



Challenges and Rewards of Driving OBIEE Standards

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Reggie Gentle, Jr.
Florida State University





Overview

- Introduction
- Background of FSU's ERP Implementation
- Profile of Customizations
- Overview of FSU's OBIEE Implementation
- Our Approach to Change Management & Issue Resolution
- OBIEE Security and How FSU Made the Shoe Fit
 - Usage Scenarios
 - Business Process
 - Init Block and Variable Usage
- OBIEE Standards
 - Dashboard Standards
 - Development Standards
- Lessons Learned
- Questions & Comments





Introduction

- Presenter:
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Florida State University

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**...is a premier, comprehensive,
graduate research university,
with both law and medical
schools.**

- **Annual Operating Budget: \$1.1B**
- **Over 200 Million in Research Dollars
attracted each year.**
- **Over 41,000 students**
- **Over 14,000 employees**
- **Over 13,000 biweekly paychecks**
- **Over \$18 million in biweekly payroll**





Background of FSU's ERP Implementation **ALLIANCE**09

- Implemented Financials 8.4, Portal 8.8, and EPM 8.8 in June 2004
- Implemented HR/Payroll 8.8 in December 2004
- Upgraded HR and EPM Suites to 8.9 in April 2006
- Upgraded FI Suite to 8.9 in November 2006
- Upgraded EPM and Portal Suites to 9.0 in November 2007
- Upgraded HR Suite to 9.0 in October 2008
- Currently Upgrading FI Suite to 9.0 (est. April 2009)
- Currently Migrating from DB2 to Oracle DB for FI (est. April 2009)
- Implemented OBIEE in March 2008
 - Initial Deployment of Development 08/2007
- Go Live for 10.1.3.4 (est. April 2009) with architecture switch to Linux



FSU's OBIEE Implementation

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FSCM Reports

- Fin & Budget Position
- Available Balance
- Department Ledger E&G
- Department Ledger C&G/CS
- Department Ledger AUX
- Department Ledger CF

HCM Reports

- Cost Center
- Employee Time Verification
- HR Active Employees
- HR-GL/Payroll Charges
- Position Detail by Dept
- Timesheets by Dept & Empl

Operations Reports

- OBIEE Usage Tracking
- DataStage Operations
- Data Reconciliation

Data Marts

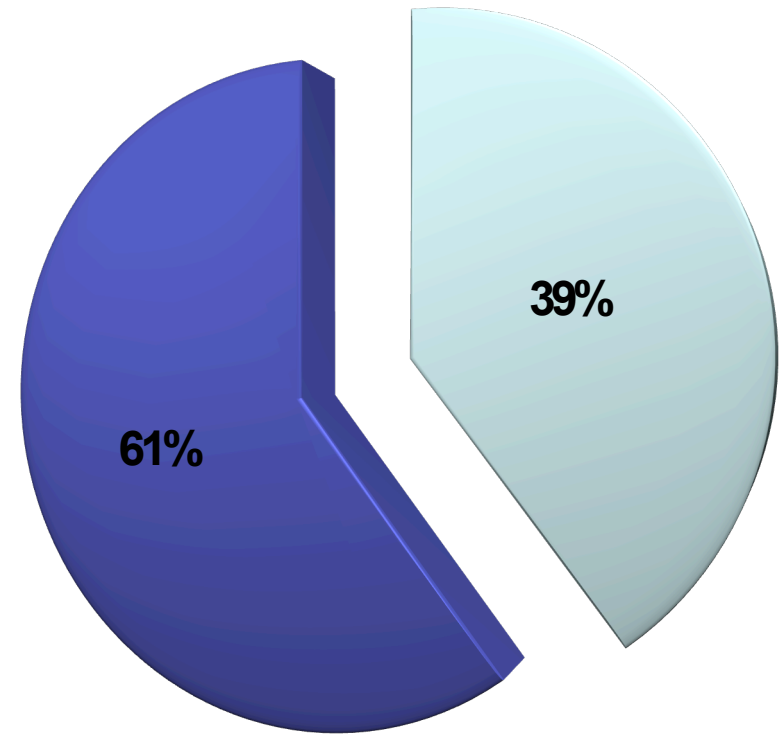
- General Ledger
- Workforce Profile (Job)
- Commitment Control
- Financial Transactions
- HR-GL Transactions
- Payroll Cost Center
- Sponsored Research
- Employee Time
- Usage Tracking
- Data Operations



OBIEE Customizations

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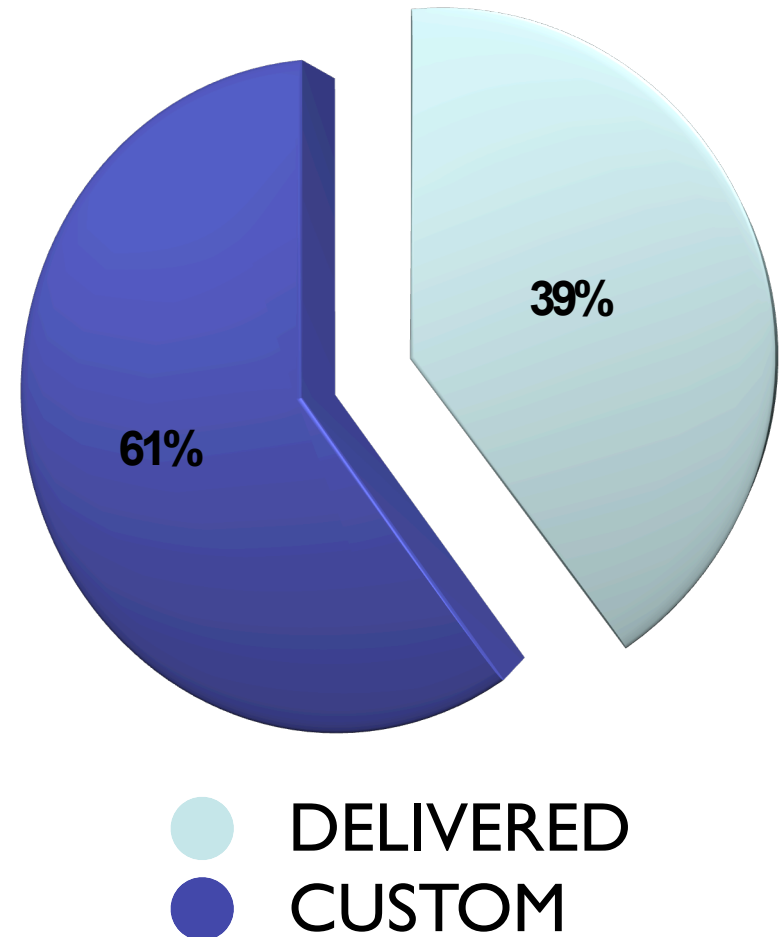
- Customization of all delivered tables as of 03/01/2009 exceeds 60%
- Customizations range from minor field modifications to complete join/table redesign.





