Oracle® Fusion Middleware

Overview Guide for Oracle Business Intelligence Applications

11g Release 1 (11.1.1.7)

E35837-02

August 2013

This guide describes key product concepts for Oracle Business Intelligence Applications. It describes what BI Applications are, the business areas where BI Applications help companies gain competitive insight, BI Applications components and architecture, and a typical BI Applications lifecycle.

This guide includes the following sections:

- Section 1, "What Is Oracle Business Intelligence Applications?"
- Section 2, "What Business Areas Are Supported in Oracle BI Applications?"
- Section 3, "About Oracle BI Applications Architecture"
- Section 4, "What Is the Oracle BI Applications Product Lifecycle?"
- Section 5, "Documentation Accessibility"

1 What Is Oracle Business Intelligence Applications?

Oracle BI Applications is a suite of prebuilt business intelligence solutions that deliver role-based intelligence. Oracle BI Applications support prebuilt aggregation and analysis of information from a variety of transactional applications, including Oracle E-Business Suite, Oracle Siebel, PeopleSoft, JD Edwards EnterpriseOne, as well as non-Oracle applications. These transactional applications are referred to source systems, because they provide the underlying data that source analyses.

Oracle BI Applications are built on Oracle Business Intelligence Suite Enterprise Edition, a comprehensive BI and analytics platform. More information is available on the Oracle Technology Network: `http://www.oracle.com/technetwork/middleware/bi-enterprise-edition/overview/index.html`.

Oracle BI Applications extracts data from your source systems using Oracle Data Integrator (ODI), a data movement tool, transforms that data with pre-built mappings, and loads it into the Oracle Business Analytics Warehouse. This information is used to populate the analyses that deliver role-based intelligence that your company can use to make decisions to improve your organization's bottom line, competitive performance, and business insight.

Oracle BI Applications allows your organization to realize the value of a prebuilt, packaged BI application such as rapid deployment, lower total cost ownership, and built-in best practices. Oracle BI Applications offers:

- A prebuilt data warehouse schema, the Oracle Business Analytics Warehouse, with associated extract, transform, and load (ETL) metadata and data-movement

infrastructure to support aggregation and transformation for the analysis of data from all transactional sources.

- A pre-built Oracle BI Applications metadata repository to support analysis of the data in the Oracle Business Analytics Warehouse.
- A suite of metrics pertaining to how organizations measure performance that your company can select from and apply to your particular line of business.
- Application and industry-specific, role-based analytics and dashboards that are organized to maximize both industry and domain knowledge, as well as leveraging an understanding of the Oracle Business Analytics Warehouse and its underlying source transactional schemas for historical analysis.

2 What Business Areas Are Supported in Oracle BI Applications?

Oracle Business Intelligence Applications are offered in these areas: Enterprise Resource Planning Analytics (ERP Analytics) and Customer Relationship Management (CRM Analytics) Analytics.

This section contains highlights of the following areas:

- Enterprise Resource Planning Analytics
- Customer Relationship Management Analytics

For more information about Oracle Business Intelligence and the analytics applications offered as part of Oracle Business Intelligence Applications, see the Oracle Technology Network at the following URL:
http://www.oracle.com/us/solutions/business-analytics/overview/index.html.

2.1 Enterprise Resource Planning Analytics

Enterprise Resource Planning (ERP) systems provide an integrated set of applications to make information available across an organization throughout all of its business areas and externally to its stake holders.

2.1.1 Oracle Financial Analytics

Oracle Financial Analytics provides organizations with information about the key financial areas of performance, including balance sheet, working capital, and liquidity. It also provides analysis of product and customer profitability, performance against budget, and on the complete lifecycle of assets. This application presents financially-relevant data for decision makers.

Oracle Financial Analytics includes the following modules:

- General Ledger
- Profitability
- Accounts Payable
- Accounts Receivable
- Fixed Assets
- Employee Expenses
- Budgetary Control

2.1.1.1 Oracle U.S. Federal Financial Analytics

U.S. Federal Financial Analytics is an Oracle Financial Analytics offering that provides operational and financial business intelligence to U.S. federal government agencies to improve transparency, accountability, and measure results. U.S. federal government agencies can track and manage non credit card invoices paid on time. They can also track and manage interest penalties payments and minimize delinquent debt amounts to improve management accountability, and reduce Treasury borrowing.

