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# Deconstructing Data Governance

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# Deconstructing Data Governance

STEVE STOCKDALE  
UNM Health Sciences Center  
NMTIE Conference  
November 20, 2015



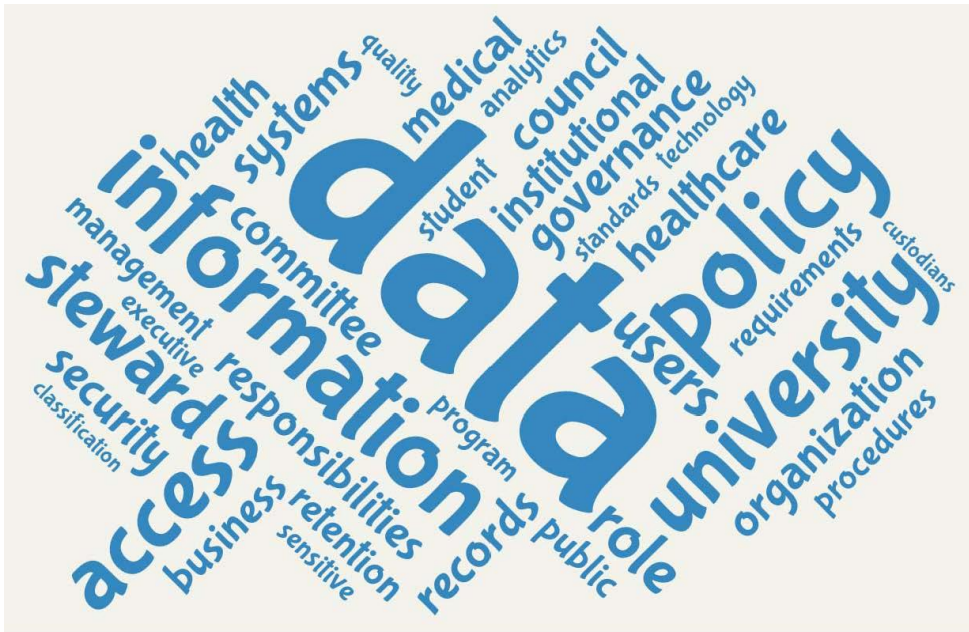
# Deconstructing Data Governance (DG)



## AGENDA

Background  
Deconstructing  
Integrating  
Resources  
Summary

# Background



My background  
UNM HSC initiative  
Peer research  
Policy sub-committee

# Deconstructing

# What is Data Governance?

... getting the right information at the right time  
to the right person at the right place for the right  
purpose.

# Data as an Institutional Asset

The sum of an institution's data, information and knowledge resources represents a valuable strategic asset.

*Any questions?*

# Data as an Asset - *Questions*

1. Should the most valuable information be the most shared, or the most protected?
2. Is the value of data most noticeable when data are available, or not available?
3. T/F – More effort at [*your institution*] is spent on restricting access to information than sharing information.
4. Does your institution treat data/information like a jewel in a deposit box, or as funds to invest?  
(*Return On Information?*)



# Data as an Asset!

“Information is a vital asset to the university.” (GWU)

“UMMS information is managed as a core institutional asset making it a key differentiator ... to make unique, strategic and operational decisions and faster medical discoveries.” (U. Michigan Med School)

“Institutional Data is a strategic asset of the University.” (UNC)

“The value of Institutional Data is increased through its widespread and appropriate use; its value is diminished through misuse, misinterpretation, or unnecessary restrictions to its access.” (Utah)

# 1995 Interview with Steve Jobs re: late '70s

<https://youtu.be/up-bOi8vg0s>

Jobs explains that in the early days of Apple II manufacturing, they didn't have good enough information systems to know what their costs were. But instead of thinking of it as an information issue, it was presented as "just the way" the cost accounting worked.



# ▶ Harvard Law School launches “Free the Law” project with Ravel Law to digitize US case law, provide free access

October 29, 2015

Teaching & Learning



Topics: [Legal History](#)

## Further Reading:

[The Paper Chase Post-Paper](#)

[Harvard Library Innovation Lab wins a 2015 Webby](#)

## Announcing Free the Law



# Diving Deep into the Fresh Air Archives...

Hey tumblr,

We are Alex and Niki, the two metadata specialists working on the *Fresh Air* Archives. WHY? was recently awarded a grant from the Council of Library and Information Resources (CLIR) to create a searchable database for 37 years' worth of *Fresh Air* episodes. The goal is to make this collection available for scholarly research and the public at-large.

