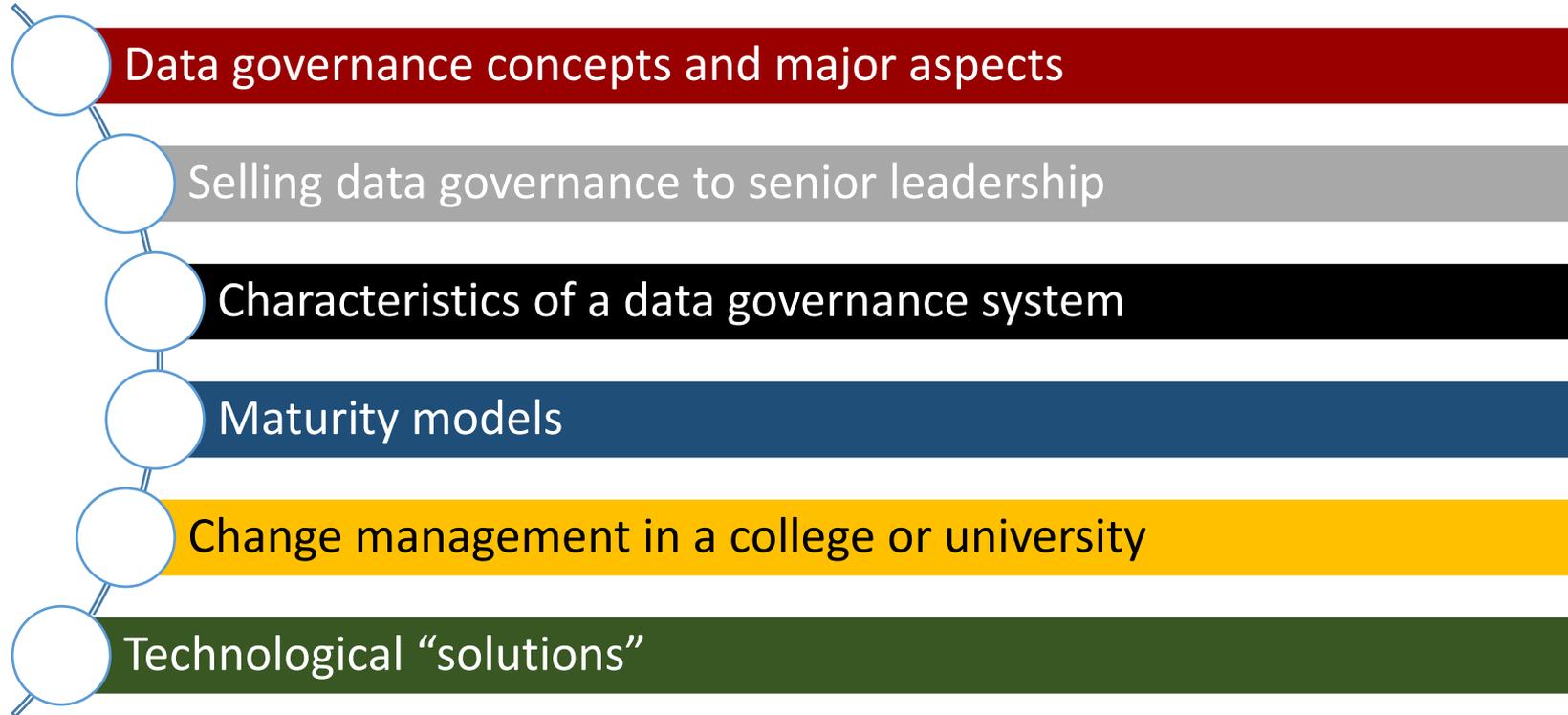Stony Brook University

FAR BEYOND

DATA GOVERNANCE – A PRIMER

Dr. Braden J. Hosch
Associate Vice President for Institutional Research, Planning & Effectiveness
November 3, 2019

Overview

Data governance concepts and major aspects

Selling data governance to senior leadership

Characteristics of a data governance system

Maturity models

Change management in a college or university

Technological "solutions"

Outcomes for workshop participants

Define data governance as an activity that centers on human behavior more than data	Describe major components of data governance activities	Articulate challenges on their campus and how data governance will address these challenges	Assess their campus culture and organization with a data governance maturity model; select and modify a data governance maturity model for their campus
Identify characteristics of a data governance system; analyze where their own institution has gaps; and create an outline for how data governance could fit into existing organizational structures	Discuss how technology may assist but not perform data governance; describe major functions of data governance software applications or "solutions"	Explain principles of change management in higher education institutions and how they will enable development of data governance on their campuses	Construct an action plan for next steps on their own campus to advance data governance activities

FAR
BEYOND

What this workshop will not do

- Design your data governance system for you

- Promote specific technological solutions

- Prescribe specific functions, operations, or organization

- Identify how much money to spend

WHAT IS DATA GOVERNANCE?

Data Governance Definitions (Generic)

- "the execution and enforcement of authority over the management of data and data-related assets" - R. Seiner (2014)

- "specification of decision rights and an accountability framework to ensure appropriate behavior in the valuation, creation, storage, use, archiving and deletion of information" - Gartner IT Glossary

- "a system of decision rights and accountabilities for information-related processes, executed according to agreed-upon models which describe who can take what actions with what information, and when, under what circumstances, using what methods" – Data Governance Institute (2014)

Data Governance Definitions from Universities

- "formalizes behavior around how data are defined, produced, used, stored, and destroyed in order to enable and enhance organizational effectiveness" – Stony Brook University (2016)

- "adds value to our administrative and academic data systems by the establishment of standards that that promote data integrity and enables strategic integrations of information systems" – Vanderbilt University

- "the discipline which provides all data management practices with the necessary structure, strategy, and support needed to ensure that data are managed and used as a critical University asset" – U of Rochester

FAR BEYOND

The 5-second elevator definition

Data governance is …

- a set of guidelines for how people behave and make decisions about data

Master data management is often confused with data governance

Master Data Management (MDM)

- Comprehensive method to link all critical data to a common point of reference
- Example:
  - All screens, documents and systems showing a student's address derive from a common location.

