



# Quick-Win OBIEE Implementation

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# Background

- 2,000 users, 8 locations
  
- eBusiness Suite
- Flexcube Core Banking
- Hyperion Budgeting and Planning
  
- HR March 2009
- Payroll April 2009
- Financials/Core Banking June 2009
- Various other modules implemented (Services, Projects, Inventory, Contract, Assets etc) in between
- Hyperion Budgeting and Planning September 2010
- HR PM and CWB December 2010



# SARB ERP High Level Architecture

Flexcube

eBusiness Suite

Hyperion

Core Banking

## Human Resources

HR (Core)  
Recruitment  
Learning Management  
HR Performance Management  
HR Employee Self Service  
HR Manager Self Service  
HR Compensation Management  
Payroll  
Business Intelligence Dashboard for HR

Remuneration

## Financials

Accounts Payable  
Accounts Receivable  
General Ledger  
Fixed Assets  
Procurement  
Purchasing  
Sourcing  
Insurance Management  
Business Intelligence Dashboard for FSD (POC only)

Operational Budget

## Inventory Management

### Sourcing

## Contract Management

### Service Contracts

## Asset Management

Asset Tracking  
Enterprise Asset Management

## Property Management

## Project Management

### Project Costing

### Project Portfolio Analysis

## Service Management

### BSTD Service Management

- Service Desk
- Request Filfillment
- Incident Management

### CSD Service Management

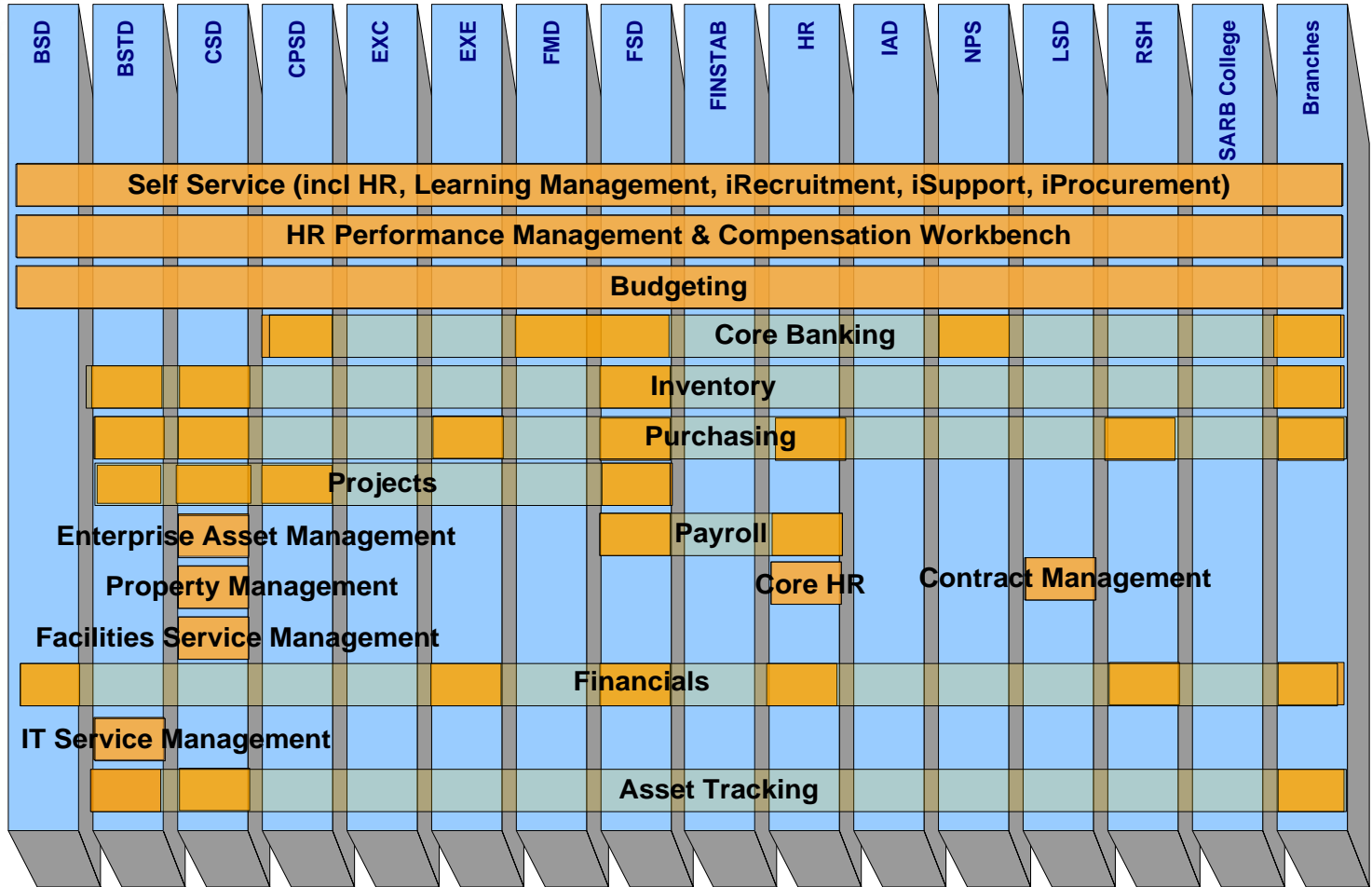
- Catering Services
- Mail and Courier Services
- Publishing and Printing Services
  - Archiving Services
- Conference Centre / Events Services
  - Transport Services
- House Inspection Services

Internet Banking

ICT Budget



# Background (Scope)





# Background (Challenges)

- ❑ The South African Reserve Bank (SARB) deployed a number of ERP modules over a period of 3 years.
- ❑ The original implementation scope for delivery of reports across the various ERP modules was greatly underestimated.
- ❑ Many demands from the various module owners for management reports and dashboards.
- ❑ A further need was identified to enable the ERP clients with ad-hoc reporting facilities.
- ❑ ERP OBIEE (Oracle Business Intelligence Enterprise Edition) Team was established in mid 2010.
- ❑ Introduction of pervasive reporting through deployment of Oracle OBIEE Reporting Layers and Dashboards.