Oracle U.S. Federal Financial Analytics includes the following modules:

- Budget Summary Analytics
- Budget Detail Analytics
- Budget Spending Analytics
- Payables Analytics

2.1.2 Oracle Human Resources Analytics

Oracle Human Resources (HR) Analytics provides information about workforce costs, staffing, compensation, recruitment, learning and productivity. This application integrates data from an array of functional areas and presents analysis tools to monitor head count movement, source applicants, and reduce retention and absence costs.

Oracle Human Resources Analytics includes the following modules:

- Workforce Effectiveness
- Workforce Deployment
- Workforce Gains and Losses
- Compensation
- Absence and Leave Accrual
- Payroll
- Recruitment
- Learning
- Time and Labor

2.1.3 Oracle Manufacturing Analytics

Oracle Manufacturing Analytics helps manufacturing organizations optimize their supply networks by integrating data from across the enterprise value chain. Through complete end-to-end insight into the manufacturing operations and visibility across the plants and business units, organizations can significantly reduce costs, enhance profitability, increase customer satisfaction, and gain competitive advantage by identifying and eliminating low value-added processes without compromising quality.

The solution is also suitably integrated with other applications in the Oracle Business Intelligence Applications family to deliver supply chain information across the value chain. For example, Oracle Supply Chain and Order Management Analytics enables better understanding of problem areas in fulfilling certain products and helps identify unrealistic levels of sales order fulfillment backlog.

When coupled with Manufacturing Analytics, organizations are able to analyze supply and demand in tandem to identify potential supply shortages.

Oracle Manufacturing Analytics includes the following modules:

- Planning
- Manufacturing Execution
- Quality
- Production Costing
- Inventory

2.1.4 Oracle Procurement and Spend Analytics

Oracle Procurement and Spend Analytics helps executives, managers, and front line employees in organizations make informed and actionable decisions by providing them with views of corporate spending and the complete procure-to-pay process, with comprehensive analyses of procurement performance, sourcing performance, supplier performance, supplier payable trends, and employee expenses. This application provides pre-built adapters for Fusion applications, Peoplesoft applications, Oracle E-Business Suite applications, and Siebel applications.

Oracle Procurement and Spend Analytics includes the following modules:

- Spend Analyzer
- Supplier Performance
- Sourcing
- Procurement Performance
- Employee Expenses

2.1.5 Oracle Project Analytics

Oracle Project Analytics delivers project-based analysis of forecasts, budgets, cost, revenue, billing, profitability, and other areas of project management. It provides the kind of data project managers, project executives, and project accountants are looking for to analyze project data. This application provides analyses for project managers, project executives, and project accountants to enable these stakeholders to monitor the lifecycle of a project and make timely, informed decisions at all levels of the organization.

Oracle Project Analytics includes the following modules:

- Budgets
- Cost
- Commitments
- Billing
- Funding
- Contracts
- Revenue
- Forecast
- Resource Management
- GL Reconciliation
- Cross Charges

2.1.6 Oracle Supply Chain and Order Management Analytics

Oracle Supply Chain and Order Management Analytics delivers sales orders and inventory analyses that organizations can use to make decisions across the supply chain management lifecycle, enabling them to asses inventory levels, product fulfillment needs, potential sales order backlog issues, and A/R and DSO issues. This application provides timely order, margin, cancellations, discounts, and returns related analyses to operations departments, order managers, fulfillment managers, and supply chain executives.

When coupled with Manufacturing Analytics, organizations can analyze supply and demand in tandem to identify potential supply shortages.

Oracle Supply Chain and Order Management Analytics includes the following modules:

- Order Management
- Order Fulfillment
- Inventory and Logistics
- Costing (for Oracle E-Business Suite only)

2.1.7 Oracle Student Information Analytics

Oracle Student Information Analytics provides academic institutions with reporting and analytic capabilities to better align curriculums and operations with opportunities and competitive challenges in three key competitive areas – student admissions and recruiting lifecycle, student academic records, and student financial transactions. Key performance metrics for recruiting efforts, course offerings, and the student population enable these institutions to maximize student recruiting efforts, shorten time-to-graduation, improve retention rates, identify successful and unsuccessful courses and programs, and analyze faculty workloads.

