

Data Stewardship for Utility Companies

Data stewardship incorporates all the practices to ensure that data is accessible, usable, protected, and trustworthy. Data stewards oversee the processes that guide effective controls and uses of data assets. In this data-driven age, the activities of active data stewardship are becoming increasingly important. Rapid expansion of data volumes, data variety, number of users, and number of use cases brings corresponding growth of data opportunities and data risks. Data stewardship is a core competency and an essential data governance capability for modern, data-driven organizations. It is central to value creation and risk management activities with data. Effective data stewardship requires the right knowledge and skills for data stewardship program management, data steward collaboration, and day-to-day data management practices. Discussions based on the utility industry are provided throughout the course to explore common challenges. Examples for break-out sessions will be selected from areas such as regulatory compliance, customer billing, asset management or grid operations.

You will learn:

- What is Data Stewardship and why is it needed
- Who are Data Stewards and what are their roles and responsibilities
- How does Data Stewardship fit into organizational structures
- Who are Data Owners and how do they work with Data Stewards
- What knowledge is needed to be effective as a Data Steward
- How can Data Stewards identify, diagnose, and resolve data problems
- What does it take to implement, evolve, and mature a Data Stewardship program

Geared to:

- Practicing and aspiring Data Stewards
- Data Governance leaders and program managers
- Data management professionals responsible for data quality
- Data management professionals responsible for data privacy and data protection
- Data owners, data strategists, data architects, and others who collaborate closely with data stewards

Module 1: Data Stewardship Concepts

- **The Importance of Data**
 - What is Data?
 - Data as an Asset
 - Data as a Resource
 - Rewards and Risks of Data
- **Data Stewardship Defined**

- What is Stewardship?
 - What is Data Stewardship?
 - What is a Data Steward?
 - Data Stewardship vs. Data Governance
- **Group Activity 1 - Short Case Study**
 - Analyze and discuss a failure in Data Stewardship in a utility company
- **Kinds of Data Stewards**
 - Enterprise Data Steward
 - Subject/Object Data Steward
 - Business Unit Data Steward
 - Process Data Steward
 - Project/System Data Steward
- **Data Stewards as Individuals**
 - Who Becomes a Data Steward?
 - Characteristics of a Data Steward

Module 2: Data Stewardship Organizations

- **Organizational Structures**
 - Hierarchical Organization
 - Matrix Organization
 - Circular Organization
 - Data Stewardship Communities
- **Collaborative Data Stewardship**
 - Data Stewards as a Team
 - Data Stewards and Data Owners
 - Data Stewards and Data Architects
 - Data Stewards and Data Governors
 - Data Stewards and Data Producers
 - Data Stewards and Data Consumers
 - Data Stewards and Data Managers
- **Data Stewardship and Data Ownership**
 - Stewardship vs. Ownership
 - Stewardship and Ownership Synergies
 - Who are Data Owners?
 - Why Data Ownership Matters
 - Data Ownership Challenges
- **Group Activity 2 – Discussion**
 - Discuss criteria for assigning data ownership to critical utility data

Module 3: Data Steward Roles and Responsibilities

- **Data Steward Roles**
 - Data stewards as leaders
 - Data stewards as managers
 - Data stewards as facilitators
 - Data stewards as problem solvers
 - Data stewards as coaches
- **Data Steward Responsibilities**
 - Stewardship and Data Strategy
 - Stewardship and Data Literacy
 - Stewardship and Data Policies
 - Stewardship and Data Protection
 - Stewardship and Data Quality
 - Stewardship and Metadata Management
- **Group Activity 3 – Short Case Study**
 - Resolving a Conflict with a Business Rule Change

Module 4: Essential Knowledge for Data Stewards

- **Business Domains**
 - Industry
 - Business Functions
 - Business Initiatives
- **Data Strategy**
 - Data and Business Capabilities
 - Data and Value Creation
 - Data and Risk Management
 - Data Culture
- **Data Operations**
 - Creation
 - Retrieval
 - Updating
 - Deletion
- **Data Consumption**
 - Operational Data Use Cases
 - BI & Analytics
 - Data Science
- **Data Management**
 - Operational Data Management
 - Analytical Data Management
 - Critical Data Elements (CDEs) Identification and Management
 - Data Integration, Data Curation, and Data Provisioning

- **Metadata Management**
 - Kinds of Metadata
 - Uses of Metadata
 - Data Semantics
 - Data Modeling
 - Data Cataloging
- **Data Privacy and Protection**
 - Data Classification
 - Regulatory Compliance
 - Authentication, Authorization, and Access Controls
- **Data Quality**
 - Quality Scope – Correctness, Integrity, Usability, Objectivity
 - While this high-level outline highlights the major categories, it does not include the detailed information that will be presented in the slides. A deeper level of detail—more comprehensive than DMBOK and addressing biases impacting AI/ML—is also not reflected here. This additional level will cover the following:

CORRECTNESS	INTEGRITY	USABILITY	OBJECTIVITY
Accuracy	Identity	Availability	Selection Bias
Completeness	References	Accessibility	Confirmation Bias
Consistency	Cardinality	Security	Measurement Bias
Precision	Dependencies	Understandability	Historical Bias
Granularity	Inheritance	Navigability	Survivorship Bias
Timeliness	Values	Presentation	

- Detecting Quality Defects
 - Correcting Quality Defects
 - Preventing Quality Defects
 - Measuring Data Quality
- **Group Activity 4– Group Exercise**
 - Analyze a table of utility related data to determine some quality defects

Module 5: Data Stewards as Problem Solvers

- **Problem Solving Skills**
 - Diagnosis – Identification of Problems and Risks
 - Analysis – Understanding of Root Causes
 - Synthesis – Definition of Solutions
 - Facilitation – Project Advocacy & Process Change
 - Communication – Data Competencies, Behavioral & Cultural Change
 - Process Improvement – Data Management Maturity

- **A Diagnostic Guide**
 - 10 Core Data Management Processes
 - 70+ Common Data Dysfunction Symptoms
 - 35+ Common Causes of Data Dysfunction
 - 70+ Solutions for Data Dysfunction
- **Group Activity 5 – Group Exercise**
 - Use the Five Why's technique and the companion "Data Steward's Field Guide" to classify observed data issues, identify root causes and recommend solutions for improvement. Discuss how this approach benefits governance of data in utility companies.

Module 6: Implementing and Evolving a Data Stewardship Program

- Executive Sponsorship
- Guiding Principles for Data Stewardship
- Stewardship Teams / Stewardship Resources
- Data Stewardship Roadmap (current state, goal state, steps & milestones)
- Data Stewardship Metrics and KPIs
- Data Stewardship Maturity
- **Group Activity 6 – Personal Reflection**
 - Identify key take aways from this course you can build on back in the workplace