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# **PROMISE SARB ERP OBIEE Access Model (1 of 5)**

[www.saoug.co.za](http://www.saoug.co.za)

Tip: Involve Internal Audit Department!

**Server Configuration**

**SSO Setup**

**Oracle BI Administration Tool  
Configuration**

**ERP Configuration**



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# SARB ERP OBIEE Access Model (2 of 5)

## Server Configuration

- NQ\_SESSION.ICX\_SESSION\_COOKIE

## SSO Setup

## Oracle BI Administration Tool Configuration

## ERP Configuration



# SARB ERP OBIEE Access Model (3 of 5)

Server Configuration

**SSO Setup**

- Create BI Groups
  - Minimal/no users are linked to these groups
- Link existing ERP groups to BI Groups
  - Limited user maintenance on this level

Oracle BI Administration Tool Configuration

ERP Configuration



# SARB ERP OBIEE Access Model (4 of 5)

Server Configuration

SSO Setup

Oracle BI Administration Tool Configuration

- Custom Authentication Function
  - Session Variables
  - Initialization Block
- Import BI Group from SSO
  - This will import all linked groups
- Build hierarchy from BI Group
- Presentation layer linked to BI Group

ERP Configuration



# SARB ERP OBIEE Access Model (5 of 5)

Server Configuration

SSO Setup

Oracle BI Administration Tool configuration

**ERP Configuration**

- Access to Oracle BI Answers routed via menu function
- ERP Profile Option Security rules applies on responsibility level



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**PROMISE**

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# SARB ERP Menu Function

**ORACLE** E-Business Suite

Oracle Applications Home Page

## Navigator

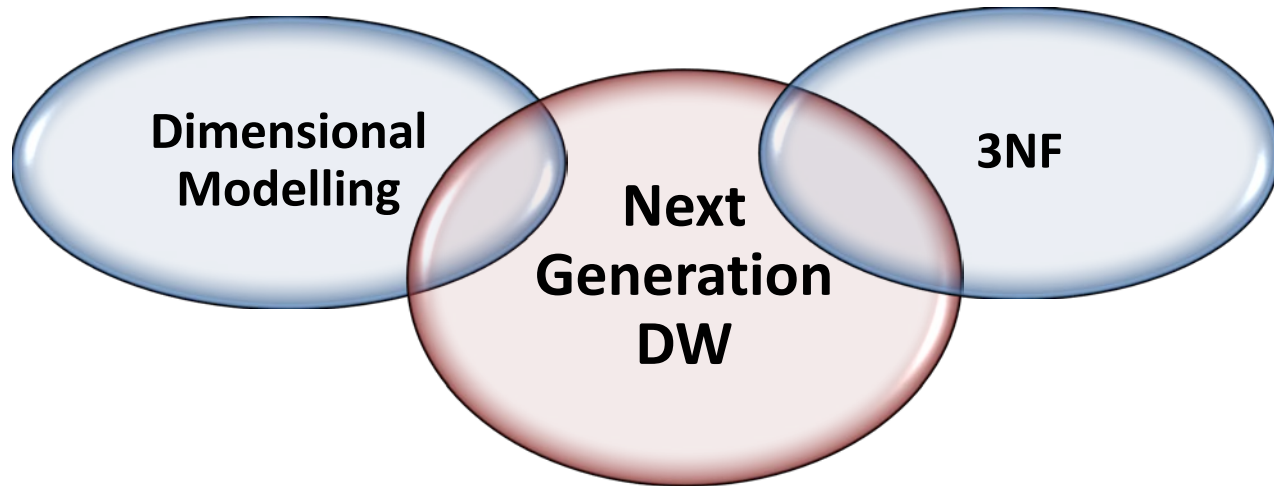
- [iRecruitment Employee Candidate](#)
- [iRecruitment Recruiter](#)
- [Learner Self-Service](#)
- [\*\*SARB BI \(HR Admin\) Answers\*\*](#)
- [SARB BI \(Incident Management\) Answers](#)
- [SARB BI \(JHB\) Answers](#)
- [SARB BI \(Leave Manager Support\) Answers](#)
- [SARB BI \(Procure To Pay\) Answers](#)
- [SARB Employee Self-Service](#)
- [SARB HRMS Support Inquiry](#)
- [SARB Incident Agent](#)
- [SARB iSupport Employee User](#)
- [SARB Service Request Agent](#)

**SARB BI (HR Admin) Answers**

[Answers](#)



# SARB ERP OBIEE Modelling Approach



## Next GenerationDW Platform:

Leverage strengths from both model forms

- Mark Rittman  
(Oracle BI&W Architecture and Development Specialist,  
co-founder of Rittman Mead Consulting)



# Next-Generation BI Project Stages

## - Mark Rittman (1 of 2)

### Stage 1

- Initial quick wins and development of a pilot system

### Stage 2

- Gradually consolidate data into a data warehouse

### Stage 3

- In the future – take advantage OBIEE 11g+ features



# Next-Generation BI Project Stages - Mark Rittman (2 of 2)

## Stage 1: Initial quick wins and development of a pilot system

- Data accessed direct from source applications
- Initial implementation of OBIEE Enterprise Semantic Model
- Used to provide reports quickly, and to gather detailed requirements

