Data Governance at a Public Research Institution: The Long & Winding Road

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...the chicken or the egg?
Started with the egg....

2001 project start—replace legacy HR & Finance w/ PeopleSoft (also purchased PS DW)

2002 IR Director and Data Administrator form Data Management Council

2003 PS goes live with HR and Finance, *no data warehouse*, IR separate database

DMC 1.0 Fizzles
DMC 1.5

2007 Project start – replace legacy SIS w/ PeopleSoft Student Administration

IT planning to implement DW
IR planning to build DW for official reporting

Reconvene DMC (1.5) (joint IR and IT effort)

DMC 1.5 Fizzles
So we tried starting with the chicken... ...a change in strategy

2008
DoIT and IR developed a shared vision for analytics and reporting

2009 DoIT and IR partner on a new data warehouse (REX) for UMBC

IR official reporting would be done from DW without significant manipulation of data

All reporting in PeopleSoft would be through the DW
Data was an institutional resource, managed by the units.

Data Governance was everyone’s responsibility and had to be more organic – thus owned by all.

2011 DMC 2.0
To Summarize:

Purchase PeopleSoft in 2001

PS HR/FIN Go Live in 2003

Start PS SA & DW in 2007

PS SA & DW Go Live in 2009

DMC 1.0 in 2001

DMC 1.5 in 2007

DMC 2.0 in 2009

2018
Why didn’t prior DMCs work?

• DMC 1.0 was a one-shop effort
• DMC 1.5 was led by IT & IR, but we had not developed a shared vision for data.
• UMBC had not developed a robust analytics & reporting infrastructure so there was no urgent need driving data governance.
• DMC was too high level - most VP’s and Deans had no concept of data management and thought the meeting a waste of time.
• Result – DMC fizzling
Key Points:

- We had to have the single DW structure in place for people to understand what data governance was and how it would work.
- Governance structure grew organically.
Collaborative Data Warehouse & DW Team

- IT and IR meet weekly, but communicate daily
- IR has IT level privileges to make changes to the data warehouse
- We are all fun people – personalities matter!
- We share the data request queue, so both IT and IR see all data and DW related requests
DMC 2.0

- Data Management Committee (not Council)
- chaired by the VP of IT and Assoc. VP of IRADS
- meets twice yearly (or tries to)
- consists of data stewards rather than division executives
- serves as a mechanism to share information on major plans for expansion and works to make certain that the data warehouse is supporting the needs of the units, especially those in the academic units
- meetings highlight what has been done or is near completion and work to solicit feedback on what else is needed
- DMC support feeds policy & strategy through data governance structure
Data Management Committee
Meets twice a year to review progress made by various teams and solicit feedback on specific issues and prioritizations.

Data Warehouse Team
Assigns REX tickets, manages changes to data warehouse & reporting environment.
Convener: Director of DS

REX User Group
Informal meeting to discuss users needs and specific reports. Could be used to discuss training options.
Convener: Director of BI

Data Quality Team
Comprised of data managers from various functional offices to develop and monitor data integrity processes.
Convener: Director of DS

Data Access & Security Team
Manages access to and security levels in PS and REX, including confidentiality issues.
Convener: Director of DS

Setup Tables Team
Manages changes to plans and subjects as the rollups to orgs, colleges, etc.
Convener: Registrar’s Office

Training Team
Manages training material for both SA and REX
Convener: Director of BI
Description of DMC Teams

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Oversees Data Warehouse plans for the campus

Bi-weekly campus support brown-bag meetings

Review data quality issues – key functional areas involved

Manage security to PS and REX, including FERPA acknowledgment

Meets when major changes occur

Provides periodic training to campus
Campus Systems Exec Committee
• made up of IT, IR, and functional offices (Finance, HR, Registrar, Enrollment Management).
• meets bi-weekly and chaired by VP of IT and Vice Provost for Enrollment Management.
• sets priorities for projects and develops recommendations to VPs & Deans for budget

IT Steering Committee
• chaired by the VP of IT and Vice Provost for Academic Affairs.
• part of University governance plan of organization, approves policies for data access before going to governance groups and President. IT Steering also is essential in reviewing actions that might impact the faculty.

VPs and Deans Council
• chaired by the Provost & Senior VP.
• VP of IT is a member of this council and is the liaison to the CSEC and IT Steering Committee for bringing issues or requests to the full Council.
We all speak the same language...

