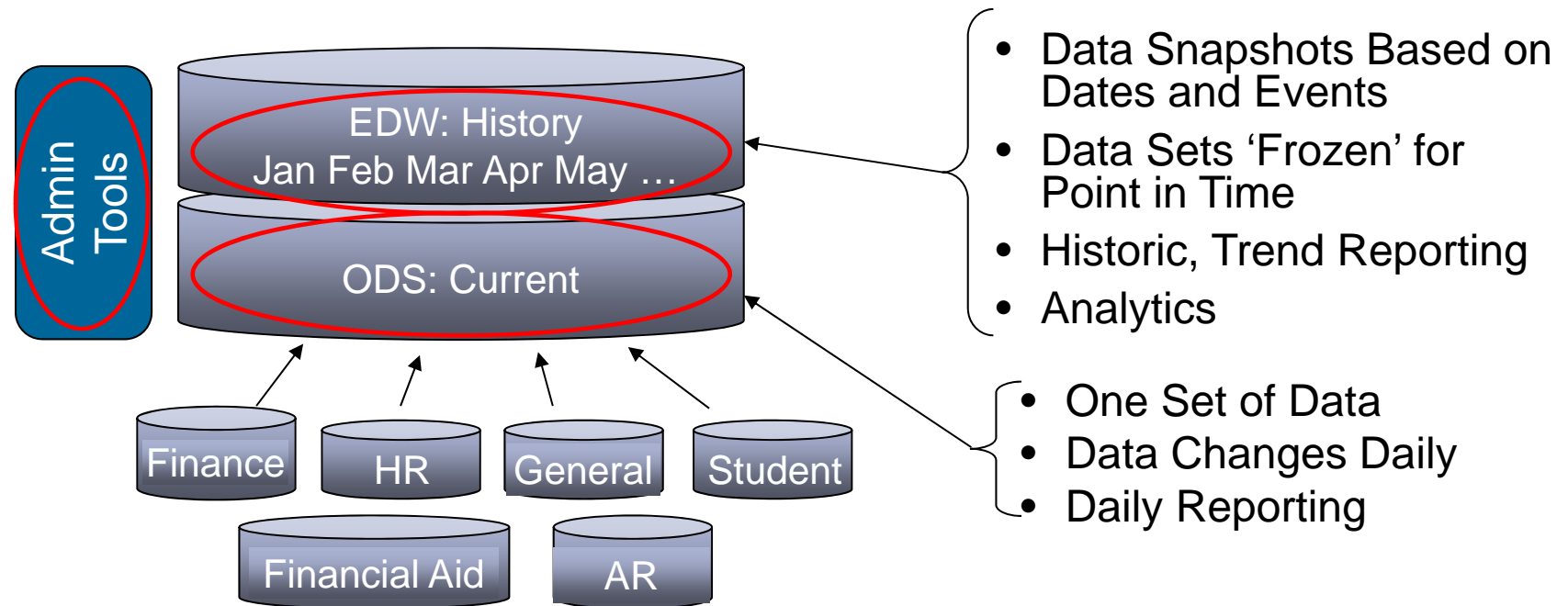


Banner ODS Overview

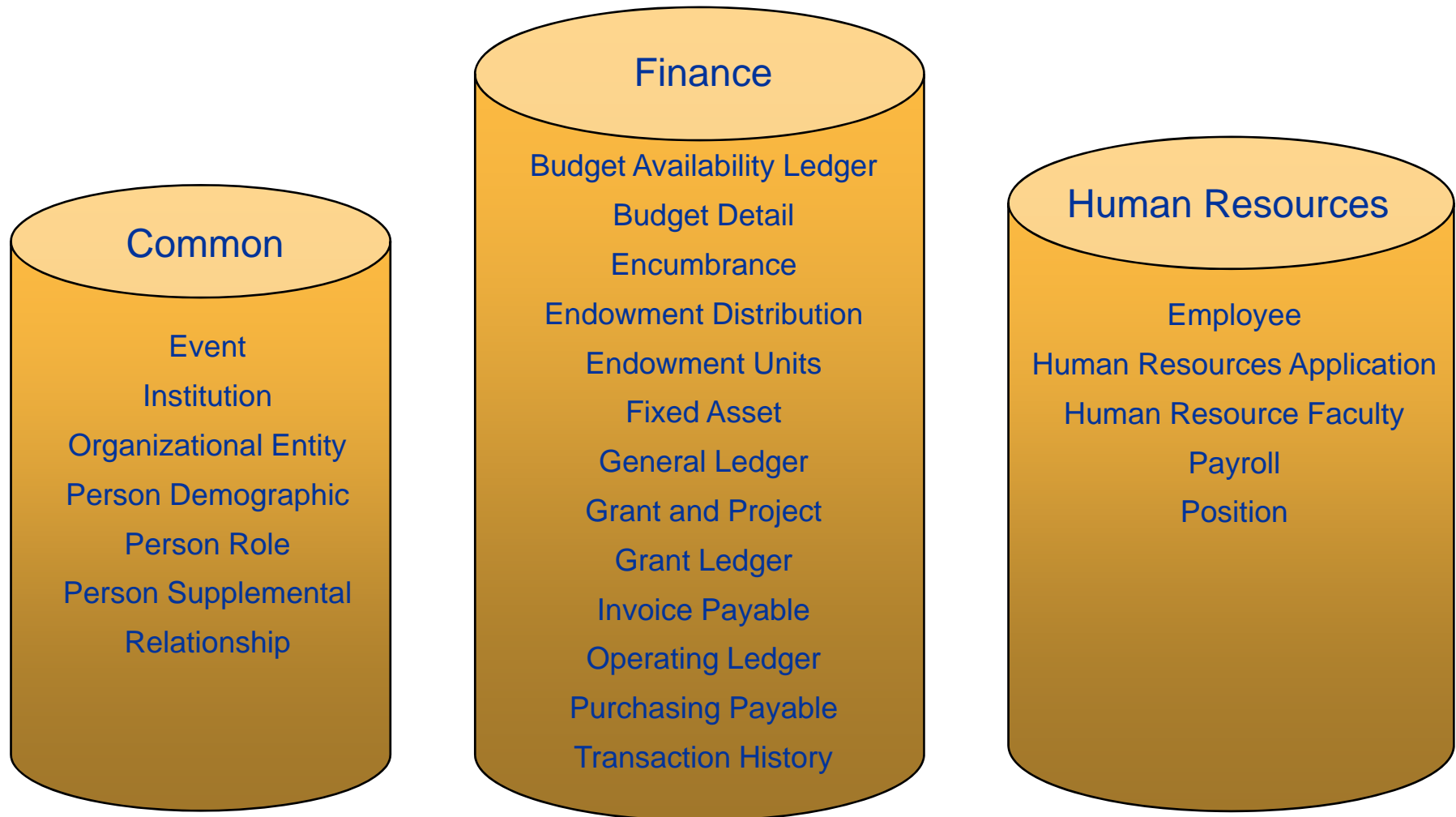
Banner ODS Overview

- Opportunity for More Consistent Reporting Results.
 - Common Data Source
 - Common Business Concepts
- Banner Operational Data Store (ODS): Ad-hoc querying and daily reporting.
- Enterprise Data Warehouse: Historic, trend reporting and analytics.



