Operational Data Store (ODS) Functional Training for Foothill-De Anza CCD

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Paul Stormo, Principal Consultant
SunGard Higher Education
August 24th – 27th, 2009

The Banner Operational Data Store:
Functional Training for Human Resources
And Related Areas

Foothill-De Anza Community College District
August 24th – 27th, 2009

Objective:
This engagement will introduce participating members of the FHDA community to concepts of reporting, the Operational Data Store as a source of data and information for creating reports, and the use of Hyperion to organize and present that information in response to operational reporting issues, and to initial management reporting issues.

Participants are expected to include District as well as College Human Resources and Payroll staff, members of Financial Aid offices, selected departmental administrators, and the technical support staff for the ODS.

General Approach:
An Overview of the ODS will be provided, to include a brief demonstration of creating a report from the ODS using Hyperion, a high-level description of how data moves from Banner to the ODS, a presentation of selected features that simplify reporting from the ODS, and an introduction to the ODS documentation (Metadata) and its use. (It is expected this component of the engagement will involve approximately two hours.) A straight-forward report will be created integrating simple business analysis, identification of the information required to answer the business question, location of that information within the ODS, and the development of the report using Hyperion. It is expected this activity will conclude Monday morning's agenda. All those participating in the week's training will participate Monday morning.

The balance of the week's agenda will consist of half-day workshops providing focused business areas with an opportunity to progressively increase their ability to independently create reports addressing their needs. Two sessions will be provided in each of the areas of employee and position management, payroll management, and student employment. The first of each set of two sessions will include an introduction to the relevant data for that area. The balance of the sessions will include the guided creation of a report, followed by individual work in creating reports seen as needed to support operations or management requirements. A final session will focus on cross-enterprise issues related to human resources. Each session will provide opportunity for guided as well as individual effort.

ODS Functional Training
HR and Related Areas

Foothill De Anza Community College District
August 24th-27th, 2009

Monday Morning, August 24th

(Recommended participants: All who will be participating in the workshops throughout the week.)
- An Overview of the ODS
    - The Reporting Role of the ODS
    - Populating the ODS from Banner
    - Finding Information in the ODS: The Metadata
    - Selected Features of the ODS
        - Display Rules
        - Freeze Tables
- Hyperion and the ODS: Creating a Simple Report

Monday Afternoon, August 24th
A Reporting Workshop focused on list-oriented personnel management reporting from the ODS using Hyperion. (Recommended participants: Those individuals expected to create ad hoc or productions reports meeting employee management requirements using the ODS and Hyperion. Technical staff expected to support reporting of employee information are also encouraged to attend.)
- Defining the report from a business perspective
- Identifying the required data in the ODS
- Building the report with Hyperion

Tuesday Morning, August 25th

A Reporting Workshop focused on list-oriented payroll management reporting from the ODS using Hyperion. (Recommended Participants: Those individuals expected to create ad hoc or productions reports meeting payroll management requirements using the ODS and Hyperion. Technical staff expected to support reporting of payroll information are also encouraged to attend.)

- Defining the report from a business perspective
- Identifying the required data in the ODS
- Building the report with Hyperion

Tuesday Afternoon, August 25th

A Reporting Workshop focused on list-oriented student employment reporting from the ODS using Hyperion. (Recommended Participants: Those individuals expected to create ad hoc or productions reports meeting student employee management requirements (to include consideration for enrollment and financial aid) using the ODS and Hyperion. Technical staff expected to support reporting of student employee information are also encouraged to attend.)

- Defining the report from a business perspective
- Identifying the required data in the ODS
- Building the report with Hyperion

Wednesday Morning, August 26th

A Reporting Workshop focused on summary-oriented reporting in support of employee management from the ODS using Hyperion. This session will build on skills and experience acquired during the earlier employee management session.

- Defining the report from a business perspective
- Identifying the required data in the ODS
- Building the report with Hyperion

Wednesday Afternoon, August 26th

A Reporting Workshop focused on summary-oriented reporting in support of payroll management from the ODS using Hyperion. This session will build on skills and experience acquired during the earlier payroll management session.

- Defining the report from a business perspective
- Identifying the required data in the ODS
- Building the report with Hyperion

Thursday Morning, August 27th

A Reporting Workshop focused on summary-oriented reporting in support of student employment issues from the ODS using Hyperion. This session will build on skills and experience acquired during the earlier student employee session.

- Defining the report from a business perspective
- Identifying the required data in the ODS
- Building the report with Hyperion

Thursday Afternoon (1-3 p.m.), August 27th

A Reporting Workshop focused on cross-enterprise reporting in support of operations, management, administrative research, and/or assessment. The consideration of information from the human resources, finance, financial aid, and student information domains will be considered as required by the business issues raised.