## Stage 2: Gradually consolidate data into a data warehouse

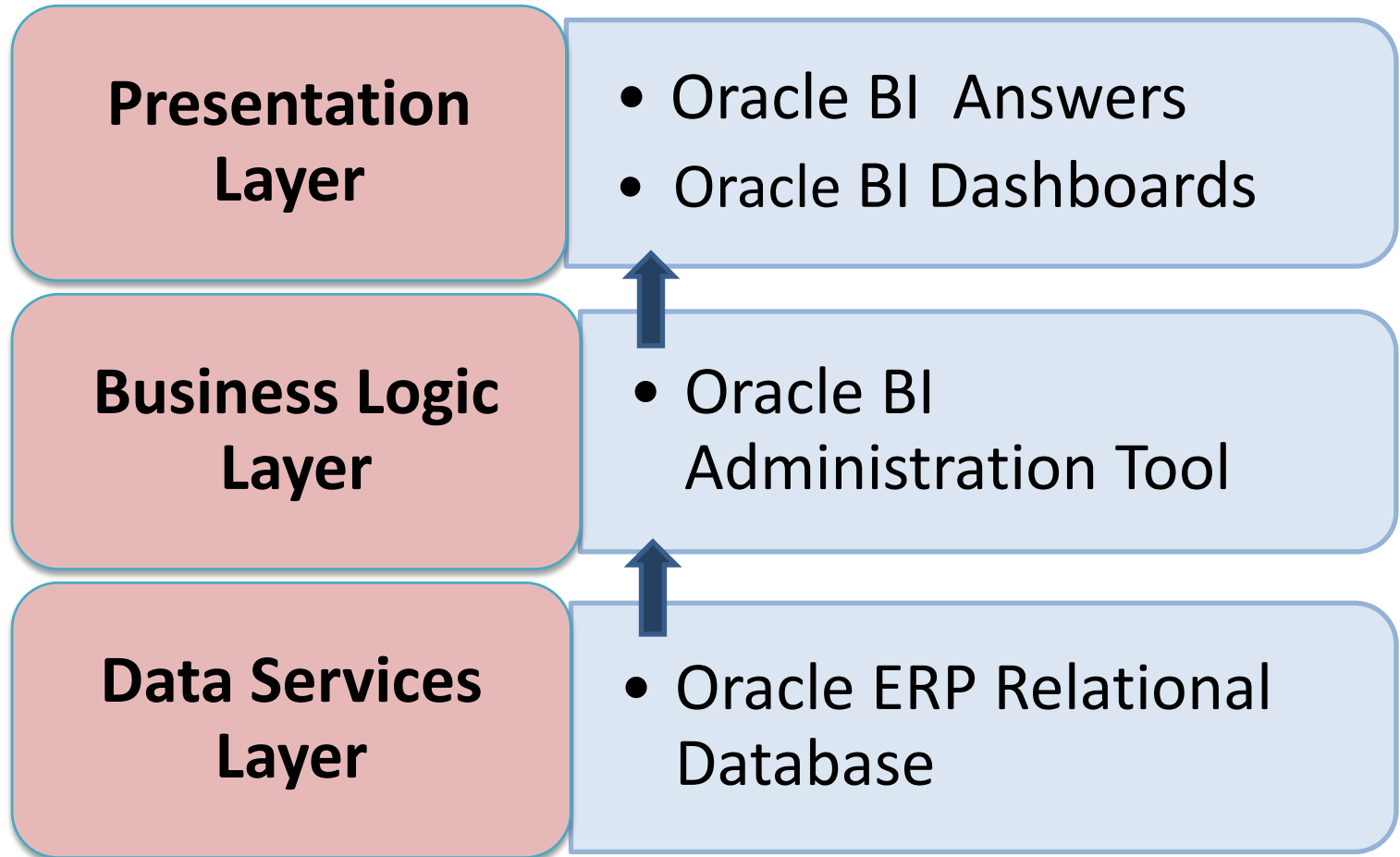
- Use ETL tool such as ODI, OWB to map data from sources
- Consolidate data over time into scalable, secure data warehouse
- Re-wire Enterprise Semantic Model to use data warehouse
- Gradually provide “one version of the truth”

## Stage 3: In the future – take advantage OBIEE 11g+ features

- Data Mart Automation
- Integration of Hyperion tools



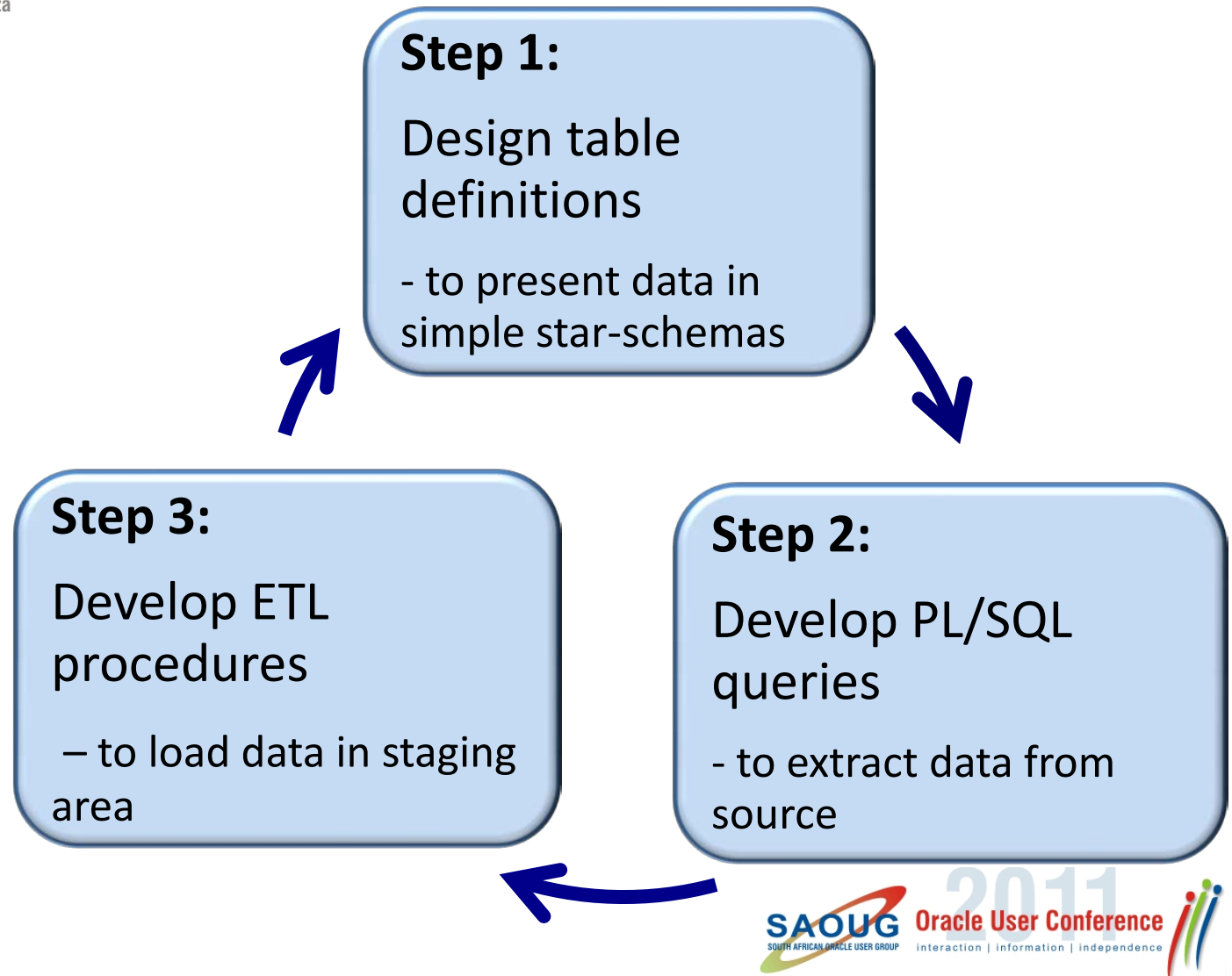
# SARB ERP Oracle Business Intelligence Architecture