OBIEE Customizations

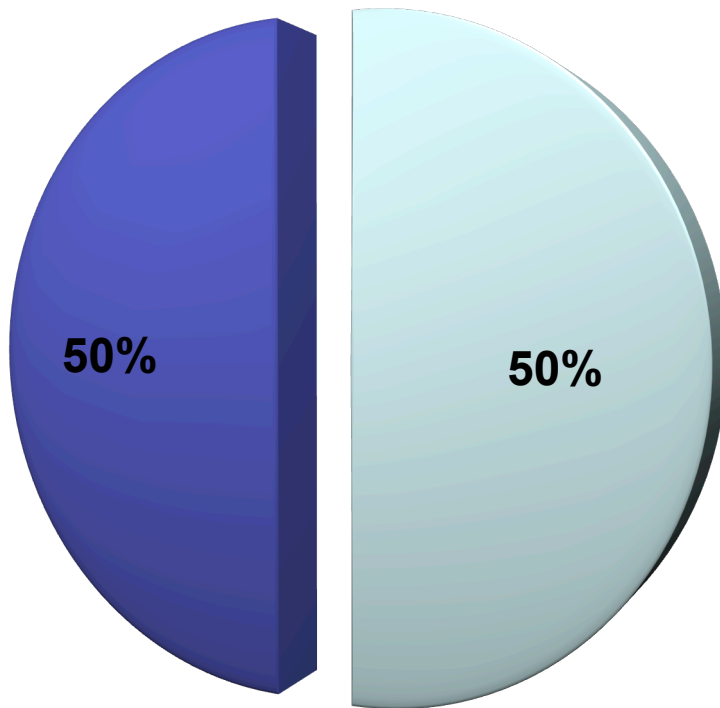
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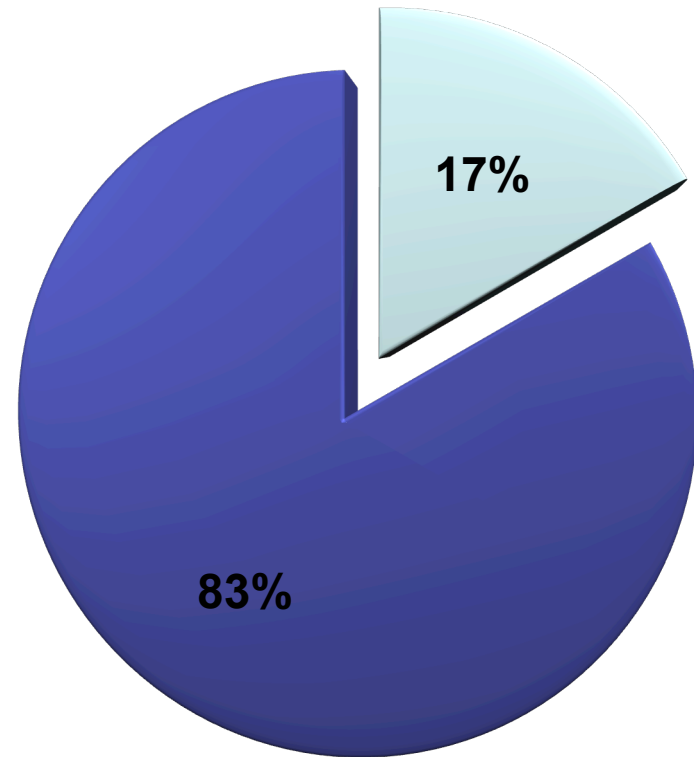


OBIEE Customizations

- Customization breakdown by Fact/Dimension objects.



● DELIVERED DIMENSION'S
● CUSTOM DIMENSION'S



● DELIVERED FACT'S
● CUSTOM FACT'S





FSU's OBIEE Implementation

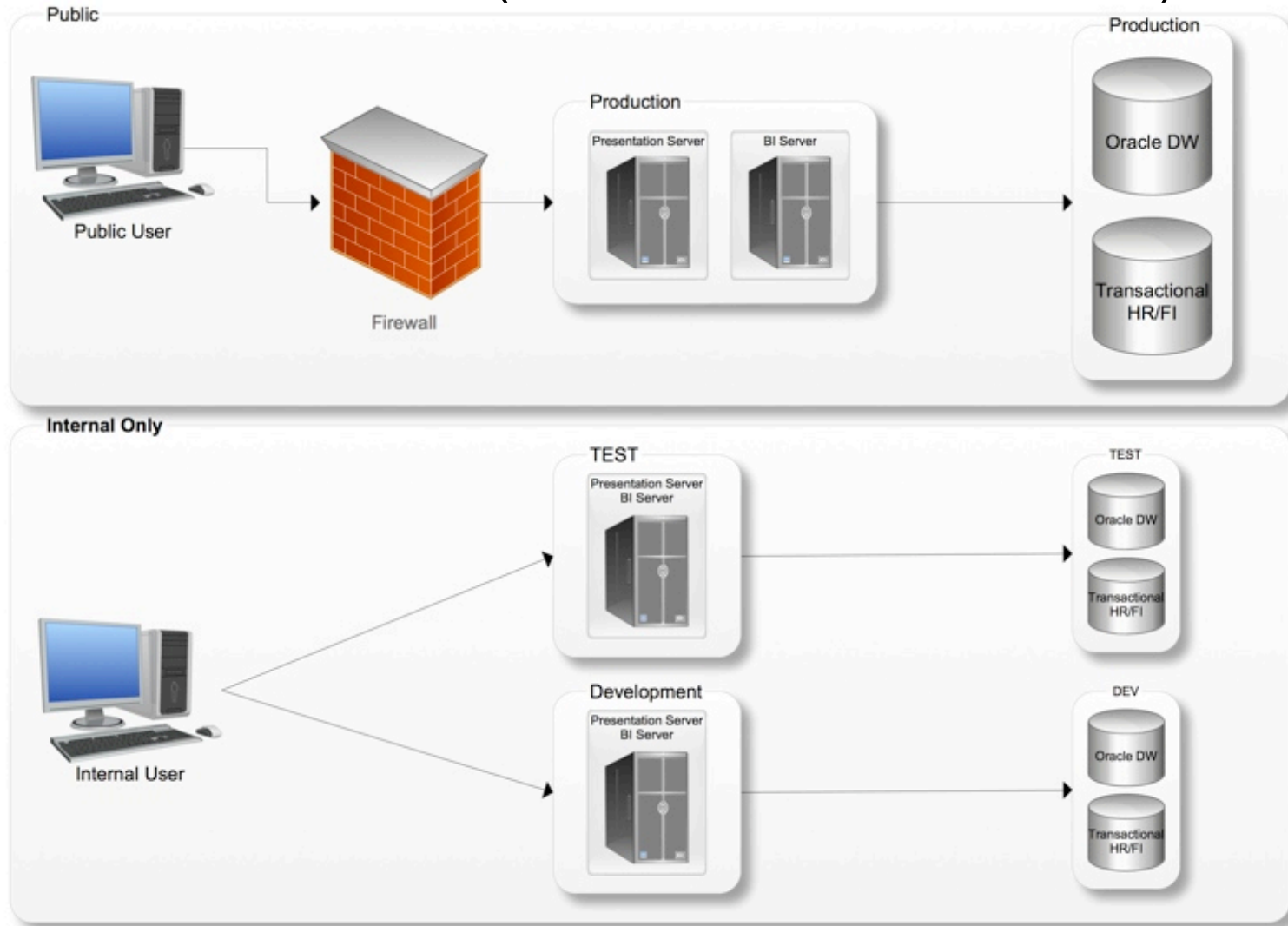
- **Implementation was broken into phases to achieve early, measurable success**
- **Phase I**
 - EPM 9.0 (on Oracle Database)
 - OBIEE and BI Publisher Deployment
 - Oracle Fusion Intelligence
 - Development of 12 key dashboards
 - Training of developers and end users
- **Usage Metrics since Go Live**
 - 674 Distinct Users
 - 1.2 Million Reporting Object Requests submitted
 - Daily Reporting Load Ranges from 8k - 16k Requests





OBIEE Architecture

- OBIEE 10.1.3.3.0(Current Windows Platform)