Data Governance

- Formalized system for how people make decisions about acquisition, production, storage, distribution, and analysis of data
- Example:
  - Group decides on a definition for home address and agrees on a common source field

FAR BEYOND

Important characteristics of DG definitions

Data governance IS	Data Governance IS NOT
• More about people and behavior than data • A system that requires and promotes shared agreement • Formal (i.e. written down) • Adds value by supporting institutional mission/goals	• IT's responsibility • Solved by technology • Equally applied across all data assets

Activity 1 – What data governance features do you have?

- List formal and informal structures you have for promoting data governance

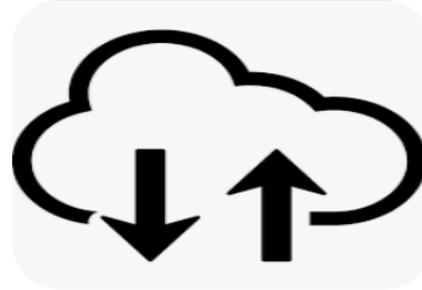|	Formal	Informal
Policies/Practices		
Groups		
Roles		
Responsibilities		

WHY DO WE NEED DATA GOVERNANCE?

Data governance is a strategic priority

Proliferation of data and applications

Privacy expectations / regulations

Cloud data mobility

Fair and ethical use

Justifications for Data Governance

Justify data governance on your campus based on:

| Value	Cost	Risk

Justifications for Data Governance - Value

EDUCAUSE identifies significant institutional value to higher education institutions from data governance:

- Official vs. ad hoc data definitions
- Clear responsibilities
- Capacity for analytics
- Competitive advantage

EDUCAUSE (2015). "The compelling case for data governance," retrieved October 15, 2018 from https://library.educause.edu/~/media/files/library/2015/3/ewg1501-pdf.pdf

Justifications for Data Governance – Cost (1)

A third of Fortune 100 organizations will experience "an information crisis, due to their inability to effectively value, govern and trust their enterprise information."
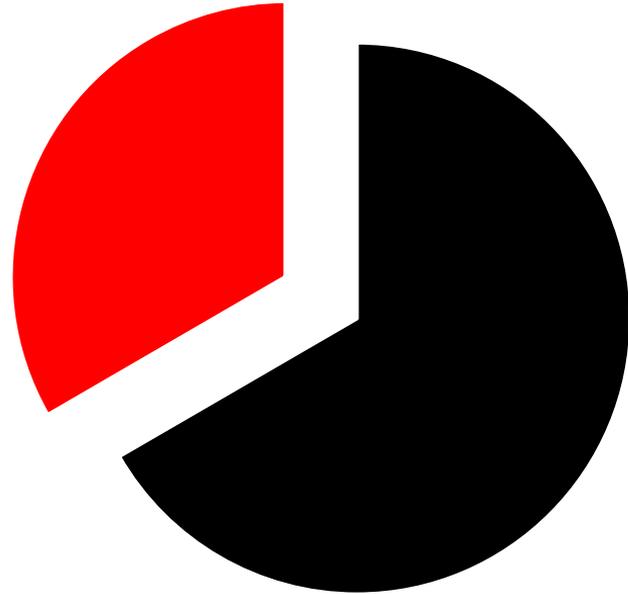
Gartner. (2014). "Why data governance matters to your online business," retrieved August 1, 2016 from http://www.gartner.com/newsroom/id/1898914s-why-data-governance-matters-to-your-online-business/

FAR
BEYOND

Justifications for Data Governance – Cost (2)

Poor data quality costs the US economy $3.1 trillion every year

$3.1 Trillion

IBM. (n.d.). "Extracting business value from the 4 V's of big data," retrieved October 1, 2018 from
https://www.ibmbigdatahub.com/infographic/extracting-business-value-4-vs-big-data

FAR BEYOND

Justifications for Data Governance – Cost (3)

The average financial impact of poor data quality on a typical businesses is $9.7 million per year. Opportunity costs, loss of reputation and low confidence in data may push these costs higher.

Forbes (2017). "Poor-quality data imposes costs and risks on businesses," retrieved October 22, 2018 from https://www.forbes.com/sites/forbespr/2017/05/31/poor-quality-data-imposes-costs-and-risks-on-businesses-says-new-forbes-insights-report

FAR BEYOND

Justifications for Data Governance - Risks

Fines Imposed by Federal Student Aid

Fiscal Year	Clery/Part 86 Imposed Fines	IPEDS Imposed Fines	Other Imposed Fines	Total Imposed Fines
2010	$42,000	$225,000	$48,653,500	$48,920,500
2011	$195,000	$144,500	$4,868,500	$5,208,000
2012	$212,500	$158,500	$624,000	$995,000
2013	$812,000	$56,000	$5,204,137	$6,072,137
2014	$438,000	$111,250	$6,750	$556,000
2015	$500,000	$39,250	$14,130,000	$14,669,250
2016	$307,500	$57,000	$79,462,500	$79,827,000
2017	$2,542,500	$1,500	$382,500	$2,926,500
2018	$988,250	$67,500	$20,000	$1,075,750

FAR BEYOND

Source: Postsecondary Education Participants System (PEPS)

Data as an Asset

- By 2020, Gartner predicts that 10% of organizations will have a highly profitable business unit specifically for productizing and commercializing their information assets.

