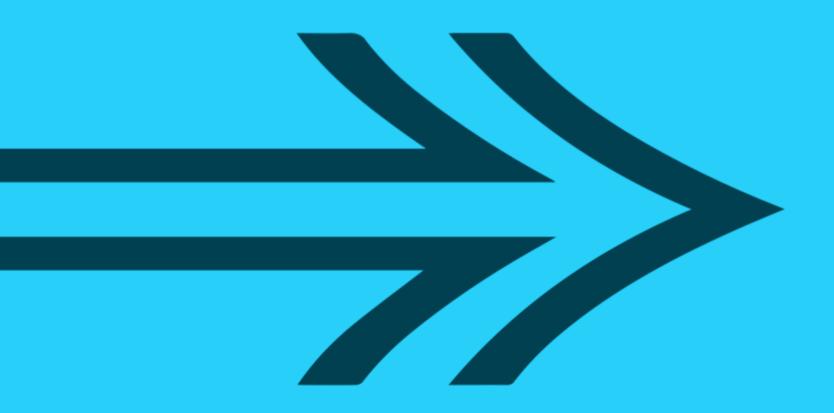


# Fundamental Concepts in Data Insight:

#### **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?

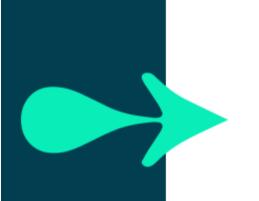


#### What is Data?

- (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?

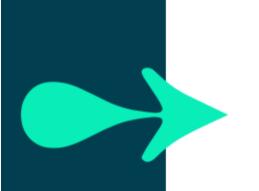


WB. How do you manage data as an asset?





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

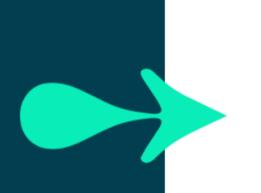


#### What are the goals of Data Governance?

- regulartory compliance
- enable organizations of manage data as an asset
- define, approve, communicate principals & practices
- monitor and guide policy, compliance and usage
- manage & resolve data issues
- sponsor, track, oversee data manaagement
- understand and promote value of data assets
- enforce polices
- 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 (clould) 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

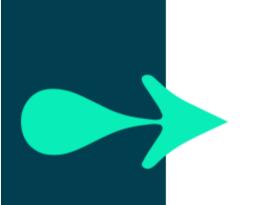


#### How does meta-data help govern data systems?

- 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
  - departemental stewards
    - ensure governance culture
- policy and practice development



#### What is Data Stewardship?

- governance = enterprise policy
- stewardship = business domain experts who implement
  - socailize/normalize governance in their area
- data stewards are implementers of data goverannce
  - 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 Governace to your organization.

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