

Data governance is a means to define the policies, standards, and data management services to be employed by the organization.

Information Management & Data Governance

OVERVIEW

A thorough Data Governance (DG) Program defines, prioritizes, and communicates the standards where by data assets can be managed according to business objectives. Supporting the data governance model with a metadata management plan that integrates with a versatile data architecture ensures that the entire organization is able to communicate seamlessly across projects, teams, departments, and solutions.

Strategis strongly believes that the best way to drive organizational change and address any improvement opportunities is through the implementation of a Data Governance Program managed by a Data Governance Council. With the support of a Business Intelligence Competency Center (BICC), this approach empowers the business to take ownership of the solutions, prioritize projects, and maintain visibility into development activities. Critical decisions (buy versus build, resource allocation, development standards, etc.) can be unified. Projects will align with organizational goals. This can even help organizations improve staffing and resource plans to minimize single resource dependencies and maximize productivity.

DATA GOVERNANCE

The formal orchestration of people, processes, and technology to enable an organization to leverage data as an enterprise asset.

- MDM Institute

Headed by a Data Governance Council, the Data Governance Program accomplishes several critical functions for the organization. It is intended to be a forum for cross-departmental communication, prioritization, and enforcement of best practices. When used as a medium for aligning IT activities with business priorities, a Data Governance model can be a unifying theme that ensures consistency, reliability, and efficiency for all information assets within the organization.

Data Governance Goals

The goals of the Data Governance Program should include:

- Define, approve, communicate data standards and strategies
- Enforce conformance to data standards and policies
- Oversee the delivery of data management projects and services
- Promote the value of data assets

Data Governance is a means to define the policies, standards, and data management

The Data Governance Council facilitates cross-departmental communication, prioritization, and enforcement of best practices.

services to be employed by the organization. The strictness of these policies and standards is up to the organization. Overly restrictive standards can nearly ensure non-compliance or a constant demand for exceptions. When properly aligned with the organization's priorities, Data Governance can be applied as the assurance for data quality, security, and conflict resolution.

Data Governance Implementation Approach

Step 1: Establish a Data Governance Council

In order to effectively manage the data assets within an organization, it is recommended that a cross-department governing body be established to oversee the prioritization and management of data and information projects for the organization. The Data Governance Council should be made up of key stakeholders as a means to clarify organizational goals, prioritize initiatives, establish funding strategies, and define the policies and standards governing all data assets.

At this stage in the process, the decision rights and accountabilities for each member of the council should be established along with specific goals and governance metrics that can be monitored for effectiveness.

Step 2: Establish Enterprise Data Strategies

Once the individuals, roles, and authority is defined, the Data Governance Council needs to define specific data strategies. This includes the identification of existing assets, assessment of data gaps, and the prioritization of new investments.

To improve conformance across the organization, members of the Data Governance Council also need to define a plan to promote enterprise data assets. By promoting enterprise solutions and socializing the details, council members can improve the feedback cycle to further refine the gaps and investment priorities to keep the organization on track with corporate objectives.

Step 3: Establish Data Governance Standards

In addition to identifying the data gaps and prioritizing new investments, the Data Governance Council should establish the data governance standards. While primarily needed for data stewardship, governance standards can also be used to dictate development practices and departmental conformance amongst other things. Like an abandoned building, if left unmanaged, the information assets of an organization quickly deteriorate.

DG Implementation:

Step 1: DG Council

Step 2: ED Strategies

Step 3: DG Standards

Step 4: DG Policies

The Data Governance Council should define owners for each data asset as well as a set of responsibilities to coincide.

Ultimately, the value of any data/information asset can be defined by the effectiveness of the solution and quality of the data. Standards are needed to ensure proactive management of these priorities by the asset owner.

A good data governance standard is an outline of roles, responsibilities, and metrics to clarify accountability and measure the effectiveness of those involved.

Step 4: Establish Data Governance Policies

In addition to the standards, the Data Governance Council needs to establish policies by which to measure compliance, quality, and usage. The policies are the means by which the standards are upheld.