According to Susan Burton's recent [New York Times Magazine feature](#) on Terry Gross, the *Fresh Air* host has conducted 13,000 interviews during the run of the show. Our task is to review and create appropriate metadata (data about data) for every interview, review, obituary, and commentary piece in the 8,000 episodes of WHY?'s digital archives. Our work will eventually allow users in WorldCat (a catalog of catalogs) to find specific content based on search terms like subject, guest name, critic, or book title.

Some trends we've observed so far include reviews of mystery novels, interviews with comedians, in-depth analysis of the Iraq and Afghanistan wars, conversations with neurologists, and tons of jazz reviews. Want to know the first time Terry talked to a transgender activist, or which film directors she spoke to in 2009? We'll make that possible.

In the coming months, we'll give you updates on the project, highlight noteworthy interviews from years past, and discuss popular topics featured on the show, so stay tuned!

## from UW Data Management Committee

- Charter Letter from Provost, October 2010
- DMC includes 23 leaders across the university
- Why?
  - consistency in approach, designation, governance of data, metadata, information base of business processes
  - clear and commonly-used structures, models, definitions and processes to support coordination, collaboration, decisions, efficient operations University-wide
  - guidance and recommendations re: institutional data in order to expand access, improve quality, inform strategic planning, assure security, and support business performance management

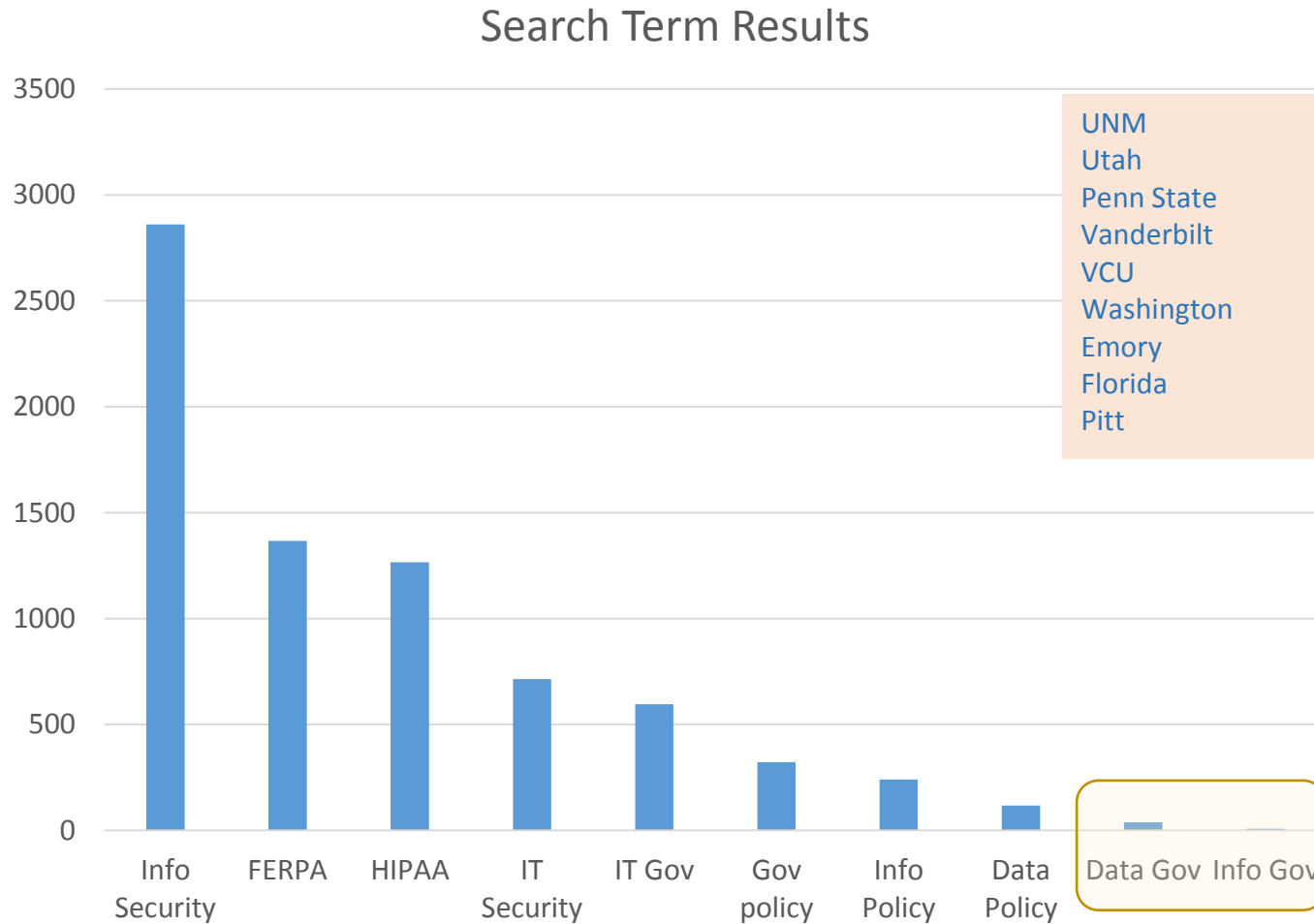
<http://www.washington.edu/uwit/divisions/im/dmc/>