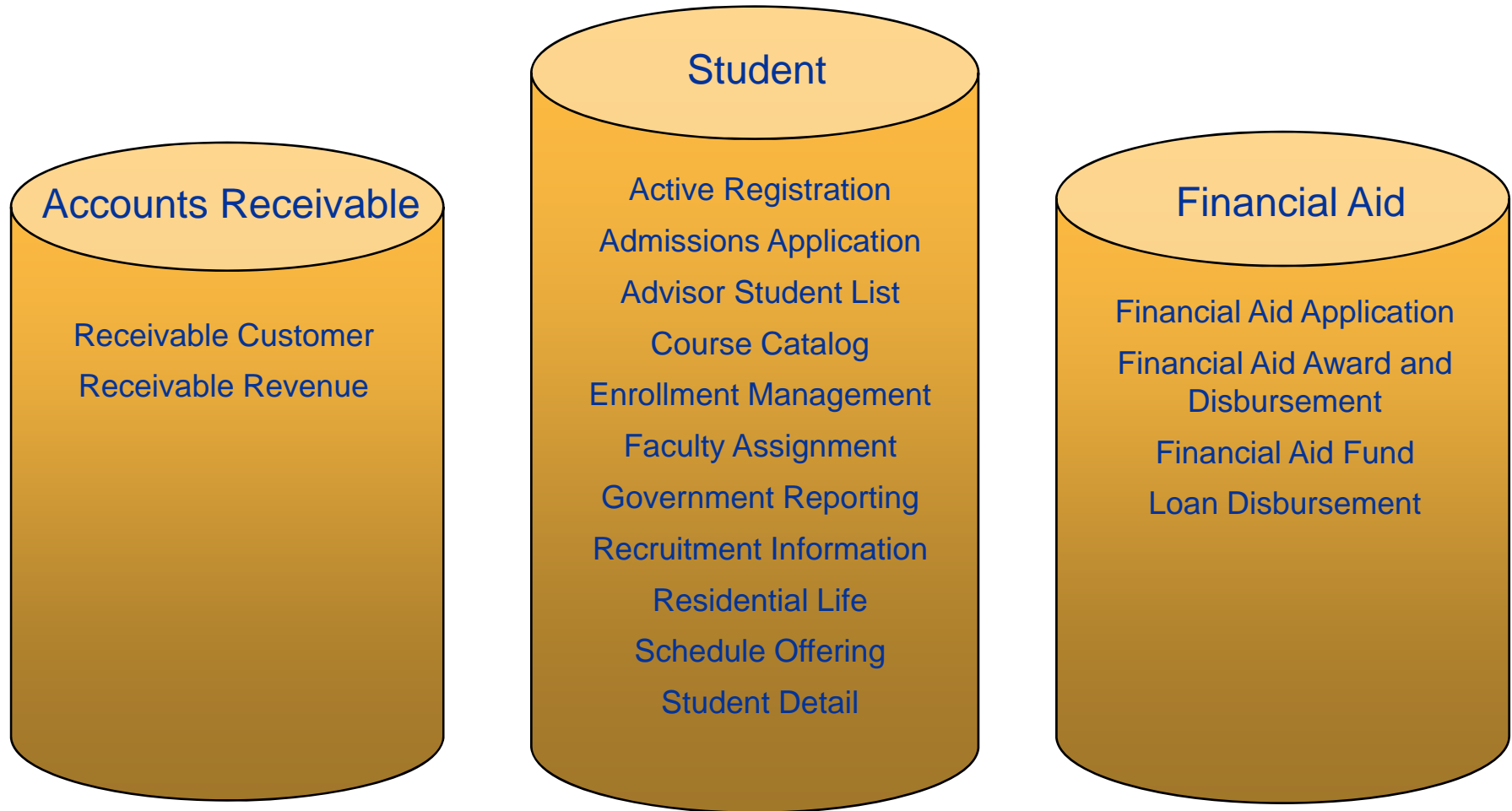
Banner ODS Overview

Business Concepts



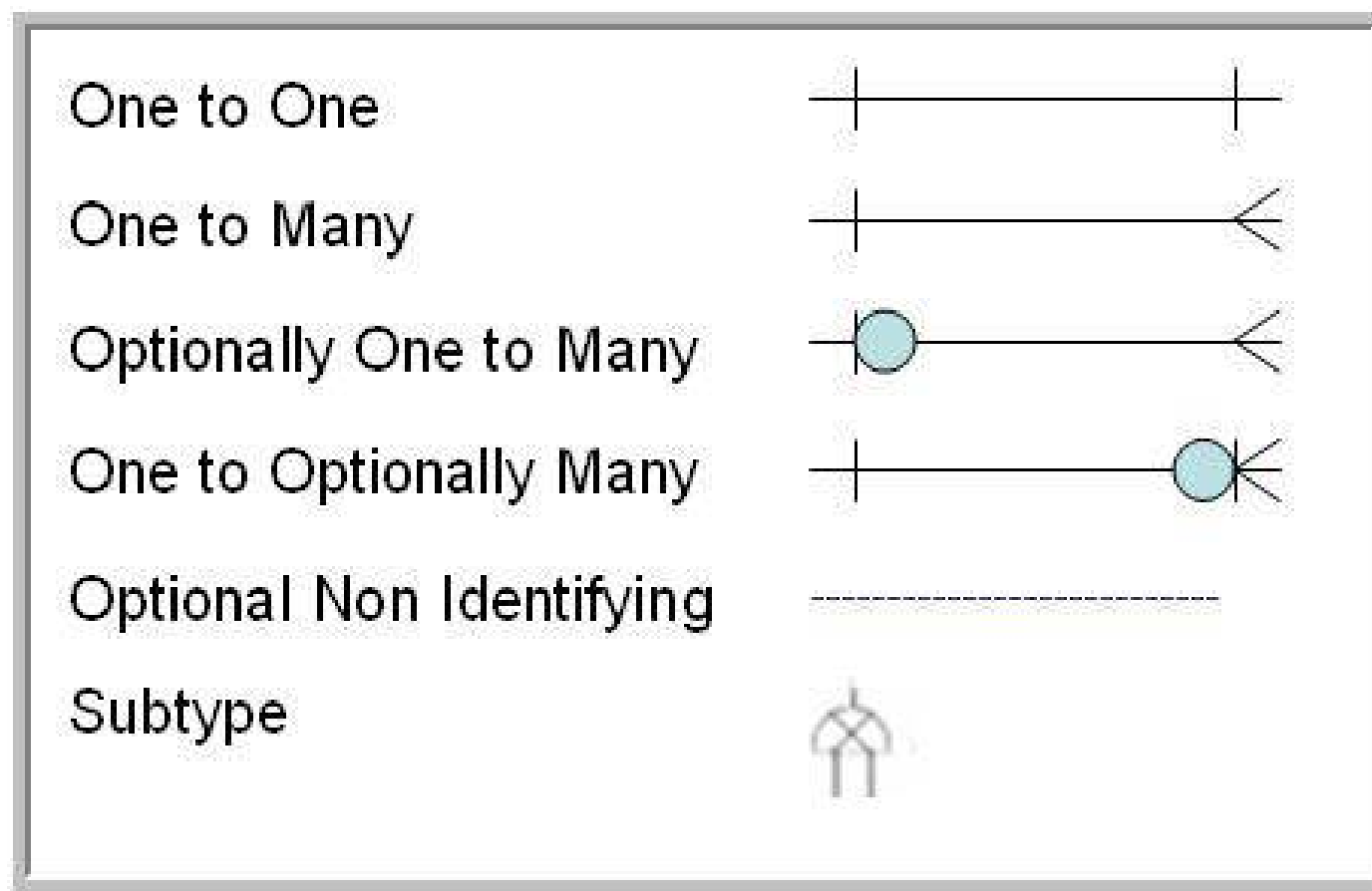
Banner ODS Overview

Business Concepts



Business Concept Diagrams

Business Concept Diagram Relationships



Primary Key (PK) and Foreign Key (FK)

Primary Key

- A column or columns that uniquely identify a row or rows in a reporting view.

Foreign Key

- Identifies the row or rows that are common between reporting views.

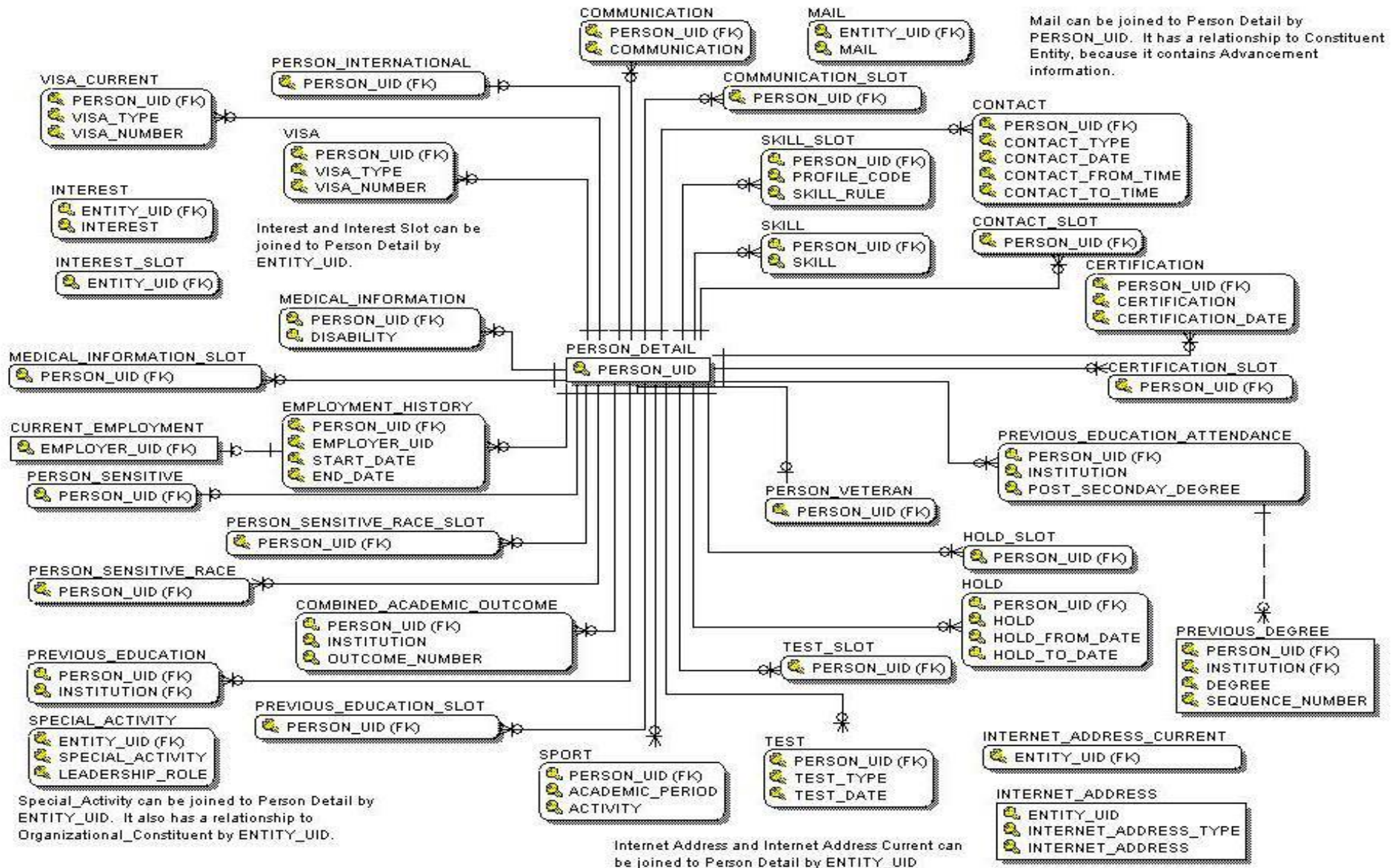


Business Concept Diagrams

Common



Person Supplemental



Content and Uses

Person Supplemental

Content

- A comprehensive gathering of person data not necessarily limited within a single business area of the institution. Although components of the data may be primarily used in one enterprise module, the nature of the data deems it as shared data.

Uses

- To report comprehensively on person entities without regard to their current roles in Banner.
- To report Visa status or international information for all person entities.
- To report employment data for constituents who are persons. (This is not the same as the employee data housed in the Banner HR module.)

