Dimensions use the data specific to the latest revisions for all revisions.

Item Age Calculations

This section explains the common implementation of Item Age Calculations.

Item Lifecycle Age (Effective Date)

Aggregation Rule: Calculates the average across all the dimensions and the sum across Lifecycle State Dimension.

For this measure, the value is calculated by averaging the values across all the dimensions such as Item, REV, Class type, and product families and summing across the life cycle state dimension.

Example:

20547-D-003 has two life cycle states Pilot with age value of 38.89 and Production with age value of 49.00
20547-W-A1 has two life cycle states Obsolete with age value of -3.17 and Production with age value of 0.00
20547-W-B1 has two life cycle states Production with age value of 24.50 and Prototype with age value of 37.00

The expected value when lifecycle dimension is removed from the report is

For 20547-D-003 - 87.89 (38.89+49.00)
For 20547-W-A1 - -3.17(-3.17+0.00)
For 20547-W-B1 - 61.50 (24.50+37.00)

Note	The explanation is same for Item Lifecycle Age (Release Date).

Item Age (Effective Date)

Aggregation Rule: Calculates the average across all the dimensions and the sum across REV Dimension.

For this measure, the value is calculated by averaging the values across all the dimensions such as Item, Lifecycle, Class type, Product families and then it adds across the REV dimension. MCO not included.

Example:

19024A80-005 has values 20, 29, 40 for revisions A, B and C respectively
19024A80-006 has values 29, 40 for revisions B and C respectively
19024A80-007 has values 20, 29, 40 for revisions A, B and C respectively

The expected value when REV dimension is removed from the report is

For 19024A80-005 - 89 (20+29+40)
For 19024A80-006 - 69 (29+40)
For 19024A80-007 - 89 (20+29+40)

Note	The explanation is same for Item Age (Release Date).

How to interpret combinations

For simplified interpretation, we recommend you to use dimension and measure combinations from the same dimension or measure group. Example: Item Dimensions with Item Measures. For interpretations on other combinations, refer the Appendix: Interpretation Matrix.

Chapter 4

Understanding PLM BI Dashboards

This section discusses

- Dashboards
- Guided Navigation
- Out-of-the-box Security Groups

Dashboards

Agile PLM BI provides various dashboards based on relevant measures and dimensions created using appropriate Agile PLM cover page attributes. These dashboards are classified into the following groups:

- Product Changes
- Product Engineering
- Product Quality

The following are the types of dashboards available:

- Functional Dashboards
- Role-based Dashboards

Functional Dashboards

The following are the Standard functional Dashboards available in Agile PLM BI application:

- Customer Complaints
- Non-Conformances
- CAPA
- Audits
- Change Orders
- Manufacturer Orders

Sample Role-based dashboards

The following are the sample role-based Dashboards available in Agile PLM BI application:

- Quality Executive
- Quality Manager
- Quality Analyst
- Change Analyst
- Component Engineer
- Component Manager
- Commodity Manager
- Configuration Manager
- VP Engineering

The following table briefly describes every standard Dashboard page:

Dashboard	Description	Prompt	Example Pages	Example Reports
Customer Complaints	Provides comprehensive and actionable insight into various aspects of Customer Complaints - trends, Open/Overdue volumes, and Cycle time and Failure modes.	Complaints Type, Calendar Year	Complaint Trends, Overdue Complaints	Top 10 product lines based on closed complaints, Overdue complaints by Aging
Non-Conformance Reports	Provides comprehensive and actionable insight into various aspects of NCR's - trends, open/overdue volumes, cycle time and failure modes.	NCR Type, Calendar Year	Overview – NCR, Item NCR	Failure Mode Pareto Analysis, NCR Affected Items by Trend
Corrective and Preventive Actions	Provides comprehensive and actionable insight into various aspects of CAPA - trends, open CAPA and cycle time.	CAPA Type, Calendar Year	CAPA Trends, Cycle Time	Closed CAPA by Dimensions, Open CAPA Status Cycle Time by Dimensions
Audits	Provides comprehensive and actionable insight	Audit Type, Calendar Year	Audit Trends, Open Audits	Audit Cumulative Trends,