# Why DG?

“Our president was updating the Board on our goal to recruit more high-achieving Latinos. He showed them our new curriculum and marketing materials. Someone asked how many students we’d admitted and what programs they selected. It took us the whole day to figure out it would take IR a month to answer the question.” - *Anon*

# Discussion – your examples

# Prevalence of Data Governance?





# DG vs. DM vs. IT

## DATA (INFO) MANAGEMENT

Delegated Authority  
Unit/Local Compliance  
Unit/Local Needs,  
Priorities, Decisions  
Implements DG Policies

## DATA (INFO) GOVERNANCE

Institutional Authority  
Institutional Decisions  
Ultimate Accountability  
Policies, Standards  
Values, Guidance

## INFORMATION TECHNOLOGY

Technical Implementation

- Network
- Hardware
- Software
- Apps/Platforms
- Security

# Information Technology

# Data/Information Governance



s	0	1	0	1	0	0	1	1
t	0	1	1	1	0	1	0	0
e	0	1	1	0	0	1	0	1
v	0	1	1	1	0	1	1	0
e	0	1	1	0	0	1	0	1

p	0	1	1	1	0	0	0	0
a	0	1	1	0	0	0	0	1
t	0	1	1	1	0	1	0	0
i	0	1	1	0	1	0	0	1
e	0	1	1	0	0	1	0	1
n	0	1	1	0	1	1	0	0
t	0	1	1	1	0	0	0	0

## Dam Construction Company

### Information Technology



## Government Water Authority

### Data/Information Governance

s	0	1	0	1	0	0	1	1
t	0	1	1	1	0	1	0	0
e	0	1	1	0	0	1	0	1
v	0	1	1	1	0	1	1	0
e	0	1	1	0	0	1	0	1

p	0	1	1	1	0	0	0	0
a	0	1	1	0	0	0	0	1
t	0	1	1	1	0	1	0	0
i	0	1	1	0	1	0	0	1
e	0	1	1	0	0	1	0	1
n	0	1	1	0	1	1	0	0
t	0	1	1	1	0	0	0	0

# Data Governance – Definition #1

*... the processes, policies, standards, organization, and technologies required to manage and ensure the accuracy, integrity, accessibility, quality, auditability, and security of data ...*

# Data Governance – Definition #1

documented framework

*... the processes, policies, standards, organization, and technologies required to manage and ensure the accuracy, integrity, accessibility, quality, auditability, and security of data ...*

# Data Governance – Definition #1

*... the processes, policies, standards, <sup>governing structure</sup> **organization**, and technologies required to manage and ensure the accuracy, integrity, accessibility, quality, auditability, and security of data ...*

# Data Governance – Definition #1

enabling capabilities

*... the processes, policies, standards, organization, and **technologies** required to manage and ensure the accuracy, integrity, accessibility, quality, auditability, and security of data ...*

# Data Governance – Definition #1

*... the processes, policies, standards, organization, and technologies required to manage and ensure the accuracy, integrity, accessibility, quality, auditability, and security of data ...*  
manageable characteristics



# Data Governance – Definition #2

*... the system consisting of decision rights and an accountability framework to encourage desirable behavior in the valuation, creation, use, storage, archival and deletion of information.*

# Data Governance – Definition #2

*... **the system** consisting of decision rights and an accountability framework to encourage desirable behavior in the valuation, creation, use, storage, archival and deletion of information.*

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# Data Governance – Definition #2

*... the system consisting of decision rights and an accountability framework to encourage **desirable behavior** in the valuation, creation, use, storage, archival and deletion of information.*

# Data Governance – Definition #2

*... the system consisting of decision rights and an accountability framework to encourage desirable behavior in the valuation, creation, use, storage, archival and deletion of information.*  
life cycle

# Data Governance – Derived Definition

a governing structure with documentation  
enabled by technology capabilities  
to manage data  
according to decision rights  
within an accountability framework  
that encourages desirable behavior  
over the life cycle of the data/information