Oracle Student Information Analytics includes the following modules:

- Admissions and Recruiting
- Student Records
- Student Financials

2.2 Customer Relationship Management Analytics

Customer relationship management (CRM) systems use technology to organize your company's business relationships with customers or clients.

Oracle's CRM Analytics is a suite of applications that provides fact-based insight into the entire sales process and into product demand, customer price sensitivity, and overall pricing effectiveness. It provides a way for your company to manage and track campaign performance, asses the effectiveness of loyalty promotions and partner relationships, and track and analyze service center metrics.

2.2.1 Oracle Marketing Analytics

Oracle Marketing Analytics provides timely fact-based insight into the marketing activities of the entire organization. It provides new levels of information richness, usability, and reach to marketing professionals throughout the enterprise. All users, from marketing executives to marketing analysts, get complete, and in-context marketing insight—insight that is personalized, relevant, and actionable. The benefits

are faster and more informed decisions that help the marketing organization optimize resources, reduce costs, and improve effectiveness of marketing activities.

Oracle Marketing Analytics provides information on which products customers are likely to buy and insight into which products may make effective bundles. The nuances of customer behavior information can be gleaned from transaction history and correlated with customer lifetime value, churn risk, and customer behavioral attributes to gain insight into customer clusters and better inform treatment strategies. The ability to aggregate information from various data sources also allows marketers to calculate, monitor, and build customer investment strategies based on critical metrics such as customer profitability.

Oracle Marketing Analytics contains the following modules:

- Budget and Cost Management
- Sales Campaign Management
- Partner Marketing
- Event Management
- Promotion Management
- Lead Management
- Customer Segmentation and List Management

2.2.2 Oracle Partner Analytics

Oracle Partner Analytics provides analyses of partner performance on all key aspects of activity such as lead generation, sales revenues and partner programs. Channel managers can assess partner revenue trends across partner types and tiers to the customers that they are selling to and the products that they are selling. A partner's contribution can be assessed in relation to their peers or the focus can be on a particular partner to understand individual contributions. Sales representatives in the partner organization can understand their personal performance. Sales managers can assess team performance with respect to lead to opportunity conversions, track pipeline and focus on key sales opportunities to reach their sales goals.

Oracle Partner Analytics provides the following areas of focus:

- Partner Performance
- Partner Programs
- Deal Registrations

2.2.3 Oracle Price Analytics

Oracle Price Analytics provides organizations with insight into product demand, customer price sensitivity, and overall pricing effectiveness, enabling pricing analysts and managers to make insight-driven pricing decisions and measure pricing effectiveness, and then make adjustments or corrections using consistent data within the right business context. Key capabilities and benefits of Price Analytics enable pricing analysts and managers to gain an accurate understanding of customer and product line profitability, identify pricing improvement opportunities, and continuously analyze and refine pricing programs to maximize margins and profits.

Oracle Price Analytics contains the following modules:

- Profitability and Policy Effectiveness

- Price Profiles and Segments
- Deal Desk
- Customer Performance
- Product Performance

2.2.4 Oracle Sales Analytics

Oracle Sales Analytics provides sales professionals with business insight throughout the sales process. With access to actionable information, sales professionals will drive greater customer satisfaction, lower sales costs, and increased revenue. Oracle Sales Analytics supports key analytics in opportunity and revenue management, customer relationships, competition, and forecasting.

Oracle Sales Analytics includes the following modules:

- Pipeline and Forecasting Management
- Demand Generation
- Quota Management
- Customer Performance
- User Adoption and Alignment

2.2.5 Oracle Service Analytics

Oracle Service Analytics provides service center managers with new levels of insight by unlocking the information value hidden in systems across the enterprise. With Oracle Service Analytics, service center professionals have access to actionable information that drives greater customer satisfaction, lower costs, and increased revenue.

Oracle Service Analytics contains the following modules:

- Self Service
- Tele Service
- Field Service
- Contracts
- Entitlements
- Assets

3 About Oracle BI Applications Architecture

This section provides information about the Oracle Business Intelligence Applications architecture and key components.

