Building a Self-Service Business Intelligence System for Strategic Decision-Making

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About Us

- Official data reporting office
- Comprise of 4 FTE staff
- Access to UMDW & S&T EDW

<table>
<thead>
<tr>
<th>Orbits (OIRA News Feed)</th>
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<td><strong>86%</strong></td>
<td><strong>$61,412</strong></td>
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<td>Second-year retention rate of fall 2013 freshman.</td>
<td>Average starting salary across all majors for 2014 S&amp;T graduates</td>
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<td><strong>93%</strong></td>
<td><strong>3rd</strong></td>
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<td>Of the 2,166 degrees &amp; certificates awarded in 2013-14 are in STEM fields.</td>
<td>Best Engineering University in the U.S.A. (College Factual/ USA Today, 2014)</td>
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<td><strong>28.4</strong></td>
<td><strong>82%</strong></td>
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<td>Freshman Average ACT Composite Score</td>
<td>of students report having firm plans at graduation.</td>
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<td><strong>78</strong></td>
<td><strong>$13 million</strong></td>
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<td>The number of countries S&amp;T international students come from.</td>
<td>earned by S&amp;T students on co-op or internship assignments in 2013-2014</td>
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Agenda

• Why a Self-Service Business Intelligence system?
• Pilot Phase – Aiming for Success
• Live Demo of data
• Post Pilot – Roll Out plan
• Questions & Answers
The Context

• We are a PeopleSoft database management institution
• Databases are Oracle-based
• ETL: Perl and SAS
• Reports: Golden, Perl, SAS & SPSS
• Data tools: Excel and Access
The Context

PeopleSoft live in 2004

• 3 databases (Student, HR & Finance)
• 32k tables
• 27k views
• 730k columns
• ½ billion records
• Big data with volume, velocity, and variety
Why a Self-Service Business Intelligence (SSBI)

- Allow greater *self service* and *data transparency*.
- Promote a *data driven culture*
- Empower analysts/users to slice and dice data
- Improves *efficiency and effectiveness*
- Add *value* to academic and research operations
- Meet executives’ *needs* for information
Pilot Phase -- Assessment

• Scope
  – 5 months

• Goals -- Ensure BI tool is
  – Easy to use
  – Scalable
  – Robust
  – Mission-critical
  – Agile & Flexible
  – Low operational cost and risk
  – Compatibility with network infrastructure
Pilot Phase -- Assessment

• Interviews
  – Customers across campus and outside
  – Peers (Purdue, TAMU, USU)

• Competitive analysis

• High level engagement
  – With IT, UM-IR and UM-DW Team

• Cost analysis of leading BI tools in the market
  (SAS, Tableau, Information Builders, IBM Business Analytics)
Pilot Phase -- Assessment

• We chose **Tableau**
  – Overall **cost of ownership** is the lowest
  – **Compatibility** with existing tech at S&T
  – **Live connection** to data sources (no in-memory data dumps)
  – Support of **column-based security**
  – Easy **collaboration** – simple and accessible
  – **Vendor support**
  – Have **desktop and server/cloud-based** sandbox capabilities
Pilot Phase - Deployment

• Licenses
  – 2 Tableau Desktop
  – Limited Tableau Server

• Hardware set-up
  – Install Tableau Server 8.2
  – Access and security management checks
  – Windows 2008 R2
Pilot Phase – Projects Implementation

• 0 experience with Tableau
• Tableau Training and Tutorials
• 2-3 weeks to prepare the data
• 2-3 weeks to learn how to build dashboards
LIVE DEMO
Post-Pilot Plan

• Conduct a roadshow information session with senior management and potential users
• Roll out analytics and dashboards in phases
  – Soft roll out of admissions and enrollment in fall 2015
  – Further roll out in Fall 2016, etc.
• Make it available on your tablet device (IPAD)
• Get information you need anytime, anywhere
Post- Pilot Phase

• Keep momentum
• Foster executives engagement
• Create networking opportunities
• Support collaboration
• Provide communication platform
• Live data (one-day old)
Questions & Answers