	into Audits- trends, open audits and cycle time.			Top 5 Suppliers based on Open Audits
Change Analyst	Enables you to track submitted changes and pending approvals	Change Analyst, Quarter	Submitted Issues, Change Documents	Open Change Orders by Status, Documents on Pending Change Orders
Change Orders	Provides the ability to analyze volume, cycle time and trends of Change Orders. It also provides the ability to analyze the trends and reasons for Change Requests and Stop Ships.	Year, Quarter, Change Order Type	Open Change Orders, Item Changes	Open Change Orders Aging by Dimensions, Parts undergoing change by Part Type
Configuration Manager	Enables you to manage the Change Order process with the ability to measure Cycle time and Volume. The analyses help you to identify issues related to process.	Quarter, Preliminary, Year, Quarter, Product Lines	Team Effectiveness, Process Effectiveness	Change Orders Aging by Change Analyst, Number of Closed Change Orders by Workflow Type
Manufacturer Orders	Manufacturer Order functional dashboard provides the ability to analyze volume, cycle time and trends of Manufacturer Orders.	Year, Quarter, Month, Mfr Change Type	Mfr Order Trends, Open Mfr Orders, Cycle Time, Item Mfr Order	Open Manufacturer Change Orders by Dimensions, Changes Cumulative Trends
Quality Executive	Provides Quality Executive with comprehensive and high-level view of complaint trends, failure modes and product line performance.	Year and Item Product Line, Calendar Year	Failure Mode, Product Line Performance	NCR Affected Items by Failure Mode, Closed CAPA Volume and Cycle Time
Quality Manager	Provides comprehensive visibility into all aspects of quality in one or more product lines.	Year and Product line, Year Quarter Month	Product Line Performance, Supplier Performance	Complaints Trend and Cycle Time, NCR Trend by Supplier
Quality Analyst	Enables analysts to	Not Applicable	Submitted	Open Complaints by

	track and manage open complaints, NCR and CAPA.		Issues, Open Issues	Status, Open NCRs by Days Open
Component Engineer	Enables you to track progress of newly created parts and sign-off progress on Manufacturer Change Orders.	Mfr Part Creator, Item Creator, Manufacturer (AML), Manufacturer, Year, Quarter	NPI Manufacturer	Manufacturer part without Item, Top 10 Manufacturers based on AML count by Mfr part preference status
Component Manager	Helps track key Part risks such as AML (Approved Manufacturer List) risk, Manufacturer Part Risk, and Part risk. It also helps Component Manager track newly created parts and their associated risks.	Year, Quarter, Product Lines, and Part family	NPI, Team Effectiveness	New Mfr Parts and Risk coverage by Part Family, Mfr Part Risk Effectiveness
Commodity Manager	Enables you to track Manufacturer and Manufacturer Parts being considered for New Product development. It helps in early visibility of risks associated with new products.	Year, Quarter, Commodity, Product Lines,	NPI, Commodity Analysis	Top Ten Commodities by Part Count, Top N Manufacturers based on AML Split
VP Engineering	Provides ability to monitor Product design, quality and risk information. It also helps evaluate effectiveness of Product lines along key parameters such as mean time between changes and design KPI.	Year, Product Lines	NPI, Product Line Performance	Products with Pending Change, Design Effectiveness, and Product Risk

The following table lists the standard Key Performance Indicators in Agile PLM BI 3.0 application:

KPI	Description	Page
Percentage Open Variance	Indicates the variance between the expected and actual number of 'Open' items in Complaints, Audits, NCRs, CAPA, Change Orders, Change Analyst, Configuration Manager, and Manufacturing Orders dashboards.	Overview page in all functional dashboards
Percentage New Variance	Indicates the variance between the expected and actual number of 'New' items in Complaints, Audits, NCRs, CAPA, Change Orders, Change Analyst, Configuration Manager, and Manufacturing Orders dashboards.	Overview page in all functional dashboards
Cycle Time Variance	Indicates the variance between the expected and actual Cycle Time for items in Complaints, Audits, NCRs, CAPA, Change Orders, Change Analyst, Configuration Manager, and Manufacturing Orders dashboards.	Overview page in all functional dashboards

Guided Navigation

Guided navigation aids users with insight into business issues and appropriate actions to take by guiding their exploration of results obtained from Oracle BI Answers. When based on common scenarios and best practices for your industry or organization, guided navigation allows users to see and analyze related issues by navigating to a related set of results, another dashboard, or a URL. Guided navigation is specified using the Dashboard Editor.

The functional dashboards contain a Guided Navigation section that appears conditionally based on certain Key Performance Indicators (KPIs). When the system detects that one of these KPIs has reached its pre-defined threshold, a link appears in the Guided Navigation section to guide you to a Summary report for further investigation.

The following table lists the sample alert names, threshold descriptions, and guided navigation target pages for the alerts that are delivered with the Agile PLM BI 9.2.1.5 application.

