

Enterprise Data Warehouse: A Roadmap from Ideation to Reality

NCAIR 2025



UNIVERSITY of
NORTH CAROLINA
WILMINGTON

Presenters

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Analytics



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Reporting



University Profile

Characteristics	Fall 2024 Student Figures
Public R2	Enrollment: 18,848 81% Undergraduate 19% Graduate
Research Productivity: \$24M	Admit Rate: 64.2%
Faculty: 778	Cohort Retention Rate: 88.1%
Student to Faculty Ratio: 17:1	4-Year Graduation Rate: 65.1%



Overview

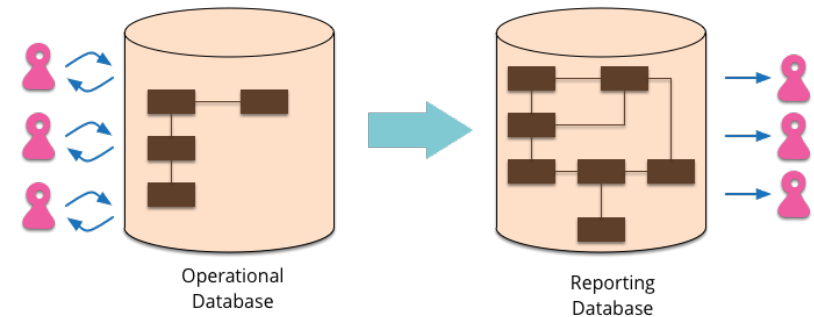
- Background
- EDW Structure
- Roadmap
- Key Takeaways
- Stakeholder Feedback
- Key Challenges
- Next Steps

Institutional Data Background Context

- **Decentralized, siloed talent**
- **Reliance on operational data/reports**
- **Emerging Data Governance practices**
- **Low data literacy**
- **No official data strategy**
- **Point-to-Point Integrations**


Institution's Data Landscape

- **Primary focus: Operational Data and Reporting**
- **Initial implementation with Cognos Reporting Tool**
 - Using custom catalogs for operational reporting needs.
- **Implemented Banner Operational Data Store (ODS)**
 - Including Fund-Org Security
 - Developed Custom Operational Data Store views
- **Migrated to Microsoft SQL Server Reporting Services**



Institution's Data Landscape

- Microsoft SSRS Web platform for operational reporting.
- Limited development of complex reporting using charts.

 Home > UNCW Reports > Class Section Listing by Term with Instructors

Favorites Browse

Select Term: Spring 2025 ▼

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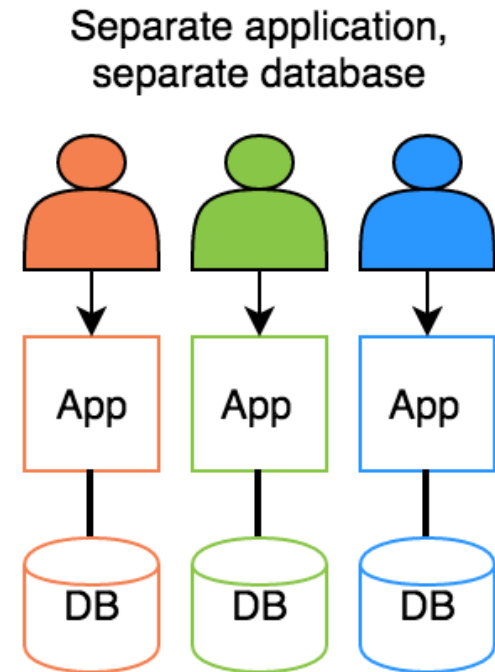
Class Section Listing by Term with Instructor - 202520 - Spring 2025

Course	CRN	Part of Term	Dept Code	Dept Desc	Primary Instructor Name	Inst
ACG 201 001	23146	F	ABL	Accountancy & Business Law	Hermanson, Susan	8500
ACG 201 002	23147	F	ABL	Accountancy & Business Law	Ivancevich, Daniel	8500
ACG 201 003	23148	F	ABL	Accountancy & Business Law	Kerler, William	8500
ACG 201 004	23149	F	ABL	Accountancy & Business Law	Kaszak, Steven	8500
ACG 201 005	23150	F	ABL	Accountancy & Business Law	Mungai, Ann	8500