# What Data Governance Is, Isn't

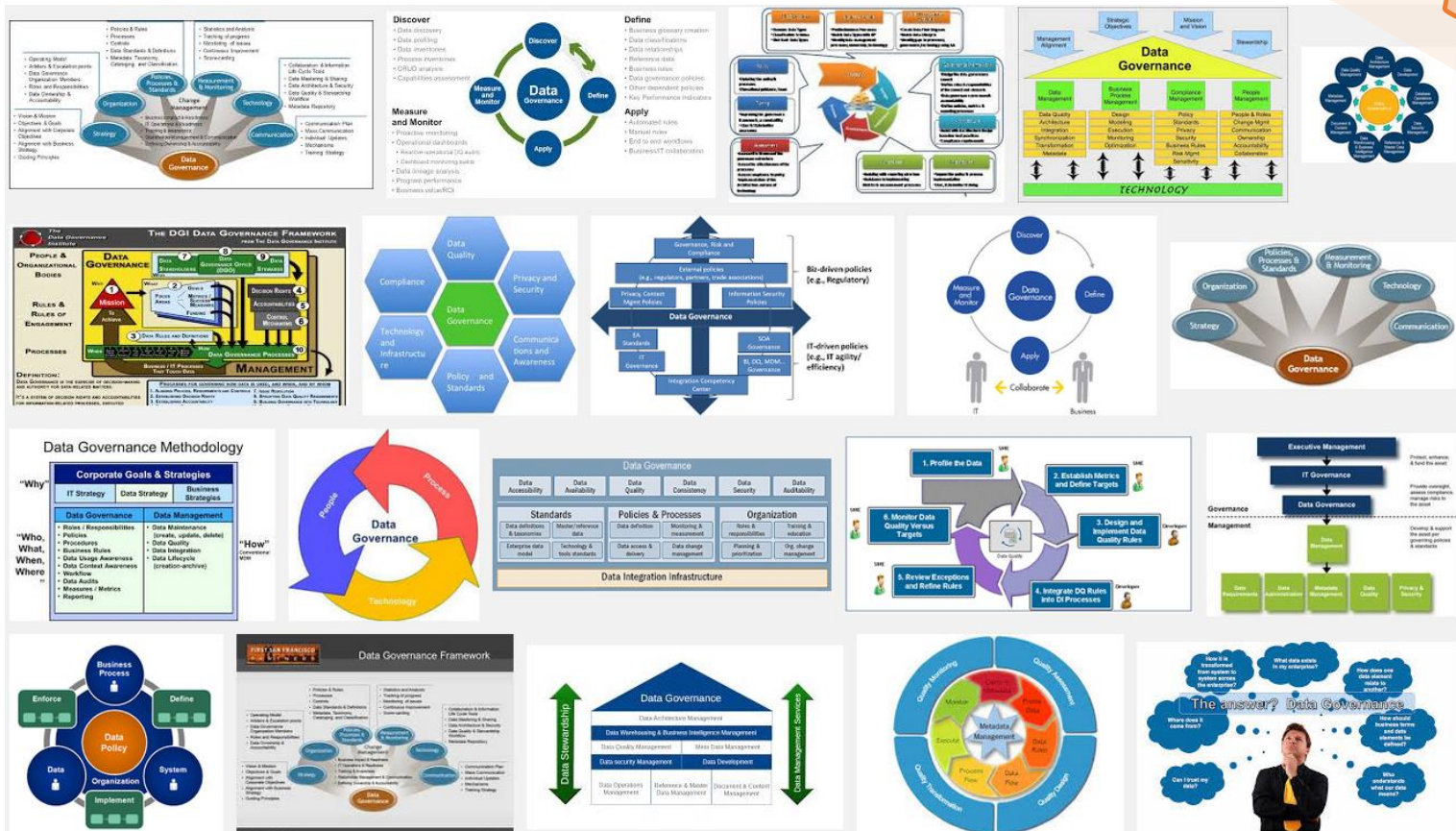
<b>Data Governance is:</b>	<b>Data Governance is <i>not</i>:</b>
An ongoing business-centered activity	<b>A one-time IT project</b>
Valuing the strategic value of data/info; unique to each	<b>A template, model or list of common practices</b>
About governing the behavior of people	<b>Managing bits and bytes</b>
Integrates business processes with data and supporting technologies	<b>IT security, IT governance</b>