Guided Navigation Link Name	Dashboard	Page	Condition	Navigation
Overdue Complaints	Customer Complaints	Overview	("- Volume Measures"."# of Overdue Complaints - Not Released"/"- Volume Measures"."# of Open Complaints - Not Released")*100 >75	Customer Complaints --> Overdue Complaints Page
Open Complaints without Expected Resolution Date	Customer Complaints	Open Complaints	# of Open Complaints - without expected resolution date returns data	Open Complaints without Expected Resolution Date
Guided Nav Link 1	Quality Executive	Overview	Open Complaints are 10 % above last 12 month average	Open Complaints by Product Lines
Guided Nav Link 1	Quality Executive	Overview	New NCR last month are 10 % higher than the 12 month average	Open NCRs by Product Lines
Guided Nav Link 1	Quality Executive	Overview	CAPA cycle time is 10 % higher than the 12 month average	Closed CAPA Cycle Time by Product Lines
Guided Nav Link 1	Quality Executive	Overview	No Audits were conducted in last 6 months.	New Audits by Product Lines
Change Requests & Stop ships	Change Orders	Overview	Number of Open Change Requests and Stop Ships is greater than 90 days	Change Requests & Stop ships

Security Groups

The following Groups are provided out of the box with Dashboard access as shown below:

Dashboard	Dashboard pages	Roles
Customer Complaints	Overview Complaint Trends Open Complaints	Administrator, Engineering Manager, VP-Quality, Support Manager

Dashboard	Dashboard pages	Roles
	Overdue Complaints Cycle Time Item Complaints	Support Manager does not have access to Item Complaints page and Item Quality subject area.
Non Conformance Reports	Overview – NCR NCR Trends Open NCR Overdue NCR Cycle time Item NCR	Administrator, Engineering Manager, VP-Quality
Corrective and Preventive Actions	Overview CAPA Trends Open CAPA Cycle Time Item CAPA	VP-Quality, Administrator
Audits	Overview Audit Trends Open Audits Cycle Time Item Audits	VP-Quality, Administrator
Quality Executive	Overview Failure Mode Product Line Performance	VP-Quality, Administrator

Dashboard	Dashboard pages	Roles
Quality Analyst	Submitted Issues Open Issues Customer/Supplier Open	Quality Analyst , Administrator
Commodity Manager	Summary NPI Commodity Analysis	Commodity Manager
Change Analyst	Submitted Issues Open Issues Change Documents	Change Analyst
Change Orders	Overview Change Orders Trends Open Change Orders Cycle Time Item Changes Change Requests and Stop Ships	VP Engineering Configuration Manager
Configuration Manager	Summary Team Effectiveness Process Effectiveness	Configuration Manager
Manufacturer Orders	Overview Mfr Orders Trends Open Mfr Orders Cycle Time Item Mfr Order	VP Engineering Component Manager Component Engineer
Component Engineer	Summary NPI Manufacturer	Component Engineer
Component Manager	Overview NPI Team Effectiveness	Component Manager
VP Engineering	Overview Product Line Performance	VP Engineering

Dashboard	Dashboard pages	Roles
	NPI	

User Authentication Details

User Name	Password
VP Quality	vpq
Quality Manager Global	qmg
Quality Manager ProductLine	qmp
Quality Analyst	qa
Engineering Manager	em
Support Manager	sm
VP Engineering	null
Commodity Manager	null
Component Manager	null
Configuration Manager	null
Component Engineer	null
Change Analyst	null

Appendix

Interpretation Matrix

This matrix describes the interpretation of some combinations of Measures and Dimensions. The blank cells in the matrix indicate that the combinations are similar to the others in the same measure group.

Item – AML Subject Area

Dimensions > Measures v	Item	Item.Lifecyle	Mfr	Mfr part	Item-Mfr Part junction Example: Preferred Status	Time
Item Measures						
Items (Released)	Count of the released items in the system.	Count of the life cycles that the released items have traversed.	Count of the released items associated with the manufacturers. The association is by an ECO or MCO.	Count of the released items associated with the manufacturer parts.	Count of the released items associated with a preference status.	Count of the items released over time. When you combine Time dimension with a dimension in a different group such as Mfr.Part, it gives the number of item and revisions associated with this Mfr.Part.
	Note: For all Dimensions, except Time, the revision data (Latest revisions or all revisions) about an item in the result is based on the					

Dimensions > Measures v	Item	Item.Lifecyle	Mfr	Mfr part	Item-Mfr Part junction Example: Preferred Status	Time
	recommended filters and dimensions used.					
# Items with One Mfr only	Number of items associated with a single Manufacturer. When you combine with Product Line, it gives the number of Items within a Product Line that have only one Manufacturer.	Life cycle of Items that have one Mfr only	Mfr associated with the Item	Mfr Part associated with Item	Preferred status of the Mfr Part associated with the Item	
# Items with One Mfr Part Only (Released Items)	Number of Items associated with a single Manufacturer Part. When combined with Product line, it gives number of Items within a Product line that has only one Manufacturer Part.	Life cycle of Items that have one Manufacturer Part only	Manufacturer associated with the Item	Manufacturer Part associated with Item	Preferred status of the Manufacturer Part associated with the Item	
Mfr Part Measures						
# Mfr. Parts	Number of Mfr. Part associated with the Items belonging to a Product Line or any other Item dimension. Example: How many Mfr.parts are	Number of Mfr Part associated with each life cycle transition of Item. This includes the current and past data.	Number of Mfr parts by Mfr dimension. This number considers only the Mfr.Parts associated to an Item. Example: How	Number of Mfr.Parts by Mfr.Part dimension. Mfr.Part that is not associated with item is not considered. Example: How many Mfr.Parts are	Number of Mfr Part by Part preference status. Example: How many Mfr Parts are preferred?	