Institution's Data Challenges

- **Desire to develop models with other operational data.**
 - Housing (Mercury)
 - LMS (Canvas)
 - Advising Engagement (Starfish)
- **Limited staffing to develop a true data warehouse.**
- **No capacity to snapshot operational data for analysis.**
- **Siloed analytics development for planning and assessment.**



Roadmap Overview

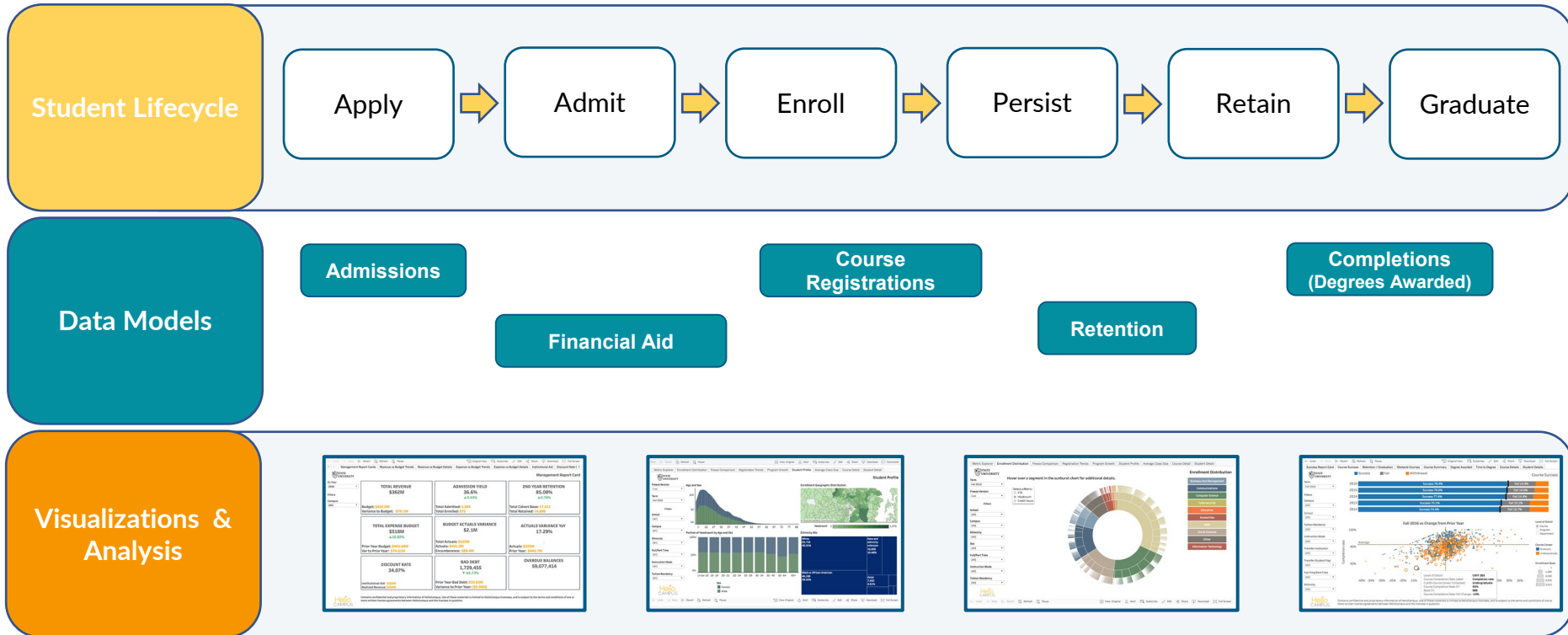
Leading up to 2023



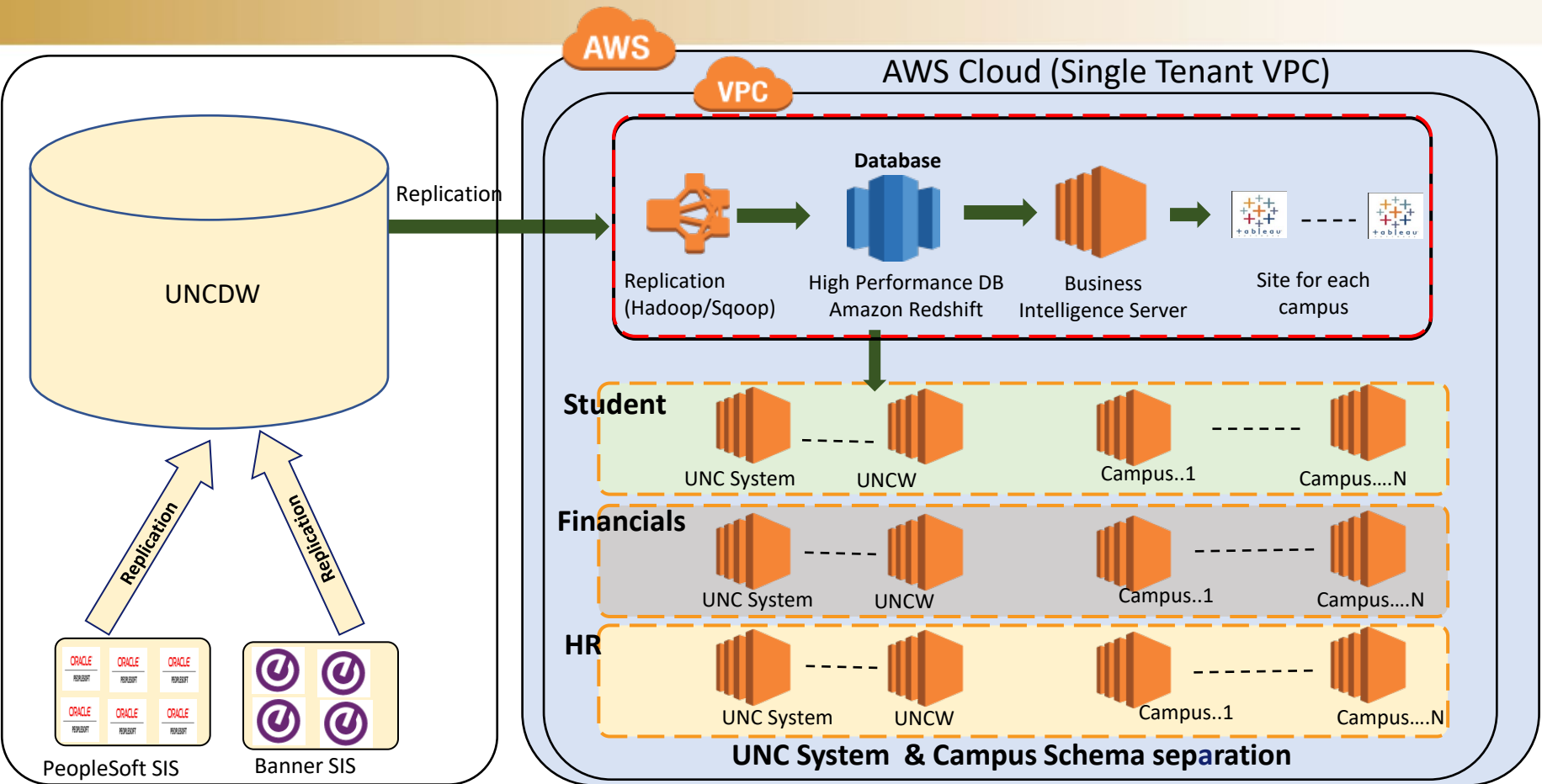
July 2023 - Present



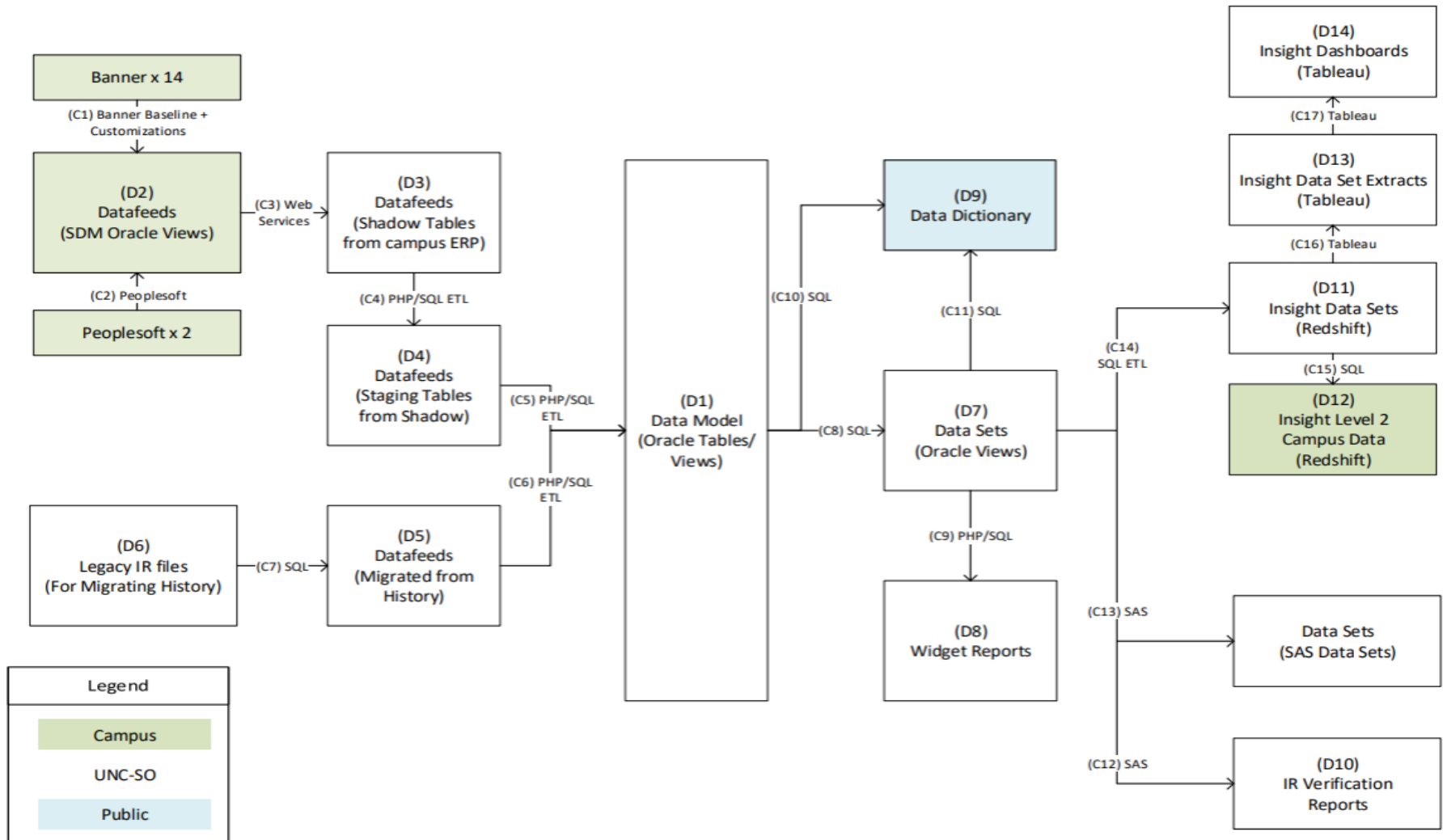
HelioCampus Student Lifecycle Data Models



