



King County

ABT PROGRAM

Accountable Business Transformation

ABT Program

Reporting Strategy Plan

June 2008

Revision History

Version	Prepared by	Date	Reviewed by	Approved by	Note
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V2	Marjorie Mills	June 17, 2008	ABT Team and Keith Pace (CIBER)	Manny Ovena, Keith Pace-Ciber	Revised to reflect OCM comments and revised schedule for ABT

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1.0 Introduction

1.1 Executive Summary

The primary goal of the ABT Program is to consolidate the functions of Human Capital Management (HCM) and Financials into a common platform by implementing PeopleSoft HCM9.0 and Oracle E-Business Suite (EBS) Release 12 and to move to a common reporting platform that can be used countywide.

The reporting strategy recommends a plan for addressing reporting out of PeopleSoft and Oracle EBS transactional database during the first three years of the ABT implementation. A second recommendation is made for moving towards a common reporting platform during years 4 and 5. The strategy plan also addresses the reporting data model and tools and technologies that will be used to achieve the stated objectives.

The first phase of Implementation is Discovery where Fit/Gap will be performed across King County Department Processes. Fit/Gap and Business Process Re-design workshops will identify gaps which will flow into a channel for system modifications, Interfaces, and custom reporting which will be costed and approved based on business dependency and justification and then planned for design, development and testing activities. These activities will include department resources where necessary.

1.2 Objectives

The objectives of this document are to provide a high level overview of the reporting architecture for the ABT implementation of PeopleSoft HCM and Oracle EBS. As part of the detailed implementation plan, the below mentioned topics are covered in this document.

- The reporting tools that are available by application and functional area
- Recommendation of which tools that best meet county requirements and are supportable
- A description of how the recommended reporting tools interact with common end user tools such as Excel, Access and Word.
- Training, support structure, support staffing level and support skill requirements needed to support the reporting tools during implementation and after implementation.
- Identify approaches to reporting during implementation
- Impacts to the ABT Technology Plan proposed reporting strategy and use of reporting tools

1.3 Summary of Recommendations:

The reporting strategy for the ABT Program aims to achieve a 70/30 model for service delivery. As appropriate to their account permissions and information needs, users will be able to generate 70% of the required reports without assistance using standard reports or ad hoc reporting tools. 30% of the reports will need the support of specialists and report developer.

- **Self Service Reports:** Business users can utilize friendly reporting tools to run prebuilt reports or create their own reports by writing simple queries or using drag and drop functionality within the tool to create new reports. End-user training for reporting tools will be provided. Oracle Discoverer and BI answers (OBIEE) are ad hoc tools and have an easy learning curve. Usually the approach that is recommended is “Train-the-Trainer” (Departments can identify the trainer and the ABT Program can train the trainer.) The trainer can in turn impart training to individuals within their departments as needed.
- **Special Custom Reports:** These types of reports need technical knowledge of the reporting tool and the programming language behind the tool. As such, report developers require knowledge of a particular programming language to develop these kinds of reports.

The recommendation covers two basic aspects of reporting. The first and the most critical aspect is the data source. Regardless of the reporting tool used, it is essential to access the right data source so that the content within a report is pertinent and meaningful.

The second aspect deals with the delivery of the report using reporting tools that are easy to use and can present the content to the business user in a meaningful way.

- **Reporting Landscape:** The recommendation for the reporting strategy is phased into two separate approaches.
 - **Reporting Landscape - Year 1 through 3:** The recommendation for the first three years is to focus on operational reports and providing ad hoc reporting tools to cover the needs of day-to-day management.
 - Oracle EBS and PeopleSoft HCM will serve as the respective reporting databases for transactional reporting for Financials and Human Capital Management(HCM)
 - Some reports will be developed using reporting tools that are available within Oracle EBS and PeopleSoft HCM, while other reports will be developed using new report development tools.
 - Reporting out of the Harrier database and ARMS Web Reports tool will continue as it is currently done.
 - IBIS Web Reports will continue to be available through Year 3. Data will be provided to these reports from Oracle EBS transactional database. Though no new interfaces have been identified to support IBIS Web Reports from Oracle EBS at present, IBIS interfaces currently providing data to IBIS Web Reports will need to be modified to reflect Oracle EBS and PeopleSoft HCM data structures.
 - HR/Payroll Web Reports (PAYREPS) will be upgraded to match the PeopleSoft HCM 9.0 schema. New source data may need to be mapped to the reporting solution during ABT phasing.

- Reporting Landscape - Year 4 and beyond: The recommendation for 'Year 4 and beyond' would be to build a reporting database that serves as a common reporting repository for countywide financial and human resource/payroll reporting and to implement new reporting tools that can access HR and financial data. Metrics based reporting provides a set of trend graphs and business intelligence reports that deliver the span and density of information needed for a given role. Managers can drill from the summarized information on each dashboard to detailed reports or to specific transactions in the underlying applications.
 - Metrics based reporting capability is recommended to be built using Oracle Business Intelligence Enterprise Edition (OBIEE) tools or an equivalent metrics based reporting tool that might be made available to the county through the budget system selection process. The recommendation includes building Reports and Dashboards that can readily used by users as well as providing the users with subject areas that can used to create ad hoc queries and reports. Metrics based reports can be built on Oracle EBS and PeopleSoft HCM.
 - IBIS Web Reports will continue to be available to the users, but will use the central reporting database as a data source rather than Oracle EBS or a copy of Oracle EBS as the data source.
 - ARMS Web Reports are planned to be retired by the end of Year 3. Once agencies have moved off of ARMS, the Harrier database may continue to have value for historical reporting purposes. If the ARMS or Harrier data is still needed, it would be possible to be migrated into the consolidated reporting database as a static historical data store.
- Reporting Tools: Below mentioned reporting tools are being recommended, based on the reporting needs and also based on the reporting data model.
 - Ad hoc Reporting:
 - Oracle Discoverer is the recommended ad hoc query tool from Oracle EBS. Business users can create, modify and execute ad hoc queries and reports through business views that hide the complexity of the underlying data structures in the reporting database which is refreshed each night.
 - PS Private Query is the recommended ad hoc query tool from PeopleSoft. Business users can create, modify and execute ad hoc queries and reports through business views that hide the complexity of the underlying data structures in the reporting database which is refreshed each night.
 - End user training is planned for the ad hoc reporting tools. The "Train-the-Trainer" approach is recommended (Departments can identify the trainer and the ABT Program can train the trainer). The trainer can in turn impart training to individuals within their departments as needed.
 - Highly Formatted Production Reports:
 - BI Publisher (formerly XML Publisher) is a template-based publishing solution used across Oracle EBS. By utilizing a set of familiar desktop tools such as Adobe Acrobat and Microsoft Word, report developers can create and maintain reports based on development-delivered XML data extracts and direct the output to PDF or MS Excel or other formats.