Primary Data Sources

- SPBPERS, GOBINTL, GOREMAL, SPRIDEN, SPRMEDI

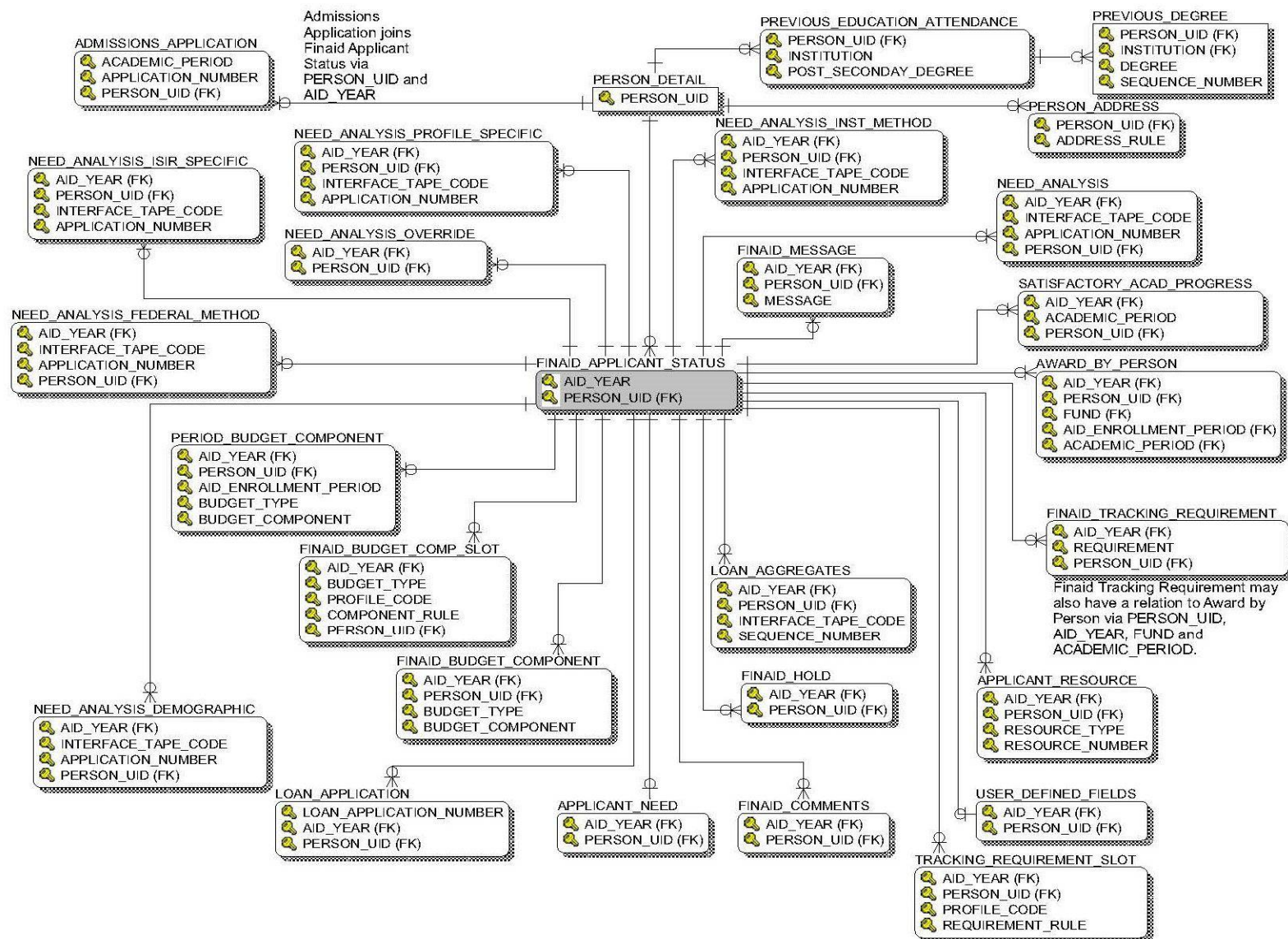


Business Concept Diagrams

Financial Aid



Financial Aid Application



Content and Uses

Financial Aid Application

Content

- The most comprehensive of the three Financial Aid concept diagrams.
- One stop shopping for most institutional reporting needs.

