

A Single Source of the Truth

Why you need Effective Data Governance

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Ellucian

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BUGMI



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Session Rules of Etiquette

Please turn off your cell phone/pager

If you must leave the session early, please do so as discreetly as possible

Please avoid side conversation during the session

Thank you for your cooperation!

Introduction

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About Me...

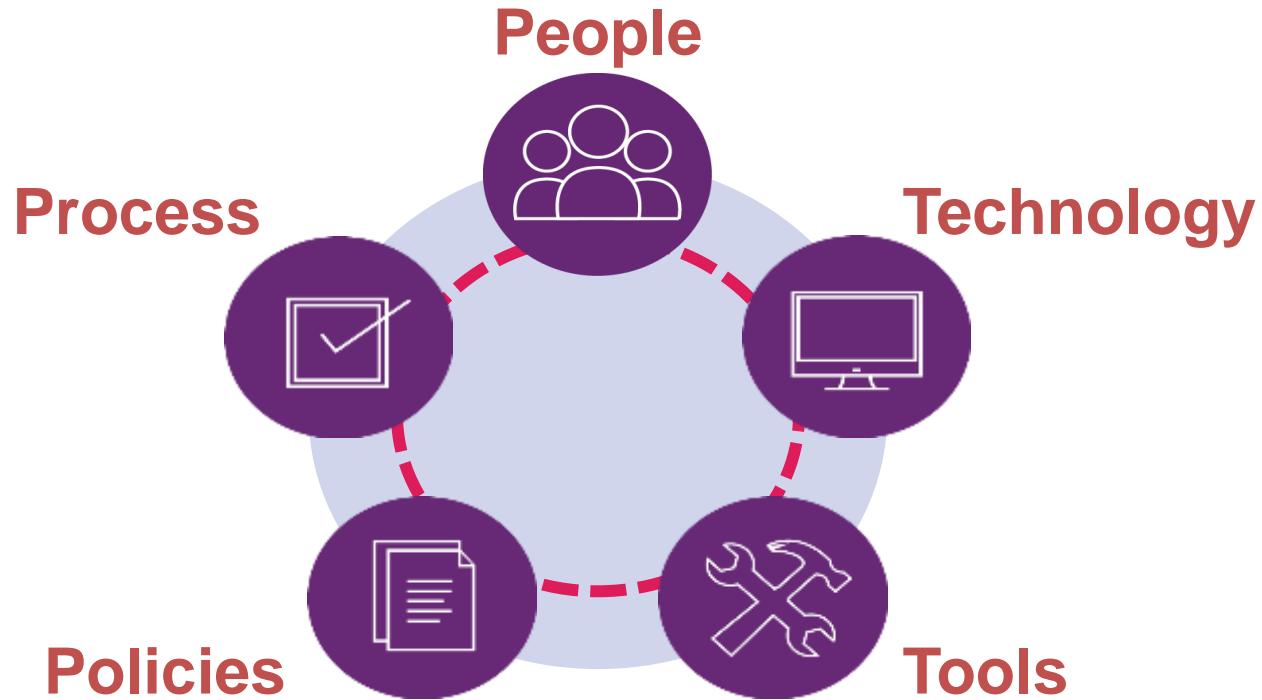
Henry DeVries

- Management Consultant, Principal
Targeted services for Business Analytics
- Ph.D. Cornell University
40 years in higher education
- Faculty member, administrator, researcher
 - 16 years as CIO at Calvin College in Grand Rapids, MI
 - 13 years (concurrently) as CFO
 - Active in NACUBO, CACUBO, EDUCAUSE, CCCU

Objectives

- We will explore the various components of a data governance program
- We will explore some ways to align your business analytics / reporting infrastructure into a framework that supports data governance

When we say “Infrastructure” ...



Agenda

- 1 Data Governance Definitions
- 2 Data Governance Components
- 3 Ellucian's Data Governance Service
- 4 Data Governance Practices

Data Governance Definitions

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What is it?

Data Governance is high-level planning and control over data management.