- Oracle Reports 10g is a proprietary tool that has been used within Oracle EBS to provide a complete set of ready-to-run and easy-to-read standard reports for each Oracle application module.
 - It is recommended that, BI Publisher be used for any new custom report development, instead of Oracle Reports as BI Publisher is expected to become the foundation reporting technology going forward with Oracle EBS in this reporting area.

○ Metrics-Based Reporting:

Performance-based or metric-based reporting can be described as reporting on quantitative measurements against specific business targets or key performance indicators (KPI). In Year 4 and 5, ABT plans to provide the tools and training to give King County departments this capability. The following tools enable reporting in this fashion:

- Oracle Business Intelligence Enterprise Edition (OBIEE) as a comprehensive reporting toolset comprising of Oracle BI Server, Answers and Interactive Dashboards that, when used together, provide a highly scalable, highly efficient reporting solution offering powerful ad hoc query and analysis capabilities via rich, interactive web dashboards.
 - Oracle Daily Business Intelligence (DBI) provides metric-based reporting using self-service dashboards that executives / managers can use to drill from the summarized information on each dashboard to detailed reports or to specific transactions in the underlying applications.
 - PeopleSoft Human Resource Management System (HRMS) Portal Packs provides metric-based reporting using pagelet technology similar to self-service dashboards in Oracle. This functionality is currently owned by King County, but has not been implemented.
 - Budget System Reporting Tool – The new budget system to be implemented by ABT will provide a metrics based reporting tool that could be used more broadly for performance-based reporting.
- Inventory of Reports: The Detailed Implementation Plan (DIP) has identified several lists of reports. As with most new Enterprise Resource Planning (ERP) implementations, it is difficult to estimate the number of custom reports that will be needed from a list of existing reports. Due to this, an algorithm has been created and will be used to arrive at an approximate number of reports that might be needed, and the report activities planned:
 - Reports that have been custom developed and are currently used in IBIS and PeopleSoft 8.9 will be migrated to Oracle EBS and PeopleSoft HCM respectively, based on current user needs. An effort will be undertaken to determine if any reports can be retired based on the volume or availability within Oracle EBS and PeopleSoft HCM. Only needed custom reports will be migrated.
 - Oracle EBS and PeopleSoft HCM provide several standard reports within each module. During the implementation, each of these standard reports will be looked at to determine whether the report provides required business information. Custom reports will be then be developed should the standard reports do not meet the business requirements.

- The implementation team will convert some of the high use Oracle Standard Reports within Oracle EBS to PDF output making these reports more legible and easier to use online and in hard copy.
- Custom reports will be developed using the recommended tools, if standard reports do not meet the business needs. As such, an algorithm is applied to arrive at an approximate number of custom reports that might be needed.

1.4 Assumptions

Oracle Corporation's recent acquisition of various companies has resulted in a varied mix of reporting tools that can be used for reporting purposes. Oracle's direction seems to be towards consolidating the reporting tool sets by replacing older tools with the best-of-breed products.

The recommendations below are based on the understanding that the tools below will continue to be available and supported by Oracle Corporation in the future. Also, that these tools will provide a usable reporting solution across both the short-term reporting and long-term reporting needs for the ABT Program and the county.

- Oracle Daily Business Intelligence (DBI): Oracle Business Intelligence Applications (BI Applications) was recently launched by Oracle Corporation and offers functionality similar to that offered by DBI. As such, the direction on DBI is not clear.
- Oracle Reports: The direction on Oracle Reports as a report building tool is not clear as BI Publisher (formerly XML publisher) is increasingly being used as the alternate report development tool within OracleEBS.
- Oracle Discoverer: Oracle Corporation recently introduced Oracle Business Intelligence Enterprise Edition (OBIEE) as a comprehensive reporting toolset that is comprised of Oracle BI Server, Answers and Interactive Dashboards. OBIEE offers a highly scalable, highly efficient reporting solution offering powerful ad hoc query and analysis capabilities via rich, interactive Web dashboards. As such, the direction on Oracle Discoverer as a reporting tool is not clear. However, Oracle Discoverer offers significant benefits to King County (meta-data enabled for Oracle EBS, easy to use, etc.) that make it a worthwhile tool at least for the next five years.
- ABT Program will continue to monitor Oracle Corporation's products listed above and make necessary adjustments as needed.

The recommendation that is laid out in this document is based on the analysis done during the DIP. The Reporting Strategy that is recommended within this document have been arrived after analyzing the following,

- The current reporting landscape to determine reporting needs, reporting tools that are currently used and data sources for the reports.
- The list of reports that are currently generated to manage the day-to-day business operations at the county. The list included the side system matrix, ARMS Web Reports and IBIS Web Reports.
- The functional modules that are recommended to be implemented within Oracle EBS and PeopleSoft HCM.

2.0 Current Reporting Landscape

The current reporting landscape is highly fragmented and complex for users to navigate. With many data sources, it is easy to have multiple reports be out of sync.

Below are some key reporting systems and reporting tools that are currently used for reporting. Some of the systems listed in the chart below represent database repositories used for reporting versus reporting tools. In other cases a database has been created to support a specific set of reports or pre-built queries. These systems serve a valuable need given the fragmentation of primary data due to having multiple financial and HR and payroll systems in place today. In Year 4 and 5 the ABT Program will consolidate the county's finance and HCM data sources into a single consolidated reporting repository that will utilize common tools for retrieval.