# Data Services Layer

## - Oracle ERP Relational Database



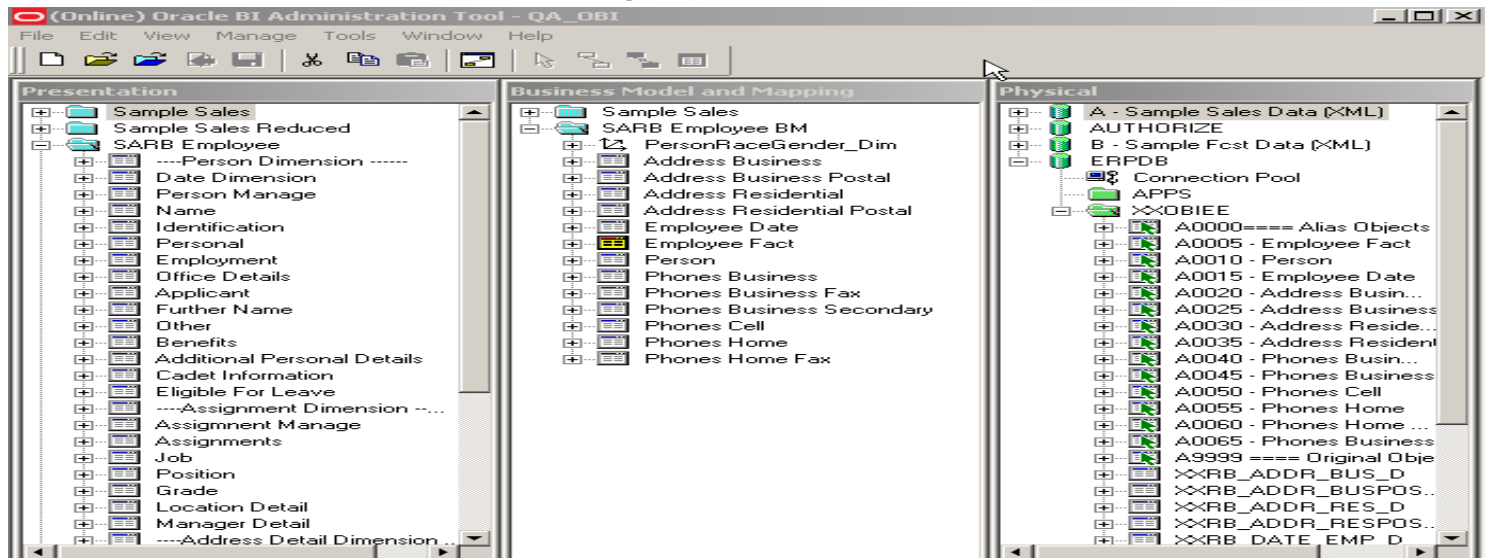


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# Business Logic Layer

## - Oracle BI Administration Tool

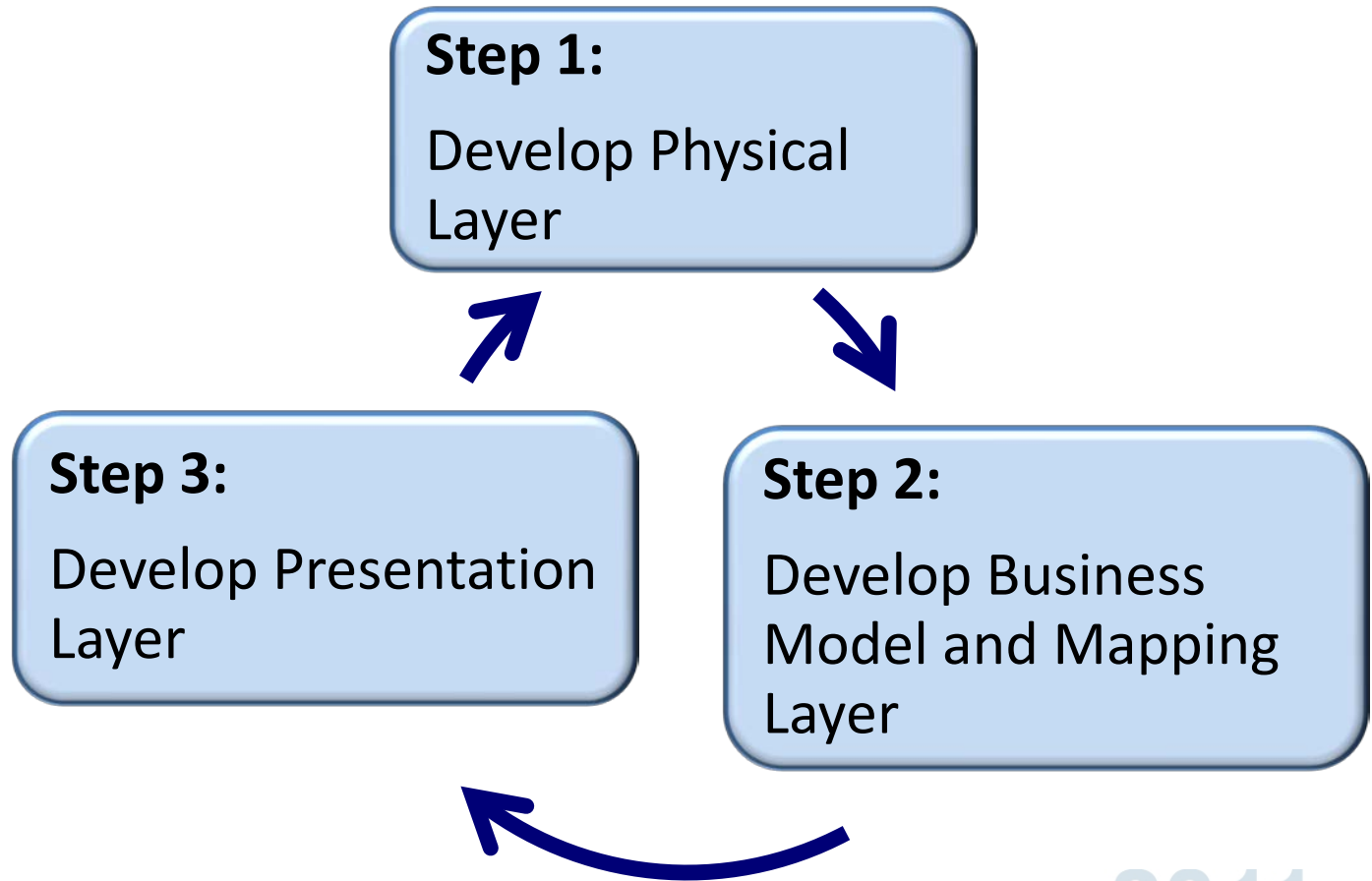
- ❑ **Physical Layer:** Represents the physical structure of the data sources to which the Oracle BI Server submits queries.
- ❑ **Business Model and Mapping Layer:** Represents the logical structure of the information in the repository.
- ❑ **Presentation Layer:** Represents the presentation structure of the repository. This layer allows you to present a view different from the Business Model and Mapping layer to users.





# Business Logic Layer

## - Oracle BI Administration Tool





# Presentation Layer

## - Oracle BI Answers

- Oracle BI Answers provides answers to business questions.
- This interface allows users to build and modify reports.
- Reports created with Oracle BI Answers can be integrated into any dashboard.
- The results of an Oracle BI Answers request can be formatted, saved, organized, and shared with others.

The screenshot shows the Oracle BI Answers interface with the following components:

- Navigation:** Criteria, Results, Prompts, Advanced tabs. Top right: Dashboards - Answers - More Products - Settings - Log Out.
- Left Panel:**
  - SARB Leave
  - Columns:
    - Leave Dimension -----
    - Date Dimension