- By 2021 companies will be valued on their information portfolios: "Those in the business of valuing corporate investments, including equity analysts, will be compelled to consider a company's wealth of information in properly valuing the company itself."

FAR
BEYOND

Data as an Asset for Universities

Generic Example	At Colleges & Universities

web sites grant access in exchange for personal data (email address, etc.) – these data have value and can be leveraged or even sold	Data are purchased
	    Names of prospective students
	    Library databases
	    Various datasets (U.S. News, Academic Analytics, etc.)
	Data are sold
	    To vendors for discounts or services
	Lost data carry costs
	    Data breaches

FAR BEYOND

Who owns the data?

- Consider carefully use of the word "ownership" with data
  - Often represents assignment of responsibility
  - Connotes individual control and property vs. caretaking of shared resource

- Institutions own the data

- Individuals provide stewardship

FAR
BEYOND

Activity 2 - Why do we need data governance?

- Identify institution-specific examples that help make the case for data governance
  - Value – what could you do that you can't do now?

  - Costs – what costs are you incurring because data are not well governed?

  - Risks – what risks are you taking because data are not well governed?

FEATURES OF DATA GOVERNANCE

Key features of data governance systems

Documents	Groups	Individual roles

• Charter / framework
  • Principles & values
  • Purpose & scope
  • Roles & responsibilities
 	
• Written & published policies
• Data dictionaries
• Communication strategies
	• Senior leadership [buy-in]
	
	• Policy council
	
	• Data steward council(s)
	
	• Information security council/program
	
	• Positions/office to support DG
		• Data stewards
		
		• Data custodians/ caretakers
		
		• Data users

Principles of Data Governance (Generic)

Consistency of data in its sourcing and in its vocabulary, definitions, and taxonomies	Quality which is proactively assessed and standards applied	Responsibility and accountability defined across the data lifecycle and recorded in the information asset register
Business alignment which ensures that data is regarded and treated as a key business asset	Access to relevant users, kept secure through access control	Providing trusted insight

Source: Carruthers, C. & Jackson, P. (2018). *The chief data officer's playbook*, London: Facet, p. 145

Principles and Values – Example
University of Wisconsin - Madison

Accountability	Determining who is responsible for the management of data at UW Madison as well as holding them to our outlined standards.
Agility	All of our processes should adapt when necessary
Change Management	New processes demand new and changing staff at UW. We're committed to ensuring smooth transitions and well informed decisions.
Consistency	All decisions made will be applied consistently across campus.
Metrics Driven	We monitor ourselves against measurable goals on a regular basis and use the results to determine courses of action.
Stewardship	Determine formal roles for those in charge of data. This does not mean that everyone on campus is not responsible despite formal roles.
Transparency	We will make it clear how and when decisions are made and when processes are created. We also strive to ensure that decisions and processes are audited to support compliance based requirements.

Principles and Values – Example Stony Brook University

Values			
Shared Assets Data and information are shared organizational resources that constitute valuable assets.	**Stewardship** Employees of Stony Brook University have a responsibility for the curation of data. They serve as caretakers of data to ensure data are collected, stored, and maintained under the premise that others will access and use them over time	**Quality** To ensure data retain value, quality of data is actively monitored and maintained	**Privacy & Confidentiality** Maintenance of individual privacy and confidentiality of educational and personal records represent not only legal requirements but also primary outcomes of data management.

Principles for Data Governance			
Organizational Effectiveness	**Transparency**	**Communication**	**Compliance**
Auditability	**Integrity**	**Accountability**	**Standards**

Principles and Values – Example
Mesa Community College

Accessibility	Integrity	Security	Ethics
• Users have role appropriate access to data needed to make informed decisions. • Data is available across platforms, on-site and remotely.	• Data should be collected and maintained with reasonable assurances of its consistency, reliability, timeliness and accuracy. • Individuals share responsibility and are accountable for their entry, use and access of the College's data repository, requiring ongoing training on the part of those who enter, use, and care for it.	• Sensitive data is protected from unauthorized access and improper disclosure. • The integrity of data is protected from malicious or accidental alteration. • Data is available with access granted according to the role of the user. • Processes are in place to ensure training and awareness.	• Data is used in accordance with ethical principles, accepted best practices, and legal requirements. • Data is used to improve practices and further the College mission.

Connect Data Governance to Mission

- Data governance is a system to improve the effectiveness of the organization, not an activity for its own sake

- Anchor data governance to mission when justifying need or presenting structure

Activity 3 - Distill university mission

- Data governance should be established to support the institution's mission and/or strategic goals. Colleges and universities have notoriously lengthy mission and goal statements, so it can be a challenge to distill them.

- Summarize the main points of your institution's mission, preferably so that it fits on a slide.