System	Type	Purpose
Harrier	Database	Database for information from ARMS for Web Reporting
INFOPAC	Reporting Tool	Renders a set of printed reporting and enables online viewing using information from ARMS, BUC , and AIRS among other legacy systems
BOSS	Database / Reporting Tool	Online viewing using information from ARMS, BUC , and AIRS among other legacy systems
PWPS	Database / Reporting Tool	Online viewing using information from ARMS, BUC , and AIRS among other legacy systems
Business Objects	Reporting Tool	Render a set of reports using data from IBIS and PeopleSoft
ARMS Web Reports	Reporting Tool	Renders a set of ARMS Web reports built with Crystal or ACCESS using information from Harrier database (listed above)
IBIS Web Reports	Reporting Tool	Renders a set of IBIS Web reports built with Business Objects using information from IBIS and PeopleSoft 8.9
IBIS	Financial System (Database / Reporting Tools)	Set of Standard and Custom Reports developed using Reporting tools such as Oracle Reports, Financial Statements Generator or XML Publisher.
PeopleSoft 8.9	HR/Payroll System (Database / Reporting Tools)	Set of Standard and Custom Reports developed using reporting tools such as PS Query, SQR or Crystal.
MSA	HR/Payroll System (Database / Reporting Tool)	Renders a set of printed reporting and PDF files
HARC89	Database	Renders a set of reports using PS Query: ISI Payroll History from 1991-1999 and MSA 1999 to current
PAYREPS Web Reports	Database / Reporting Tools	PeopleSoft dynamic and static web reporting using information from PeopleSoft 8.9. Generates 24 reports
HRDR	Database / Reporting Tools	HR/Payroll consolidated database for Reporting and Data Sourcing. Generates 4 reports
EchoNW	Database / Reporting Tools	External Vendor housing King County Data for special reporting requests

Note: For a list of List of reports that are currently in use, please refer to "King County EBS Technical Inventory.xls" ('Reports tab')

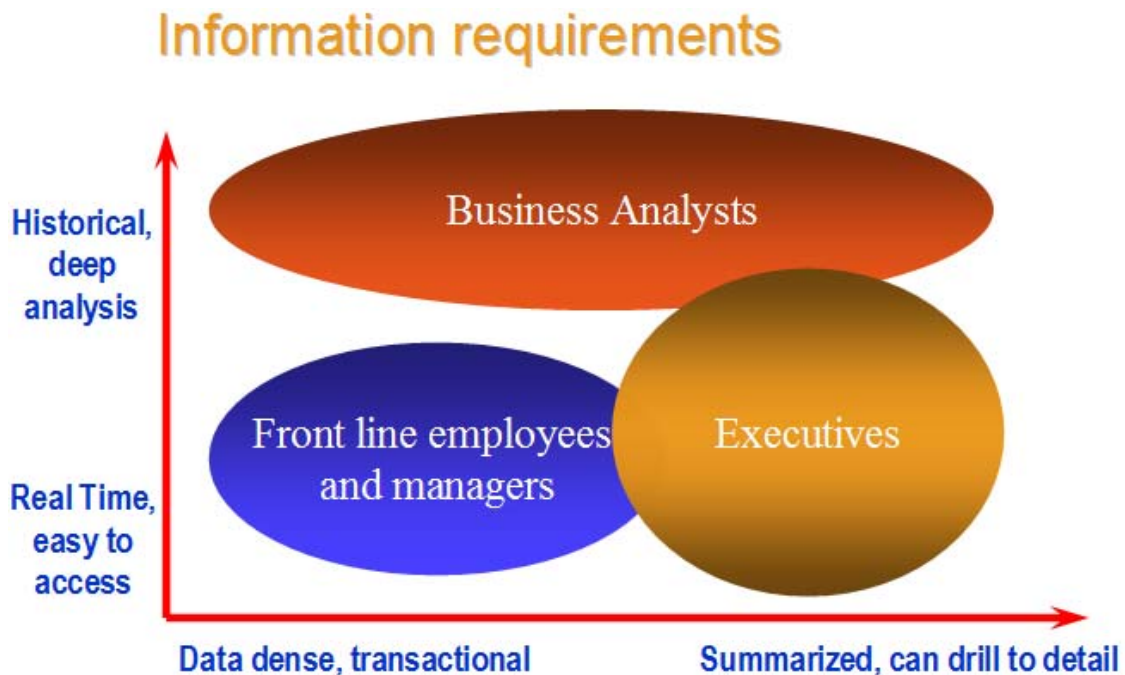
3.0 Reporting Approach

Determining the target audience for a given report is essential in order to determine the right reporting tool to use and the right data source for meaningful reporting. Different users require different levels of reports and at different times – strategic reports when mapping out long-term strategy, operational reports for day-to-day management and analytical reports for historical analysis.

Three major types of reporting users

- Executives
- Analysts
- Front line employees and managers

Each type of user requires information presented at a differently level of aggregation. The chart below depicts the information requirements of each type of user:



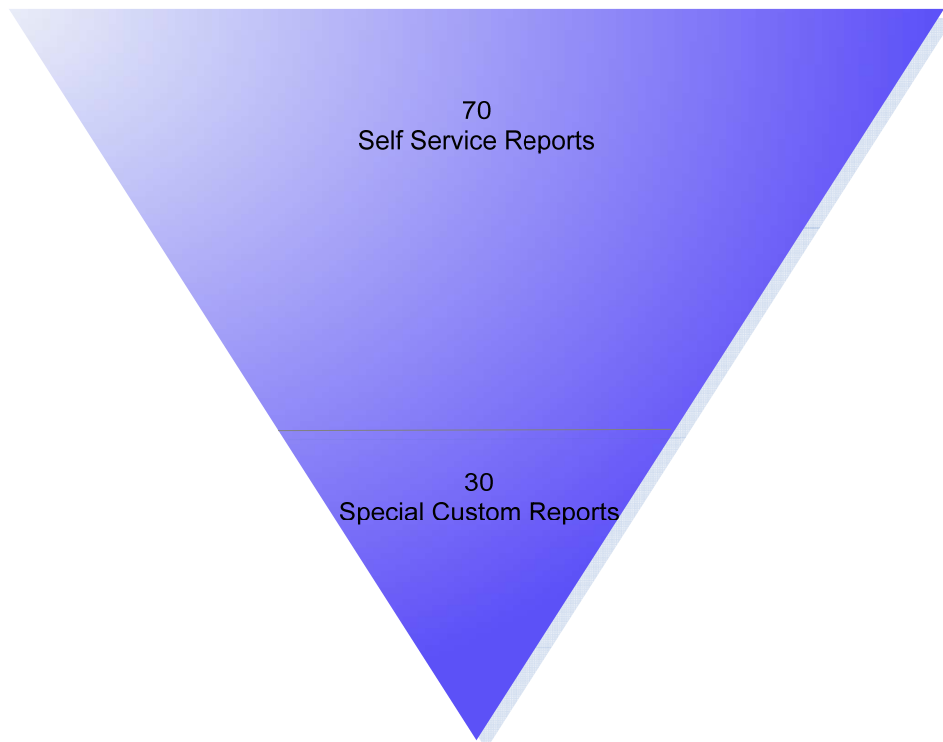
Executives require information summarized at a high-level. Moreover, in order to be proactive (manage by exception) instead of reactive (manage after-the-fact), executives also need the ability to drill to details when problems are detected. Daily Business Intelligence (DBI) or OBIEE dashboards and reports are recommended for executive users.