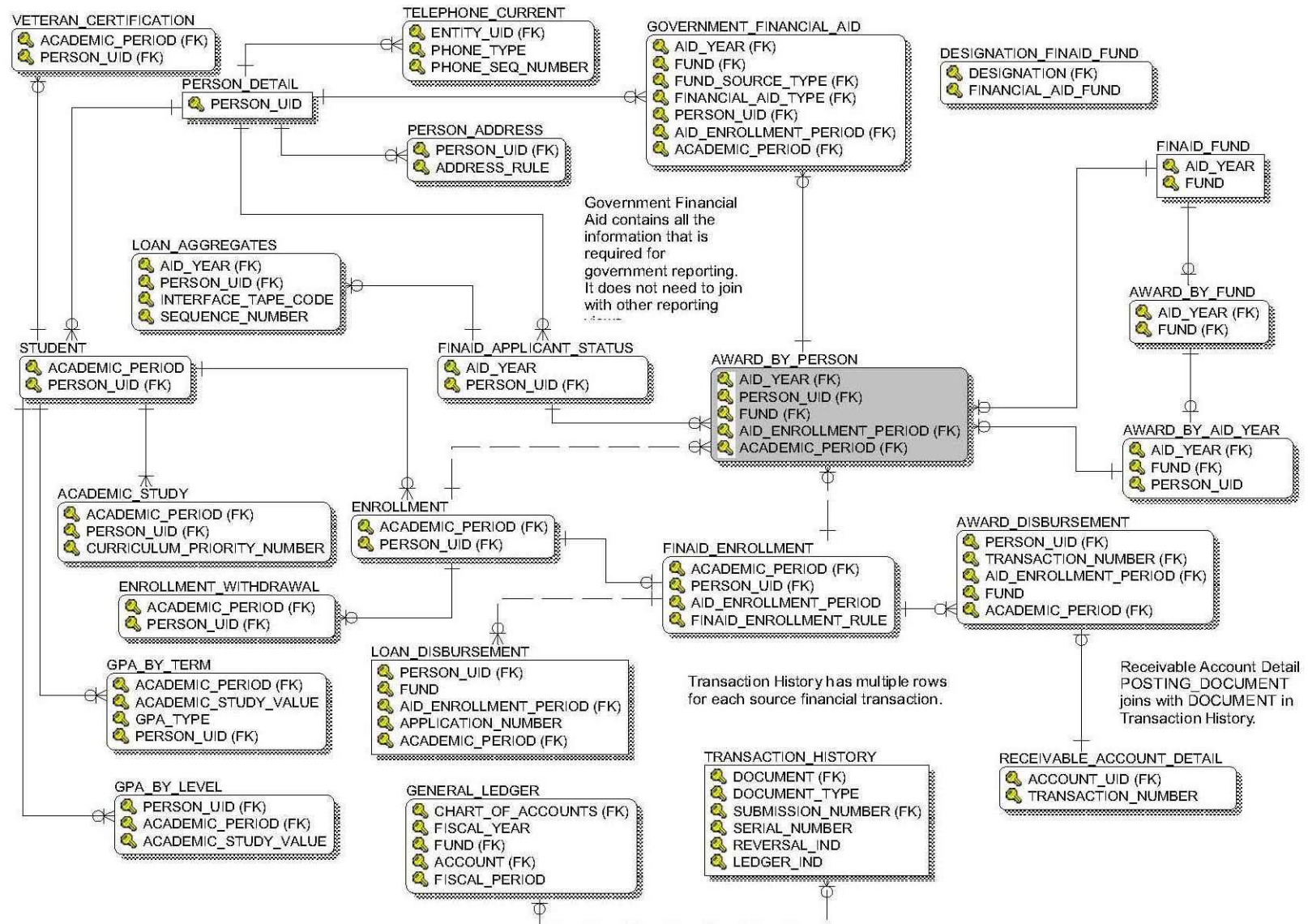
Uses

- Reporting of financial aid application status.
- Reporting of financial aid applicant eligibility status and needs analysis.
- To provide statistical reporting with demographic data.

Primary Data Sources

- RBRACMP, RCRAPP1-4, RCRIMP1, RCRESAR, RNROVRD, ROBINST, RORHOLD, RORSAPR, RORSTAT, RPRATRM, RPRLAPP, RRRAREQ, SABSUPL, SARADAP, SPBPERS, SPRADDR

Financial Aid Award and Disbursement



Content and Uses

Financial Aid Award and Disbursement

Content

- Contains reporting views that will support institutional reporting needs including financial reports and government reports.

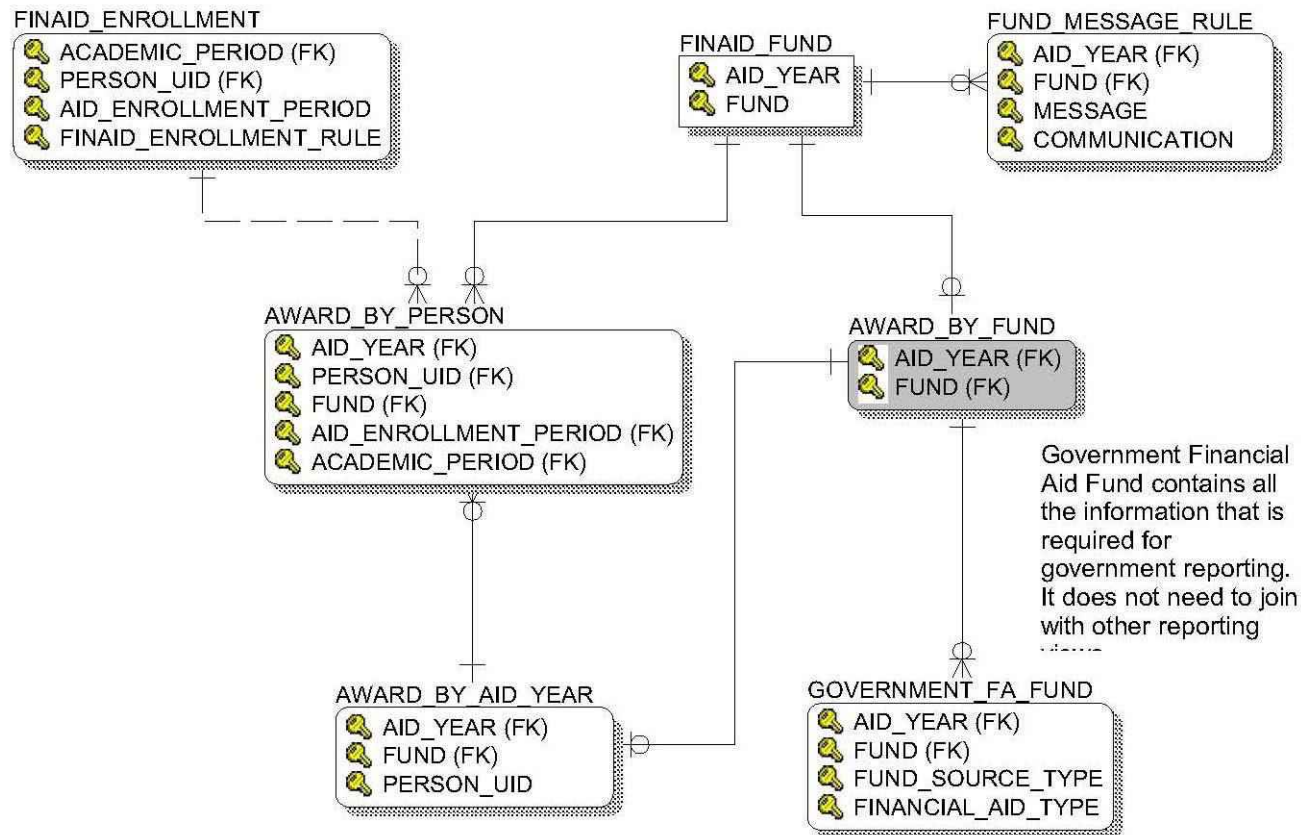
Uses

- Reporting of awarded financial aid – categorize by award amount offered, accepted, declined, canceled.
- Reporting of academic persistence and continued financial aid eligibility.
- To provide government reporting.

Primary Data Sources

- FGBGENL, FGBTRND, RFRASPC, RFRBASE, RORSTAT, RPRADSB, RPRATRM, RPRAWRD, RTVAWST, RTVFTYP, SFBETRM, SGBSTDN, SGRSPRT, SHRTGPA, SPBPERS, SPRADDR, TBRACCD

Financial Aid Fund



Content and Uses

Financial Aid Fund

Content

- Contains reporting views that will support institutional reporting needs based on enrollment status and aid awarded.
- Supports Federal reporting.