- Defining the report from a business perspective
- Identifying the required data in the ODS
- Building the report with Hyperion or other tools, including cross-functional joins of business information in the data model

**Operational Data Store (ODS)
Functional Training for
Foothill-De Anza CCD**

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The Objective for the Week

The objective of this training is to provide an introduction to
the ODS and the processes that populate it with data from
Banner, and to provide the staff of Foothill-De Anza CCD
with the hands-on experience in generating reports from
the ODS using the Cognos reporting toolset.

The hands-on experience will be increasingly
individualized, with the bulk of the training engaged in
creating reports of business interest to the participants.
Small groups with interests in personnel management,
payroll management, and student employment will meet for
two sessions each, with a concluding session focused on
cross-enterprise reporting of the related information.

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What is Reporting?

It's asking questions.
   - Operations
   - Management
   - Research and Planning

It's getting the information ready to answer questions.

And then answering them.

**It's putting the right 'stuff' together at the right time and for
the right purpose.**

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A Quick Demonstration….

Behind the Scenes…There is NO Magic!

- **Reporting answers business questions**
- **Data must exist before it can appear on a report**
- **Banner data must move to the ODS before we can access it from the ODS**
- **Hyperion must know about the ODS data before it can use the data in a report, and it must know about the data in a way that supports the business issue posed**
- **Reporting is sometimes difficult for one simple reason: The people working to solve the problem are just too smart!**

Questions in Search of Answers

- **How many employees do we have today?**
- **What is their annual salary as of today?**
- **How much have they earned as of today?**
- **Are all our student employees taking enough credits?**
- **What should we be considering for succession planning?**
- **How has our employee profile been changing over the years?**
- **How does payroll activity impact our Finance system?**
- **And the list might go on….**
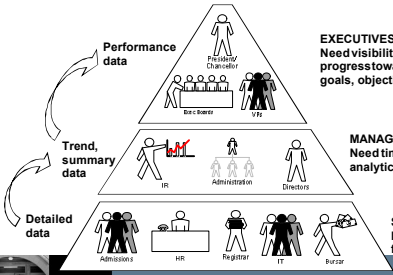
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Making Data Available in the ODS

Information: The Common Component

- Information needs to reach all levels of campus
- Data from lower levels must be transformed to upper levels

Performance data

President/Chancellor

Executive Board   VP

EXECUTIVES:
Need visibility into progress towards our goals, objectives

Trend, summary data

IR   Administration   Directors

MANAGEMENT:
Need timely trends, summaries, analytics of our operations

Detailed data

Admissions   HR   Registrar   IT   Bursar

STAFF:
Need detailed reports in many formats and ad-hoc access

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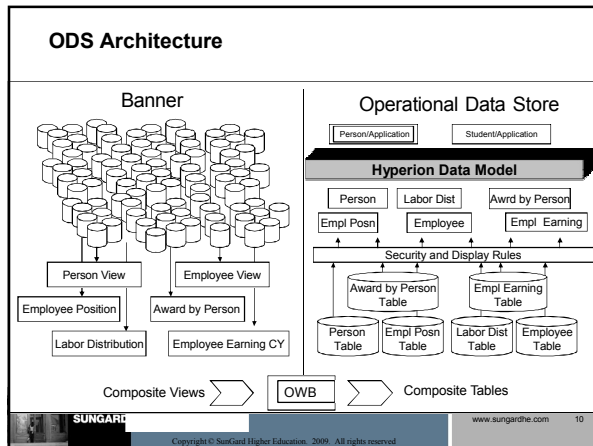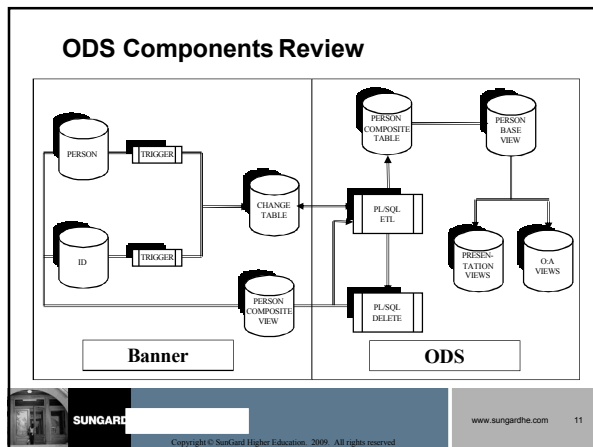

ODS Population Processes

- **ODS Initial Load Approach: Load all rows of the relevant data into the ODS**
- **Incremental Refresh Approach: Refresh the ODS with only the information that has changed since the last ODS refresh**

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ODS Architecture

Banner

Operational Data Store

Person/Application

Student/Application

Hyperion Data Model

Person

Labor Dist

Awrd by Person

Empl Posn

Employee

Empl Earning

Security and Display Rules

Person View

Employee View

Award by Person Table

Empl Earning Table

Employee Position

Award by Person

Labor Distribution

Employee Earning CY

Person Table

Empl Posn Table

Labor Dist Table

Employee Table

Composite Views

OWB

Composite Tables

ODS Components Review

PERSON

TRIGGER

ID

TRIGGER

CHANGE TABLE

PERSON COMPOSITE TABLE

PERSON BASE VIEW

PL/SQL ETL

PRESEN-TATION VIEWS

O:A VIEWS

PERSON COMPOSITE VIEW

PL/SQL DELETE

Banner

ODS

How Do I Find the Information I Need and Where Do I Find It?