# Integrating



NO STANDARD

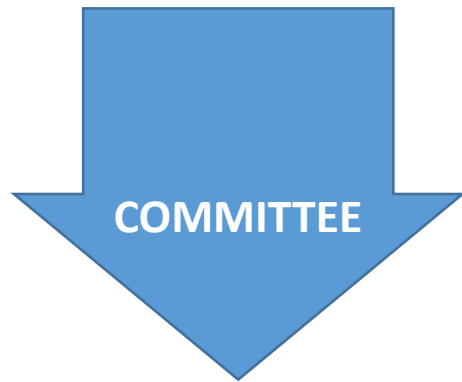
# Elements of Data Governance



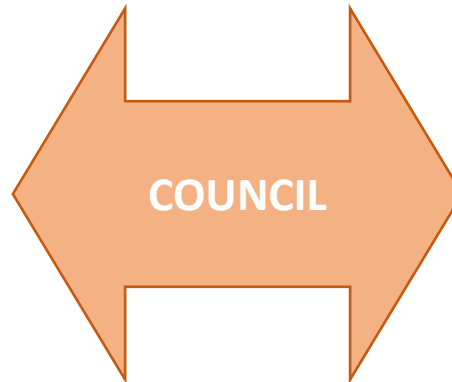
# Elements of Data Governance

- Governing structure
- Roles and responsibilities
- Data classification
- Policies, standards, guidelines, etc.
- Implementation

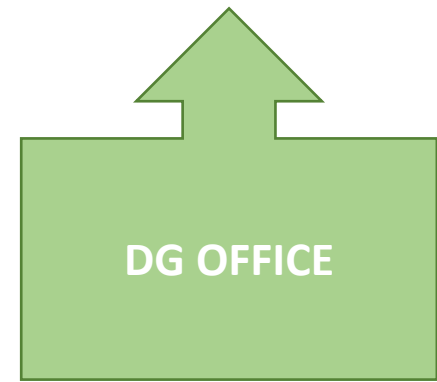
# Data Governance Governing Structure(s)



Appointed by executive  
Typically direct reports



Appointed by managers  
Larger, broader  
representation



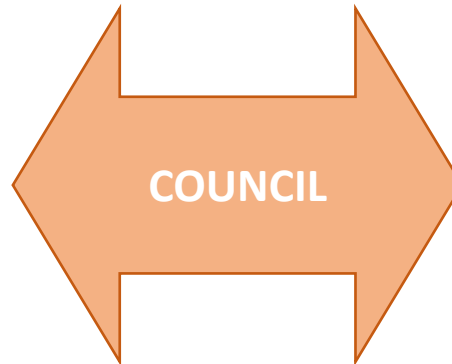
Dedicated personnel  
Similar to PMO

# Data Governance Governing Structure



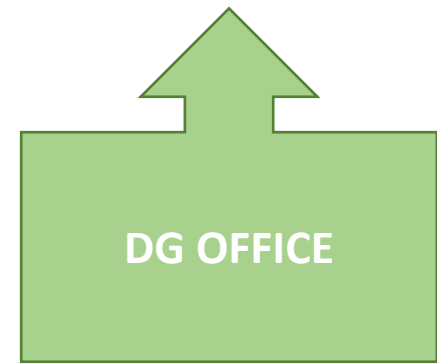
Appointed by executive  
Typically direct reports

*Pros: highest level, can  
make decisions*  
*Cons: focus, interest?*



Appointed by managers  
Larger, broader  
representation  
Reports to \_\_\_\_\_?