Example

Stony Brook's framework for data governance outlines a set of principles, structures, roles, and responsibilities to improve the data infrastructure and to advance institutional goals

- Stony Brook has a five-part mission to provide & carry-out:
  - Highest quality comprehensive education
  - Highest quality research and intellectual endeavors
  - Leadership for economic growth, technology, and culture
  - State-of-the-art innovative health care, with service to region and traditionally underserved
  - Diversity and positioning Stony Brook in global community

Structure – Generic Example
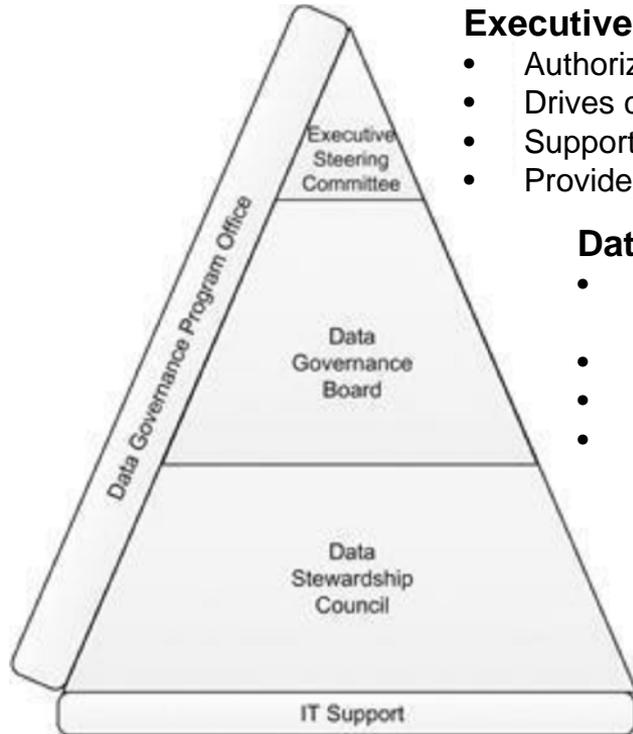
Executive Steering Committee
- Authorized to change the organization
- Drives cultural change
- Supports the program enterprise-wide
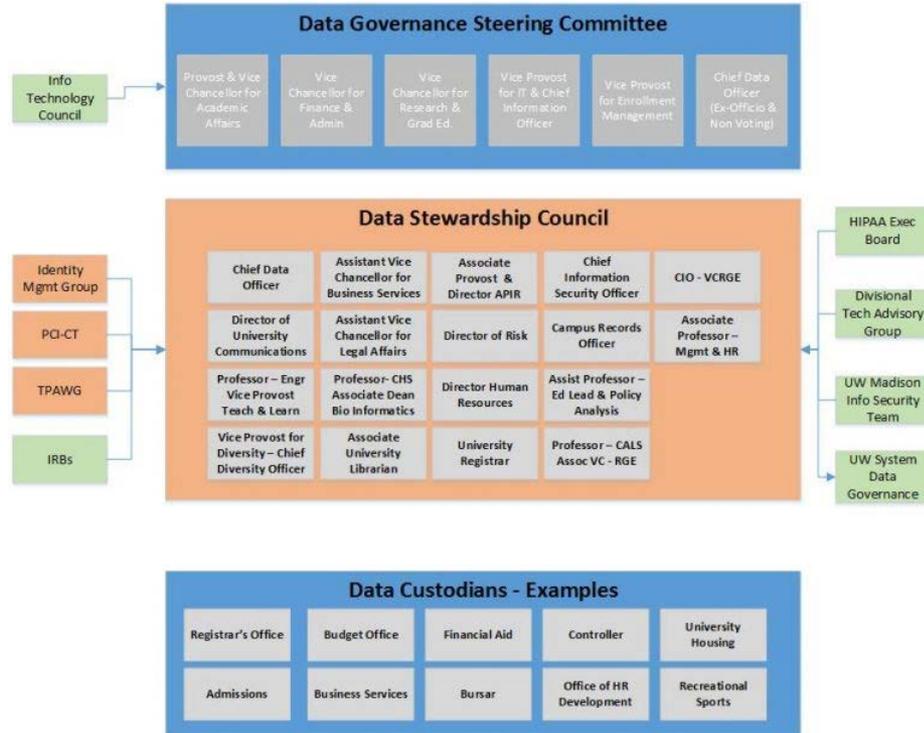- Provides funding for the Data Governance Program

Data Governance Board
- Made up of high-ranking representatives of data- owning business functions who can make decisions about data for the company
- Assign members of the Data Stewardship Council
- Approve decisions of the Data Stewardship Council
- Approve data-related policies

Business Data Stewards
- Experts on use of their data domain data
- Able to reach out to SMEs to gather information and make decisions
- Typically someone who others come to as the most knowledgeable about the meaning of the data (and how it is calculated)
- Makes recommendations on data decisions and write data-related procedures

The pyramid diagram (left side):
- Data Governance Program Office (left edge label)
- Executive Steering Committee (top)
- Data Governance Board (middle)
- Data Stewardship Council (lower)
- IT Support (base)

Plotkin (2014). Data stewardship: An actionable guide to effective data management

Structure – University of Wisconsin-Madison

Data Governance Steering Committee
- provides executive level guidance to the program
- promotes Data Governance across UW-Madison
- allows for / facilitates data-driven decision making
- determines priority and budget of major data-related projects.

Data Stewardship Council
- determines operational structure of the program
- drafts, communicates, and recommends approval of data-related policies
- implements, budgets, and monitors data-related programs across UW-Madison.