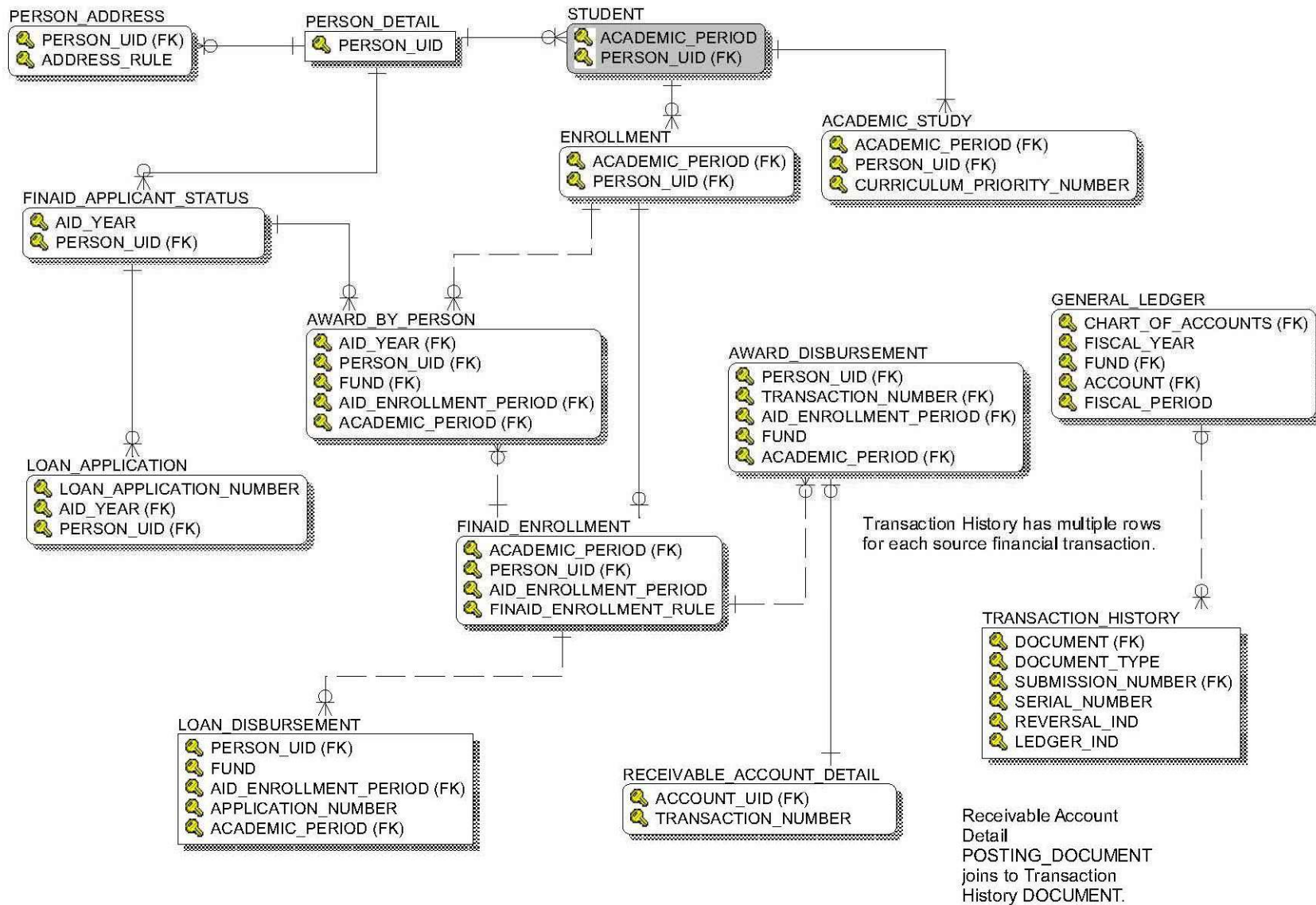
Uses

- To report awarded financial aid by fund type (Grant, Scholarship, Loan, etc.).
- To provide government reporting.

Banner Source Tables

- RFRASPC, RFRBASE, RORENRL, RORSTAT, RPRADSB, RPRATRM, RPRAWRD

Loan Disbursement



Content and Uses

Loan Disbursement

Content

- Contains reporting views that will support institutional reporting of detailed data on loan disbursements made within an aid enrollment period.

Uses

- To report on Loan Disbursement – categorize by loan amount offered, accepted, declined, canceled.

Primary Data Sources

- STVTERM, REPRLADB, ROBPRDS, RPRLATR, RPRLAPP, RTVRJCT, RTBLNST



Banner and Banner ODS

Making the Connection



The Meta Data

Composite views represent a composite (mixture) of the tables selected from Banner and allow for a single piece of data to be extracted row-by-row.

- All the business logic is included in the view itself.

Column names are generic.

- Term becomes Academic Period.
- PIDM becomes UID (unique ID).

Reporting views are divided into the various Banner systems.

- Accounts Receivable
- Common
- Finance
- Financial Aid
- Human Resources
- Student

The Meta Data

- Meta Data is information about the structure of the ODS data itself, such as the columns or fields in the data source, the format or the location of the data sources.
- Two perspectives are available
 - ODS Composite Views.
 - ODS Reporting Views (this is the view used most often).
- Some terminology
 - Target view – ODS reporting views that contain information from the related Banner tables.
 - Source Table – Tables from the Banner database.
 - Source Function – Functions that use data from Banner tables to create new data that is stored in the ODS.

Banner and Banner ODS

Making the Connection

Simple Steps

- Know the Banner form you need data from.
- Use dynamic help query to identify the table and field names.
- Use the Metadata to crosswalk from Banner to Banner ODS.
- Identify the Banner ODS views and fields needed.

Banner and Banner ODS

Dynamic Help Query from the Banner Form

Oracle Developer Forms Runtime - Web: Open > SGASTDN

File Edit Options Block Item Record Query Tools Help

General Student SGASTDN 8.5 (SEED8)

ID: A00010483 Herman, William

Learner Curricula Study Path Activities

General Learner

New Term: 200920 Spring 2009

Student Status: AS Active

Student Type: Continuing

Residence: R In state Resident

Fee Assessment Rate:

Class: FR Freshman

Student Centric Cycle:

Full or Part Time: ☐ Full Time ☐ Part Time ☒ None

Curricula Summary - Primary

Priority	Term	Program	Catalog	Level	Campus	College	Study Path:
1	200910	BA in Accounting	200910	Undergraduate		Business	Degree
End:		Outcome Key:	1	Admission Type:	Standard	Admission:	200910
						Matriculation:	

Additional Information

From Term: 200920 To Term: 999999

Block:

Citizenship: Y Citizen

Banner and Banner ODS

Locate the Table Name

Oracle Developer Forms Runtime - Web: Open > SGASTDN - GUAHELP

File Edit Options Block Item Record Query Tools Help

General Student SGASTDN 8.5 (SEED8)

ID: A00010483 Herman, William Student Summary Term: 201010 View Current/Acti

Learner Curricula Study Path Activities Veteran Comments Academic and Graduation Status Dual Degree Miscellaneous

Help Form GUAHELP 8.1 (SEED8)

☐ Form SGASTDN
☐ Block SGBSTDN
☒ Field SGBSTDN_STST_CODE

☐ Banner ☒ Local ☐ Help Exists?