*Pros: representative*  
*Cons: authority? too  
many? consensus?*

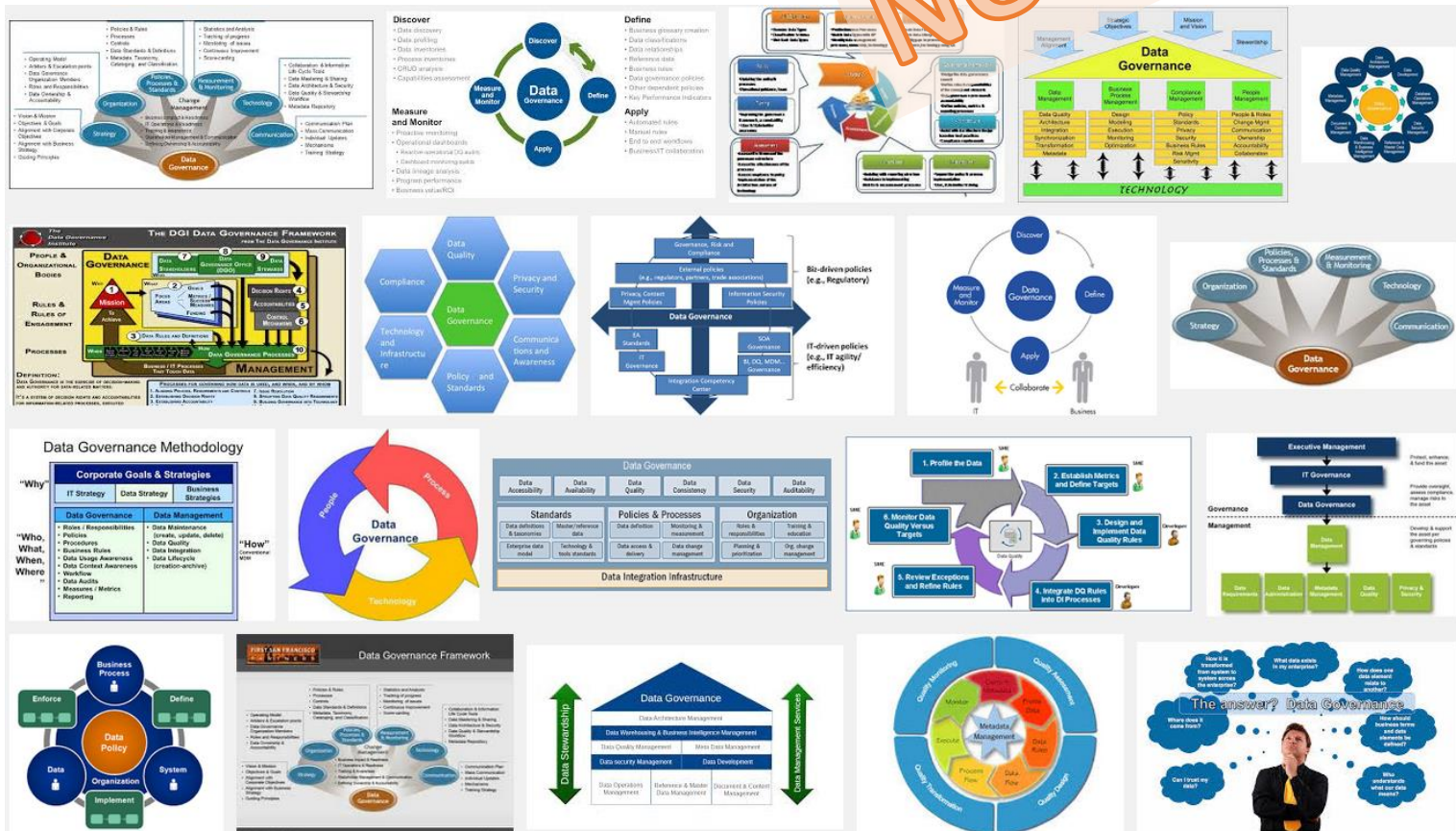


Dedicated personnel  
Similar to PMO  
Reports to \_\_\_\_\_?