3.1 Oracle BI Applications Component Descriptions

This section includes descriptions of the following Oracle Business Intelligence Applications components:

- Source Systems
- Oracle Business Intelligence Enterprise Edition

- Oracle Business Analytics Warehouse
- Oracle BI Applications Configuration Manager and Functional Setup Manager
- Oracle Data Integrator
- Oracle GoldenGate

3.1.1 Source Systems

Source systems include Oracle Fusion Applications, Oracle E-Business Suite Applications, Oracle's Siebel Applications, Oracle's PeopleSoft Applications, Oracle's JD Edwards Applications, and non-Oracle systems. Their Online Transactional Processing (OLTP) databases hold the source data for ETL into the Oracle Business Analytics Warehouse. This data becomes the underlying data for your analyses and includes customer information, inventory, sales, marketing, accounts, and other types of data you collect about your business.

3.1.2 Oracle Business Intelligence Enterprise Edition

Oracle Business Intelligence Enterprise Edition (Oracle BI EE) is a business intelligence platform that is used to access and present data in easy-to-understand formats, such as tables and graphs. Oracle BI Applications is built on the Oracle BI EE platform to deliver targeted information about your organization's data with Oracle BI EE's dashboards, reports, graphs, scorecards, and analyses. For more information about Oracle Business Intelligence Enterprise Edition, see http://www.oracle.com/technetwork/middleware/bi-enterprise-edition/index.html.

3.1.3 Oracle Business Analytics Warehouse

The Oracle Business Analytics Warehouse is a modular enterprise-wide data warehouse data model with conformed dimensions for data integrated from multiple sources. Oracle Business Analytics Warehouse provides code standardization, stores transaction data in the most granular fashion, and tracks historical changes. It also supports multiple currencies and languages.

The Oracle Business Analytics Warehouse supports the analytical requirements of Oracle Business Intelligence Applications, including:

- A universal data warehouse design that enables you to integrate data from different source systems.
- Multiple instance support that enables you to use one data warehouse deployment for multiple source system instances.
- Conformed dimensions that enables you to view the data from different subject areas.

The Oracle Business Analytics Warehouse is supported only on the Oracle database. For more information, see System Requirements and Specifications and Supported System Configurations on the Oracle Technology Network.

3.1.4 Oracle BI Applications Configuration Manager and Functional Setup Manager

Oracle BI Applications Configuration Manager is a web application for setting up and maintaining an Oracle Business Intelligence Applications environment. Oracle BI Applications Configuration Manager works in conjunction with Functional Setup Manager to provide guided Tasks to configure Offerings and Functional Areas.

Functional Setup Manager enables you to manage and perform functional configuration tasks for configuring Offerings. You use Functional Setup Manager to deploy the Offering and Functional Areas. Functional Setup Manager generates a list of configuration tasks for the deployed areas, which you can assign to different functional developers and monitor the implementation status. For more information, see the Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Applications at http://docs.oracle.com/cd/E38317_01/index.htm.

3.1.5 Oracle Data Integrator

Oracle BI Applications uses Oracle Data Integrator (ODI) as its data integration platform. ODI is a comprehensive, unified ETL tool for building, deploying, and managing complex data warehouses. ODI performs high-volume, high performance batch and real-time loads, as well as data validation. In an Oracle BI Applications environment, ODI works in conjunction with Oracle BI Applications Configuration Manager, which provides a user interface for managing load plans as well as access to ODI Console, the web-based console that enables you to view objects in the ODI repository.

3.1.6 Oracle GoldenGate

Oracle BI Applications can optionally leverage Oracle GoldenGate. Oracle GoldenGate is a data replication tool leveraged to create a replicated OLTP schema or schemas, facilitate change data capture, and aid in ETL and transactional system performance. It provides an OLTP mirrored schema on the Oracle Business Analytics Warehouse database instance using replication. This replicated Source-Dependent Schema is then used as a source during ETL

Oracle GoldenGate provides less network Input/Output (I/O) during ETL because the source data for extract is in the same physical instance/machine as the Oracle Business Analytics Warehouse target tables. It can also shorten the length of time that ETL takes by minimizing the impact to the OLTP database. For more information about Oracle GoldenGate, please see http://www.oracle.com/technetwork/middleware/goldengate/overview/index.html.