FAR BEYOND

Structure – Stanford University
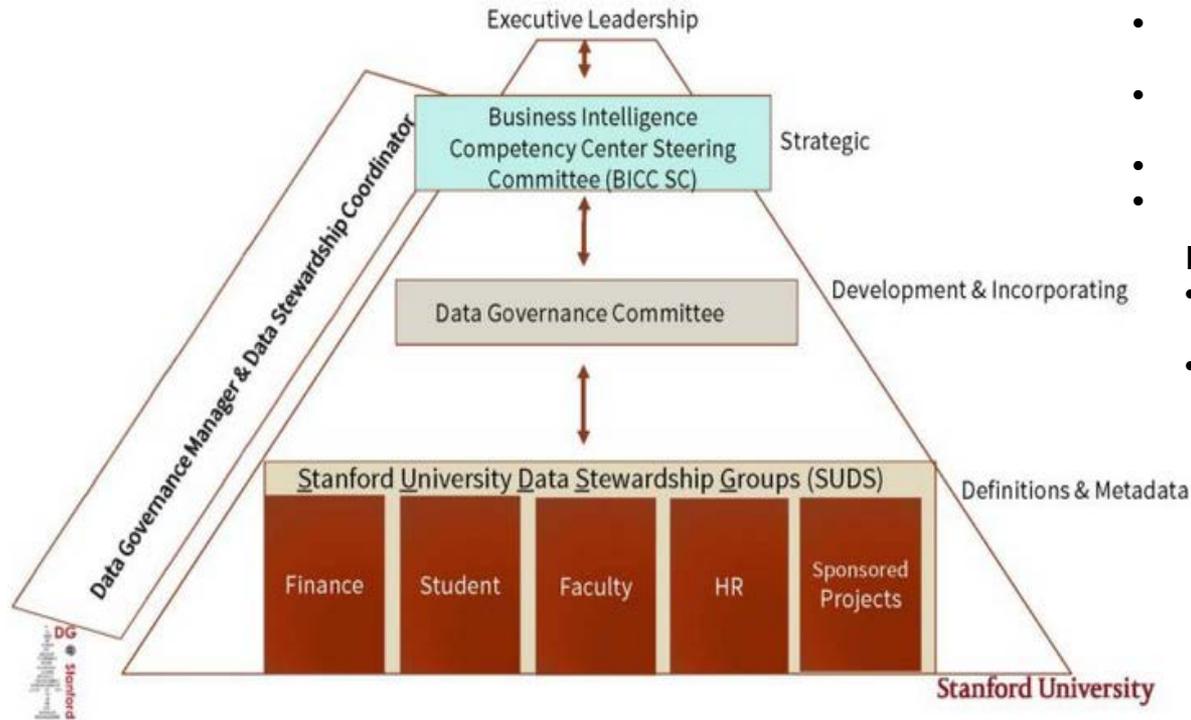
BI Competency Ctr. Steering Committee
- Cross-functional oversight & communicates long-term value of BI program
- Achieves peer buy-in, and effects change in business process and data quality
- DG adopters and champions
- Ensures alignment of DG with university goals

Data Governance Committee
- Sets & incorporates DG policies, standards, procedures, roles & responsibilities
- Includes lead steward from each of the data steward groups, plus reps from additional units

Data Stewardship Groups
- Provide metadata infrastructure to support improved decision-making university-wide
- Ensure information integrity
- Build data knowledge
- Meet compliance requirements
- SMEs who define reporting terms and gather metadata associated with their reporting environment

Structure – Stony Brook University

VP Council

Data Governance Council

Finance

Student

Human Resources

Data Stewards

Data Stewards

Data Stewards

Functional data governance committees
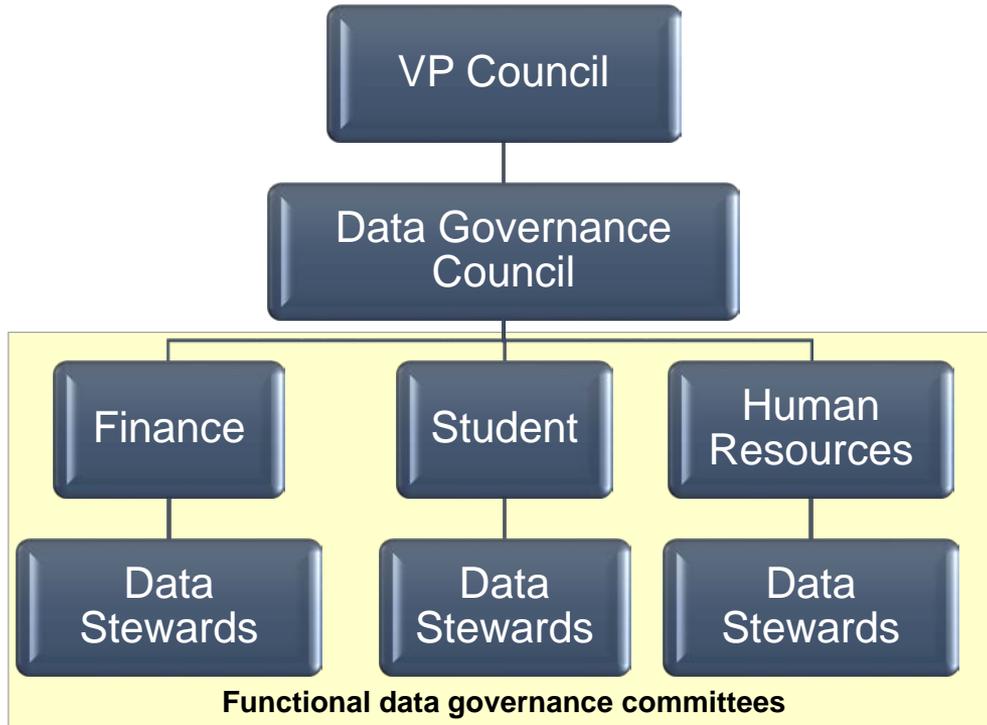
VP Council (Project 50 Forward SteerCo)
- Executive sponsors of project
- Establishes authority and purview of data governance system

Data Governance Council
- Recommends and implements institutional policy for data governance
- Sets priority for