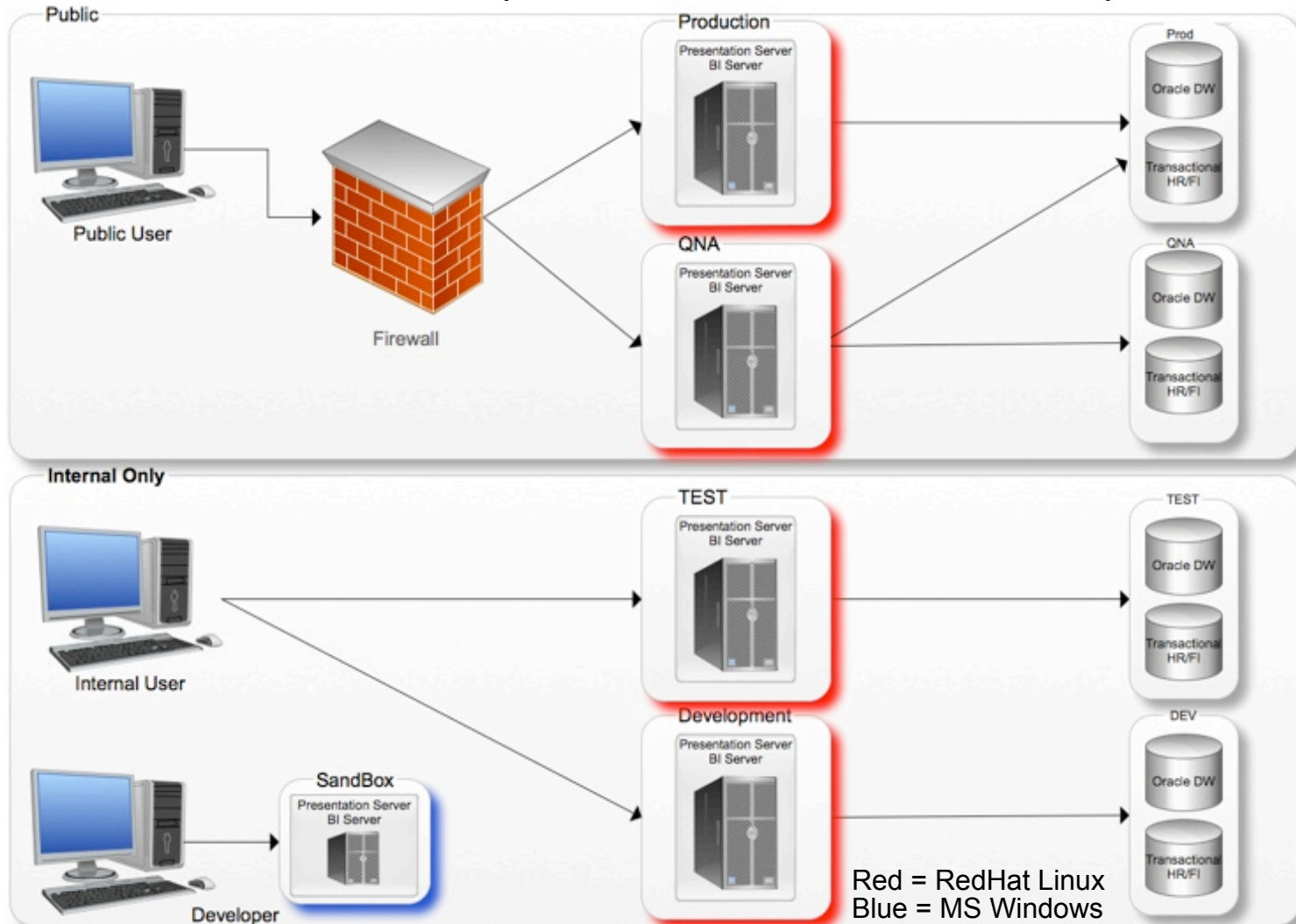




OBIEE Architecture

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- OBIEE 10.1.3.3.4(Current LINUX Platform)





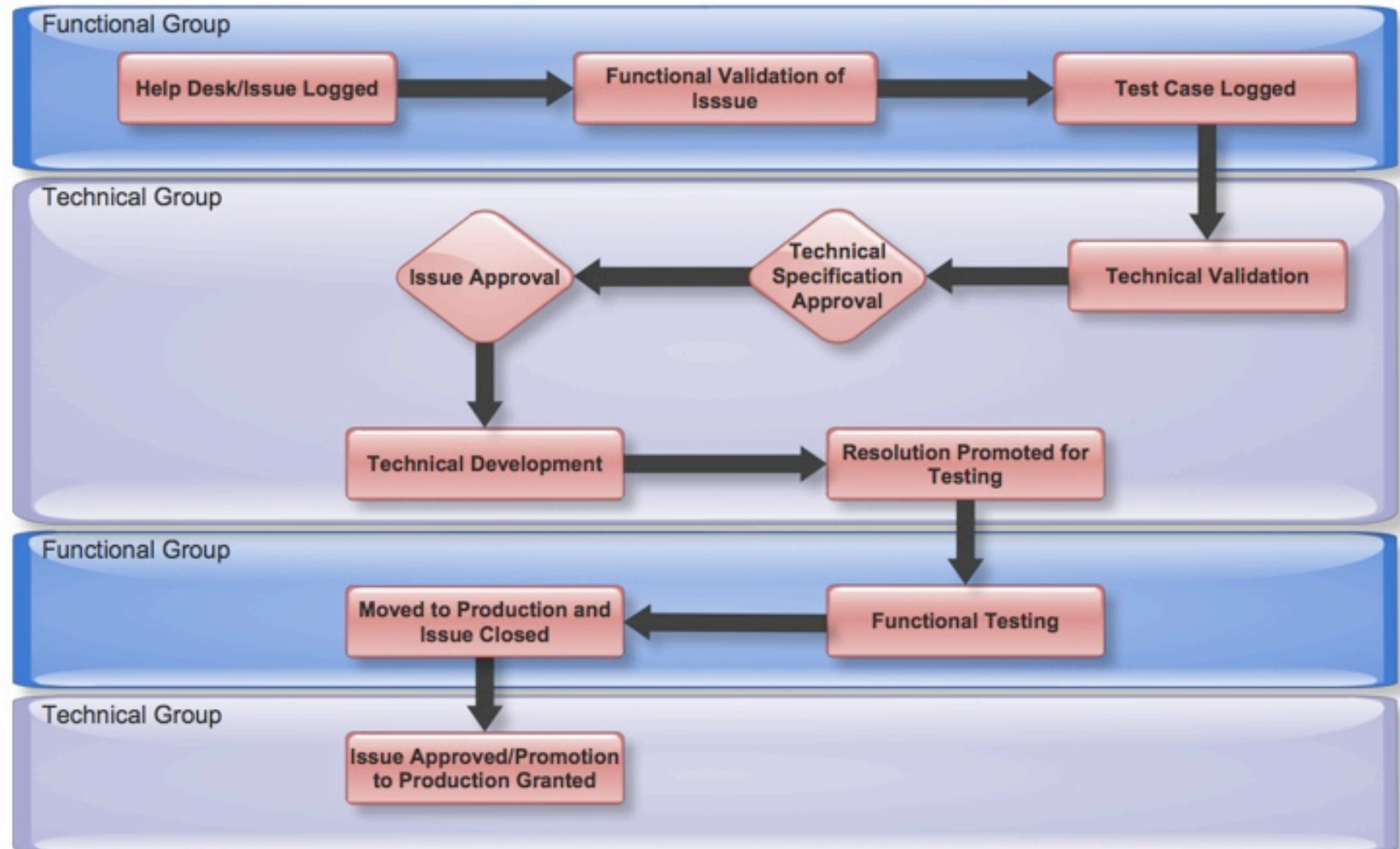
Challenge: To Much Noise!!!

- Way to many issues arising from users who state they need X; however no proven business reason
- Need method to track problems vs bugs vs enhancements
- Need method to track importance of bug as well as level of associated risk
- Functional business experts **MUST** be engaged and play an active role!