Data Governance Policies provide the rules of the road and the means to seek exception. Even variations to governance standards should be managed by a policy to ensure an effective use of enterprise resources and the ability to maintain the solution in the future.

If defined thoroughly, Data Governance Policies will dictate specific governance steps in the SDLC to enforce compliance and ensure conformance to the data standards defined by the Data Governance Council.

METADATA MANAGEMENT

Metadata Management serves three primary use cases: introspection, impact analysis, and data lineage. Introspection meant to mean the analysis of or harvesting of the information in a metadata repository. Impact analysis is the view into dependencies across the architecture. In order to do true impact analysis, there is an end-to-end interdependence of all metadata. Data lineage is a reference for the origins of a piece of data (where and how it arrived in the current data store).

As a translation between business terminology and the underlying data that is captured in IT systems, Metadata Management provides a roadmap to manage the details. In its most simple form, business terminology should be mapped to data sources to ensure consistency in function and usage across an organization. If done well, Meta Data Management can be a platform that helps an organization communicate across business units, resolve inconsistencies in data quality, establish standard performance metrics, and enable BI self-service.

Metadata Includes:

- Business Metadata
- Operational Metadata
- Technical Metadata
- Process Metadata

Sound Metadata Management boils down to an accurate process for capturing the relevant details of ownership, descriptive characteristics, rules & policies, calculations, and physical characteristics.

At the functional level, there is business, operational, technical, and process related metadata.

- Business Metadata includes business definitions of the objects and metrics, hierarchies, business rules, and aggregation rules.
- Operational Metadata stores information about who accessed what and when.
- Technical Metadata describes the data structures and formats such as table types, data types, indexes, and partitioning method.
- Process Metadata describes the data input process.

In a Nirvana of sorts, good Metadata Management includes an interchange of information between the four functional levels. End users should have visibility into Process and Operational Metadata while they are trying to navigate BI tools, reports, and analytics to find the information that they need. When information is requested, a translation should occur where by the Technical Metadata is applied to govern the data being retrieved.

From an IT development perspective, accurate and comprehensive metadata eases the process of changing the data architecture. When new requests to evolve the model arrive, the impact to other data elements can be researched via data lineage definitions.

Compliance and certification relies on accurate metadata as the key to clearly demonstrate what components exist in the organization's architecture, their capabilities and interdependencies.

At the data element level, the metadata should capture the following:

- Names, labels and descriptions for variables, records and their values
- Explanation of codes
- Data Profiling: Reasons for missing values
- Derived data created after collection

The metadata details can be captured in any metadata repository or can be embedded in a Business Intelligence (BI) platform as part of the semantic layer that translates business logic to the underlying data definitions. Whereas the latter sounds ideal, it

Metadata Elements:

Names / Labels
Explanation of Codes
Data Profiling
Derived Data

often comes with many limitations in accessibility.

Metadata Management Recommendations

The following steps provide guidance for implementing a metadata management process:

1. Determine what is most important to the business via the Data Governance Council
 - Data Dictionary? Data Lineage? BI Self-Service?
2. Align this initiative with existing projects
3. Align this initiative with existing governance
4. Determine resourcing/staffing needed
 - New resources? New skills?
5. Start small and stay focused
 - Find a specific problem to solve
 - Get additional buy in after increment improvements
6. Establish success metrics
7. Start with a single perspective and then expand!

CONCLUSION

Having a strong Information Strategy and Data Governance Program will ultimately allow organizations to be more agile and efficient. The goals of a Data Governance Program should be to define, prioritize, and communicate the standards where by data assets can be managed according to business objectives. The goal, however, is not to set overly restrictive standards which will almost always ensure non-compliance or a constant demand for exceptions. The balance is a fine one and any Data Governance Program should be well thought out in order to produce successful results.

ABOUT STRATEGIS

Founded in 2006, Strategis Consulting is a technology consulting firm specializing in building strategic information solutions. Our range of services include advanced analytics, business process management, data warehousing, portals, reporting, workflows, mobile apps, integration, custom solutions, and training.