Information Resource Management
Strategy and Direction

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Agenda

1. Goals
2. Guiding Principles
3. Planned Architecture
4. How to Get There
1. Goals

He who aims at nothing is sure to hit it!

Goal 1: Get the Right Data to the Right People at the Right Time

Goal 2: Implement a Preeminent Information Architecture
2. Guiding Principles

Information Quality

1. Data Definition Quality
2. Information Architecture Quality
3. Data Content Quality
4. Data Presentation Quality
2. Guiding Principles

1. Data Definition Quality
   - Business rules
   - Domain values
   - Enterprise consistency
   - Accuracy
   - User satisfaction
2. Guiding Principles

2. Information Architecture Quality

- Stable
- Flexible
- Complete—negating the need for duplication of data and “shadow” databases.
2. Guiding Principles

3. Data Content Quality

- Accurate
- Complete
- User Satisfaction
2. Guiding Principles

4. Data Presentation Quality

- Intuitive
- Available
- Robust

Business processes can still fail even when data is accurate and complete!
2. Guiding Principles

Enterprise Focus
3. Planned Architecture

- **Ancillary Applications**
- **Enterprise Resource Applications**
  - Financial Management
  - Human Resource Management
  - Student Services & Administration

**OPERATIONAL DATABASES**

**ENTERPRISE INFORMATION TECHNOLOGY ARCHITECTURE**

**REPORTING & DECISION SUPPORT TOOLS**

- Information Factory (Data Warehouse and Data Marts)
  - Dept App
  - Dept App
  - Dept App
  - Dept App
  - Dept App
  - Dept App
3. Planned Architecture
3. Planned Architecture

Business Intelligence

Data Quality Firewall

ETL

Business Data Marts

Student
Finance
HR
University Advancement
Institutional Research

ERP Warehouse
Non-ERP Warehouse

ERP ODS
Non-ERP ODS

Metadata

(OLAP, Managed Reporting, Portal, Dashboard, Metrics Management)
4. How to Get There
4. How to Get There

Data Clean

ERP
Bolt-Ons
Other

Document Business Rules

1 Month
Planned

Data in Source

Profile Data

Data Review With Users
4. How to Get There

Data Preparation

- Planning and POC in Fall 2004
- January 2005 Start
- Zachman, Rows 1 & 2 (Scope & Business Model)
- Zachman, Columns 1 & 2 (Data & Function)
- Staging, Profiling, Quality Assessment
## Data Prep Resource Requirements

<table>
<thead>
<tr>
<th>Task</th>
<th>Technical</th>
<th>Functional</th>
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</thead>
<tbody>
<tr>
<td>Staging</td>
<td>Analysts (Legacy/ERP)</td>
<td>n/a</td>
</tr>
<tr>
<td>Profiling</td>
<td>Analysts (ERP)</td>
<td>Process Experts (1 FTE)</td>
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<tr>
<td>QA</td>
<td>Analysts (ERP)</td>
<td>Data Experts (2 FTE)</td>
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4. How to Get There

ETL

- Extraction, Transformation, and Loading.
- Currently use Informatica Powermart.
- Future tool depends on ERP selection.
- Will likely use ETL tool provided by ERP vendor (PeopleSoft ships with Ascential’s DataStage).
Data Warehousing

- Will use data warehouse provided by ERP vendor.
- Data warehouse will be relational and used for data-mining purposes.
- Will create second data warehouse during post-ERP for non-ERP applications.
- **Current warehouse functionality will be frozen December 31, 2004** (except for non-elective changes and work already in progress). *Data will continue to be refreshed.*
- Current warehouse will be retired after the ERP is implemented.
Operational Data Store

- Will use ODS provided by ERP vendor.
- Will create second ODS during post-ERP for non-ERP applications.
- ODS will be used for supplemental operational reporting.
- ODS will contain only current data.
4. How to Get There

Data Marts

- Some provided by ERP vendor; others will be created.
- Design and function is similar to current DSS system.
- Optimized/Denormalized for reporting performance.
- Architecture tailored to meet specific business-area needs.
BI Technology

- Aiming for preeminence in data presentation quality!
- Abandoning Brio Query client tool.
- Evaluation of vendor finalists is complete (Cognos, Hyperion)—recommendation due by the end of June 2004.

Requirements:

- Zero Client, OLAP, Dashboard, Managed Reporting, Portal, Metrics Management, Report Customization
- Implementation is scheduled to begin August 2004.
- Reporting tool will require central administration.
- Staff will have 12 months of experience before the ERP project even starts.
BI Implementation Resource Requirements

<table>
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<tr>
<th>Technical</th>
<th>Functional</th>
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<tbody>
<tr>
<td>Project Manager</td>
<td>Data Stewards</td>
</tr>
<tr>
<td>Information Analysts</td>
<td>Business Query Experts (1 FTE)</td>
</tr>
</tbody>
</table>

Functional areas will need to:

- Validate old reports against information provided by new tool.
- Assist with report consolidation and identification of unneeded reports.
- Create metadata.
- Assist with assessment and handling of data-quality issues.
4. How to Get There

Organization

Business Intelligence Competency Center

- Data Steward
- Business Analyst
- Project Manager
- ETL
- Data Architect
- DBA
- Information Analyst
- Data Miner
- Query Specialist

Business Knowledge

IT Skills

Analytical Skills

Business Intelligence Advisory Committee (BIAC)
4. How to Get There

Metadata ("Data about data")

- Includes business and technical metadata.
- Assists users in accessing their data.
- Provides for consistent interpretation of data.
- Allows impact analyses.
- Business metadata is available via the Web.
4. How to Get There

Data Quality

- Benchmarks
- Automated checks
- Confidence factor
- Third-party software
- Implemented with ERP

The best place to address data quality is at the source, but that doesn’t always work!
“Quality is free…What costs money are the unquality things—all the actions that involve not doing jobs right the first time.”

—Philip Crosby