Issue Resolution Flow Process





Challenge: Something isn't Right?!

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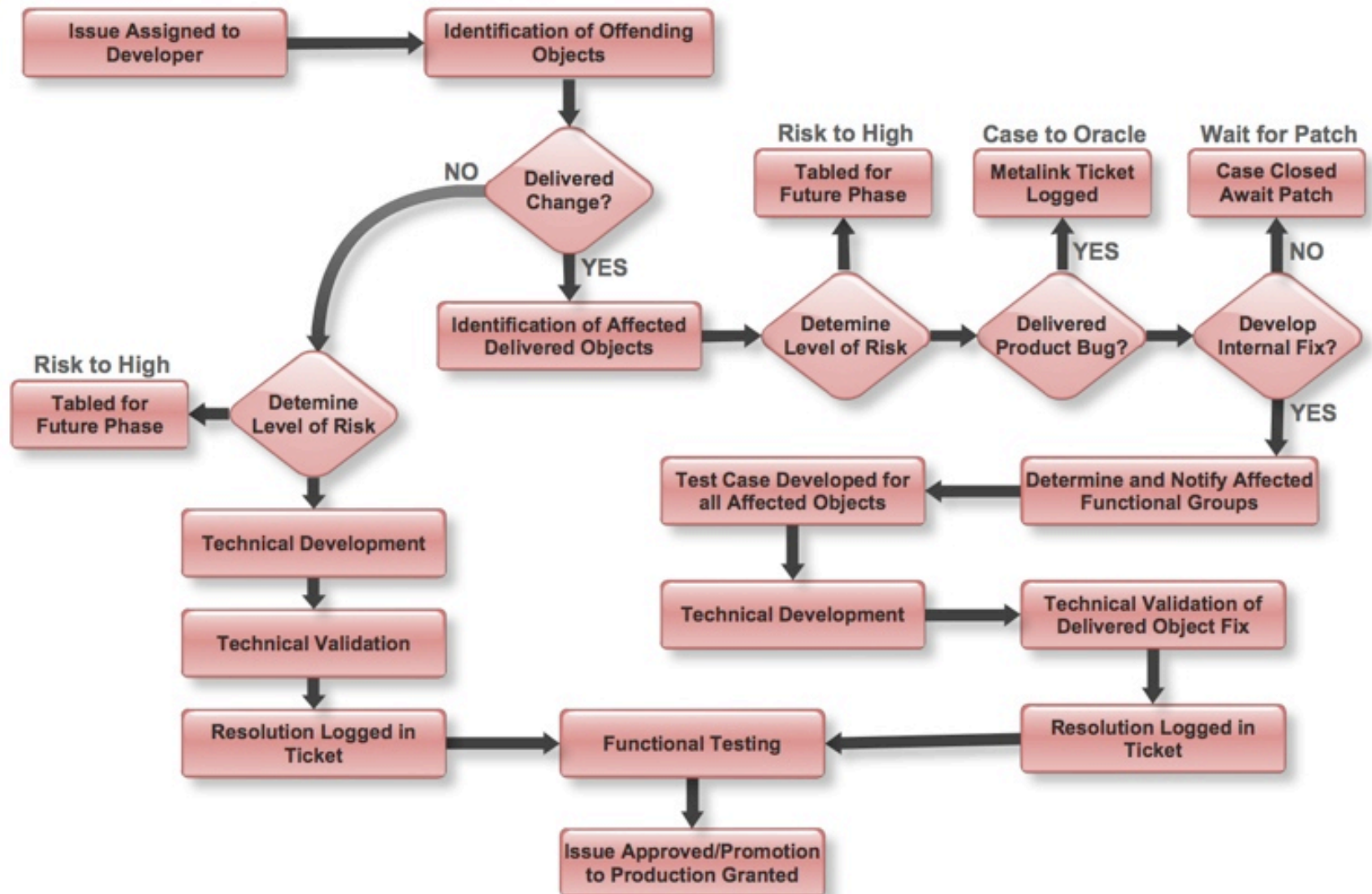


- Are you SURE the report hasn't changed?
- How can you prove to me(business analyst) something hasn't changed
- Wait! The reporting change that just went in; well; I'm sorry to report; but it shows we have a few extra million in the bank; can we roll that back?
- ✗ Ooooooops I just "accidentally" deleted something... and by the way, it was in PRODUCTION!



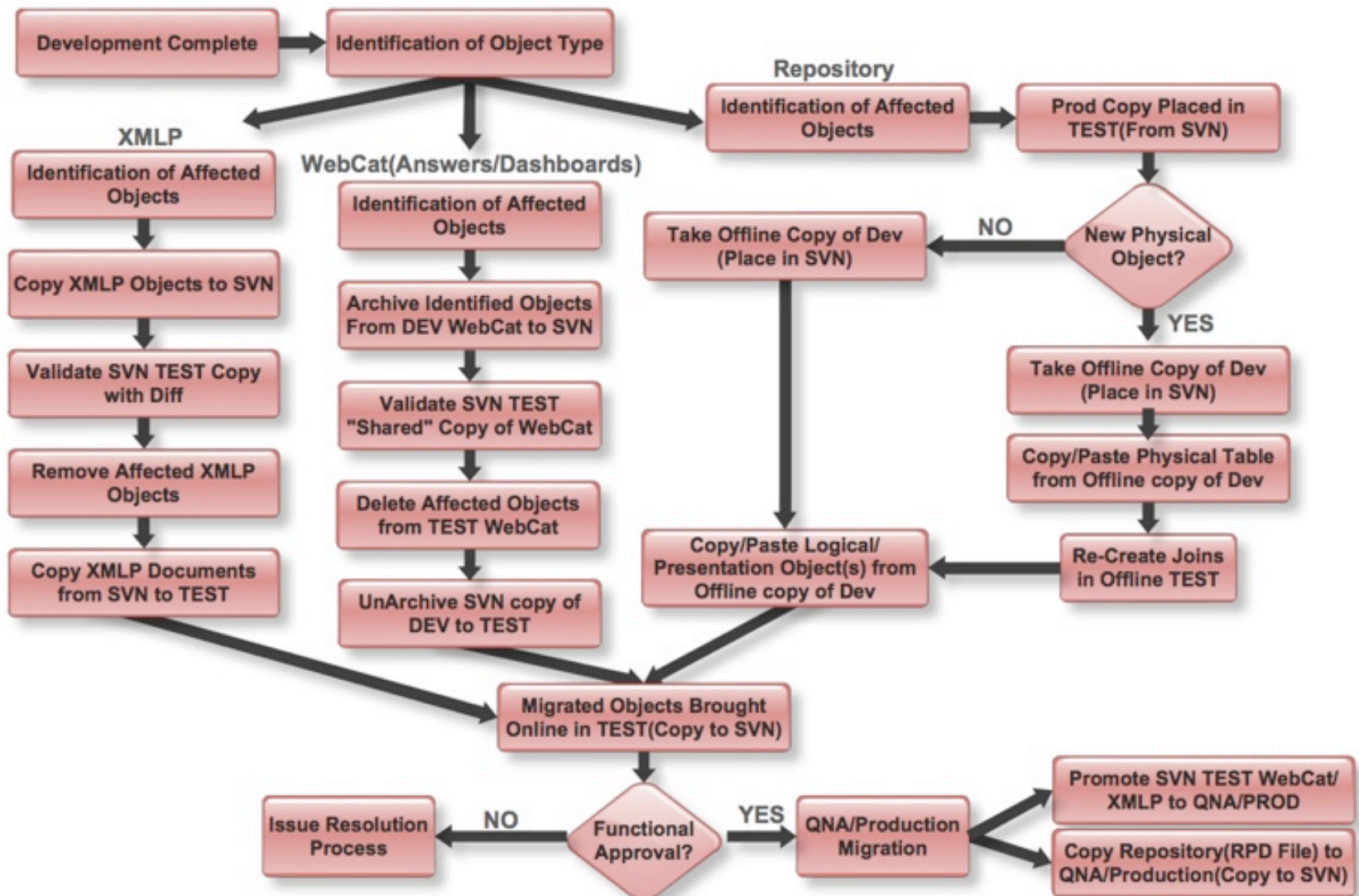


Change Control Process





Change Control Process






Change Control for Reports

- Use 4 standard environments to migrations
- Use catalog manager to move objects between environments
- Document/Performance driven process (Issues, Specifications & Change requests)
- Moves are coordinated and scheduled
- Backup/restore enabled
 - SubVersion
 - Short term/Revision history managed by Volume Shadow Copy services/Change capture script
 - Long term by Tivoli Hot Storage Solution