    - Employee Detail
    - Employee Logistic Detail
    - Job
    - Position
    - Grade
    - Manager Detail
    - Leave Transaction Dimen
    - Transaction
    - Transaction Facts
  - Filters:
    - SARB Leave
  - Refresh Display
  - Reload Server Metadata
- Main Area:**
  - Columns:** Click on column names in the selection pane to add them to the request. Once added, drag-and-drop columns to reorder them. Edit a column's format, formula and filters by clicking the buttons below its name.
  - Table Structure:**

Employee Detail	Employee Logistic Detail	Manager Detail	Date Dimension		Transaction	Transaction Facts		
Full Name	Division	Manager Full Name	Leave Start Date	Leave End Date	Transaction Type	Open Balance	SUM(Transaction Facts.Absence Mo...)	Closing Balance
  - Filters:** Add filters to the request criteria by holding down the CTRL key and clicking on column names in the selection pane, or by clicking on the filter button below included columns. Add a saved filter by clicking on its name in the selection pane.
  - Filter Examples:**
    - Transaction Type is equal to / is in Overtime 1.5 Encash, Overtime 2.0 Encash
    - AND Division contains any BSTD -
  - Buttons:** Display Results, Remove All, Save Filter..., Remove Filters, Combine with Similar Request



# Presentation Layer

## - Oracle BI Answers (QA environment)

### Step 1:

Test reporting Layer in Answers (QA environment)