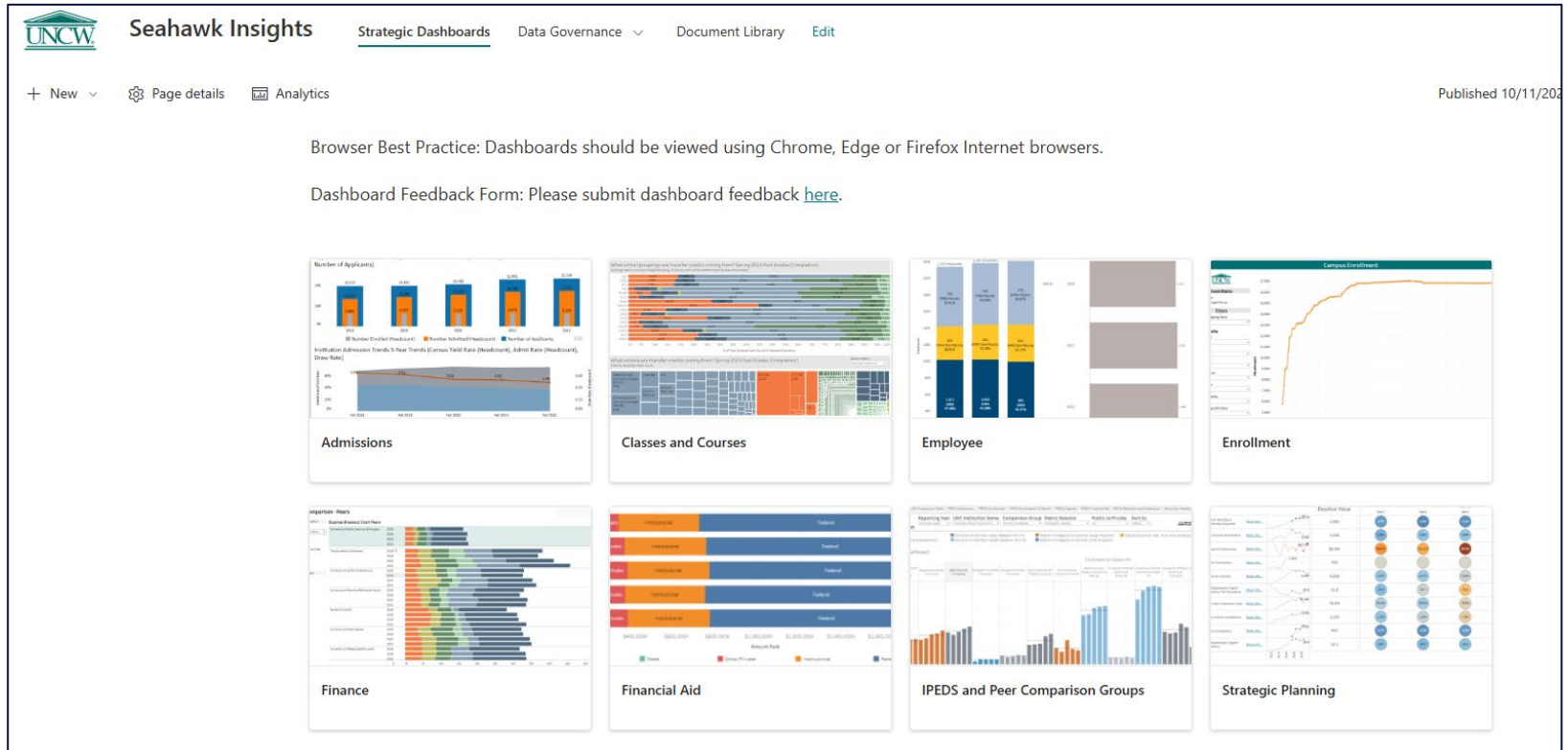
HelioCampus Student Lifecycle Architecture



Data Extraction, Transformation, & Loading



Centralized Portal



Roadmap: Institutional Spotlights



Key Takeaways

A flexible, modern data ecosystem is possible!
Nurture a vision and harness the power of a cross-functional team.

People

Process

Infrastructure

Culture

Stakeholder Feedback Themes

Level of Involvement

- Moderate to Low Involvement
- Active participation

Biggest Successes

- Streamlining Processes
- Identifying and correcting data errors
- Improved data review practices

Stakeholder Feedback Themes

Biggest Challenges

- Balancing competing priorities
- Navigating inconsistent/unstructured data
- Time constraints for cross-functional meetings

Opportunities for Growth

- Data literacy and education
- Expanding data access and integration
- Process Standardization



Stakeholder Feedback Themes

Room for Improvement

- Consistency in data definitions and practices
- Continued data management workflow streamlining
- Communication/Collaboration
- Access/Permissions

Challenges



- *Data Visualization*
- *Data Security (user assignment to roles)*
- *User Training (conduction)*

- *Calculations*
- *Business Rules*
- *Data Modelling*
- *Data Transformation*
- *Data Cleaning*
- *Data Access*
- *Acceptance Testing*
- *Data Security (roles)*
- *User Training (preparation)*
- *Report Purpose Questions*
- *Requirements Gathering*
- *User Workshops*
- *Mock-ups*
- *Language Requirements*
- *Time Zone Requirements*
- *Data Latency/Refresh*
- *Infrastructure*
- *Deployment*

** Note: the items included in the “underwater” section are common examples only and are presented in no particular order; their inclusion/exclusion and relative priority will vary by organization/project*

Next Steps

- Communication Plan
- Training Roadmapping
 - FERPA/Responsible Use
 - User Workshops
 - Data Literacy
- Enhancement prioritization

Questions?

