



Fundamental Concepts in Data Insight:

Data Governance

Fundamentals for a General Audience





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Data Governance

- What is Data?
- What is Data Governance?
 - WB. How do you manage data as an asset?
 - WB. What does Data Governance oversee?
 - What are the goals of Data Governance?
 - WB. What areas does governance touch?
 - Review: What topics does governance cover?
- How does Data Governance relate to Compliance?
 - Governing Organizations
- How do we govern data systems?
 - How does meta-data help govern data systems?
 - WB. How are Data Governance roles defined?
 - How do organizations implement Governance?
 - What is Data Stewardship?
- The Data in Data Governance
 - How do you value data?
 - How do we ensure data quality?
 - How do you manage data security?
- Group Exercise





What is Data Governance?





What is Data?

- (measurements of observable variables....)
- a corporate asset
 - which must be managed
 - to derive maximum value
- a support for
 - high-quality decision making
- consider:
 - how are other organizational assets managed?





WB. How do you manage data as an asset?





WB. What does Data Governance oversee?





What is data governance?

- you know
 - what data you have
 - where it's stored
 - who has permissions to access
 - how authorized users use it
- governance guides all other data management functions
- data management *done well*
 - ie., formalized policy and procedures





What are the goals of Data Governance?

- regulatory compliance
- enable organizations to manage data as an asset
- define, approve, communicate principles & practices
- monitor and guide policy, compliance and usage
- manage & resolve data issues
- sponsor, track, oversee data management
- understand and promote value of data assets
- enforce policies
- ensure data strategy follows business strategy





WB. What areas does governance touch?





Review: What topics does governance cover?

- Strategy
- Policy
 - access, usage, security, standards, and quality
- Oversight (stewardship)
 - audit, quality, policy
- Compliance
- Issue management
- Data management project sponsorship
- Data asset valuation
 - framework for valuing data assets





How does Data Governance relate to Compliance?

- governance teams work with
 - business and technical leadership
- regulation questions
 - which regulation is relevant to organization?
 - what does compliance look-like?
 - how is compliance monitored and demonstrated?
 - what is the risk of non-compliance?
 - how is non-compliance redressed?
- example regulations
 - Basel II for EU bank risk
 - Solvency II for insurance
 - GDPR for EU data privacy and control





Governing Organizations





How do we govern data systems?

- centralise data into a (cloud) data systems
- data quality & auditing procedures
 - data catalogue covers whole data systems
- consistent data security procedures enforced by-design
- regulatory compliance by-design
 - ownership, access, useage, auditing
 - compliance-sensitive data flagged





How does meta-data help govern data systems?

- meta-data
 - data about data
- meta-data can track
 - what data is used for
 - data origin, destination
 - data access, ownership
- data catalogue
 - software which tracks meta-data
 - visibility on data access, modification,





WB. How are Data Governance roles defined?





How do organizations implement Governance?

- change-management via C-level sponsorship
- governance team
 - departmental stewards
 - ensure governance culture
- policy and practice development





What is Data Stewardship?

- governance = enterprise policy
- stewardship = business domain experts who implement
 - socialize/normalize governance in their area
- data stewards are implementers of data governance
 - typically several, and specialized to relevant areas
- stewards
 - create and manage metadata
 - business terminology and glossary
 - reference data values
 - rules, standards and practices





The Data in Data Governance





How do you value data?

- economic value of data
 - non-fungible (not interchangeable)
 - market valuation
 - product valuation
 - strategic evaluation
- competitive differentiator
- replacement cost





How do we ensure data quality?

- data insight requires data which is high quality
 - accurate
 - complete
 - well-formatted
 - relevant
- data steward
 - responsible for data quality
 - manages meta-data
 - auditing procedures
- data citizens
 - transparent access to organizational data
 - coordinate with data stewards





How do you manage data security?

- access control and role-based access
- column-level and row-level permissions
- hide values, communicate type/structure
 - eg., credit card details hidden from DBAs
- multifactor authentication
- encryption
 - possibly at-rest and in-flight
- redundancy and backup





Group Exercise

Consider how you would communicate value of Data Governance to your organization.

- find case studies of
 - failures due to lack of governance
 - opportunity costs
 - gains of revenue
- "make it real" to your organization