Dimensions > Measures v	Item	Item.Lifecyle	Mfr	Mfr part	Item-Mfr Part junction Example: Preferred Status	Time
	associated with the Product Line Leo?		many Mfr.Parts are manufactured by a specific manufacturer?	from Part family, 'Cable'?		
# Mfr. Parts in Released Item	Number of Mfr. Part associated with the Released Items belonging to a Product Line or any other Item dimension. Example: How many Mfr.parts are associated with the Product Line Leo?	Number of Mfr Part associated with each life cycle transition of Released Item. This includes the current and past data.	Number of Mfr parts by Mfr dimension. This count considers only the Mfr.Parts associated with a Released Item. Example: How many Mfr.Parts are manufactured by a specific manufacturer?	Number of Mfr.Parts by Mfr.Part dimension. This count considers only the Mfr.Parts associated with a Released Item. Example: How many Mfr.Parts are from Part family, 'Cable'?	Number of Mfr Part by Part preference status. This count considers only the Mfr.Parts associated with a Released Item. Example: How many Mfr Parts are preferred?	
# Mfr. parts on more than one Item	Item or Product Line to which Mfr.Parts that are on more than one Item is associated with.					
Average Mfr. Parts per Released Item	Average number of Mfr. Parts per released revision of the Item by a specific dimension. Example : Product Line	Average number of Mfr Parts per Released Item by Life cycle.	Do not use	Do not use	Do not use	
Mfr.Measures						

Dimensions > Measures v	Item	Item.Lifecyle	Mfr	Mfr part	Item-Mfr Part junction Example: Preferred Status	Time
# Mfr	Number of Manufacturers associated with the Items belonging to a Product line.	Number of Manufacturers associated with each Life cycle transitions of one or more items. The revision data (Latest revisions or all revisions) about an item in the result is based on the recommended filters and dimensions used.	Number of Mfr by Mfr dimension. Manufacturers that are not associated with Mfr.Parts or Manufacturers that are not associated with Mfr.Parts that have association with item are not included.	Number of Mfr by Mfr.Part dimension. Example: How many Mfr does Mfr Part family have?	Example: How many Manufacturers are preferred?	
Item Mfr Part Measures						
AML Split by Item Create Date	AML split of Mfr Parts associated with Items by Product line	AML split associated with each life cycle.	AML split by Mfr	AML split by Mfr.Part	AML split by preference status	
Defined Measures						
Spend by Mfr by Item Create date	Spend on Mfr Parts associated with Items by Product line	What is spend by Item life cycle?	What is the spend by Mfr as on date?	Do not use	Do not use	
Note: This measure requires Defined Fields Cost 1 and Quantity 1 to be configured to P2 or P3 attribute. The spent amount is calculated as Cost 1 x Quantity 1. This measure is not revision-specific. Use the ‘Items with latest revision along with this measure.						
Spend by Mfr by						

Dimensions > Measures v	Item	Item.Lifecyle	Mfr	Mfr part	Item-Mfr Part junction Example: Preferred Status	Time
Item Effective date						

Item Subject Area

Dimensions > Measures v	Item	Item.Lifecyle
Item - Age	Sum of Item Age by revision. Note: For all the other dimensions, the result is an average of Item Age by revision.	Do not use with Life cycle.
Item Age by Life cycle	Use this with Filter 1, for the latest revision.	Sum of Item Age by Life cycle. Note: For all the other dimensions, the result is an average of Item Age.

For Item age, use the recommended filter 1, for the latest revision.

When using recommended filter 2 for latest revisions, use Item age in every instance except when you expose Life Cycle as a dimension. For the latter, use the Item Age by Life cycle.

Note Do not use Item and Revision in conjunction with Item age by Life cycle.

Product Performance Subject Area

Dimensions > Measures v	Item	Item.Lifecyle
Mean Time Between Cycles (MTBC)		Recommend not to use with Life cycle since this is based on Item age.
Mean Time Between Design Failures (MTDF)		Recommend not to use with Life cycle since this is based on Item age.

For Mean Time between Cycles, use the recommended filter 1 for latest revision. When using recommended filter 2 for all revisions, use Item-age only in all cases except when exposing life cycle as a dimension. If there are two repeating life cycles on an Item, the duration of each life cycle is averaged (not summed) thereby providing an inaccurate Mean Time Between Cycles, Mean Time Between Design Failures for Life cycle.