Display Clear Cancel

General Learner

New Term: Spring 2009

Student Status: AS Active

Student Type: C Continuing

Residence: R In state Resident

Fee Assessment Rate:

Class: FR Freshman

Student Centric Cycle:

Full or Part Time: ☐ Full Time ☐ Part Time ☐ None

Curricula Summary - Primary

Priority	Term	Program	Catalog	Level	Campus	College	Study Path:	Degree
1	200910	BA in Accounting	200910	Undergraduate		Business		Bachelor o

End: Outcome Key: 1 Admission Type: Standard Admission: 200910 Matriculation:

Banner and Banner ODS

Match the Table Name...

Source Reports:

[FUNCTION](#)
[NA](#)
[SABAUDF](#)
[SABSUPL](#)
[SARAATT](#)
[SARADAP](#)
[SARAPPD](#)
[SARCHKL](#)
[SARCHRT](#)
[SARRRAT](#)
[SARRSRC](#)
[SCBCRSE](#)
[SCBDESC](#)
[SCBSUPP](#)
[SCRATTR](#)
[SCRCORQ](#)
[SCRGMOD](#)
[SCRLEVL](#)
[SCRRTST](#)
[SCRSCHD](#)
[SFBETRM](#)
[SFRAREG](#)
[SFRSTCA](#)
[SFRSTCR](#)
[SFRTHST](#)

[SFBETRM](#)
[SFRAREG](#)
[SFRSTCA](#)
[SFRSTCR](#)
[SFRTHST](#)
[SGBSTDN](#)
[SGRADVR](#)
[SGRCHRT](#)
[SGRCOOP](#)
[SGRDISA](#)
[SGRSACT](#)
[SGRSATT](#)
[SGRSPRT](#)
[SGRVETN](#)
[SHBDIPL](#)
[SHRATTC](#)
[SHRATTTC](#)



- ✓ In the web interface or via your reporting tool access the Meta Data
- ✓ Select the appropriate business area, e.g. Student
- ✓ Select the appropriate business reporting view
- ✓ Locate the Source Reports and select the table

Banner and Banner ODS

Locate the Field Name

		VIEW	<u>STUDENT_EXTENDED</u>	<u>ORIENTATION_SESSION</u>	
			<u>GOVERNMENT_STUDENT</u>	<u>ORIENTATION_SESSION</u>	
SGBSTDN_PIDM	NA	REPORTING VIEW	<u>ACADEMIC_STUDY</u>	<u>PERSON_UID</u>	NA
			<u>GOVERNMENT_FINANCIAL_AID</u>	<u>PERSON_UID</u>	
			<u>ACADEMIC_STUDY_EXTENDED</u>	<u>PERSON_UID</u>	
SGBSTDN_PREV_CODE	SGASTDN	REPORTING VIEW	<u>STUDENT</u>	<u>PROGRESS_EVALUATION</u>	NA
			<u>STUDENT_EXTENDED</u>	<u>PROGRESS_EVALUATION</u>	
SGBSTDN_RESID_CODE	SGASTDN	REPORTING VIEW	<u>GOVERNMENT_STUDENT</u>	<u>RESIDENCY</u>	NA
			<u>STUDENT_EXTENDED</u>	<u>RESIDENCY</u>	
SGBSTDN_SESS_CODE	SGASTDN	REPORTING VIEW	<u>ACADEMIC_STUDY</u>	<u>STUDENT_MEETING_TIME</u>	NA
			<u>ACADEMIC_STUDY_EXTENDED</u>	<u>STUDENT_MEETING_TIME</u>	
SGBSTDN_STST_CODE	SGASTDN	REPORTING VIEW	<u>ACADEMIC_STUDY</u>	<u>STUDENT_STATUS</u>	NA
			<u>ACADEMIC_STUDY_EXTENDED</u>	<u>STUDENT_STATUS</u>	
			<u>STUDENT</u>	<u>STUDENT_STATUS</u>	
			<u>STUDENT_EXTENDED</u>	<u>STUDENT_STATUS</u>	
SGBSTDN_TERM_CODE_ASTD	SGASTDN	REPORTING VIEW	<u>ACADEMIC_STUDY</u>	<u>ACADEMIC_STANDING_ACAD_PERIOD</u>	NA
			<u>ACADEMIC_STUDY_EXTENDED</u>	<u>ACADEMIC_STANDING_ACAD_PERIOD</u>	
SGBSTDN_TERM_CODE_CAST	SGASTDN	REPORTING VIEW	<u>STUDENT_EXTENDED</u>	<u>COMBINED_ACAD_STANDING_PERIOD</u>	NA
			<u>STUDENT</u>	<u>COMBINED_ACAD_STANDING_PERIOD</u>	
SGBSTDN_TERM_CODE_FEE	SGASTDN	REPORTING VIEW	<u>STUDENT</u>	<u>ACADEMIC_PERIOD</u>	NA



Banner and Banner ODS

Drill to the Target Report

STUDENT_LEVEL_DESC	Student level description.	VARCHAR2 (255)	FUNCTION	SORLSTYP_GET_DESC
STUDENT_MEETING_TIME	Student's normal attendance time. May be either day, evening, weekend, etc.	VARCHAR2 (63)	SGBSTDN	SGBSTDN_SESS_CODE
STUDENT_MEETING_TIME_DESC	Student's meeting session description.	VARCHAR2 (255)	STVSESS	STVSESS_DESC
STUDENT_POPULATION	Student population or type for reporting. May include populations like new freshman, transfer, continuing, etc.	VARCHAR2 (63)	CALCULATION	NVL(SORLCUR_STYP_CODE,SGBSTDN_STYP_CODE)
STUDENT_POPULATION_DESC	Student population or type description.	VARCHAR2 (255)	STVSTYP	STVSTYP_DESC
STUDENT_RATE	Identifies any specific assessment rate to be used to determine the charges for this student.	VARCHAR2 (63)	CALCULATION	NVL(SORLCUR_RATE_CODE,SGBSTDN_RATE_CODE)
STUDENT_RATE_DESC	Description for the rate code.	VARCHAR2 (255)	STVRATE	STVRATE_DESC
STUDENT_STATUS	Student's current status for the academic period. May include active and permitted to register, inactive and stop registration, graduated, etc.	VARCHAR2 (63)	SGBSTDN	SGBSTDN_STST_CODE
STUDENT_STATUS_DESC	Student's status description.	VARCHAR2 (255)	STVSTST	STVSTST_DESC
SUB_ACADEMIC_PERIOD	A session, portion or part of the academic period.	VARCHAR2 (63)	NA	NA
SUB_ACADEMIC_PERIOD_ADMITTED	Session or part of the academic period associated with the information on the academic study information record.	VARCHAR2 (63)	NA	NA
SUB_ACADEMIC_PERIOD_ADMIT_DESC	Description of the session or part of the academic period associated	VARCHAR2 (255)	NA	NA