The exercise of authority, control and shared decision-making (planning, monitoring and enforcement) over the management of data assets.

Data Governance is a component of institutional governance.

DAMA (Data Management Association) www.dama.org

Why?

The objectives of data governance are to:

- Enable better decision-making
- Reduce operational friction
- Protect the needs of data stakeholders
- Assure data accuracy and quality
- Train management and staff to adopt common approaches to data issues
- Build standard, repeatable processes
- Reduce costs and increase effectiveness through coordination of efforts
- Ensure transparency of processes

The Need for Data Governance

Institutions are increasingly enthusiastic about Data-Driven Decision Making and Institutional Performance Management.

BUT – You need quality data to analyze and manage institutional outcomes. So, back to the title of this talk. (Guiding Principle)

“A single source of the (data) truth”

Data Governance is designed to help the institution assure that desired data quality.

Some Symptoms that you need Data Governance

- **“Your” numbers don’t match “my” numbers
....so I’ll create my own database.....**
- **Multiple data sources for the same type of data
....How many shadow databases exist at your institution?
....What impacts does this have?**
- **Data validation issues
....Do you know who is responsible for validation, what will be validated, when should data be validated, and how is it done?**
- **You spend more time auditing the reports for “correctness” of the data than using the report.**

Data Governance Components

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Guiding Principle

An institution needs **“a single source of the truth”** for all of its operational and reporting data.

Data governance is about putting the correct infrastructure (people, policies, procedures, tools, and technologies) in place to assure this.

In other words we want to prevent the dreaded **“GIGO”** = garbage in / garbage out.

Component #1 – Data Ownership

Data Ownership – An institution needs an infrastructure to establish who “owns” the data at an institution. That’s not as simple as it seems.

It is also important to distinguish the other data roles, such as data governance council, data trustee, data steward, data custodian and data consumer (end-user).

Component #2 – Data Quality

Data Quality – An institution needs an infrastructure to govern how data elements are defined, recorded, and displayed, i.e., a data dictionary.

Data standards are also important to ensure that all data is defined consistently, input accurately, and that data correctness and completeness are maintained.

Component #3 – Data Access

Data Access – An institution needs an infrastructure to govern how data is classified (personal/private, confidential, community, public) and who receives access to what.

This also intersects with external compliance requirements, such as FERPA, HIPAA, FIPPA, etc.

Component #4 – Data Security

Data Security — An institution needs an infrastructure to govern how and where data is stored, handled, shared, distributed and protected. This requires a comprehensive set of policies and procedures for both personnel and IT resources.

There is often intersection with external compliance directives, e.g., PCI-DSS, HIPAA, etc.

Ellucian's Data Governance Service



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Data Governance Service

Data Governance is high-level planning and control over data management.

If you cannot trust the data, then turning data into useful information for reporting results, running analysis, making decisions and developing strategies is difficult to impossible.

The Data Governance Services provides clients with the necessary tools and support to create a solid data governance roadmap and the ongoing support to move forward with that plan.

Ellucian's Data Governance Service

Step 1: Information Gathering

Through a combination of surveys with on-site interviews and focus groups, we will assess the current data governance infrastructure and determine what additional resources may be needed to achieve the desired future state.

Ellucian's Data Governance Service

Step 2: Training Workshop

This one-day workshop leverages the information obtained during the initial onsite visit and educates institutional staff to begin to develop the necessary infrastructure to support Data Governance.

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Step 3: Assessment and Recommendations

Presents the assessment of the current infrastructure and recommendations for new assets, along with a roadmap that will allow the institution to create the environment to support Data Governance.

Ellucian's Data Governance Service

Step 4: Ongoing Advisory Support, e.g.,

- Development of Charter to Data Governance Council
- Determination and Assignment of Data Ownership Roles
- Development of the Data Dictionary and Data Standards
- Mentoring with Information Technology Security Officer

Some Common Data Governance Issues

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Data Ownership

Who owns my record?

Clear, well-understood roles are critical to resolve conflicts and challenges

- Data Governance Council
- Data Trustees / Owners
- Data Stewards
- Data Custodians
- Data Consumers

This is an institutional governance question, not an IT one.

