# 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

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*Almost 50 years of combined University experience*

# University of Delaware



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

# 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

How should I run this report?

*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.

# Solution, Part 1:  Cognos

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

Hey, we can do this!

# BUT…

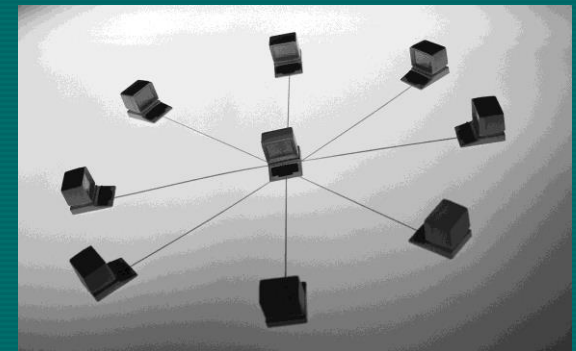Cognos prefers
Dimensional Data structures

⬆ BUT ⬇

PeopleSoft is a
Transactional Database

# 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

Enterprise Solution

# 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

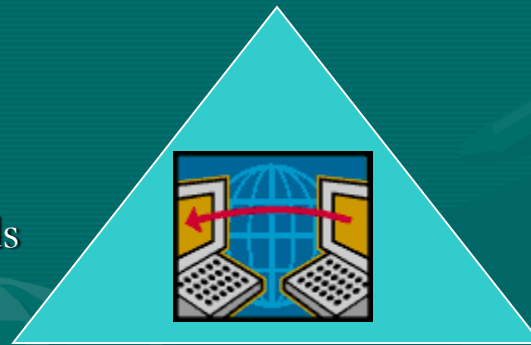Definition: Technical Expertise with Functional Knowledge.

# 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 manger
  - IR programmer
- Report Authoring, Training and Support
  - Project Manager
  - IR programmer

# Continuing Work

- Growth of **U**niversity of **D**elaware **I**nformation **M**art **W**ith **I**nstitutional **T**ools (unapproved title)
- Write and distribute reports to the University Community
- Train users
- Go Live!

# Questions?

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