Unified Student/Course Data System

Integrated Student Lifecycle History

- **Incoming**
  - inquiries
  - applications

- **Inprocess**
  - Student registration
  - Course activity

- **Outgoing**
  - Degrees

Supplemental Data Sources

- Financial Aid
- Accounts Receivable
- Housing
- Payroll
- Alumni

Horizontal Integration

Vertical Integration
Wichita State University Business Intelligence and Predictive Modeling (BIPM) Integrated Student/Course Data System Overview

Needs:
- Reporting
- Forecasting
- Analysis
- Exports

Scheduled:
- Admission Reports: Weekly Applications, Weekly Forecasting, Weekly Feeders, Banner Table Errors
- Enrollment Reports: Daily Registration Forecasting
- Analytic Reports: Program Evaluation

Student Migration Through System
- Incoming
- Inprocess
- Outgoing

Core:
- Admissions: Recruits, Applications, App Freezes, App Processed
- Registration: Student Current, Stu/Crs Current, Course Current
- 20th day: Student, Student/Course Course
- End of Term: Student, Student/Course Course

Degrees

Supplementals:
- Financial Aid
- Housing
- Account Receivables
- Payroll
- MCG Major Code
- CCG Course Code
- Term Codes
- Student Demographics
- Student Academic History
BIPMS Student Core* Tables

Incoming
- inquiries
- applications

Inprocess
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- Course activity

Outgoing
- Degrees

* Core files contain base Banner data, managed data columns and may include legacy data
Business Intelligence and Predictive Modeling (BIPM)

SPSS Data-to-Information Processing

Data to information object process:
SOURCE - CODE - OBJECT

Automated ETL build to non-SPSS data formatted dbo tables for Microsoft Reporting Service Reports

Open Source development from analyst

Back Office operations | Front Office tasks
Business Intelligence and Predictive Modeling (BIPM)

SPSS Data-to-Information Processing

- Production
- ODS
- Legacy
- Other

Nightly automated ETL builds

SPSS Server

BIPM data

SPSS Statistics

Manual ETL builds and development testing

Open Source development from analyst

Automated ETL build to non-SPSS data formatted dbo tables for Microsoft Reporting Service Reports

SPSS Server

MS & Oracle dbo

Web reports

Data to information object process:
SOURCE - CODE - OBJECT

Unit Analyst pulling source data, executing code for object creation & delivery

Deliverable objects

Objects include reports, analysis, audits, list

BIPM/SPSS Community

Back Office operations | Front Office tasks

Business Intelligence and Predictive Modeling (BIPM)
Business Intelligence and Predictive Modeling (BIPM) SPSS Data-to-Information Processing

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Office of Planning & Analysis (OPA)

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Source-Code-Object (SCO) versus Source-Source-Object (SSO) Data Processing

**Source-Code-Object (SCO)** processing provides a highly efficient (speed and flexibility) system that captures current data, provides complete documentation for all data alterations, can be replicated and automated with the ability to create multiple objects in different dimensions.

Source involves importing data from a source(s) and selection of a population to address a specific query or database build.

Code involves the programming of data into information and includes joining data sources, alteration of data elements (e.g., recoding, aggregation, imputation, estimates) and exporting of deliverables (object).

Object involves the deliverables (e.g., report, list, database) that represent information related to a question (e.g., queries, planning, audits).

**Source-Source-Object (SSO)** processing is an inefficient (speed and flexibility) system that renders data obsolete, provides little to no documentation of data alterations, cannot be easily replicated or automated, highly manual and with limited ability to create multiple objects in different dimensions.

Source involves importing data from a source(s) and selection of a population to address a specific query or database build.

Source data are downloaded to offline storage and manually altered (e.g., recoding, aggregation, imputation, estimates); the offline source often becomes the deliverable (object).

Object involves the deliverables (e.g., report, list, database) that represent information related to a question (e.g., queries, planning, audits).