Office of Planning, Analysis, & Accountability (OPAA)

IR Responsibilities:
- Data Reporting (federal, state, system)
- Enrollment analysis
  - Student retention, progression, graduation, student profiles, fact book
- Grade analysis
  - Midterm analysis, success rates, etc
- Surveys
  - Internal - entering student, current student, graduating student satisfaction, course evaluations, ad hoc
  - External –US News, CUPA, AAUP, VSE, etc
- Enrollment Projections

IE Responsibilities:
- Strategic and annual planning
- Accreditation – regional / specialized
- SLO and other assessment activities
- Curriculum management
- ROI / resource allocation analyses
- President / Provost / Cabinet projects
- Data warehouse and Post-Graduation outcomes
Boutique consultancy founded in 1992 in Kansas City, Missouri
Developed 400+ Oracle BI and analytics systems
Specializes in Oracle-based:
  - Enterprise Business Intelligence & Analytics
  - Analytic Warehousing
  - Machine Learning and Predictive Analytics
  - Data Visualization
  - ETL and data integration
Tim Vlamis – VP & Analytics Strategist
  - 16 years with Vlamis
  - MBA Northwestern University’s Kellogg School of Management
  - BA Economics from Yale University
  - 6 years Adjunct Professor in Benedictine’s Full-time and Exec MBA programs
10+ Year Decision-Support Journey

Leadership Expectations

- Integrity
- Relevance
- Accessibility

Technology
Integrity

Re-establish AIR Ethical Principles

Accurate & Verified

Limited Tools
Relevance

Data Aware
- ★
- Manually compile non-standardized reports from different systems

Data Proficient
- ★★★
- Standardized reporting on an organization-wide reporting platform

Data Savvy
- ★★★
- Use data to make critical business decisions

Data Driven
- ★★★
- Embed data into all business processes. No data -> no decision

Goal: Standardized reporting
Goal: Track org KPIs using BI platform
Goal: Data based decisions for key initiatives
Goal: Add scale and take out cost
New
• President
• Cabinet Members
• BSU Strategic Plan

3.4 Construct an analytics capacity – Develop a data warehouse that incorporates a reporting tool to provide actionable information to support student retention, progression, and graduation.
Multi-Year Grant Funding

• Title III HBGI Activity - Enhancing Institutional Effectiveness, Academic, and Student Success Through Data Analytics
  ✓ Phase I – Identifying data warehouse and analytics tools (2021)
  ✓ Phase II – Build initial data structures to support academic decision making and student success (2022-2023)
• Phase III – Expand “Bulldog Data House” student success data to support and create a data governance process (2023-).
DoIT Partnership

- Identify tools
- Gap analysis
- Engage Vlamis Software Solutions
  - Support DoIT staff to activate ADW Architecture
  - Collaborate with OPAA on Star Schemas
  - Develop initial dashboards
  - Training

Image source: www.expertprogrammanagement.com
Scale is Important
Delivering Analytics to Large Orgs is like Feeding Hundreds of People
Main Oracle Products for Analytics

- **Oracle Analytics Cloud**
  - Extremely comprehensive business intelligence/analytics software suite

- **Oracle Autonomous Data Warehouse**
  - Cloud-based version of Oracle Database specifically designed for enterprise data warehousing and data management tools
“Use Case” - Tracking Reenrollment of Bachelor’s Degree Recipients

• Why
  • Previewed Oracle Analytics data integration and visualization process
  • Demonstrated effectiveness of BSU’s academic programs
    • Post Graduation Reenrollment
    • Post Graduation Earnings (future)
  • Met specialized accreditation requirements
  • Provided Title III eligibility data
Tracking Reenrollment of Bachelor’s Degree Recipients – Data Sources

- BSU Degree Recipients
- BSU Student Demographic Information
- National Student Clearinghouse Subsequent Enrollment Matching
- IPEDS Classification of Instructional Programs
3. Hierarchy Levels

