



How to transform the landscape of analytics with data governance

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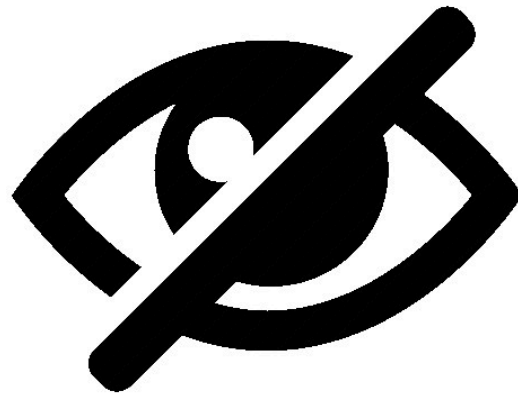
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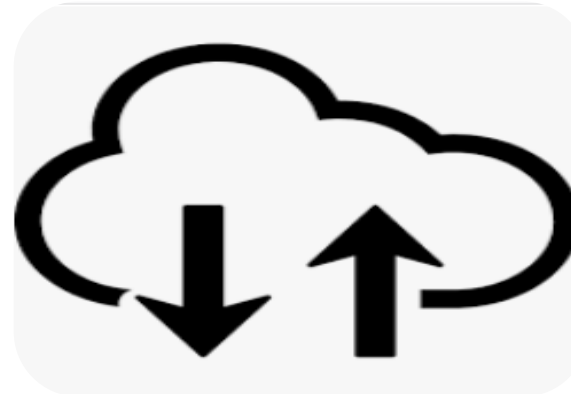
Data governance is a strategic priority



Proliferation of
data and
applications



Privacy
expectations/
regulations



Cloud data
mobility



Fair and
ethical use

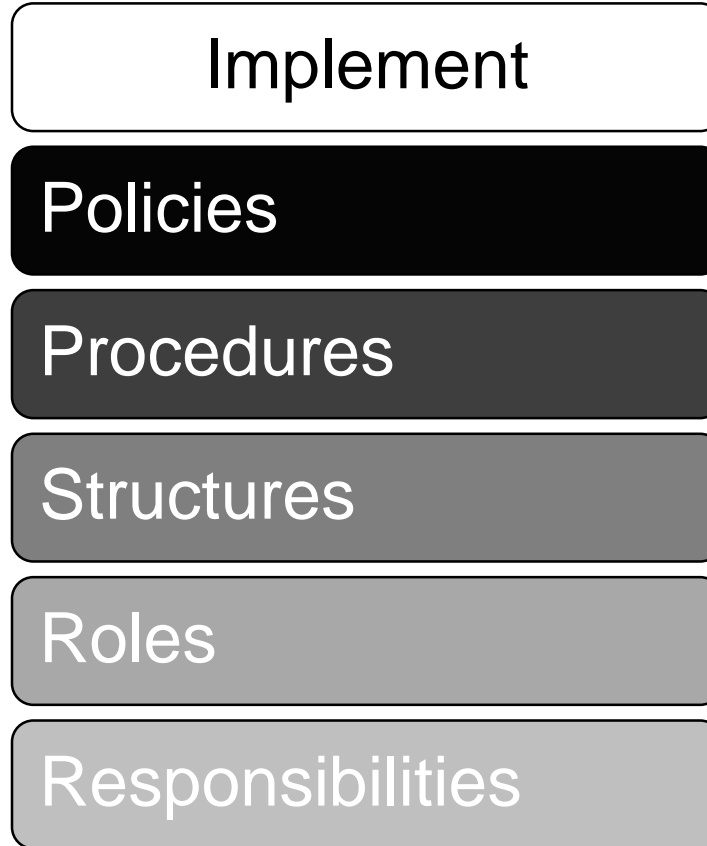
The 5-second elevator definition

Data
governance
is ...

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

What is Data Governance?

John Ladley –
Data governance is the organization and implementation of policies, procedures, structure, roles, and responsibilities which outline and enforce rules of engagement, decision rights, and accountabilities for the **effective management of information assets.**



Important characteristics of DG definitions

Data governance IS

- 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

Data Governance IS NOT

- IT's responsibility
- Solved by technology
- Equally applied across all data assets

Why Do We Need Data Governance?