Challenge: Repo Changes

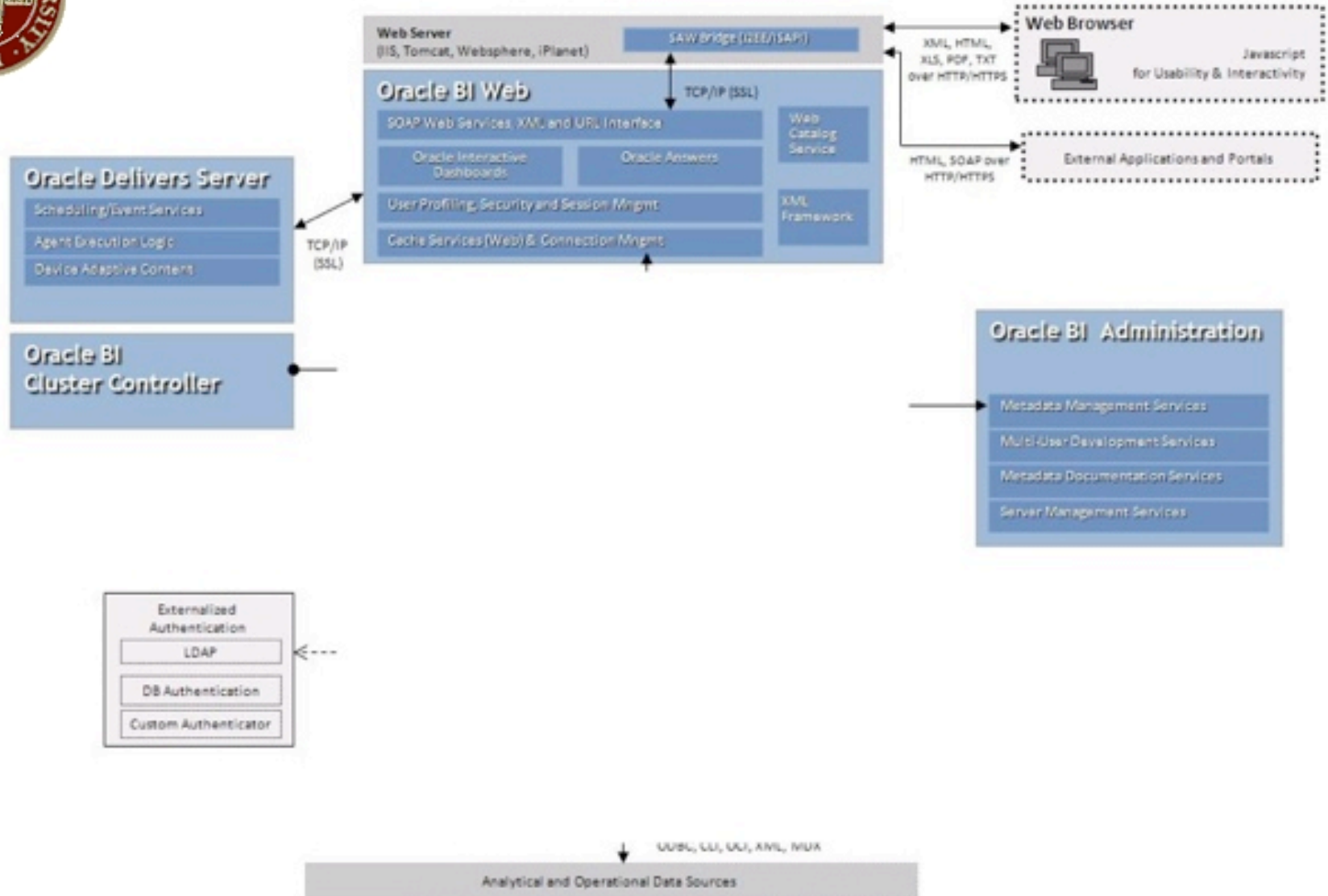
- I have a mess on my hands and have no clue as to what changed!
- Merge utility has ONCE AGAIN corrupted my Repo! 
- Repo? HUH? What's that!? Should I be worried/concerned?
- Metadata management; how is that generated?





Challenge: What is a Repo?

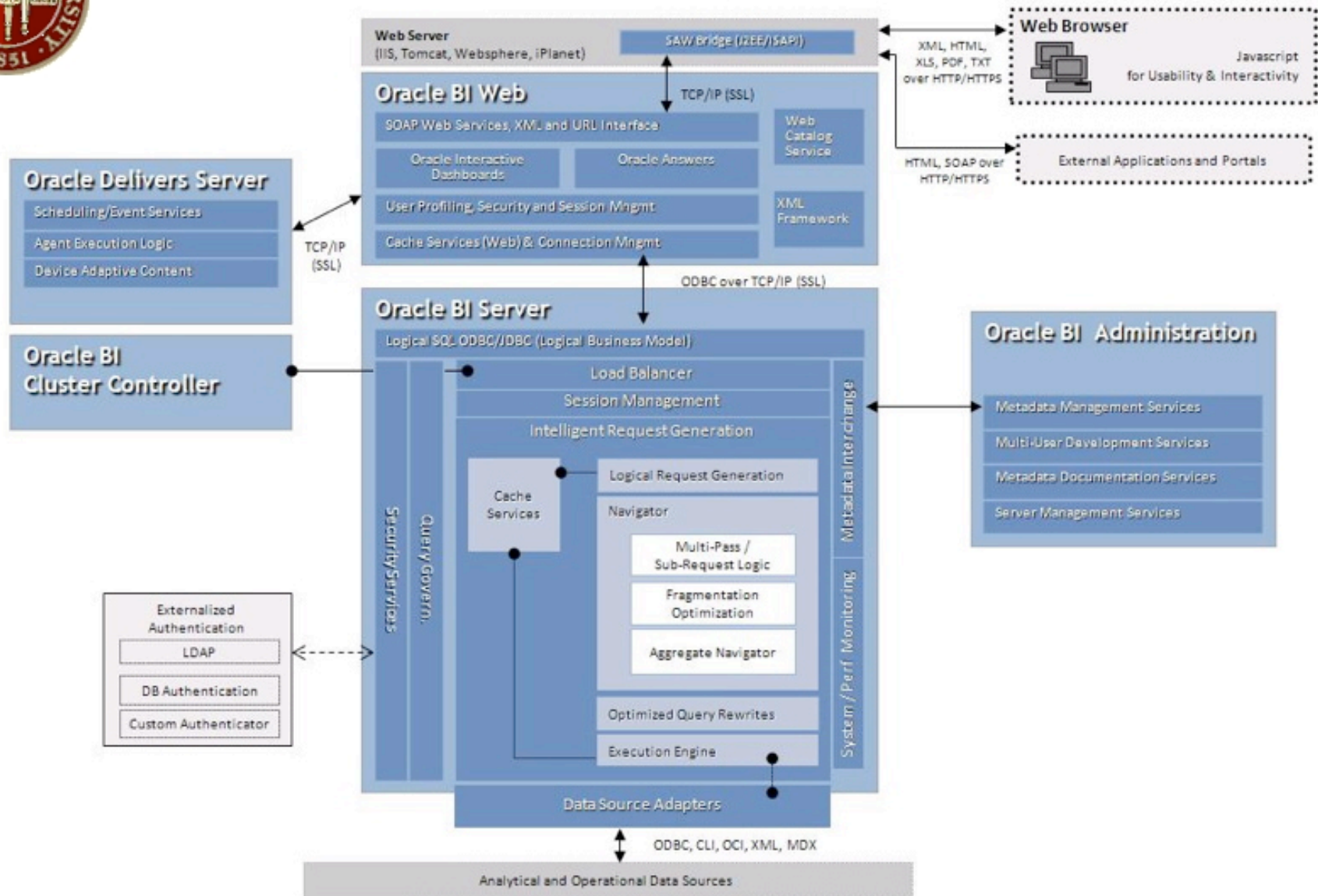
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Challenge: Repo Explained