• Single DW (REX) serves the entire campus and integrates data from systems throughout UMBC.
• REX provides both transactional and official data, and reports are written for both using the same tools and data tables.
  – There’s no “your numbers vs. my numbers”
  – Data freeze/ census reporting more efficient and timely
  – Know what is happening before the freeze, which allows us to tackle data quality issues
  – One report serves two purposes - both live and frozen information
  – One suite of software serves all
  – Less duplication of effort
  – Greater efficiency / collaboration on best practices
and we share the same language...

• Use the Data Cookbook to collect descriptions and definitions for reports, tables and fields used within REX. This software is also used by our state Higher Ed commission. (Work in progress).

• Developed a data dictionary for student data in our undergraduate cohort and cohort term tables, which has facilitated exploration of data on student success.
Focus on Data Quality...

Data Quality Team Modules:
- Campus Community
- Admissions
- Student Records
- Human Resources
- Facilities Management
- Institutional Research
- Data Warehouse

For more on data quality at UMBC, see Reporting Data Quality Issues, found at https://rex.umbc.edu/about/presentations/
Welcome to REX

REX is the reporting and decision support environment for UMBC's data warehouse. The UMBC data warehouse integrates data from systems throughout UMBC. REX allows authorized faculty, staff, and institutional researchers to report and analyze University data. REX provides a few ways for reporting data from the data warehouse.

Guided Reports
Pre-written reports which allow authorized users to change options to suit their needs.

To run the reports on Windows use Internet Explorer.
To run the reports on Mac use Firefox.
For more information on browser support click here.
[Remember to put "ad" before your myUMBC user id ... adjohnndoe]

Exploratory Analysis
Advanced users can explore the data warehouse and create their own reports. This requires additional training and authorization, and is not intended for the casual user.

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Institutional Research, Analysis & Decision Support
Official data frozen on census dates is available for internal or external reporting.

REX Finance
These reports reflect the prior day's information from the PeopleSoft Finance system.

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Data Dictionary
An off-campus service (currently Data Cookbook) that allows REX to collect descriptions and definitions for reports, tables and fields used within REX. Their website will use UMBC data. It is intended to provide information to help the user find the correct report to use.

www.rex.umbc.edu
Governance built into data access...

FERPA compliance
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This is the portal to REX reports
When granted access to REX, clicking on Guided Reports takes you to this screen:

The folders and subfolders you see are dependent on your level of access and security.

For the most part all UMBC employees get access to public folders. No one gets access to student detail reports without permission, except those with a faculty/instructor role.

With access to a report, user can see data for any department (no row level security).
Welcome to REX

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Governance built into data access...

Click here to make a data request

Helpful Guided Reports
- REX Guided Reports
  - My Report History
  - Most Popular Reports
  - Recently Added Reports
  - List of Reports (A-Z)

REX News
- REX Finance Sponsored Account Reports NOW AVAILABLE!
  March 10, 2016 10:46 AM
- New REX report for Extracurricular Interest
  March 5, 2016 12:01 PM
- New REX reports for grade distribution
  February 27, 2016 12:16 PM
- Back to Back Classes report renamed to Class Time Conflicts
  February 13, 2016 1:21 PM
- New REX report: Curricular Interdependency Matrix
  February 6, 2016 3:31 PM
### Data Request

**I am employed by UMBC and seeking:**

<table>
<thead>
<tr>
<th>Help with a REX report</th>
<th>REX Reporting Request form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counts of Students or Employees</td>
<td>IRADS Request form</td>
</tr>
<tr>
<td>List or Contact Information of Students</td>
<td>Enrollment Management Student Request form</td>
</tr>
<tr>
<td>List or Contact Information of Employees</td>
<td>Human Resources</td>
</tr>
</tbody>
</table>

**I am NOT employed by UMBC and seeking:**

<table>
<thead>
<tr>
<th>Counts of Students or Employees</th>
<th>IRADS Public Request form</th>
</tr>
</thead>
<tbody>
<tr>
<td>List or Contact Information of Students</td>
<td>Public Info Request form</td>
</tr>
<tr>
<td>List or Contact Information of Employees</td>
<td>Human Resources</td>
</tr>
</tbody>
</table>

**Requests for changes to REX reports or new REX reports**

**Requests for official data from IRADS or questions about data**

**Detail record level data must be provided by data stewards**
QUESTIONS?

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