Analysts require data-dense reports in order to analyze trends over time. Analysts must also run ad hoc reports to handle one-off issues that frequently arise. Discoverer and a subset of DBI or OBIEE dashboards are recommended for business analysts.

Front line employees and managers require easy to use reports to manage day-to-day activities. The data involved is usually transactional. Reports generated by SQR, PS Public Queries, XML Publisher or Oracle Reports are recommended for front line users. These include reports directed at external consumers of county information.

3.1 Reporting Data Model:

The reporting strategy for the ABT Program aims to achieve a 70/30 model for service delivery. As appropriate to their account permissions and information needs, users will be able to generate 70% of the required reports without assistance. 30% of the reports will need the support of specialists and report developer. Once the custom report has been developed, the user will be able to run the report on demand. There are two components for a report; the first being data and the second being the layout and content within the report. Self-service reports are reports that a user will create by deciding on the content and layout of the report. The system integrator or a technical developer will build a data model or views that the report users can employ to create their reports. For example: Discoverer can be used to create such ad hoc reports once the data or views are available.



- Self Service Reports: Business users can use friendly reporting tools to run prebuilt reports or create their own reports by writing simple queries or using drag and drop functionality within the tool to create new reports.

Self service delivery of reports allows the users to develop their own reports without having to rely on specialist report developers to develop the reports. A one time effort is needed to generate the data layer or views on which the self service reports can be based on. Once the data layer or views are developed, business users can use friendly reporting tools to run prebuilt reports or create their own reports.

The data model takes into account the need for information based on user role and will build appropriate security in the data model so that only authorized users have access to the information.

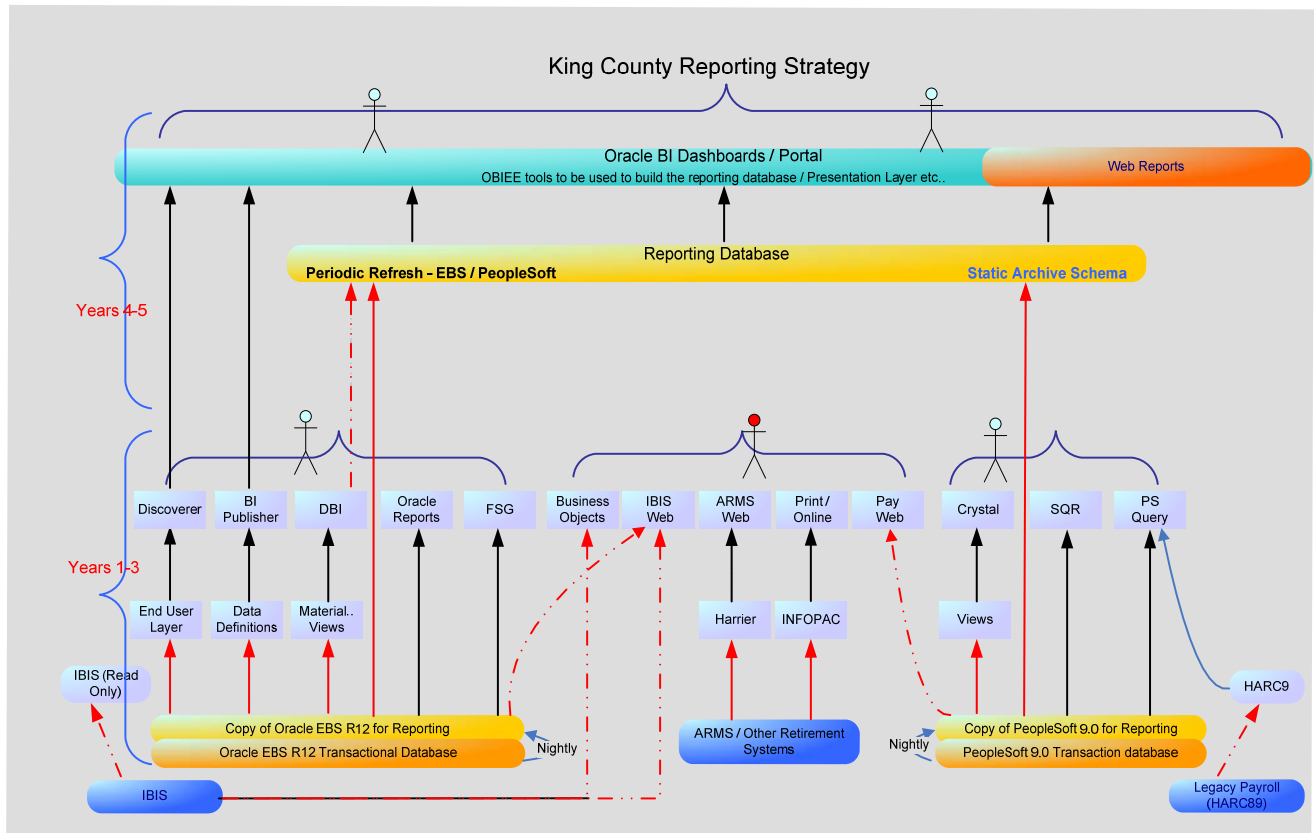
Based on the tools that are being recommended, the following data layers will be created for self-service reports.