What Information do I need?

- **Business requirements drive the general scope of information for a report.**
  - What is the purpose of the report?
  - What is the expected audience for the report?
  - What is the time reference of the report?
  - Is the content to be presented detail or summarized…or both?
  - How will it be delivered?
- **What specific content is to be on the report?**
  - In business language
  - In Banner language

Where Do I Find That Information?

- **Primary Resource: The ODS Metadata**
  - Locate specific data by:
    - Identifying the ODS Target (Reporting) view(s) of interest
    - Identifying the required Banner Table as a 'Source' and seeing which Reporting view(s) contain needed data
- **Use the 'Business Concept Diagrams' to identify ways to 'join' views**

Joining Information in Hyperion

- **Identify the Reporting Views required for the report**
- **Bring them into the 'Data Model'**
- **Identify the columns to be used to join one view to another**
- **Identify the nature of the relationships of the joins**
  - 'Inner' Join
  - 'Outer' Join

Basics to Remember

▪ **Data are stored at varied levels of detail and relationship**
  - ▪ Employee
  - ▪ Position
  - ▪ Employee Position (aka Job)
  - ▪ Payroll
  - ▪ Labor Distribution is not Payroll Distribution
  - ▪ Student credit hours can change any time

▪ **Time is often a consideration**
  - ▪ Start and End dates for position definitions as well as employees in positions so the appropriate 'filters' must be applied
  - ▪ Calendar year is not the same as Academic Year or Fiscal Year

▪ **Some employees will have more than one associated position, so filter by PRIMARY_POSITION_IND if required.**

▪ **Be very conscious of Personally Identifiable Information, especially if you are saving output of the report to a file.**

▪ **And....**

Supporting Documentation and Other Tools

Related Documentation

▪ **ODS Metadata Reports**
  - ▪ ODS Target Reporting Views
  - ▪ Banner Source tables and functions
  - ▪ Customizable by and for FHDA

▪ **Operational Data Store Handbook**

▪ **From Banner**
  - ▪ Banner Product Line User's Guide
  - ▪ Help-> Dynamic Help in a Banner Form to find the source of the data

▪ **For Hyperion**

Making Reporting Better and Easier

- **Display Rules**
  - Get only one address from a specific hierarchy
  - Organize Earnings in a specific order as data are 'flattened'
- **Freeze Tables**
  - Freezing data: Holding today's data constant for subsequent reporting
    - Support for activities such as regulatory reporting
    - Pre-reporting date audit for data clean-up
  - Freeze Lists so related data are captured at the same time and filtered consistently
- **Customizing Metadata to reduce 'hanging questions'**
- **Administrative Support**

In Summary….

ODS Architecture

Banner	Operational Data Store

Person/Application   Student/Application

Hyperion Data Model

Person   Labor Dist   Awrd by Person

Empl Posn   Employee   Empl Earning

Security and Display Rules

Award by Person Table   Empl Earning Table

Person Table   Empl Posn Table   Labor Dist Table   Employee Table

Person View   Employee View

Employee Position   Award by Person

Labor Distribution   Employee Earning CY

Composite Views   OWB   Composite Tables
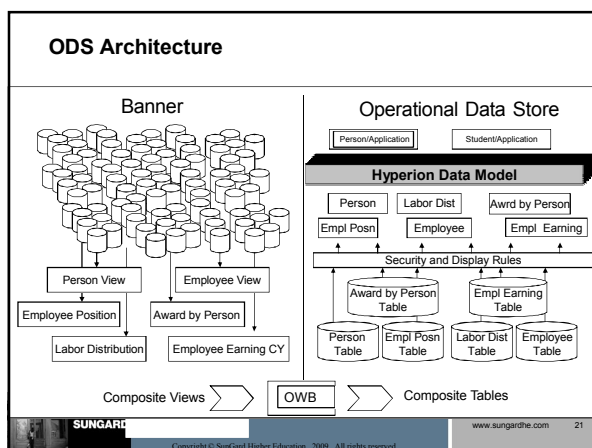
**The rest of the week:
Work to create, in small
groups and individually,
your reports with support
and guidance as required.**

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Questions?

Thank You!

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