### Step 4:

Assist clients to finalize reporting layer for sign-off

### Step 2:

Verify requirements from clients



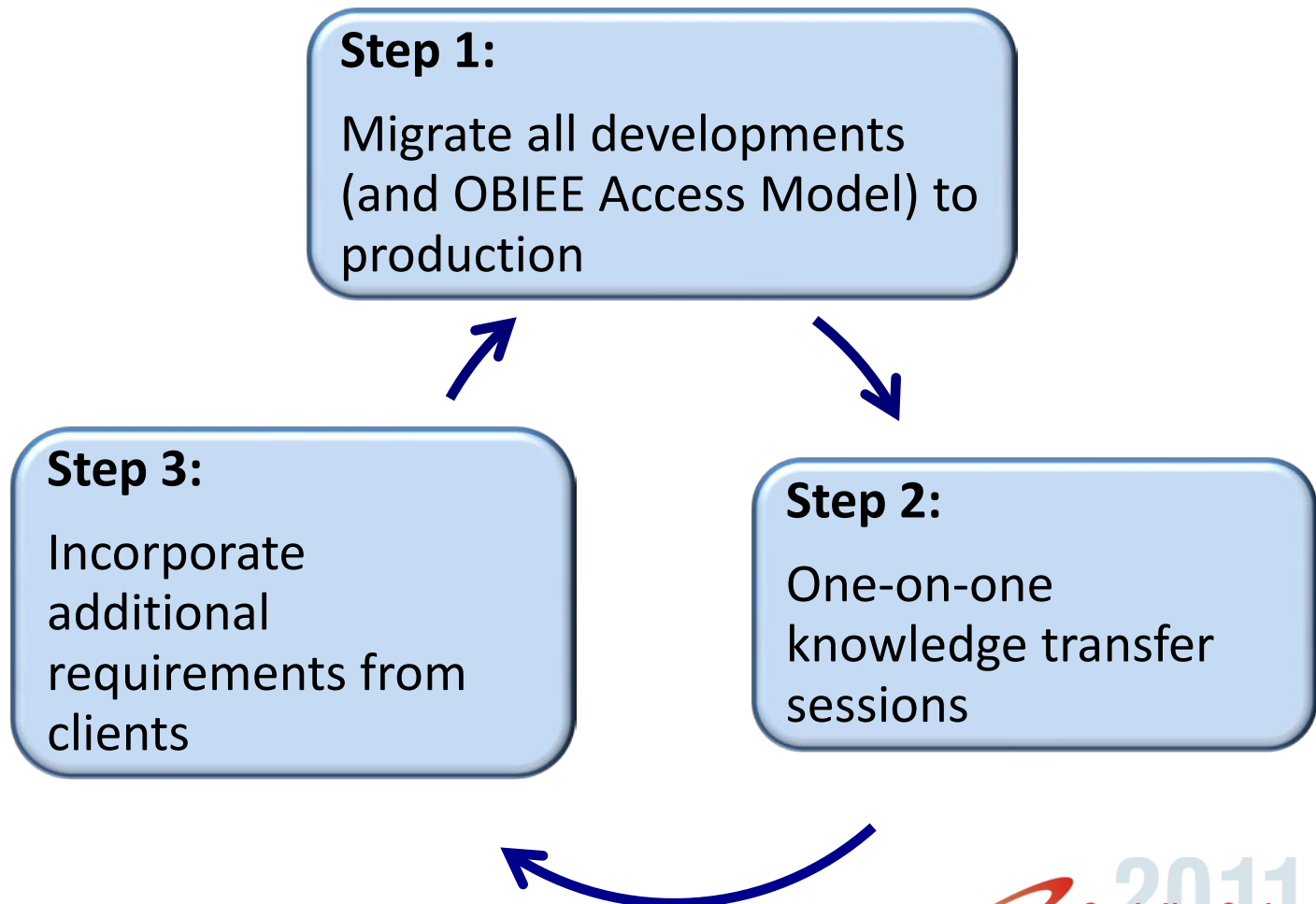
### Step 3:

Develop reports, graphs and dashboards



# Presentation Layer

## - Oracle BI Answers (Production environment)

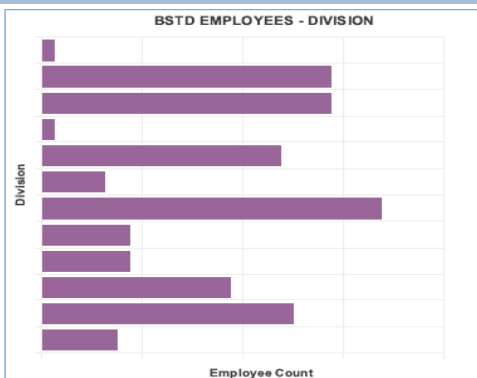




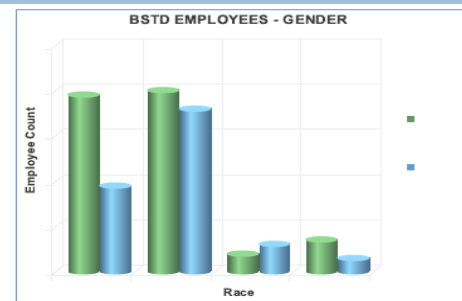
# Dashboard Example 1

## - Employee Reporting Layer

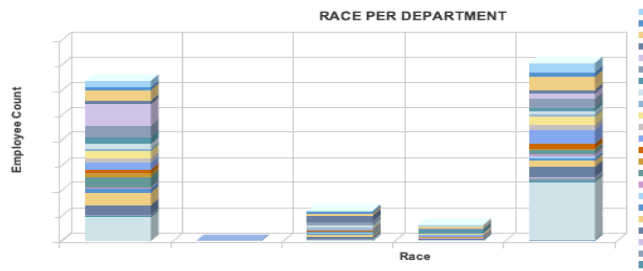
BSTD EMPLOYEES - DIVISION  
Date run: 2011/11/09



BSTD EMPLOYEES - GENDER  
Date run: 2011/11/09



Race per Dept 2



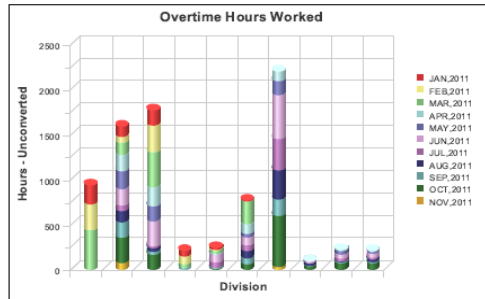


# Dashboard Example 2

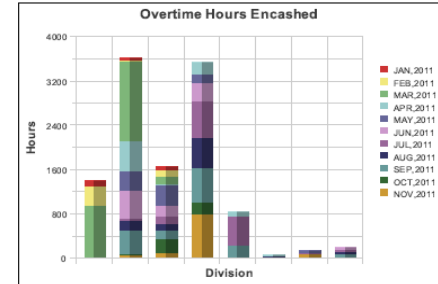
## - Leave Reporting Layer

### OVERTIME WORKED PER DIVISION

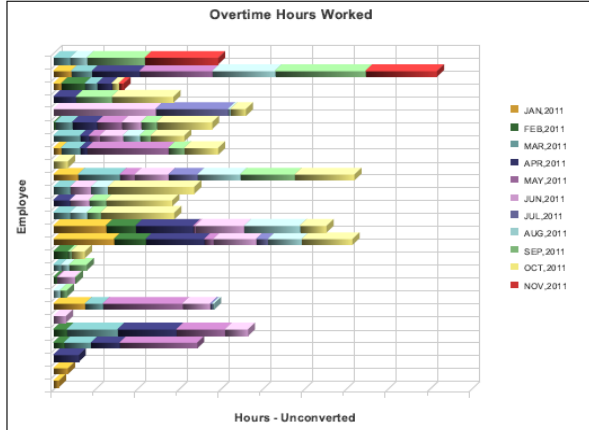
Working Hours Policy - Policy 27 (October 2006)