*Pros: dedicated, action*  
*Cons: cost, authority,  
visibility?*

# Roles and Responsibilities

NO STANDARD



# DG Roles and Responsibilities

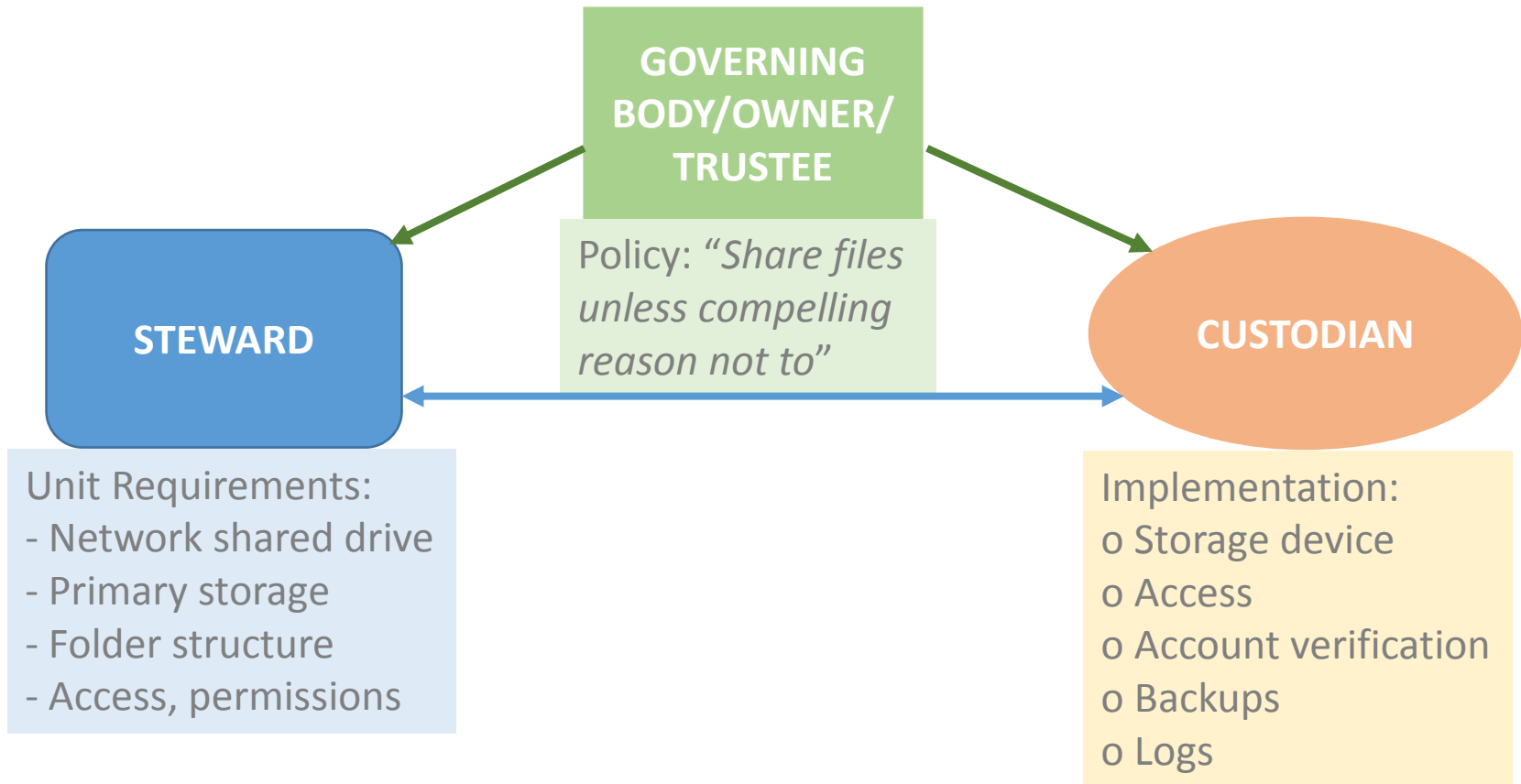
- No consensus labels or terminology
- But *generally* include:
  - Executive officer or group as authority
  - Senior business unit leaders with delegated authority and accountability
  - Technologists (IT) tasked to design, operate and maintain systems
  - Users with authorized access

# DG Roles and Responsibilities - *Generally*

Role	Responsibility
Owner, Trustee, Group	Institutional decision making authority, responsibility
Steward	Delegated authority and accountability at business unit level
Custodian	Typically IT, implement DG directives in hardware, software, networking
User	Authorized access to data with training and expectation of compliance



# Roles and Responsibilities (example)





# DG Roles and Responsibilities

## U. of Washington Data Map

<http://www.washington.edu/uwit/divisions/im/dmc/>

# Data Classification System

- Generally, 3-4 classifications
- Least sensitive/protected to most
- Must be communicated and deployed



# Data Classification

UNIVERSITY DATA CLASSIFICATIONS:	Highest Protection ←————→ Lowest Protection			
Arizona	Regulated	Confidential	Internal	Public
Arizona State	Level 4-Highly Sensitive	Level 3 - Sensitive	Level 2-Internal	Level 1 - Public
California-Davis	Restricted	Private	Public	
California State	Level 1 - Confidential	Level 2 - Internal Use	Level 3 - General	
Colorado	Highly Confidential	Confidential	Public	
Colorado State	Restricted	Private		
Connecticut	Confidential	Protected	Public	
Emory	Restricted	Confidential	Internal	Public
Florida	Restricted	Sensitive	Open	
George Washington U.	Regulated	Restricted	Public	
Kentucky, + Medical Center	Confidential	Sensitive	Public	
NMSU	<i>not found</i>			
Ohio State	Restricted	Private	Internal	Public
Oklahoma HSC	Category A-Most Sensitive	Cat B-Moderate Sensitivity	Cat C-Some Sensitivity	Cat D - Not Sensitive
Oklahoma State	<i>not found</i>			
Penn State	Restricted	Internal/Controlled	Public	
Penn State Hershey Medical Ctr	Protected Health Info	Confidential Business Info	Other Non-Public Internal	Public
Stanford (prior to May 2015)	Restricted	Sensitive	Public	
Stanford (after May 2015)	High Risk	Medium Risk	Low Risk	
Texas (Austin)	Category I	Category II	Category III	
Texas A&M	Confidential	Sensitive	Public	
<b>UNM</b>	<b>Encryption, "E-Class"</b>	<b>Confidential, "C-Class"</b>	<b>Public, "P-Class"</b>	
<b>UNM - HSC</b>	<b>Confidential</b>	<b>Restricted</b>	<b>Unrestricted</b>	
Utah, + Health Sciences	Restricted	Sensitive	Public	
Utah State	Confidential	Internal Use	Public	
Vanderbilt, + Medical Center	Confidential	Restricted	Unrestricted	
Virginia Commonwealth	Category I	Category II	Category III	
Washington, + Medical Center	Confidential	Restricted	Public	

