Data Governance
Theory vs. Practice
A guide to pragmatic data governance

A conversation with

Rachel Haines
Principal Solutions Architect
Quest Software
Rachel.Haines@Quest.com
Hosted by Mike Meriton
Co-Founder & COO, EDM Council

- Joined EDM Council full-time 2015 to lead Industry Engagement
- EDM Council Co-Founder & First Chairman (2005-2007)
- Former CEO GoldenSource (2002-2015)
- Former Executive for D&B Software and Oracle
- FinTech Innovation Lab – Executive Mentor (2011 – Present)
Today’s speaker

Rachel Haines
Principal Solutions Architect
Quest Software

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Data Governance
Theory vs. Practice

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Rachel.Haines@Quest.com

A guide to pragmatic data governance
Contents

- What is the current state of Data Governance?
- What does it mean to “govern” the data?
- What are the tactical “first steps” for Data Governance implementation?
- How much governance is enough?
- Who should participate in start-up Data Governance?
- What is the role of technology?
- What are the best practices which will lead to a successful implementation?
Industry Standard Models for Data Governance

Data Management Frameworks

Data Governance Institute Data Governance Framework

Six-Sigma DMAIC Process
Industry Standard Model Take-aways?

- Frameworks provide strategic value
- Data is a vital enterprise asset
- Data Management is a journey
- Metadata Management is foundational (commitment, planning, definition, management of quality, risk management)
- There are Strategic, Tactical, and Operational components
- Both Business and IT partners participate and have a role to play
- Data Management encompasses multiple technical and non-technical disciplines
  - Data Governance
  - Data Quality
  - Master Data Management
  - Database Management
  - Business Functional Knowledge
  - Business Operational Knowledge

Data Governance
Data Quality
Master Data Management
Database Management

Business Functional Knowledge
Business Operational Knowledge

Data is valuable
- Data is an asset with unique properties
- The value of data can and should be expressed in economic terms

Data Management Requirements are Business Requirements
- Managing data means managing the quality of data
- It takes Metadata to manage data
- It takes planning to manage data
- Data management requirements must drive Information Technology decisions

Data Management depends on diverse skills
- Data management is cross-functional
- Data management requires an enterprise perspective
- Data management must account for a range of perspectives

Data Management is lifecycle management
- Different types of data have different lifecycle characteristics
- Managing data includes managing the risks associated with data
Definition of Governance

What does it mean to “govern” data?

That depends…
- All data is not of equal value
- More valuable data requires more oversight
  - Greater quality frequency
  - More detailed testing
  - More usage audit
- Consider: What is the MVP for each level of data criticality

There are both strategic and tactical components to Data Governance
- Governance is Strategic
- Stewardship is tactical
Data Governance Cycle

- **Identify** un-governed data
- **Catalog** tribal knowledge one data element / one data repository at a time
  - Rationalize / harmonize the data into a common vocabulary
- **Analyze** the data for fitness
- **Improve** and fix where necessary
- **Share** results
  - Involve Stakeholders via Change Management
  - Publish the results
- **Rinse and repeat**
What are the tactical “first steps” for Data Governance implementation?

**Ready! - Establish Standards**
- People
  - Roles / Responsibilities
  - Organizational Structure
- Process
  - Classification Standard
  - Prioritization Scorecard
  - Metadata Standard (MVP)
- Technology
  - Data Dictionary
  - Business Glossary
  - Accelerators

**Set! - Scope a “Doable” Project**
- Partner with the Business
- Identify a resolvable problem (clear use case / measures of success)
- Scope a critical data assets

**Go! - Govern Data**
- On-board data
- Measure quality
- Manage / fix issues
- Communicate status and results
How much governance is enough?

• To understand what would be “useful” to users, we need to appreciate that most will have the same basic questions:
  • What is the meaning of the data?
  • Where is the data?
  • Is the data fit-for-purpose
  • How do I get access to the data?

• If we have done our jobs correctly, these questions should be answered by the metadata we collected as part of the MVP model discussed earlier.

• Build enough governance process to get the job done and not be a burden
Data Intelligence People of Interest

C-Suite (CDO, CIO, etc.)
Requires enterprise-wide visibility to limit risk and ensure data is leveraged as a company advantage.

Data Owners
Functional roles across the organization concerned with data usage risks and providing appropriate data access.

Business Data Steward
Responsible for meaning and correct data usage across the enterprise.
Ensures business rules and policies associated with data are in place and understood.

IT Data Steward / Data Custodian
Ensures the data use rules and policies are managed and operationalized within IT.
Manages the actual data per data owner’s rules and oversees schema and lineage.

Data Architect
Designs, structures, organizes and maintains data.
Benefits from visibility of a catalog of data assets tied to business context in order to better architect solutions.

Data Analyst
Charged with mapping data assets to establish integrations and lineage. May also facilitate data preparation.
Benefits from automation of mapping tasks and immediate visibility into data details.

Data Engineer / Developer
Builds data platforms, develops data pipelines and delivers development projects.
Benefits from automated code generation to speed project delivery and to focus on higher-value tasks.

GRC, Security/Privacy Architects + Analysts
Many in governance, risk and compliance [GRC], data privacy/ and security, and legal roles benefit from data governance providing context of data as they protect and enable the enterprise.

Data Scientists, Business and BI Analysts, etc.
Data consumers across the enterprise that all benefit from greater visibility and access to data, with contextual meaning and usage guidance attached.
DG Operating Model - Organizational Perspective

Data Governance Executive Board
(Strategy, Vision, Mission, Alignment)
- Data Governance Charter
- Align Data Governance to Enterprise Goals
- Prioritize and Fund Data Governance Efforts
- Define Data Governance Vision, Mission, Goals

Data Governance Working Group – Data Owners
(Tactics, Goals, Policies, Procedures, Issue Management)
- Resource Management
- Data Ownership and Accountability
- Issue Prioritization and Management
- Data Governance Standards and Policy Approval
- Communicate & Educate
- Align to Business Needs for Data

Data Stewardship Council – Data Stewards, Data Custodians, Data Movement Engineers
(Execution, Subject Matter Expertise, Analysis, Monitoring)
- Data On-boarding
- Issue Logging
- Issue Impact / Root Cause Analysis, Remediation
- Data / Process Subject Matter Expertise
- Data Quality Reporting
- Execution of Best Practices

Data Governance Office – DG Administrator
(Standards, Best Practices, Education)
- DG Best Practice Leadership
- DG Roadmap and Execution
- DG Mentoring and Education
- Dev Standards, Policy, Procedure, RACI
- Communicate / Coordinate / Facilitate
- Operational Management of DG Program
What is the role of technology?

• Ingestion Automation
  – Data at Rest (databases, flat files, other structured data)
  – Data in Motion (ETL, Python, SQL)
  – Data Models
  – Business Concepts (Business Terms, Business Rules, Policies, Standards)
  – Metadata Enhancement (associations, classifications, accountabilities)

• Lineage / Impact Analysis (source-to-target mapping, transformations, SOR / SOT, Change Management)

• Data Quality (measurement, publication, visualization, trend analysis)

• Search by Characteristic (type, classification, domain, associations)

• Workflow Management (accountability, checks and balances)

• Audit Support
What are the best practices which will lead to a successful implementation?

- Start small – Don’t boil the ocean
- Solve problems – Get the win
- Share results
- Learn and mature
- Expand data and metadata scope
- Trust, Transparency, and Discipline
Thank you!

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Questions?

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FOR MORE INFORMATION:

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