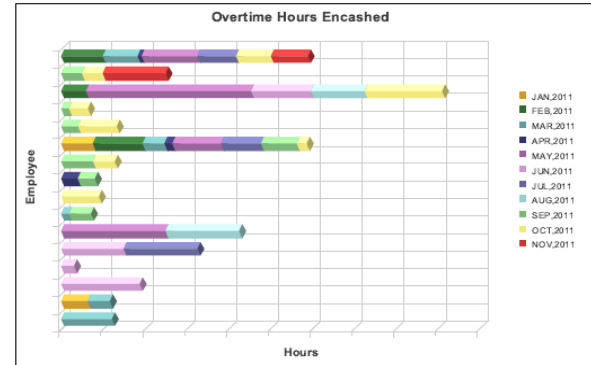
### OVERTIME ENCASHER PER DIVISION



### OVERTIME WORKED PER EMPLOYEE



### OVERTIME ENCASHER PER EMPLOYEE

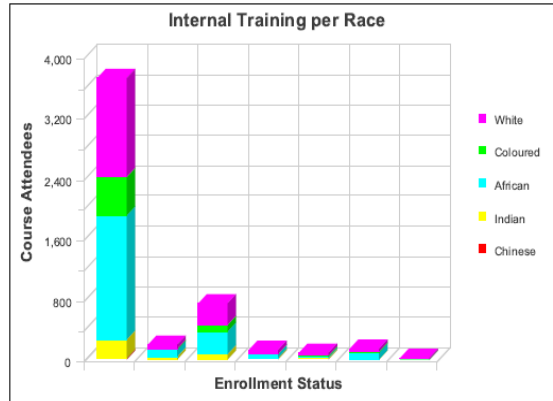




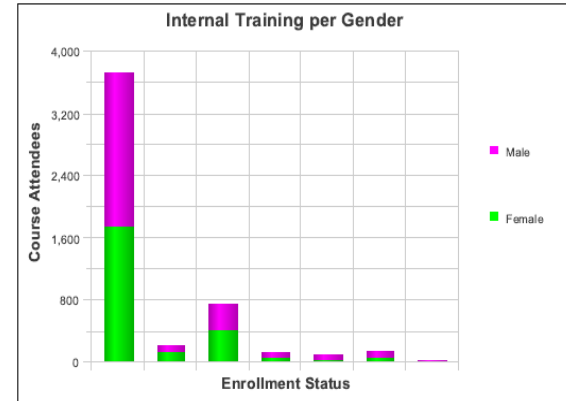
# Dashboard Example 3

## - Oracle Learning Management Reporting Layer

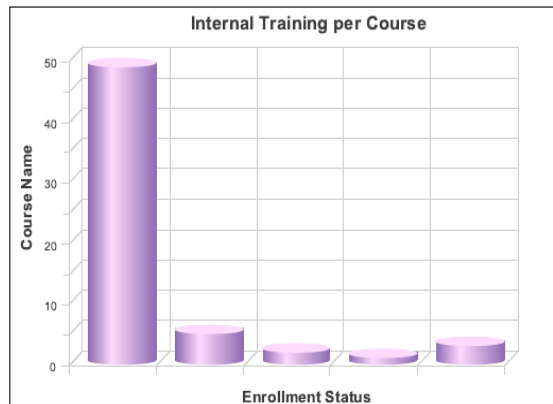
Internal Training per Race



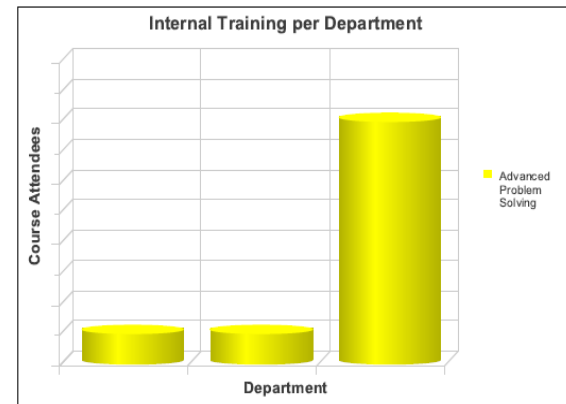
Internal Training per Gender



Internal Training per Course



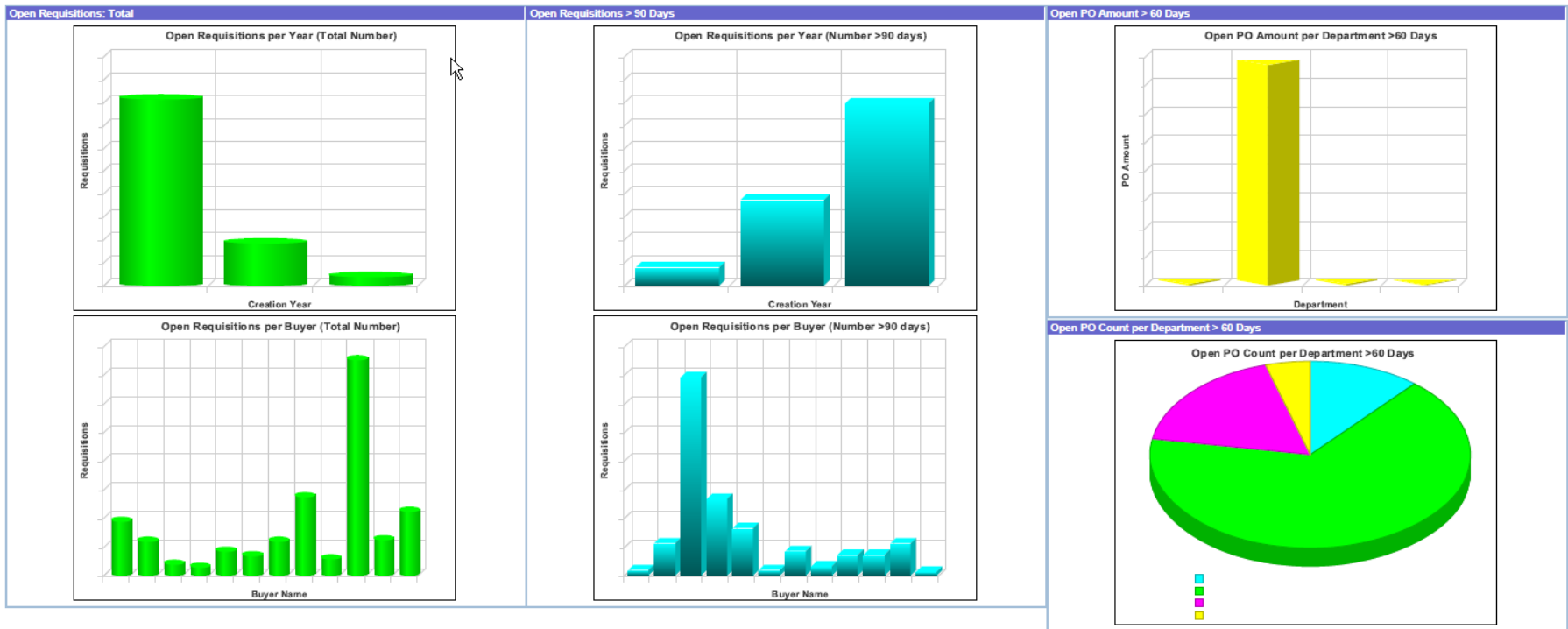
Internal Training per Department





# Dashboard Example 4

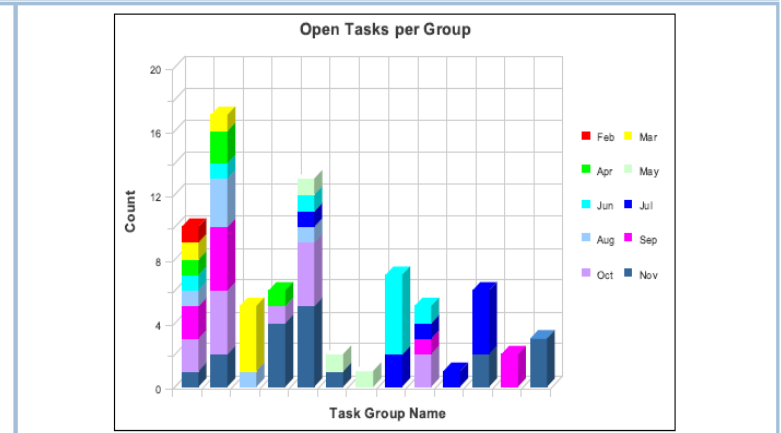
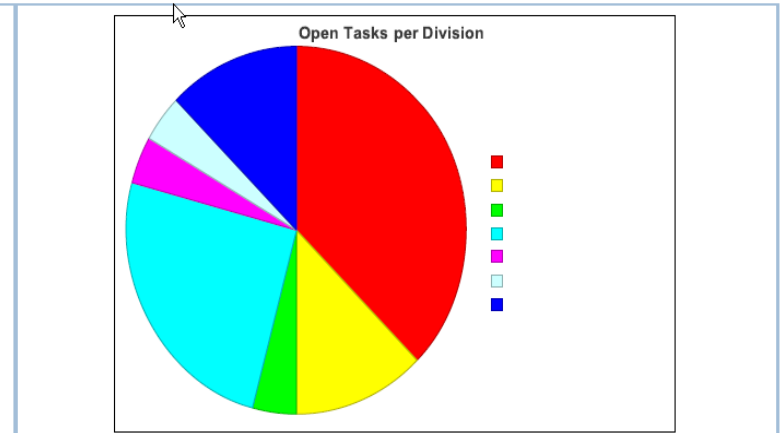
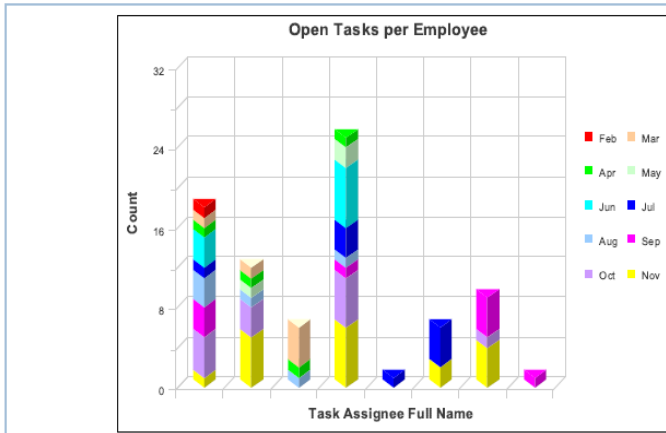
## - Procure to Pay Reporting Layer





# Dashboard Example 5

## - Oracle Incident Management Reporting Layer





# Summary (1 of 2)

## Stage 1 – Initial quick wins and development of a pilot system

- This has been completed successfully in the areas of HR, Incident Management and Procurement
- Currently busy with a POC for a Flexcube Reporting Layer

## Stage 2 – Gradually consolidate data into a data warehouse

- The SARB ERP OBIEE Team will now embark on the migration of all OBIEE developments into a data hub

## Stage 3 – In the future – take advantage OBIEE 11g+ features

- Oracle BI Applications



## Summary (2 of 2)

The SARB ERP OBIEE Team succeeded in their goal to bring the SARB ERP Clients closer to their data, therefore, adopting more responsibility and taking ownership of their information.





# References

- ❑ **Oracle® Business Intelligence Answers, Delivers, and Interactive Dashboards User Guide**
  - Version 10.1.3.2, December 2006
  
- ❑ **OBIEE 11g Data Modeling Best Practices**
  - Mark Rittman, Director, Rittman Mead Oracle Open World 2010, San Francisco, September 2010
  
- ❑ **Oracle Business Intelligence Enterprise Edition**
  - [www.Fullinterview.com](http://www.Fullinterview.com)





**THANK YOU!**

**QUESTIONS?**