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Change Control for Repository

- Metadata changes are primarily driven by reports
- Variety of methods are used to migrate metadata
 - Copy UDML from Source to Target
 - Manual development in target
 - Scripted full repository copies from source to target
- Backup/restore enabled
 - SubVersion
 - Short term/Revision history managed by Volume Shadow Copy services
 - Long term by Tivoli Hot Storage Solution
 - Migration scripts to create backups





OBIEE Security and Usage

- There are two approaches with security
 - Closed system
 - Completely wide open system(default)
- Security Strategy at FSU is a two step approach
 - Functional Requirements
 - What can the user see
 - Technical Requirements
 - What can the user do(*italic and underlined*)
- Explicit security is a caveat to both scenarios





OBIEE Security and Usage

- OBIEE Security is assigned based on a non-explicit model
 - Security is always implied as default(Open/Closed) unless otherwise specified
- User A logs into an “Open” system and is able to see everything a power developer could see as well as perform actions on such objects he/she can see
- User B logs into a “Closed” system and is unable to view or perform actions on objects he doesn’t have explicit access to.





OBIEE Usage Scenarios

- Self Service Report Viewer
 - Ability to Login to OBIEE & access Dashboards
 - Ability to print/export to PDF/XLS
 - Refresh Data
 - Non-Employee consumer of reporting objects(dashboards)
 - Typically used to allow former employees to print a timesheet for a small period





OBIEE Usage Scenarios

- Report Viewer
 - Ability to Login to OBIEE & access Dashboards
 - Ability to print/export to PDF/XLS
 - Refresh Data
 - “Send To” type functionality(IE, send to email.. etc)
 - Merely a consumer of reporting objects(dashboards)
 - Number of Rows returned limited
- Power User
 - Same Needs as “Report Viewer”
 - Increased access from a reporting content aspect
 - Number of Rows returned limit increased
 - Otherwise no added functionality





OBIEE Usage Scenarios

- Answers Report User/Developer
 - Same Needs as “Power User”
 - Access to “Answers” application within OBIEE
 - Ability to save documents to “My Folders”
 - Ability to save documents to departmental folders
 - Separate from structured reporting objects
 - Restricted to Answers Subject area’s which are separate from structured reporting subject areas
 - Ability to view contents of structured reports for best practice guidance
 - Ability to utilize shared filters created by OBIEE Reporting Team





OBIEE Usage Scenarios

- OBIEE Report Developer(Internal ERP)
 - Same Needs as “Answers Report User”
 - Ability to save documents to shared/structured reporting folders
 - No Subject area restrictions other than non-deployed products
 - Ability to create Dashboards and Prompts
 - Ability to create shared filters for usage by campus report developers
 - Ability to create/schedule/manage ibots
 - Clear OBIEE Cache requirement

