The Changing Face of IR: How a New Student Record System Changed Our Role and How We Changed with It

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Today’s Presenters

Kat Collison, Senior Research Analyst, Institutional Research and Planning, University of Delaware
Karen DeMonte, Senior Research Analyst, Institutional Research and Planning, University of Delaware
Dale Trusheim, Associate Director, Institutional Research and Planning, University of Delaware

Almost 50 years of combined University experience
Located in suburban Newark, Delaware midway between Philadelphia and Baltimore. Origins back to 1743, was chartered in 1833.

- Public, State Assisted University
- Doctoral Research Extensive University
- 22,000 Undergraduate Applicants
- 17,000 Undergraduates
- 3,500 Graduates
- 126 undergraduate degree programs
- 82 master’s programs
- 39 doctoral programs
- 4,000 Full and Part-time Employees
- Total FY06 Operating Expenses and Transfers – $617.2 Million
Synopsis of Presentation

• History of Reporting at the University of Delaware
• Implementation plan for PeopleSoft Reporting
• Creation of UD Data Warehouse
• Role of Institutional Research in UD Reporting
• Transformation of Institutional Research
Welcome to the New Millennium

2000 – Live with PeopleSoft Human Resources 7.5

2003 – Live with PeopleSoft Finance 8.0

2004 – Began PeopleSoft Student Administration 8.9

Phased Roll Out of SA 8.9 Modules:
Admissions Module first go-live August, 2005
Followed by Financial Aid and Student Finance
And Fall 2006, Student Records went live (mostly)
Remember the Good ‘ol Days of Legacy Reporting?

- Production reports developed by IT
- Users easily produced reports
- Included data from several sources
  - Human Resources
  - Finance
  - Student Records
  - Development, etc.

How can I help you?
Reporting in PeopleSoft HR and Financials Was a Challenge

• **PSQuery** – *Heavily Used on Campus, but…*
  – Too many tables to join
  – Report formatting was limited
  – Outer Joins were difficult to program
  – System was slow

• **Limited support from Information Technology**
  – “IT out of reporting business”

• **Could not report across systems**
UD Plan to Implement Student Administration Reporting

• Functional teams were established by management to comprise all areas vital to the implementation of PeopleSoft SA (UDSIS).

• The Reporting Team was made up of key individuals with reporting responsibilities from each major functional area:
  – Institutional Research & Planning – Team Lead
  – Functional team representatives
  – IT-Management Information Services

• Uncertain future of PS Query
PeopleSoft Reporting – Now What?

- PSQuery
- N-Vision
- Crystal
- Excel, Access, SPSS

At times, all of the above...

Other times, none of the above
How do we Resolve Reporting Needs on Campus?

- A Committee was formed to select a reporting system which will be used at UD with the enterprise systems - HR, Financials, Student Records, etc.

- Criteria for evaluating packages:
  - Web-based deployment
  - Easy to use
  - Have more functionality than what was currently available with PSQuery
  - Share Reports via email and the web
  - Use existing data security in applications
  - Give users the ability to write and deploy their own reports
  - Download reports to excel and access.

- The selected vendors provided demos and then committee members followed up with other schools for their recommendations. Cognos BI Tools was purchased in 2003.
Solution, Part 1: Cognos

- Framework Manager
- Cognos Connection
  - Query Studio
  - Report Studio
- Training documents on-line

Hey, we can do this!
BUT...

Cognos prefers Dimensional Data structures

PeopleSoft is a Transactional Database

I'm heavily medicated
Solution, Part 2: A Data Warehouse

• IR took the lead - we live on data!
  – Proposed the implementation of a data warehouse

• We wanted outside experts
  – Did not have expertise on campus
  – No time; No resources

• We did not want an out of the box solution
  – Wanted customization
  – Ability to grow and expand
  – Ownership
Partnership with Phytorion, Inc.

- Expertise and experience
- Time savings
- New business requirements will drive needs
- Won’t bog down production
- Generate data from the same source
- Speed of processing
- Simplify reporting
Unlike Others, Phytorion Offered...

- Expertise and experience
- Time savings
- Data consolidation
- Processing speed
- Reporting sophistication
- Knowledge of Cognos
- Knowledge transfer
- Ability to decipher our business requirements
IR Proposal

• Data Delivery Team
  – IR primary data users, data analysts and data presenters

• Primary source of UD reporting needs
  – Reporting moved out of traditional location in IT

• Partnership with IT and Phytorion, Inc

• Design and manage UD Data Warehouse
Why IR?

- We collect data
- We analyze, distribute, and present data
- We assist in planning, decision-making, and policy formulation based on data
- We ensure the accuracy of vital University statistics
- We respond to diverse requests for data
- We assist other units with research and assessment

We Have a Vested Interest in Reporting
New Challenges

- Learn new data architecture
- Learn Dimensional Modeling Schemas
- Learn new ETL build tool
- Confidence that we are reporting the correct ‘single version of the truth’ to campus
- Teaching ‘old dogs new tricks’
  - Data Definitions
  - Dimensional Structures
  - Reporting Tools
- And make it easy for our users
Is IR Technical or Functional?

Neither and Both...

Technofunc

Definition: Technical Expertise with Functional Knowledge.
Build Relationships

Institutional Research
- Functional Unit Liaison
- Built and tested packages
- Wrote reports in Cognos
- Verified output

Information Technology
- Software and hardware needs
- Database copies
- ETL load time
- Technical support

Phytorion
- Business requirements
- Star schemas
- Developed ETL code
- Trained technical DBA’s

Success = Team Work
Institutional Research’s Role

• Institutional Research built and tested packages in Data Warehouse
• Wrote reports in Cognos Connection
• Verified output by comparing data from DWH with data from PSQuery using Excel and Access
Information Technology’s Role

• Configure software and hardware requirements
• Create copy of production data
• Technical support of Cognos tools
• Work with Network System Services
Phytorion’s Role

- Gathered business requirements
- Delivered Fact and Dimension tables
- Developed ETL code and trained UD’s Technical DBA’s on use of Data Manager

What makes Phytorion unique?
- Surrogate Identifiers (SID) for creating star schemas
- Valid to and from dates for effective dating
- Count fields
- Derived fields based on user specifications
Additional IR Staffing Requirements

• Massive Undertaking
  – Creation, maintenance and expansion

• Over 100% time commitment for two SR IR Analysts
  – Hired one IR Analyst

• Assumed many functions performed by IT
  – Programmers
  – Data Administrators
  – Trainers
  – End-user support
Proposed Data Delivery Team

- Warehouse Management & Metadata Modeling
  - Project manager
  - IR programmer
- Report Authoring, Training and Support
  - Project Manager
  - IR programmer
Continuing Work

- Growth of University of Delaware Information Mart With Institutional Tools (unapproved title)
- Write and distribute reports to the University Community
- Train users
- Go Live!
Questions?
Contact Information

Office of Institutional Research and Planning
University of Delaware
302-831-2021
irp@udel.edu

Phytorion, Inc.
773-255-3861
Yiorgos.Marathias@Phytorion.com

Presentation available on-line:
http://www.udel.edu/IR/presentations/