3.2 How Do Oracle Business Intelligence Applications Components Work Together?

This section contains a diagram of the logical view of the Oracle BI Applications architecture. Figure 1, "Oracle BI Applications Architecture" shows the component pieces of Oracle BI Applications. The diagram is presented in 3 main layers.

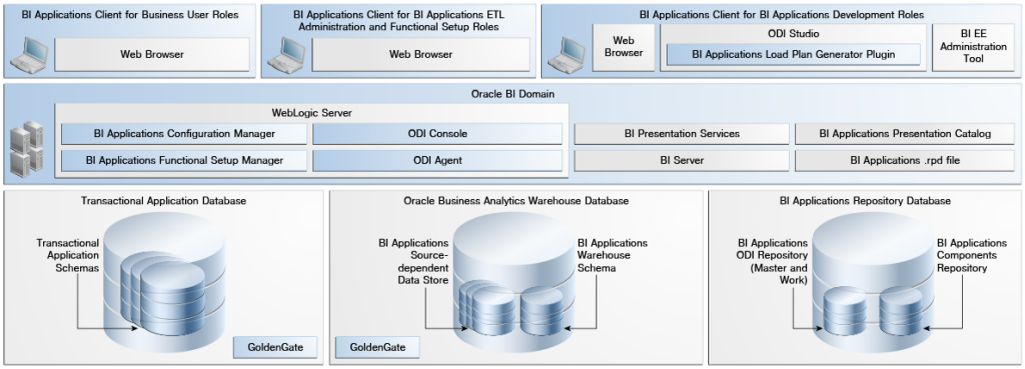
The bottom layer includes the transactional application database, the Oracle Business Analytics Warehouse Database, and the Oracle BI Applications Repository Database. The transactional application database contains transactional application schemas and can optionally be hooked up to the Oracle Business Analytics Warehouse with Oracle GoldenGate. The Business Analytics Warehouse Database contains the optional BI Applications Source-dependent Data Store (SDS) Schema and the BI Applications Data Warehouse Schema. The Oracle BI Applications Repositories Database system includes the Oracle BI Applications Oracle Data Integrator (ODI) Repository and the Oracle BI Applications Components Repository.

The middle layer shows the BI Domain. This layer includes the ODI Console and ODI agent, Oracle BI Applications Configuration Manager and Functional Setup Manager, and the load plan generator, all of which are hosted on the Oracle Weblogic Server.

This layer also includes the Oracle BI Presentation Server and the Oracle BI Server, and the Oracle BI Applications Presentation Catalog and repository (.rpd) file.

The top layer includes the user connections to Oracle BI Applications. The BI Applications Client for Business User Roles and the BI Applications Client for BI Applications ETL Administration and Functional Setup Roles both use a web browser to access their part of Oracle BI Applications. Business users access dashboards and analyses created from Oracle BI Applications. Administrative users or users performing configuration tasks access Oracle BI Applications Configuration Manager and Functional Setup Manager from their web browser. Development users use a web browser as well as ODI studio, which gives them access to the load plan generator plug-in and other utilities. They also use the BI Administration Tool, which is part of Oracle BI EE.

Figure 1 Oracle BI Applications Architecture



Oracle BI Applications use all of the components depicted in Figure 1, "Oracle BI Applications Architecture" to deliver information specific to your business needs. Your data, from human resources to sales totals, is extracted from your Transactional Application Database, or source system. This data is loaded into the Business Analytics Warehouse Database and it is transformed using the mappings that are stored in the BI Applications Repository Database. This database contains the repository information for BI Applications ODI repository and the BI Applications Components Repository.

Optionally, you can leverage Oracle GoldenGate to perform the initial load of data from your transactional database into the Oracle Business Analytics Warehouse without downtime. When doing the initial data load, you can migrate your transactional data without shutting down the system, and it captures any changes made during the migration and update the database with those changes as well. After your Oracle BI Applications system is in production, Oracle GoldenGate captures changes to your transactional data in real time and moves them into the data warehouse.