Maximize
Data
Investments

Gain Deeper
Insights

Promote
Efficiency

Ensure Trust

Reduce Risk

Improve the
Experience

Principles of Data Governance

Consistency
of data in its sourcing
and in its vocabulary,
definitions, and
taxonomies

Quality
which is proactively
assessed and
standards applied

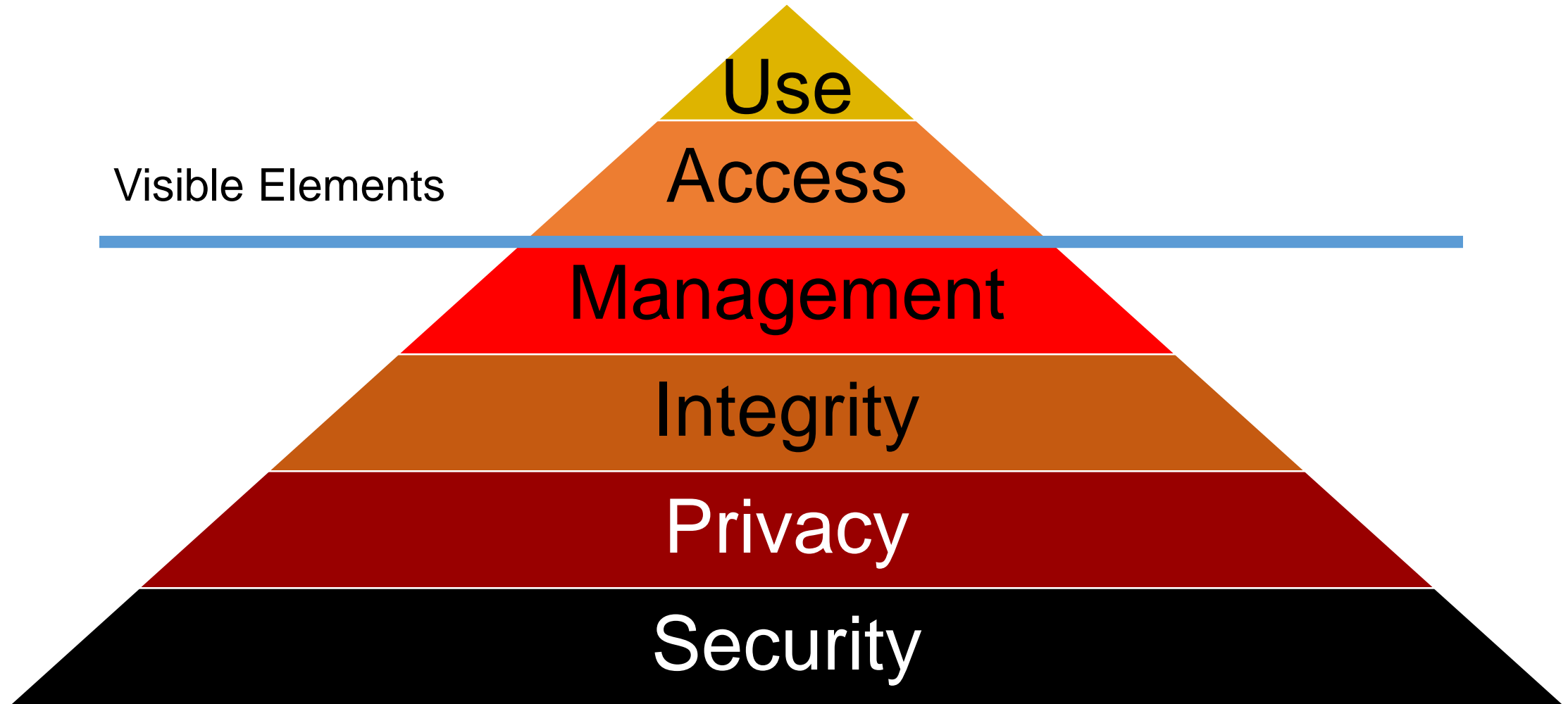
Responsibility
and accountability
defined across the data
lifecycle and recorded in
the information asset
register

**Business
alignment**
which ensures that data is
regarded and treated as a key
business asset

Secure access
to relevant users, kept
secure through access
control

Insight

What are the Data Dimensions



Key features of data governance systems

Documents

- Charter / framework
 - Principles & values
 - Purpose & scope
 - Roles & responsibilities
- Written & published policies
- Data dictionaries
- Communication strategies

