

How Data Modeling Supports Effective Data Governance



Today's data modeling has entered a new era. Historically the best way to understand complex data sources, the scope of data modeling continues to expand. Its importance as the focal point of collaboration between data producers, curators and users also grows.

A key factor in this transformation is that metadata is now the heart of [enterprise data management](#), intelligence, and governance. Data modeling's power to visualize metadata makes it essential.

Visually Empowers

Data modeling excels as the preferred way to design and deploy new complex data sources. The power of a data model to communicate visually empowers those who manage and govern, enabling smarter decisions. Modern data modeling solutions:

- Increase confidence in the information business leaders use to make decisions.
- Standardize projects with core definitions and data structures from the centralized data model and associated metadata.
- Resolve inconsistencies to deliver a single source of truth for enterprise business data.
- Interface with enterprise applications, such as CRM and ERP.
- Represent both technical and business database structures with abundant metadata in a single model.

- Combine business definitions and rules with technical database diagrams, procedures and processes in the model.



Harnesses Metadata

Effectively governing data and drawing intelligence from it depends on effective metadata management. In addition to harvesting and cataloging, metadata must also be visualized to communicate its meaning to stakeholders in the data value chain. Visualization breaks down the complexity of data organization and clearly identifies data relationships.

Data models enable visualization, supplement the metadata, and serve to standardize the data design across the organization.

Modern data modeling goes well beyond its origins as a tool to understand complex data sources and automate design standards. Though the best way to do those things, it now also functions to streamline and ensure the success of [data governance](#) in the enterprise.

That's no small feat as data governance grows in importance with new privacy laws such as the General Data Protection Regulation (GDPR) and California Consumer Privacy Act. Data modeling also drives innovation. For example, companies who pursue AI initiatives, need quality data and well-defined data models to succeed.

Facilitates Enterprise Data Management

Data modeling captures and circulates how the organization defines and uses data. It facilitates design task automation and enforcement to promote data integrity. Managing the data source design and

maintenance lifecycle, the data modeling process also results in a more flexible and governable data architecture.

Reducing complexity, data modeling promotes collaboration and understanding among data stakeholders. It reveals the connections between dissimilar data elements. And the integration of business and technical metadata in the modeling process supplements and accelerates data governance and intelligence initiatives.

Data modeling fosters higher quality data sources with the necessary structural integrity. Facilitating design task standardization, it also promotes business alignment and simplifies integration. Governing the design and deployment of data across the organization, data modeling, standardizes, aligns, and documents all types of data regardless of location.



The Value of Data Modeling

Data modeling promotes and enhances [effective data governance](#) and other positive outcomes. For example, it facilitates collaboration within an organization because it serves as a visual reference point for everyone in the organization seeking to meet governance requirements.

As the enterprise evolves, we're nearing the point where both the business side and IT co-own data models and modeling processes.

Thus, business analysts and other power users better understand data complexities because they comprehend the terminology. They also contribute to data accuracy and wholeness. Hence, the importance of data modeling grows in the eyes of business users.

Easy to use business glossaries and [data catalogs](#) make information readily accessible to users/roles as defined within rules determined by the organization. The metadata behind these resources, supplied by data models, provides understandable and meaningful terminology for everyone in the business.

Thus, enhanced data intelligence follows because stakeholders now better understand, use, and trust the data they need to inform decision-making organization wide.

Making data easy to understand and access within the business increases the value of data assets. In addition, the return on investment grows as more opportunities are realized. Indeed, data modeling serves as the champion of both by providing the infrastructure for metadata management and appropriate data governance.