Display Rules

Banner ODS Concepts

Display Rules

- Enable you to control and customize how data is:
 - Stored in the Banner ODS composite tables.
 - Displayed in certain Banner ODS Reporting Views.
 - Example – test scores or address types.
- Determine the positional location of data in a view or the hierarchical order in which a particular type of data should be retrieved.
 - “Positional” display rules are required for many of the Slotted views.
 - “Hierarchical” display rules are required for a sub-set of Reporting views.
- In most cases the query must be ‘filtered’ by a RULE in order to avoid Cartesian-effect results.

Display Rules

Financial Aid

Internal Group	Internal Code	Rule Definition	Used In: (Slotted Table or View)
ADDRESS	FAPLADDR, FASTADDR, FAWTADDR, FAWYADDR	1: MA 2: PR 3: GO 1: MA 2: PR 3: GO 1: MA 2: PR 3: GO 1: MA 2: PR 3: GO	Address By Rule, Person Address
BUDGET COMPS	FAPLBCMP	1: TUIT 2: FEES 3: HOME 4: BOOK 5: PERS	FinAid Budget Comp Slot
TEST	FAPLTEST	1: SATM 2: SATV 3: ACTC	Test Slot
TRACKING REQS	FAPLTREQ LOANTREQ PBPNTREQ RJRCTREQ	1: ADMIT 2: DLEC 3: FAFSA 1: DLEC 2: PNPERK 1: PBPN 1: REJECT 2: REJSIG	Tracking Requirement Slot

Reporting and Slotted Views

Reporting and Slotted Views

Reporting Views

- Includes the main data that is extracted from source system and stored in Banner ODS.

Slotted Views

- Stores data values for a specific code related to a base reporting view.
- Optimizes the speed of queries.
- Population is often controlled by Display Rules the Institution defines.

Reporting Views

Financial Aid (31)

Applicant_Need	Government_FA_Fund
Applicant_Resource	Government_Financial_Aid
Award_By_Aid_Year	Loan_Aggregates
Award_By_Fund	Loan_Application
Award_By_Person	Loan_Disbursement
Award_Disbursement	Need_Analysis
Finaid_Applicant_Status	Need_Analysis_Demographic
Finaid_Budget_Component	Need_Analysis_Federal_Method
Finaid_Comments	Need_Analysis_Inst_Method
Finaid_Enrollment	Need_Analysis_ISIR_Specific
Finaid_Fund	Need_Analysis_Override
Finaid_Hold	Need_Analysis_Profile_Specific
Finaid_Message	Satisfactory_Acad_Progress
Finaid_Tracking_Requirement	User_Defined_Fields
Fund_Message_Rule	

Slotted Views

Financial Aid (2)

Finaid_Budget_Comp_Slot*
Tracking_Requirement_Slot*

* Relies on MGRSDAX display rule

Questions

Banner ODS Documentation

- <http://www.sou.edu/it/banner/index-banner-ods.html>

Contact the Helpdesk

- Send an email to data-warehouse-support@sou.edu

Glossary



Glossary

Attribute

A building block of information within a view. Many attributes in a view come directly from fields in the source database (Banner). Other attributes are derived either through calculations or the logic defined in a function.

Banner Enterprise Data Warehouse (Banner EDW)

An informational database that enables an institution to keep “time slices” of data over time, over history, stored for easy retrieval and comparison. The Enterprise Data Warehouse is an extension of the Operational Data Store, which is the primary source of aggregated and detailed data.

Banner Operational Data Store (Banner ODS)

The primary source of aggregated and detailed data is comprised of over 300 reporting views containing data across subject areas applicable to higher education. Because of the size and scope of the Banner ODS data model, reporting views are grouped into logical “business concepts” to better illustrate the various business uses. The data models are grouped into the following sections : Accounts Receivable, Common, Finance, Financial Aid, Human Resources and Student.

Glossary (cont.)

Dimension

A structural attribute of data that consists of pieces of information of a similar type. A Geography dimension, for example, may contain data about regions, countries, cities, states. A time dimension contains year, month, day and hour members. A multidimensional data structure allows data to be organized and analyzed in a concise, efficient way.

Facts/Measures

Numbers that are related to the attributes. Facts and measures (the terms are synonymous) generally represent counts, sums or percentages and other ratios. They may be stored and retrieved or calculated from stored measures as the query is executed.

Filter

A filter is used to defined or restrict the data that is shown on a report.

Glossary (cont.)

Incremental Refresh

Data in the Banner ODS is updated, or refreshed, at predetermined intervals of time. Only the data that has changed in the source database (Banner) since the last refresh is updated.

List of Values

A list of values is a set of valid values (codes) for a column in a reporting view. A List of Values generally includes the description along with the code.

ODS Business Concepts

Business concepts are used to organize the data available for different reporting requirements. A business concept shows the relationships between the data supporting a set of business processes. Because different business processes often require different perspectives on data, the relationships among the supporting database objects need to change based on the analysis being performed.

ODS Composite View Meta Data

The composite views gather Banner source data necessary to populate and maintain the information stored in the Banner ODS.

Glossary (cont.)

ODS Reporting View Meta Data

Meta data in Banner ODS tells what data columns are in Banner ODS , a definition of their business use, the type of data (number, character, date, etc.), how long they are, where they come from (in the source system) and their destination (in the target system.)

Package

A package is a subset of data in Cognos designed to support a specific set of reporting needs. They are used by Report Studio to access data for the reports being built. Within the various Cognos tools you can report against only one package at a time. When creating a new report, you are prompted to select which package to use.

Prompts

A prompt is used to create a list of values that can be selected from. The report will be built (or filtered) based on the prompts selected.

Glossary (cont.)

Slotted View

Slotted views group similar information in one row instead of multiple rows to make reporting simpler. An example could be Student holds. Instead of having separate rows for each hold a student has, there would be one row with up to 5 holds in separate fields. Which holds show in the slotted view is based on Display Rules that are defined by the Institution. The number of slots in different slotted view varies.

Source Function

Functions that use data from the Banner tables to create new data that is stored in the Banner ODS.

Source Table

Tables from the Banner database where the data is coming from.

Target View

Banner ODS reporting views that contain information from the related Banner tables.