- Years 1 through 3
 - End User Layer for use with Discoverer Tool within Oracle EBS.
 - Views for Crystal reporting in PeopleSoft.
 - Continuing data feed for IBIS Web Reporting.
- Year 4 and beyond
 - Continuing use of End User Layer for use with Discoverer Tool within Oracle EBS.
 - Continuing use of Views for Crystal reporting in PeopleSoft
 - Continuing use of Web Reports to have end users without systems accounts have a place to get reports
 - New Reporting database to be built for use with Oracle Business Intelligence Enterprise Edition (OBIEE) or equivalent reporting tool.
- Special Custom Reports: These types of reports need technical knowledge of the reporting tool and the programming language behind the tool. As such, report developers require knowledge of a particular programming language to develop these reports.
 - Years 1 through 3
 - Oracle EBS and PeopleSoft transactional database is recommended to be used as the data source for building custom reports using BI Publisher with Oracle EBS and Crystal within PeopleSoft.
 - Oracle Reports 10g is only recommended for limited use, where a standard delivered report within Oracle EBS needs to be modified to accommodate a minor change.
 - Year 4 and beyond
 - Continuing use of Discoverer End User Layer for use with Discoverer Tool within Oracle EBS.
 - Continuing use of Views for Crystal reporting in PeopleSoft
 - New Reporting database to be built for use with Oracle Business Intelligence Enterprise Edition (OBIEE) tools or equivalent reporting tool.

3.2 King County Future Reporting Landscape

The following diagram outlines the recommended future reporting landscape. The reporting strategy is phased with a view of focusing on transactional reporting during the first phase and building a central reporting data base for during year 4 and year 5 to provide a comprehensive reporting platform.

The below diagram depicts the recommended reporting landscape:



Legend:

- Red solid lines indicate the data extracts from transactional database into views or metadata etc.
- Black solid lines indicate the data source for the reporting tool.
- Red dotted lines indicate data extracts from transactional database into tools that are expected to be retired by the end of year 3.

3.2.1 Reporting Landscape - Year 1 through 3

The recommended reporting strategy for the first three years would be to focus on operational reporting requirements from Oracle EBS and PeopleSoft HCM transactional database.

- Oracle EBS and PeopleSoft HCM will serve as the respective reporting databases for transactional reporting for Financials and Human Capital Management(HCM)
- Some reports will be developed using reporting tools that are available within Oracle EBS and PeopleSoft HCM, while other reports will be developed using new report development tools such as BI Publisher, DBI and Discoverer.
- Reporting out of the Harrier database and ARMS Web Reports tool will continue as it is currently done.
- IBIS Web Reports will continue to be available through Year 3. Data will be provided to these reports from Oracle EBS transactional database.

3.2.2 Reporting Landscape - Year 4 and beyond

The recommended reporting strategy for year 4 and beyond would be to build a reporting database that serves as a common reporting repository for countywide financial and human resource/payroll reporting. This reporting model will be available in addition to the transactional reports made available in Years 1-3.

Metrics based reporting capability is recommended to be built using Oracle Business Intelligence Enterprise Edition (OBIEE) tools. The recommendation includes building Reports and Dashboards that can readily used by users as well as providing the users with subject areas that can used to create ad hoc queries and reports.

- IBIS Web Reports will continue to be available to the users, but will use the central reporting database as a data source rather than Oracle EBS or a copy of Oracle EBS as the data source.
- ARMS Web Reports will be retired by the end of Year 3. Once agencies have moved off of ARMS the Harrier database may continue to have value only for historical reporting purposes. If the ARMS or Harrier data is still needed it will be migrated into the consolidated reporting database as a static historical data store.
- At the end of years 5, the reporting landscape will become simpler, and will include the new technologies added for years 1-3 as well as that which is added in years 4 and 5.

3.4 Reporting Tools

Below mentioned reporting tools are being recommended, based on the types of users and also based on the reporting data model.

- Metrics-Based Reporting:
 - Oracle Business Intelligence Enterprise Edition (OBIEE) as a comprehensive reporting toolset comprising of Oracle BI Server, Answers and Interactive Dashboards that, when used together, provide a highly scalable, highly efficient reporting solution offering powerful ad hoc query and analysis capabilities via rich, interactive web dashboards.
 - Oracle Daily Business Intelligence (DBI) is an out-of-the-box metric-based reporting and analysis application that delivers accurate, timely, actionable information to executives, managers and front-line employees using self-service dashboards.
 - Each dashboard is designed for a particular functional, management responsibility and provides a set of trend graphs and business intelligence reports that deliver the span and density of information needed for a given role. Managers can drill from the summarized information on each dashboard to detailed reports or to specific transactions in the underlying applications.
 - DBI boasts a radically simplified architecture and a single data model for a single source of information. DBI has a very short implementation timeframe and requires minimal setup. DBI also comes with a Report and Dashboard Designer that King County can leverage to build custom dashboards and performance measures based on business needs.

DBI, among other intelligence areas, offers the below mentioned intelligence applications.

- Daily Financials Intelligence
 - Daily Payables Intelligence
 - Daily Procurement Intelligence – Oracle’s Daily Business Intelligence offering that ABT will implement
 - Daily Projects Intelligence
- Ad hoc Reporting:
 - Oracle Discoverer is the recommended ad hoc query tool. Discoverer is a spreadsheet-based tool that enables users to create, modify, and execute ad hoc queries and reports without having to understand the database language SQL (Structured Query Language). Users can access data through business views that hide the complexity of the underlying data structures reported on. Some of the Discoverer terminology is described below.
 - Discoverer Administrator is an individual responsible for creating and maintaining Business Areas.