Functional Data Governance Committees
- Implements institutional policy for data governance
- Recommends solutions to specific data issues
- Considers and approve changes to code sets, additions to tables
- Develops solutions to data governance issues
- Communicates with data caretakers in their areas

FAR BEYOND

Structure – Bowdoin College

Division/Department	Position
Permanent members	
IR, Analytics & Consulting	Vice President*
Information Technology	IT Security Officer
Information Technology	SVP and CIO
Office of the Registrar	Registrar
Treasurer's Office	Legal & Asst Scrtry of Coll
IR, Analytics & Consulting	Dir. BI & Data Warehouse**
Data Stewards	
Academic Affairs	Assoc Dean
Admissions and Student Aid	Mgr of Tech. & Marketing
Comm. and Public Affairs	Exec. Director
Dev. and Alumni Relations	Asst Vice President
Finance and Administration	Vice President HR
President's Office	SP & Special Asst. to Pres.
Student Affairs	Assoc Dean

Bowdoin College's Data Governance Committee includes stewards from seven of the College's divisions, as well as permanent members and committee staff. There may be multiple Stewards within a single division, but only one serves on the Committee at a time

* Committee chair
** Committee staff

Policy-Making Body - Data Governance Council

Prioritizes decisions regarding data to address most relevant needs of organization	Reviews, evaluates, and reports on data governance performance and effectiveness	Ensures that annual performance measures align with data governance and business objectives	Reviews and approves data governance policies and goals

Ultimately is accountable for business data use, data quality, and prioritization of issues	Makes strategic and tactical decisions	Defines data strategy based on business strategy and requirements

FAR BEYOND

Plotkin (2014). Data stewardship: An actionable guide to effective data management

Data Governance Council Membership Examples

UW-Madison	Stony Brook
Chief Data Officer	Chief Institutional Research Officer
Director of Univ. Communications	Analytics and Enterprise Data Officer
VP for Teaching & Learning	University Controller
VP for Diversity	Chief Enrollment Management Officer
AVC Business Services	University Registrar
AVC Legal Affairs	Chief Financial Aid Officer
Assoc. Dean Biomedical Informatics	Provost's Office designee
VP Libraries	VP Student Affairs designee
CISO	VP Administration designee
Campus Records Officer	VP Human Resources designee
Assoc. Dean Education	VP Information Technology designee
Faculty/Dean Representation	VP Research designee
	SVP Health Sciences Designee
	University Senate designee
	Chairs & Vice Chairs of FDGCs (6 people)

Data Stewardship Definitions

- Data stewardship is the most common label to describe accountability and responsibility for data and processes that ensure effective control and use of data assets. – Knight (2017)

- Data stewardship is the operational aspect of an overall Data Governance program, where the actual day-to-day work of governing the enterprise's data gets done. – Plotkin (2014)

- Data Stewardship is concerned with taking care of data assets that do not belong to the stewards themselves. Data Stewards represent the concerns of others. Some may represent the needs of the entire organization. Others may be tasked with representing a smaller constituency: a business unit, department, or even a set of data themselves. – Data Governance Institute (n.d.)

Types of Data Stewards

Business Data Steward

- Accountable for data owned by business area
- Work with stakeholders to make recommendations on data issues
- Manage metadata for their data
- Champion data stewardship for their areas

Technical Data Steward

- Provide expertise on applications, ETL, data stores, and other links in information chain
- Assigned by IT leadership to support data governance

Domain Data Steward

- Business steward for widely shared data
- Work with business stewards as stakeholders to achieve consensus

Project Data Steward

- Represent data stewardship on projects
- Funded by projects
- Work with business data stewards to obtain info and make recommendations about data stewarded by business stewards
- Notify business data stewards about data issues raised by the project

Operational Data Steward

- Provide support to business data stewards
- Recommend changes to improve data quality
- Help enforce business rules for the data they use

Alternative models for types of data stewards

Data Stewards by Subject Area
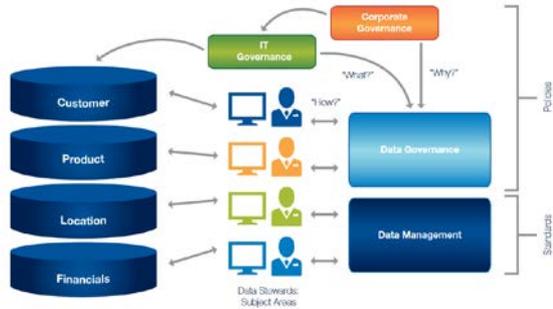
Data Stewards by Function

Data Stewards by Process
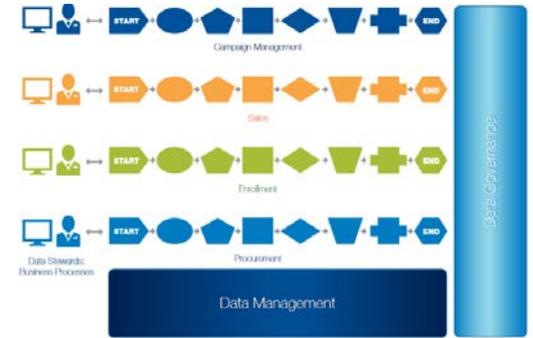
Data Stewards by System