Groups

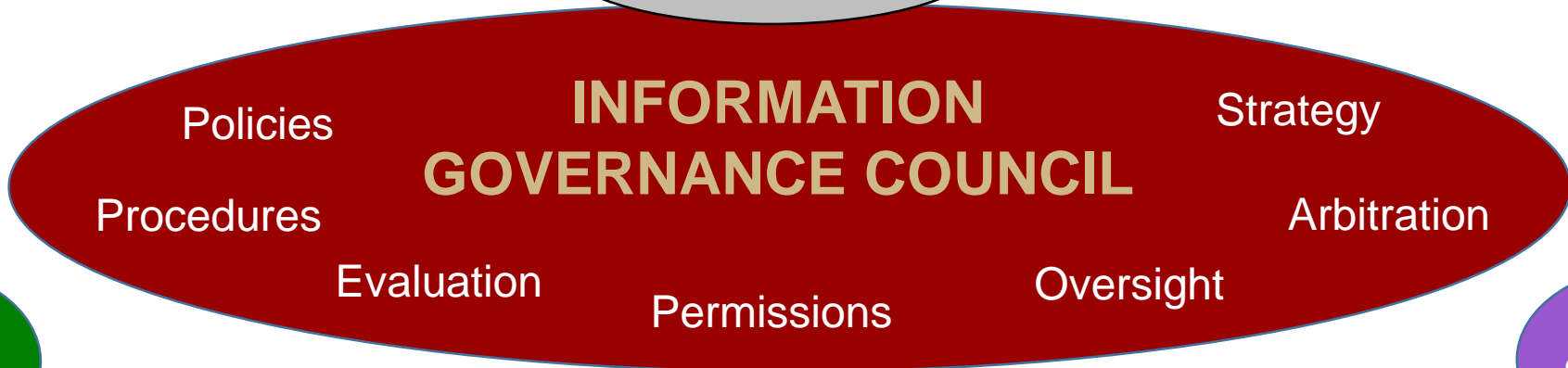
- Senior leadership [buy-in]
- Policy council
- Data steward council(s)
- Information security council/program
- Positions/office to support DG

Individual roles

- Data stewards
- Data custodians/caretakers
- Data users



Chief Data Officer



Human Resources

Fair & Ethical Use

Financials

Data Sciences

Functional Governance Groups

Student Information

Alumni & Foundation

Business Intelligence

Data Strategy



Information Governance Council Purpose

Create a data governance imperative

Promote a data-engaged campus

Create and update policies

Create access control mechanisms

Manage conflict resolution

Promote shared data management

Authorize data movement and storage

Reinforce reporting controls

Define and arbitrate fair and ethical use

Evaluate and assess effectiveness

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**

Functional Data Stewardship Council/Committees

Coordinate
data stewards in
related area

Set / review
definitions, data
quality rules,
creation/usage
rules, metadata

Consider and
approve
**changes to
code sets**

Enforce
data dictionary
standards in area

**Review data
quality**
in functional area;
identify practices
promoting data
quality

**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

Data users

Expectations should be set for data users. Example formal responsibilities (Stony Brook)

Recognize that institutional data are potentially complex.

Make efforts to understand the source, meaning and proper use of the data

Include information about the data source and criteria to guard against misinterpretations of data.

Respect the privacy of individuals whose records they may access.

Ensure that **passwords** or other security mechanisms are used for sensitive data

Report data quality issues to appropriate data steward

Keys to Implementation

Change Management 101

Create value
statement for
DG

Prepare a
roadmap

Design the
program

Identify
rough costs
and staffing

Identify
structure and
roles on
governance
committees

Plan
meetings and
document via
shared
media

Additional Keys to Implementation

Document

Communicate

Evaluate



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



Example 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 valued.	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.

Takeaways

- Data governance is more about people than data
- All higher ed change management principles apply
- Process and written documents are essential
 - Leadership support
 - Broad-based consultation, including faculty
 - Opportunity for consultation
 - Representation
- Software can help, but it won't fix broken processes or organizations
- Starting data governance is hard work; sustaining it is harder



Questions?

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