- Discoverer End User is an individual who can create, modify, share or execute discoverer Reports based on the permission levels assigned.
 - End User Layer (EUL) is a repository for storing and retrieving definitions of objects used when querying relational data sources.
 - Business Area is a set of related information with a common business purpose. It is comprised of a logical grouping of tables and views.
- PS Query – There two types queries that can be used by PeopleSoft Business Users. 1) Public and 2) Private.
 - Public Queries are developed and tested by Super Functional Users. Then, migrated to the Production Transaction database and departmental users are granted rights to run the query. These queries can be run by anyone granted rights to the underlying data tables.
 - Private Queries are created in the reporting database by Super Functional and departmental users. These queries can be executed one time or saved for subsequent executions. These queries can only be executed by the creator.
- Highly Formatted Production Reports:
 - BI Publisher (formerly XML Publisher) is a template-based publishing solution used across Oracle EBS. By utilizing a set of familiar desktop tools such as Adobe Acrobat and Microsoft Word, report developers can create and maintain reports based on development-delivered XML data extracts and direct the output to PDF or MS Excel or other formats.
 - Oracle Reports 10g is a proprietary tool that has been used within Oracle EBS to provide a complete set of ready-to-run and easy-to-read standard reports for each Oracle application module.
 - It is recommended that, BI Publisher be used for any new custom report development, instead of Oracle Reports as BI Publisher is expected to become the foundation reporting technology going forward with Oracle EBS in this reporting area.

3.5 Inventory Of Reports:

A review was conducted during the Detailed Implementation Plan of existing reports used by various departments to get an idea of the scale of reporting that needs to be addressed in the project. For the purposes of arriving at an approximate number of customized reports to be developed from the new suite, an algorithm was created based on inventory analysis. Below are the activities which are planned from that analysis.

- Reports that have been custom developed and are currently used in IBIS and PeopleSoft 8.9 will be migrated to Oracle EBS and PeopleSoft HCM respectively.
- IBIS Web Report will be migrated and changes made to take into account new data structures in Oracle EBS and PeopleSoft HCM.
- Oracle EBS and PeopleSoft HCM provide several standard reports within each

module. During the implementation, each of these standard reports will be looked at to determine if the report provides the required information.

- The implementation team will convert some of high use Oracle Standard Reports within Oracle EBS to PDF output.
- Custom reports will be developed using the recommended tools, if standard reports do not meet the needs. As such, an algorithm is used to arrive at an approximate number of custom reports that may be needed.
- Algorithm for Oracle EBS Custom Reports.
 - 1 report per department * 16 departments * 8 modules = 128 reports
 - 2 reports * 8 modules for countywide use = 16 reports
 - Additional Reports for specific needs = 12 reports
 - [Departments are used for an algorithm but how the total number of reports will be allocated may not be by department]
- Algorithm for PeopleSoft HCM Custom Reports
 - 90 new reports are planned to be developed based on the estimation table below and the required business justification and approval process.

PS Module	Hard	Med	Easy	Total
HR & Pos Mgt	5	5	5	15
Benefits	5	5	5	15
T&L	5	5	5	15
Payroll	5	5	5	15
Absence Mgt	1	1	1	3
ELM	3	3	3	9
ePerformance	3	3	3	9
Profile Mgr	1	1	1	3
Succession Planning	2	2	2	6
Candidate Gateway	0	0	0	0
eCompensation Mgr	0	0	0	0
Totals:	30	30	30	90

4.0 Knowledge Transfer for Maintenance and Support

King County needs to identify personnel to support the integration components for on going maintenance and support that may be necessitated by a change in business process or for building new integration requirements.

- Retooling of Support Staff: It is recommended that the support personnel identified by

King County undergo training on the software programming languages and tool that are employed at implementation. It is also recommended that they register themselves into Oracle technology user forum discussion boards and Oracle Knowledge base (such as Oracle Metalink etc.).

- Knowledge Transfer: The Implementation team provides knowledge transfer to personnel identified by King County for each of the interfaces that would be delivered as part of the implementation. In order to enhance the knowledge transfer and to speed up the learning curve, it is recommended that support personnel undergo training at Oracle University or any comparable training program.

The following tools are targeted for knowledge transfer and training for key individuals:

Common Tool for PeopleSoft and Oracle EBS	Tool / Language
Both	OBIEE (Admin, Reports, Dash boards)
EBS	BI Publisher
EBS	Oracle Reports 10G
EBS	Discoverer Admin
EBS	Discoverer End User
EBS	DBI Designer
PeopleSoft	Crystal
PeopleSoft	PS Query
PeopleSoft	SQR

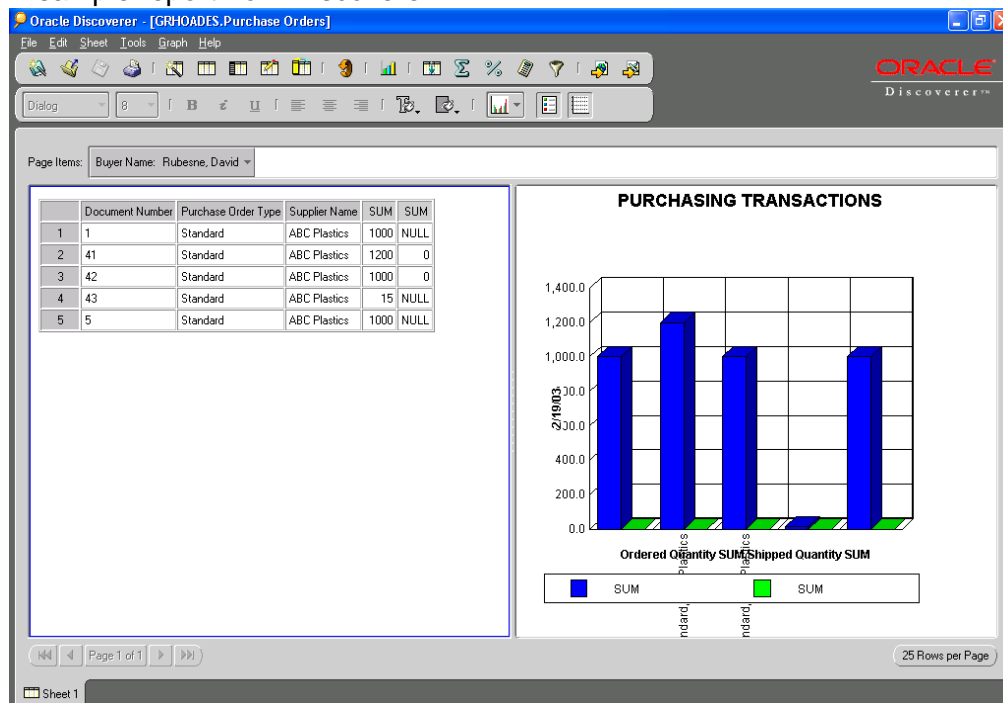
5.0 About Reporting Tools

Reporting Tools in Oracle e-Business suite:

5.1 Discoverer is a spreadsheet-based tool that enables users to create, modify, and execute ad-hoc queries and reports without having to understand the database language SQL (Structured Query Language). Users can access data through business views that hide the complexity of the underlying data structures reported on. Some of the Discoverer terminology is described below.