Data Stewards by Project

Dyché & Polsky (2014). "Five models for data stewardship" SAS Whitepaper
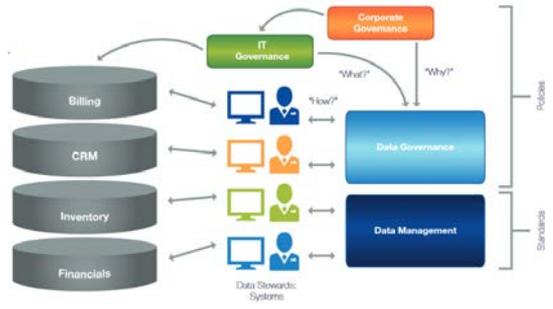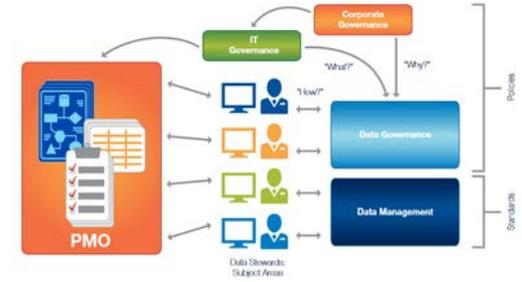
Data Steward Responsibilities

Oversee management of selected data assets

Participate in data governance and carry out decisions

Assist in creation and maintenance of data dictionaries, metadata

Document rules, standards, procedures, and changes

Ensure data quality and manage specific issues

Communicate appropriate use and changes

Manage access and security

Data Stewardship Council/Committee(s) (Functional)

Stony Brook University

Coordinate data stewards in related area	Set and review definitions, data quality rules, creation/usage rules, determines official version of metadata	Consider and approve changes & additions to code sets	Ensure dictionary standards are followed in area
Review data quality in functional area; identify practices promoting data quality identify areas for improvement and monitor improvements	Respond to inquiries about process, content, limitations and uses of data, especially in cross-functional settings	Elevate issues that require resolution	Communicate proceedings, including notice of changes and decisions

FAR BEYOND

Stony Brook Roles and Responsibilities Matrix

	Data Governance Council	Functional Data Governance Cmtes	Data Stewards
Standards and Policies	Define, Establish, Monitors, Audit, Verify, Develop, Revise	Cross functional implementation, coordination	Functional implementation
Data Quality	Identify, Adopt enterprise-wide DQ tool Big picture	Prioritize levels Monitor area Identify needs	Review audit reports, Coordinate clean-up, Initial prioritization
Metadata	Establish standards	Ensure cross-functional alignment	Implement Maintain
Metrics	Review, Identify, Monitor	Monitor area Identify are priorities	Monitor Remediate

Data users

- Often not considered in data governance systems but should be
- Example formal responsibilities (Stony Brook)

Recognize that institutional data and information derived from it are potentially complex. Make efforts to understand the source, meaning and proper use of the data through training sessions, utilizing data dictionaries and knowledge of supporting system processes.	Include information about the data source and criteria when distributing data, reports and ad hoc analytics to guard against misinterpretations of data.	Respect the privacy of individuals whose records they may access. Unauthorized disclosure or misuse of institutional information stored on any device is prohibited	Ensure that passwords or other security mechanisms are used for sensitive data	Report data quality issues to appropriate data steward

Administrative Office / Positions Supporting Data Governance

- In general, offices and positions dedicated to supporting data governance are still emerging in higher education

Chief Data Officer	Data Governance Program Manager
• Purdue University • University of Florida System • University of South Carolina – Columbia • University of Rochester • University of Wisconsin - Madison	• Purdue University • Stanford University

Pomerantz, J. (2017) *IT leadership in higher education: The chief data officer*. *Educause.*
Research Report. Louisville, CO:ECAR.

MATURITY MODELS

Assess your current state of data governance

- To implement data governance, if not to sell it to senior leadership, assessment of the current state is important.

- Extends beyond the informal list we made in Activity 1

- Uses a maturity model to quantify the existing state; allows for measurement of progress in a future state

Activity 4: Data Governance Maturity Model

	Level 1	Level 2	Level 3	Level 4	Level 5
	Informal	**Developing**	**Adopted and Implemented**	**Managed and Repeatable**	**Integrated and Optimized**
Organizational Structures	Attention to Data Governance is informal and incomplete. There is no formal governance process.	Data Governance Program is forming with a framework for purpose, principles, structures and roles.	Data Governance structures, roles and processes are implemented and fully operational.	Data Governance structures, roles and processes are managed and empowered to resolve data issues.	Data Governance Program functions with proven effectiveness.
Culture	Limited awareness about the value of dependable data.	General awareness of the data issues and needs for business decisions.	There is active participation and acceptance of the principles, structures and roles required to implement a formal Data Governance Program.	Data is viewed as a critical, shared asset. There is widespread support, participation and endorsement of the Data Governance Program.	Data governance structures and participants are integral to the organization and critical across all functions.
Data Quality	Limited awareness that data quality problems affect decision-making. Data clean-up is ad hoc.	General awareness of data quality importance. Data quality procedures are being developed.	Data issues are captured proactively through standard data validation methods. Data assets are identified and valuated.	Expectations for data quality are actively monitored and remediation is automated.	Data quality efforts are regular, coordinated and audited. Data are validated prior to entry into the source system wherever possible.
Communication	Information regarding data is limited through informal documentation or verbal means.	Written policies, procedures, data standards and data dictionaries may exist but communication and knowledge of it is limited.	Data standards and policies are communicated through written policies, procedures and data dictionaries.	Data standards and policies are completely documented, widely communicated and enforced.	All employees are trained and knowledgeable about data policies and standards and where to find this information.
Roles & Responsibilities	Roles and responsibilities for data management are informal and loosely defined.	Roles and responsibilities for data management are forming. Focus is on areas where data issues are apparent.	Roles and responsibilities are well-defined and a chain of command exists for questions regarding data and processes.	Expectations of data ownership and valuation of data are clearly defined.	Roles, responsibilities for data governance are well established and the lines of accountability are clearly understood.