- Executive Sponsorship is critical.

Data Quality

Procedures

- Validation during data entry
 - e.g., address-checking, duplicate records
- Error correction procedures

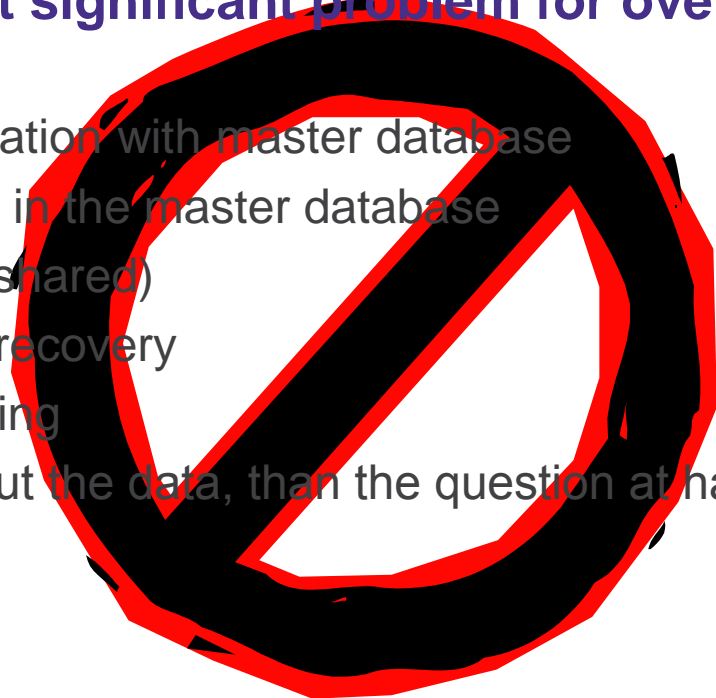
Policies

- Data dictionary: identifies standard elements for data use for key business terms
 - Meaning (definition) of the data element
 - Validation, format, display
 - Metadata
- Data Handling

Shadow Databases

Are often the most significant problem for overall institutional data quality--

- Lack of synchronization with master database
- Additional data not in the master database
- Invisible data (not shared)
- Security, backup / recovery
- Inconsistent reporting
- “arguing more about the data, than the question at hand”



Customizations, Localizations

Customizations – changes to the baseline that have been made to reflect local preferences

Localizations – changes to the baseline that are necessary to do business in your specific environment

Are they moving from the transactional database into the Business Intelligence stack (ODS/EDW)?

External Data Sources

Bolt-ons, Add-ons, SaaS

- e.g., recruiting/admissions tools, CRM systems
- Incomplete or asymmetrical data transfer to/from the transactional database
- Subsequent difficulty in reporting performance metrics

Community Definitions (AUP)

- Public Data
- Sensitive Data
 - Private Information
 - Confidential Information
 - Community Information

External Factors

- FERPA, HIPAA, FIPPA, PCI-DSS, PHI, etc.

Data Access - Reporting

As Business Intelligence initiatives open up the data to a broader base of data consumers across the campus, how do you control “who can see what?”

These may be different security measures than those which apply to reporting from the transactional database.

The big question – Is data treated as an institutional asset or a department asset?

Data Security

People-based...

- Knowledge transfer about how to handle sensitive data
 - Policies -- FERPA
 - Procedures – can you say “memory stick”?

Technology-based...

- Data backup / restore
- Data encryption
- Data transfer
- Audit trail

How do you Measure Progress?

Adoption of

- Policies
- Procedures
- Tools

Data Governance KPIs...

- Number of data integrity open Issues
- Number of Data Quality issues resolved
- Number of defined data sources in the Data Dictionary

Closing

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Summary

Data Governance is a key component in the establishment of a reliable infrastructure to support data-driven decision-making

Data Governance components:

**ownership,
quality,
access, and
security.**

Data Governance is far-reaching across the institution and is bigger than just IT

Questions & Answers

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Thank you!

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