4 What Is the Oracle BI Applications Product Lifecycle?

This section provides information about the product lifecycle after you have purchased Oracle BI Applications for your organization. A typical product lifecycle consists of the following process, some of which may happen concurrently.

- Installing Pre-Requisites and Oracle BI Applications
- Configuring Oracle BI Applications

- Performing a Full Load of Your Transactional Data into Oracle Business Analytics Warehouse
- Testing Your Oracle BI Applications Deployment and Moving to Production
- Running Regular or Daily ETL With Oracle BI Applications
- Patching Oracle BI Applications
- Administering Oracle BI Applications

This section refers to guides in the Oracle Business Intelligence Applications library, see http://docs.oracle.com/cd/E38317_01/index.htm to view this documentation.

4.1 Installing Pre-Requisites and Oracle BI Applications

Before installing Oracle BI Applications, you will want to review the Oracle BI Applications Installation Guide and ensure that you have completed all of the pre-requisite steps. You install Oracle Business Intelligence Enterprise Edition platform and Oracle Data Integrator. Then, you install Oracle Business Intelligence Applications as described in the Oracle Business Intelligence Applications Installation guide. This guide includes topics and instructions on pre-installation and deployment requirements, installing repositories, and installing Oracle BI Applications.

4.2 Configuring Oracle BI Applications

After you have installed Oracle Business Intelligence Applications, you perform a functional configurations for each of the applications that you want to use. Oracle BI Applications configuration involves Oracle BI Applications Configuration Manager and Oracle BI Applications Functional Setup Manager. These web applications help you to perform functional configurations, including creating an implementation project, assigning tasks, running the domain ETL, and setting up your functional configuration data. Some of the tasks that you perform include specifying the Initial Extract Date, calendar type, and currency types. These processes are described in the Oracle Business Intelligence Applications Configuration Guide.

For more information about the ETL process, including conceptual and administration information about load plans, see the Oracle Fusion Middleware ETL Guide for Oracle Business Intelligence Applications.

4.3 Performing a Full Load of Your Transactional Data into Oracle Business Analytics Warehouse

After you have configured your load plan and your functional configuration data you perform a full load of your data into the Oracle Business Analytics Warehouse.

4.4 Testing Your Oracle BI Applications Deployment and Moving to Production

You test your Oracle BI Applications deployment in a pre-production environment with users who are preparing Oracle BI Applications for use by others. During this phase, you continue to customize the deployment based on user feedback and any encountered issues.

After your developers, users, and administrators have verified that your test deployment meets your organization's needs, you can move the deployment to production.

4.5 Running Regular or Daily ETL With Oracle BI Applications

After your Oracle BI Applications deployment is running, you will run periodic ETL on changed data from your transactional database into your Oracle Business Analytics Warehouse. Oracle BI Applications has two ETL modes: full load and incremental load.

- **Full Load**

  During a full load, all records are extracted from tables that are sources for dimension tables and all records created after an 'Initial Extract Date' from tables that are sources for fact tables.The Initial Extract Date value is a configurable value and is set for each data source in the Oracle BI Applications Configuration Manager.

- **Incremental Load**

  During an incremental load, Oracle BI Applications extracts records that have changed or were created after a 'Last Extract Date'. This is done by comparing the Last Extract Date value to a Last Updated Date (or LUD) type column in the source table. If the source table does not have such a column, Oracle BI Applications extract all records from that table.

For more information on the ETL process for Oracle BI Applications, see the Oracle Fusion Middleware ETL Guide for Oracle Business Intelligence Applications.

4.6 Patching Oracle BI Applications

Patching involves copying a small collection of files over an existing installation. A patch is normally associated with a particular version of an Oracle product and involves updating from one minor version of the same product, or applying an interim patch to resolve a specific issue. to a newer minor version of the same product. An Oracle BI Applications patch can include bug fixes, metadata, and binary file updates.

4.7 Administering Oracle BI Applications

Administering Oracle BI Applications includes customizing Oracle Business Analytics Warehouse, managing language support, configuring Oracle BI Applications for deployment in additional languages, and managing Oracle GoldenGate and source dependent schemas. For more information, see the Oracle® Fusion Middleware Administrator's Guide for Oracle Business Intelligence Applications.

5 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at
http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.