- Discoverer Administrator is an individual responsible for creating and maintaining Business Areas.
- Discoverer End User is an individual who can create, modify, share or execute discoverer Reports based on the permission levels assigned.
- End User Layer (EUL) is a repository for storing and retrieving definitions of objects used when querying relational data sources.
- Business Area is a set of related information with a common business purpose. It is comprised of a logical grouping of tables and views.

A sample report from Discoverer



5.2 Oracle Business Intelligence Suite Enterprise Edition (OBIEE) is a comprehensive and integrated suite of Analytic Tools designed to bring greater business visibility and insight to the broadest audiences of users, allowing any user in an organization to have Web-based self-service access to up-to-the-moment, relevant, and actionable intelligence.

Oracle BI Suite consists of several products that can be used together or independently:

- OracleBI Server is a highly scalable, highly efficient query and analysis server that

efficiently integrates data from multiple relational, unstructured, OLAP, and prepackaged application sources, Oracle or non-Oracle.

- OracleBI Answers is a powerful ad hoc query and analysis tool that works against a logical view of information from multiple data sources in a pure Web environment.
- OracleBI Interactive Dashboard is a rich, interactive pure Web dashboard that displays personalized information to guide users to precise and effective decisions.
- OracleBI Disconnected Analytics is a packaged solution to offer Answers and dashboards to mobile professionals on computers disconnected from the network.
- OracleBI Delivers is an alerting engine to capture and distribute notifications via multiple channels in response to pre-defined business events to speed decision making.
- OracleBI Publisher is a highly scalable reporting engine to generate reports from multiple data sources in multiple document formats and to multiple delivery channels.

Oracle BI Interactive Dashboards - Mozilla Firefox
 File Edit View History Bookmarks Tools Help
 http://obiee-demo:9704/analytics/saw.dll?Dashboard
 ORACLE Interactive Dashboards My Dashboard Boston Public Schools Department of Education K12 Performance Measurement Trending

K12 Performance Measurement Welcome, Superintendent Charlotte Rice! Dashboards - Answers - More Products - My Account - Log Out

Key Performance Indicators Achievement Students Staff Finance Achievement Analysis Page Options

Assessment

Math Test **ELA Test**

Student Count

Legend:
 1 - Achieved the Standard with Honors
 2 - Achieved the Standard
 3 - Nearly Achieved the Standard
 4 - Below the Standard
 5 - Little Evidence of Achievement
 Not Tested

Students

KPI: Enrollment 2006 Enrollment Rates and Actuals

Area	KPI Rate	Enrollment Actual
North	3,722	
South	4,055	
West	3,528	

KPI: Attendance Current Month Attendance Rates

Area	KPI Rate
North	90.18%
South	86.39%
West	91.20%

KPI: Suspensions/Expulsions Current

Area	Suspensions	Expulsions
North	1	2
South	4	1
West	4	1

Staff

KPI: Highly Qualified Teachers Percent of Teachers meeting HQ Status

Area	KPI % Meeting Status
North	71.64%
South	69.20%
West	71.89%

KPI: Adequate Yearly Progress (NCLB) 2006 Percent Proficient Rate Target is 72 percent

Student - Gender	KPI % Proficient
Female	77.97%
Male	77.98%

Cohort: Student - Gender

Finance

KPI: Budget by Fund Type

Fund Type Desc	Budgeted	Expended	Encumbered	% Expended
Activity	\$0.00	\$22,650,191.63	\$669,972.76	
Building	\$85,079,150.00	\$108,329,491.47	\$0.00	127.33%
Capital Outlay	\$9,726,479.50	\$10,300,462.76	\$0.00	105.90%
Operating	\$528,882,631.70	\$458,312,576.49	\$1,851,567.15	87.01%
Food Service	\$40,912,451.30	\$31,345,941.10	\$241,630.10	77.21%
Teacher Salary	\$396,255,562.20	\$292,964,097.11	\$0.00	73.93%
Debt Service	\$49,753,744.10	\$30,561,417.05	\$0.00	61.43%
Federal	\$41,445,095.50	\$24,752,195.51	\$218,707.07	60.25%

5.3 Oracle Daily Business Intelligence (DBI) is an out-of-the-box metric-based reporting and analysis application that delivers accurate, timely, actionable information to executives, managers and front-line employees using self-service dashboards.

Each dashboard is designed for a particular functional, management responsibility and provides a set of trend graphs and business intelligence reports that deliver the span and density of information needed for a given role. Managers can drill from the summarized information on each dashboard to detailed reports or to specific transactions in the underlying applications.

DBI boasts a radically simplified architecture and a single data model for a single source of information. DBI has a very short implementation timeframe and requires minimal setup. DBI also comes with a Report and Dashboard Designer that King County can leverage to build custom dashboards and performance measures based on business needs.

DBI, among other intelligence areas, offers the below mentioned intelligence applications.