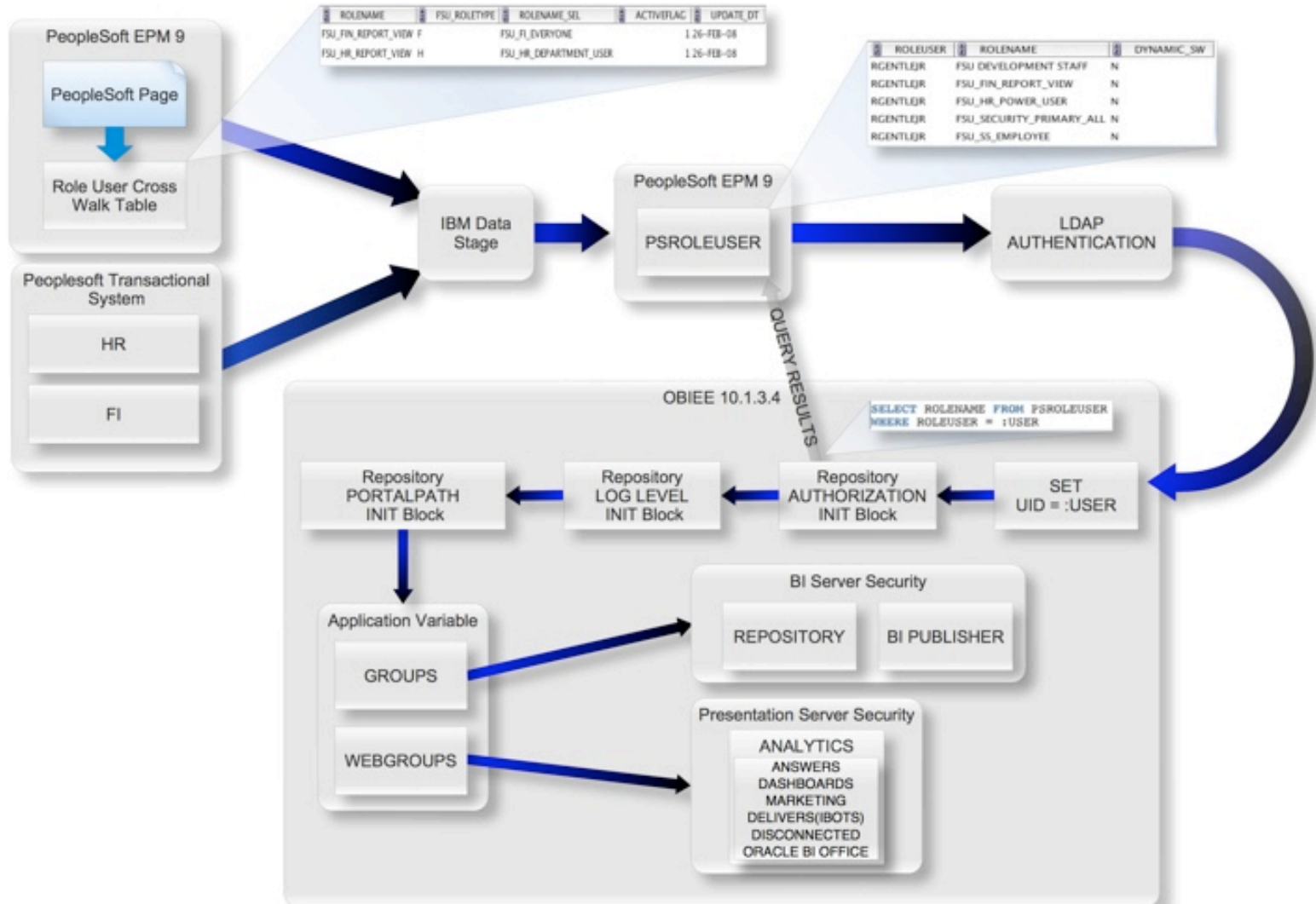




OBIEE Architecture

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- OBIEE SECURITY PROCESS





Challenge: OBIEE Storage Mess

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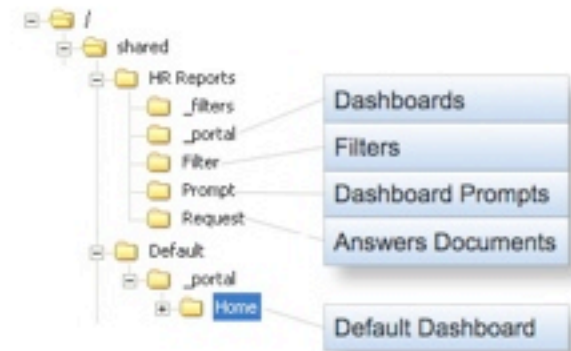
- To trash or NOT to trash?
 - Should we just pile EVERYTHING in one directory or not?
- To many developers; not enough “personal space”!
- **E**mployees **a**re **c**reatures of “*habit*” and have their **OWN** way of doing things; often times are 1st in line to sign up for “**Prevent Change Pep Band**”!
- Structure is never welcomed, but always needed to keep the gray hairs at bay!





OBIEE Storage Structure

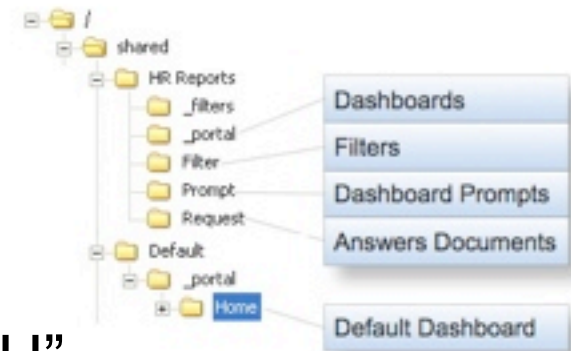
- All Structured Reporting areas have the same folders for document storage
 - Dashboards
 - Filter
 - Prompt
 - Request
- Provides Separation of documents based on type regardless of report being developed
- Each Deployed PeopleSoft Functional Area has Parent Folder for Document Storage
- All Shared Document Storage is consistent in Design/Naming/Security/Structure of Objects





OBIEE Storage Structure

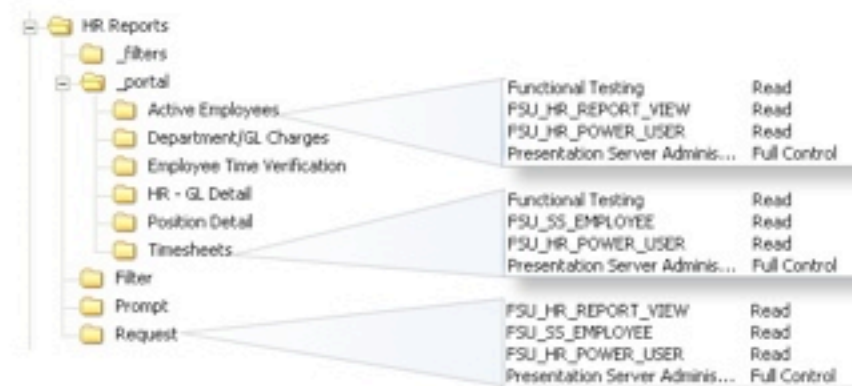
- Default Dashboard is Set via Init Block and Allows for Setting of Default based on:
 - Location
 - Department
 - Referring Application
 - Variable known as "PORTALPATH"
- Allows for Announcements about upcoming events such as system outages.





OBIEE Storage Structure

- Security is Set at each Dashboard/Object Level
 - Developer Prompt(Allows Developers to turn on/off Logging Level of a dashboard for troubleshooting)
 - Dashboard Main/Pages are used for securing who can “See” what dashboards
 - Prompt/Request/Filter are all set to “Read Only” for All Groups which have rights within the Deployed PS Functional Area





OBIEE Variables

Variable Overview

	Repository		Session		Presentation
	Static	Dynamic	System	Dynamic	Dynamic
Set Process	Server Startup	Repository Init Block	Login/Init Block/SQL/Dashboard		Dashboard Prompt
RPD Expression	VALUEOF("VARIABLE NAME")		VALUEOF("NQ_SESSION.VARIABLE NAME")		N/A
Answers Expression	VALUEOF("VARIABLE NAME")		VALUEOF("NQ_SESSION.VARIABLE NAME")		@{VARIABLE NAME {DEFAULT VALUE}}
Delivers Expression	@{VARIABLE NAME}	N/A	@{NQ_SESSION.VARIABLE NAME}		@{VARIABLE NAME {DEFAULT VALUE}}
Other (milleage may vary)	@{biServer.variables["Variable Name"]}		@{biServer.variables {NQ_SESSION.Variable Name}}		@{VARIABLE NAME {DEFAULT VALUE}}
Row Level Init (IE; Row level security, etc)	NO		YES		N/A



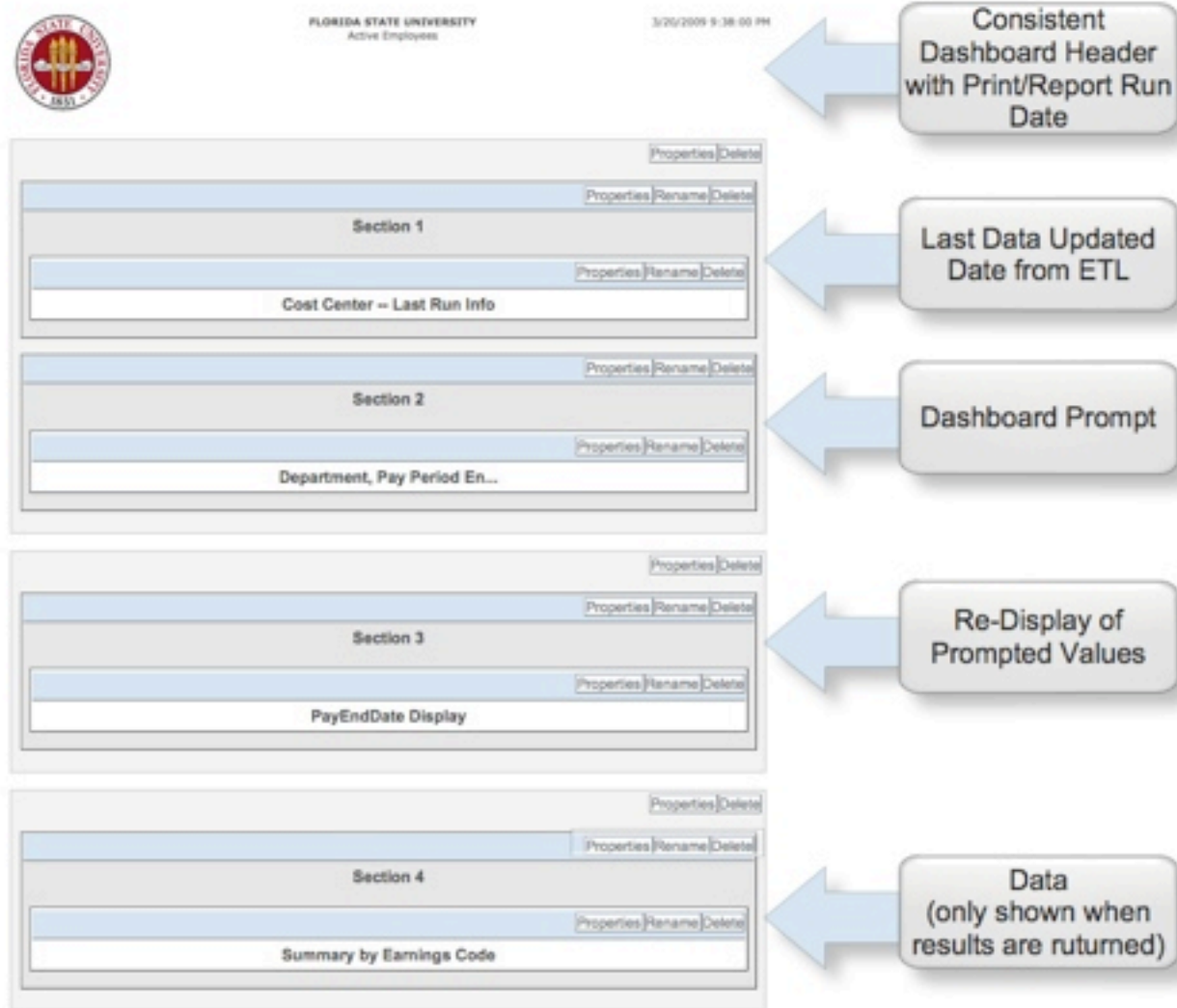
- Typical FSU Dashboard Consists of a Minimum of 5 sections
- Consistent Look and Feel of all Structured Dashboards
- Provide Base Objects to Developers for Rapid Development
 - Pre-defined Header/Footer Code
 - Repository/Presentation Variables
 - Consistent Format of Data(Numeric/Dates)
- Security Administered Separately from Development Staff
- Ability to Re-Use objects from previously developed dashboards