- **DIM_CLASS**
  - Acad_Org
  - Subject
  - Catalog
  - Course
    - Class (CLASS_NBR, CLASS_SECTION)

- **DIM_TERM**
  - Acad_Year
    - Acad_Term - Session (ACAD_TERM)

- **DIM_ACAD_PLAN**
  - Acad_Institution
    - Acad_Career
      - Acad_Program
        - Acad_Plan

- **DIM_CALANDER**
  - Year
    - Quarter
    - Month
    - Week
    - Day
Total # BSU Students Enrolled
5,719

- # Enrolled Undergrads: 4,685
- # Enrolled Grads: 935
- # Enrolled Cont' Ed: 101

# Stud Enrolled by Term Description

- Spring 2017: 5,500
- Spring 2018: 5,700
- Spring 2019: 5,600
- Spring 2020: 5,800
- Spring 2021: 5,900
- Spring 2022: 5,700
- Spring 2023: 5,600

# of students enrolled by Academic Career Descr

- Undergraduate
- Graduate
- Continuing Education

# of students enrolled by Student Level Descr

- Freshman
- Sophomore
- Junior
- Senior
- Graduate
# Stud Enrolled Running By Term by Date, Term Start Date by Date

Academic Year: 2024

Date

# Stud Enrolled Running By Term by Days From Term Start Date, Term Description, Term Start Date by Days From Term Start Date

Days From Term Start Date | Fall 2021 | Fall 2022 | Fall 2023
--- | --- | --- | ---
-133 | 852 | 247 |
-132 | 1,004 | 789 |
-131 | 1,112 | 408 |
-130 | 1,192 | 327 |
-129 | 1,247 | 785 |
-128 | 1,279 | 553 |
-127 | 1,292 | 518 |
-126 | 1,350 | 540 | 872 |
-125 | 1,418 | 716 | 828 |
-124 | 1,499 | 830 | 911 |
-123 | 1,537 | 900 | 1,043 |
-122 | 1,572 | 938 | 1,094 |
-121 | 1,587 | 947 | 1,097 |

Running Enrollment Diff 2024-2023

Days From Term Start Date
Grow Your Analytics Naturally

• Start with a general plan
Grow Your Analytics Naturally

• Start with a general plan
• Enhance existing features
Grow Your Analytics Naturally

• Start with a general plan
• Enhance existing features
• Prepare one bed at a time
Grow Your Analytics Naturally

• Start with a general plan
• Enhance existing features
• Prepare one bed at a time
• Mulch and weed early on
Q & A
Gayle Fink - Assistant Vice President for Institutional Effectiveness

gfink@bowiestate.edu

Tim Vlamis – Vlamis Software Solutions

tvlamis@vlamis.com
Wednesday, May 31st

**Dreams Do Become Reality: An Institution’s Decision-Support Journey**

**Speaker Session**  **Decision Support**

**1:45 PM – 2:30 PM**

**Meeting Room 20**

**Description**

Bowie State University, Maryland’s oldest HBCU, has been on a 10-year journey in developing, sharing, and using data in decision-making. This session will highlight the many twists and turns encountered by the Office of Planning, Analysis, and Accountability along the way. An overview of the journey highlighting key events that led to the institution’s current decision-support structure will set the stage for the session. The presenters will then share the factors that lead to the realization that a technology partner was necessary to successfully launch a data warehouse as well as a retrospective on human and technical challenges/opportunities along the current phase of the journey. A live demonstration of the front and back end of decision-support data visualizations including post-graduation outcomes will be shared. The session will close with a conversation about best practices for training and supporting campus leadership use of data.

**Speakers**

- **Gayle Fink** (Speaker) Assistant Vice President for Institutional Effectiveness, Bowie State University
- **Tim Vlamis** (Speaker) VLAMIS SOFTWARE SOLUTIONS, INC, Vice President & Analytics Strategist

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