- Daily Financials Intelligence
- Daily Payables Intelligence
- Daily Procurement Intelligence
- Daily Commodity Intelligence
- Daily HR Intelligence
- Daily Projects Intelligence
- Daily Service Contracts Intelligence
- Daily Supply Chain Intelligence

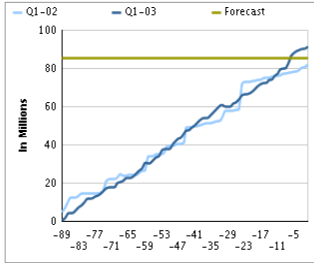
A sample A Dashboard from Daily Business Intelligence (DBI)

Q1 FY03 Day -0 31-Mar-2003 Period Quarter Compare To Prior Year Manager W. Tucker Currency USD

Profit and Loss KPIs

Name	QTD	Change
Revenue	91,157K	10.6%
Expenses	28,499K	30.2%
Operating Margin	23,513K	-3.7%
Operating Margin %	25.8%	-3.8

Cumulative Revenue Trend

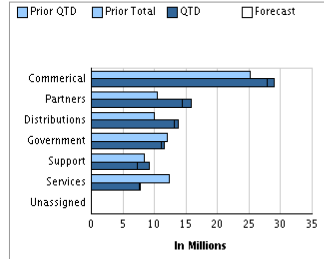


Links

[Personalize](#)

- [Expense Analysis](#)
- [Expense Management](#)
- [Funds Management](#)
- [Profit and Loss by Manager](#)
- [Budget Summary](#)

Revenue



Revenue (in Millions)

Line of Business	QTD	Change	Forecast	Change
Commercial	29	15.4%	28	10.9%
Partners	16	51.1%	14	37.5%
Distributions	14	37.7%	13	32.4%
Government	12	-4.6%	11	-8.7%
Support	9	9.7%	7	-12.8%
Services	8	-37.2%	8	-38.4%
Unassigned	0	-100.0%	0	254,900.0%
Grand Total	87	11.0%	82	3.8%

Links

[Personalize](#)

- [Revenue by Manager](#)
- [Revenue Trend](#)
- [Revenue by Line of Business](#)
- [Revenue by Sales Channel](#)

5.4 BI Publisher (formerly XML Publisher) is a template-based publishing solution. By utilizing a set of familiar desktop tools such as Adobe Acrobat and Microsoft Word, users can create and maintain their own report formats based on development-delivered xml data extracts. This enables users to easily and quickly convert a pre-packaged, plain-text Oracle report into a visually appealing report, with graphs and tables, and in multiple formats (such as PDF, HTML, MS Excel, etc).

One Solution for all Business Documents

The collage displays several Oracle BI Publisher reports:

- PTTD EXPENSES AND BENEFITS 2002-03:** A tax-related report with multiple sections and tables.
- ORDERING DOCUMENT:** A document from VISION CORPORATION, 123 Rock Harbor Lane, featuring a logo and contact information.
- Oracle General Ledger:** A financial report for Vision Operations (USA) showing journal entries and balances for the period 01-JAN-99 to 31-JAN-99. It includes a table of journal entries with columns for Line, Amount, Transaction Date, Description, Line Item, Debit, Credit, and Unit.
- Invoice:** An invoice from Oracle Corporation (AT&T Universal Card) to Vision Corporation for \$2,100.00, dated 11/22/2004. The invoice includes a payment instruction to pay to the order of Vision Corporation and a memo section.
- Other Documents:** Includes a purchase order header and various other business forms.

5.5 Oracle Reports is a proprietary tool that has been used within Oracle EBS to provide a complete set of ready-to-run and easy-to-read standard reports for each Oracle application module. Oracle reports 10G is the version that is currently used with Oracle applications Release 12 and can be used to design and build a variety of standard and custom Web and paper reports.

5.6 Financial Statement Generator (FSG) is a GL reporting function that uses row sets and column sets. Financial Statement Generator (FSG) is a powerful report building tool for Oracle General Ledger. FSG can:

- Generate financial reports, such as income statements and balance sheets, based upon data in the general ledger.
- Apply security rules to control what financial information can be printed by specific users and responsibilities in any reports they run using FSG.

- Define reports with reusable report objects, making it easy to create new reports from the components of reports already defined.
- Design custom financial reports to meet specific business needs.
- Print as many reports as needed, simultaneously.
- Print the same report for multiple departments, cost centers, divisions, or any other segment of the account structure, in the same report request.
- Schedule reports to run automatically.
- Produce ad hoc reports whenever they are needed.
- Print reports to tab-delimited files for easy import into excel spreadsheets.

5.7 Excel Add-In is a tool that allows business users to import data into Excel, manipulate the data and export it back into the Oracle module.

5.8 Business Intelligence Portal - Oracle Application Server Portal (OracleAS Portal) is a component of Oracle Application Server that is used for the development, deployment, administration, and configuration of enterprise-class portals. OracleAS Portal incorporates a portal-building framework with self-service publishing features that can create, publish, and manage information within a portal.

A portal is made up of groups of pages hosting many different types of content that come from many different sources, all presented from a single location, the portal. The basic structural components of a portal built with OracleAS Portal include page groups, pages, tabs, regions, portlets, and items.

Portlets are reusable information components that summarize or provide access to different types of information sources. Portlets appearance can be customized on a per user or per group basis. Examples of portlets include a dynamically updated report of quarterly earnings, a Discoverer worksheet, a search field and button, or a simple user poll.

5.9 Structured Query Report Writer (SQR) is a programming language that combines the power of Structured Query Language (SQL) queries, the sophistication of procedural logic, and the freedom of multiple-platform development. Increasingly popular since Oracle selected this language as its main SQL processing and reporting tool, SQR's unique combination liberates developers from the constraints of SQL and allows them to concentrate on the application aspects of their programs.

SQR is not just a language. It also includes an industrial-strength engine for extracting, transforming, and distributing data throughout the enterprise. It works equally well on both client and server, crosses almost seamlessly between different platforms, and covers nearly all relational databases.

Unlike most report writing tools, SQR is extremely flexible. With SQR you can extract data from and load data onto the database, process complex file structures, print sophisticated reports with dynamic breaks at multiple levels, create interfaces between different systems, generate form letters with business charts, graphs and images, and perform many other tasks. At the same time, for those who used to work with "drag-and-drop" Graphical User Interface (GUI) development tools, SQR may look a little old-fashioned and "Cobol-like" (although an optionally purchased SQR Workbench eliminates this problem). The absence of a slick development environment is fully compensated by the robustness, scalability and solid performance of this product.

Additional notes: In addition to its report capabilities, SQR is a flexible and comprehensive tool for extracting and manipulating database tables and flat files. Programs written in SQR can be run on a Windows workstation, the application server, or supported database servers. One caveat is that using SQR for file-based processing should be avoided since this is considered a deprecated feature.