OBIEE Dashboard Standards

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FLORIDA STATE UNIVERSITY
Active Employees

3/20/2009 9:38:00 PM

Section 1	
Cost Center -- Last Run Info	

Section 2	
Department, Pay Period En...	

Section 3	
PayEndDate Display	


Section 4	
Summary by Earnings Code	





OBIEE Dashboard Standards

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**OMNI** INTERACTIVE DASHBOARDS

Dean of the Faculties Home Financial Reports HR Reports MGMT Cost Center Sponsored Research Reports

Cost Center

Welcome, Gentle, Reggie! Dashboards - Answers - More Products - Settings - Log Out

Payroll Certification Current Payroll Differences Cost Center Report Summary by Earnings Code Current Run vs Previous Final Page Options

Data contained within this report was last loaded on 3/23/2009 04:41:09 PM

Department
005000 - Ofc c

Payroll End Date
3/19/2009

Employee Type
(All Choices)

Go

I, _____ (Print Name), CERTIFY THAT THE PERSONS NAMED HEREON ARE DUE THE AMOUNTS SHOWN FOR SERVICES PERFORMED FOR THE DEPARTMENT INDICATED DURING THE PERIOD STATED, INCLUDING LEAVE AND OTHER PAY ADDITIVES AND THAT THESE PAYMENTS CONFORM TO THE POLICIES ESTABLISHED BY THE FLORIDA STATE UNIVERSITY AND THE BOARD OF GOVERNORS. I FURTHER CERTIFY THAT I AM AN AUTHORIZED SIGNER FOR THIS DEPARTMENT AND THAT A PERMANENT, SIGNED COPY OF THIS DOCUMENT WILL BE MAINTAINED IN MY OFFICE FOR AUDIT PURPOSES. Errors in employee earnings should be notated by creating a Parature ticket for correction and detailing the Parature ticket number in the memo report below

To Certify: Sign and Date the first page; Initial all other Pages;
File in your office for Auditors.

Signature: _____

Date: _____

Department
00

Employee Name	Empl ID	Hours	Earnings
		80.00	2,855.66
		80.00	4,177.69
		80.00	3,339.36
		80.00	2,335.54
		80.00	1,570.88
		80.00	2,490.27

Employee Name	Empl ID	Hours	Earnings
		80.00	2,263.79
		80.00	2,678.36
		80.00	2,969.64
		80.00	2,103.58
		80.00	2,388.67

	Hours	Earnings	# of Employees
Grand Total	880.00	29,173.44	11

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Lessons Learned

- Cache CANNOT be managed with a “One Size Fits All” Approach.
- Tree’s as delivered are Views; which can be heavily taxing on a DB; consider a Materialized View Alternative with MV Memory Pin.
- DW Objects are Delivered DB Agnostic and can be tuned further to meet specific db vendor needs
- Tis better to perform the calc in the metadata than weigh down developers with countless formulas.
- Consistent Drill Paths/Navigation
- Focus on data reconciliation early and consistently.

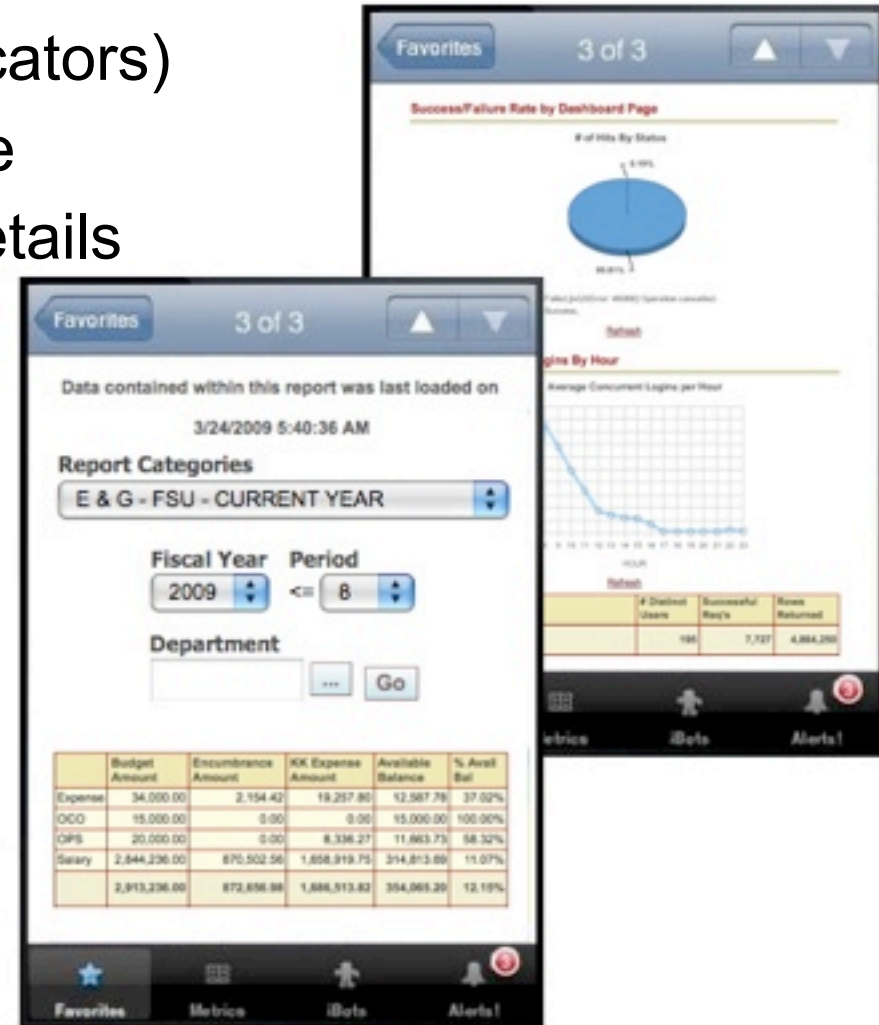




Future?

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- Mobility Support(Oracle Indicators)
 - Usage Tracking via Iphone
 - High Level Transaction Details
 - Current Available Budget
 - Mobile Alerts





Questions and Comments?

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A large, faded background image of three torches standing on a banner that reads "VIRGES QUAE SECUNDUM MOREM".

Thank You!