# Policies, procedures, standards, etc.

## ‘Common’ policy content:

- Purpose, Scope, Introduction
- Principles
- Statement regarding Institutional Data
- Authority, Delegation of Accountability
- Roles and Responsibilities
- Data Classification (or reference)
- Definitions/Glossary
- References, related policies

# Policy-Defined Terms

*compiled from six representative policies*

Access  
Best Practices  
Data  
Data Administrators  
Data Custodian  
Data Governance  
Data Steward  
Data Users  
Departmental/Unit/ Local Data  
Repositories  
Information

Institutional Data Model  
Institutional Information  
Institutional Metadata  
Metadata  
Private/Confidential Data  
Public Data  
Record  
Sensitive Data  
Subject Area Domains  
System of Record  
Workforce Member

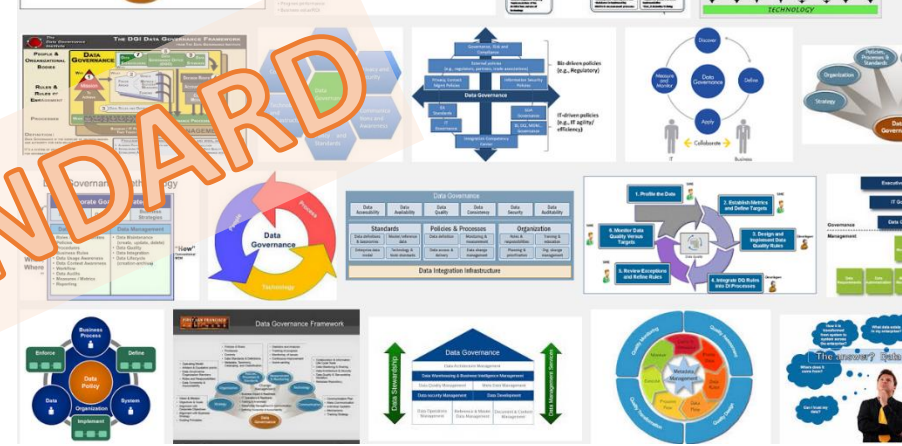
# Information Management

## NO STANDARD



The collage features several diagrams and frameworks related to data governance:

- The OSI Data Governance Framework:** A layered model showing the relationship between Data Governance, Data Management, and Data Architecture.
- Data Governance:** A circular flow diagram illustrating the cycle of Data Governance, Data Management, and Data Architecture.
- Data Governance Framework:** A central circle labeled 'Data Policy' surrounded by four quadrants: Business, Process, People, and System.
- Data Governance:** A central circle labeled 'Data Policy' surrounded by four quadrants: Business, Process, People, and System.
- Data Governance:** A central circle labeled 'Data Policy' surrounded by four quadrants: Business, Process, People, and System.



## Governance Principles for Healthcare

- Accountability
- Transparency
- Integrity
- Protection
- Compliance
- Availability
- Retention
- Disposition

American Health Information Management Association  
(AHIMA)

## Data Governance Checklist

*(section headings)*

- Decision-making authority
- Standard policies and procedures
- Data inventories
- Data content management
- Data records management
- Data quality
- Data access
- Data security and risk management

Privacy Technical Assistance Center ([ptac.ed.gov](http://ptac.ed.gov))

# Implementation

*... govern to the least extent necessary to  
achieve the greatest common good ...*

Dale Sanders  
“Demystifying Healthcare Data Governance”  
HealthCare Catalyst

# Summary

- Valuation of institutional data
- Effective utilization of data can provide real competitive advantage
- DG practices and initiatives not as mature
- DG is not DM is not IT (*careful with labels*)
- DG is about governing people
- Each institution's needs are unique ...



November 20, 2015

## Steve Stockdale

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# Deconstructing Data Governance

# GO FORTH AND GOVERN DATA!

# Thanks for attending

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