FAR BEYOND

Activity 4: Data Governance Maturity Model

	Enter rating 1 through 5 based on maturity model rubric					
	Finance data	Student data	HR data	Research data	Facilities data	Overall
Organizational Structures						
Culture						
Data Quality						
Communication						
Roles & Responsibilities						

FAR
BEYOND

Stony Brook Data Governance Maturity Model
Initial Results – Spring 2016

Stony Brook Data Governance Maturity Model 2.0 Results Summary

| | BY FUNCTIONAL DATA TYPE | | | | |

OVERALL (Area Averages)	DATA GOVERNANCE	CULTURE	DATA QUALITY	COMMUNICATION	ROLES & RESPONSIBILITIES
Level 1-Informal	11%	18%	8%	14%	10%
Level 2-Developing	41%	30%	34%	39%	32%
Level 3-Adopted and Implen	11%	14%	9%	14%	3%
Level 4-Managed and Repea	3%	3%	6%	2%	7%
Level 5-Integrated and Optir	0%	0%	2%	0%	0%
Not enough information	34%	35%	41%	32%	48%

CHANGE MANAGEMENT IN HIGHER EDUCATION

Elements to change management

Process
Representation
Deliberation

Executive sponsors
Mission alignment
Project mgmt./timeline

Initiative

Problem statement
Research/environ. Scan
Ideas for solutions

Interested allies
Interest mapping
Advocacy from others

Activity 5 – Assemble your group

- Data governance requires support of senior leadership and functional leadership

- Identify

  - Senior leaders who will sponsor

  - Functional leaders and their potential for collaboration (includes available bandwidth, interest, capability, willingness)

FAR
BEYOND

Case Study – Stony Brook University

Initiative to strengthen university data infrastructure (Jan 2015-Sept. 2016). Charge to examine:

Data governance	Data quality	Communication

Charge for data governance (first 9 months)

Examine existing governance structures	Identify and articulate
• active and inactive groups and lines of responsibility • existing processes, practices and procedures that significantly impact data management and stakeholders.	• Roles of cross-functional groups • Functional roles in business units (e.g. data owner, data custodian, report owner) will also be identified and articulated.
Draft formal governance structure for university data management • Principles, mission, and goals • Post on a website to codify roles and responsibilities.	**Formalize a process for prioritization**

Charge for data quality improvement

Examine existing practices for ensuring data quality within the Data Warehouse and may extend to quality assurance practices in functional systems.	**Articulate and publish practices for developing, maintaining, and communicating** • data definitions (such as robust data dictionaries) • transparent source information • update schedules • error check practices and • clean-up procedures

Charge for training and communication

Develop a communication plan for
- How new capabilities for business intelligence go beyond initial reporting functionality.
- Availability
- Use limitations, and opportunities
- including needs identification for documentation, training, workshops, etc.

Develop, document, and adopt reporting standards

Example initial process for data collection

- With broadly representative planning group (~20 people), conduct focus group with notecards and flipchart

list three current data governance mechanisms at our [INSTITUTION], the systems or applications they cover	list three aspects of data governance that are absent at [INSTITUTION] or need to be strengthened
list three things that data governance at [INSTITUTION] should accomplish	list three roles or structures that should be included in [INSTITUTION'S] data governance system.

FOCUS GROUP ACTIVITY

FAR
BEYOND

Activity 6 – Draft input for planning process

- Using the framework below, draft useful responses to be incorporated into local planning

  - list three current data governance mechanisms
  - **list three aspects of data governance that are absent**
  - list three things that data governance should accomplish
  - list three roles or structures that should be included

- [Anticipate responses that may be counterproductive]
  - E.g. "IT should control data governance"

FAR
BEYOND

TECHNOLOGICAL "SOLUTIONS"

Technology applications for data governance

Technology
can support data governance

Data dictionary management	
Data quality analysis	
Master data management	
Issue and process management	

Technology
will not

Build organizational structures, responsibilities, accountabilities
Mend dysfunctional organizations
Implement organizational or cultural change

Collibra

data cookbook
idata Data Management for Higher Education

Informatica   melissa

ORACLE   sas

talend   Technikes
let the world know about it

FAR BEYOND

Data governance applications / vendors

Data Cookbook (iData)
- Allows management of data definitions
- Manages metadata within reporting environments
- Online service to communicate and define reporting terms
- Allows users to view definitions and terminology in reports

Collibra
- Full suite of metadata management and data quality tools
- Issue resolution workflow functionality
- Some users report complexity and not making use of full functionality

Melissa Data
- Data quality tool only
- No metadata management

Technikes
- Metadata management tool only.
- Integration with reporting tools, website search and manage data definitions.
- Integrated with active directory security
- No data quality validation or profiling tools

FAR
BEYOND

Issues to consider when selecting technology

Initial cost and annual cost

Alignment with needs

- Metadata mgt.
- Integration w/ reporting tools
- Data quality
- Security roles

User community
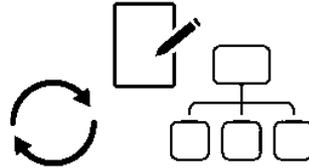
Ease of implement-ation

FINAL THOUGHTS

Takeaways

Data governance is more about people than data

All higher ed change management principals apply

Process, written documents, and structures are essential

Software can help, but it won't fix broken processes or organizations

Starting data governance is hard work; sustaining it is harder

Data governance is only one part of a data strategy

- A data strategy is a larger vision for how your organization will work with data.

  Data acquisition   Data usage & literacy

  Data governance   Data extraction & reporting

  Data quality   Data analytics

  Data access