

The Usefulness of Architecture

Domains like financial management, human resources management, and even fitness & health management have developed sets of principles, standards and models over time that represent best practices for the domain and provide the context in which to develop tools for implementing those best practices.

The information systems domain is relatively **young**, and has grown so quickly with new technological possibilities, that these guiding principles are not as well known or agreed upon like those in other more established domains. Nevertheless, Architectural elements for the IT domain ensure completeness, standardization, flexibility for future change, implementation of best practices, and a context for the use of power tools.

There are several samples of IT Architectural Frameworks. The following figure illustrates one such framework, one that has been honed by experience with successful implementations.

	Principles	Standards	Models	Inventory
Processes				
Data	<ul style="list-style-type: none"> • Document viable choices • Align to organ'nl goals 	<ul style="list-style-type: none"> • Industry standards • Data Naming • Best Practices • Method Constraints • Tool Constraints 	Pictures and diagrams, <i>with their meta data</i> , that represent the domain	Documentation and examination of existing data sources
Infrastructure				
Organization				

This architectural framework describes the Information environment across the domains (rows) of Process, Data, Infrastructure (Hardware, Software, Network, Training), and Organization structures. The columns represent the elements of

architecture across the four domains. The data architecture is comprised of its Data Principles, Standards, Models and Inventory. Ideally, the Principles, Standards and Models are defined for the Enterprise, and Models and Inventory are defined within that context for individual Information Systems, including data warehouse systems.

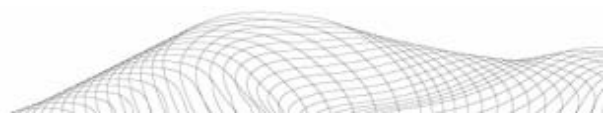
Three Pillars of Data Management

Data Governance and Meta Data Management are key foundation elements, and Data Quality a key effect of an Enterprise data architecture and data management approach. They represent the three points of stability for the discipline – like the three legs of a stool that allow it to stand and make it strong.

They overlay the Data Architecture as follows:

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Data governance is not a technical principle. It has no snazzy interface, runs on no software platform, and isn't based on mathematical principles. Yet the establishment of effective data governance is an indispensable part of data management, particularly for those organizations that are in the midst of transformation.



Almost any organization undertaking a serious data management initiative will find that “all roads lead to Data Governance”.

What Is Data Governance?

Data Governance is a *management function* that is performed by an enterprise. It is about having knowledgeable responsibility over the data and information of the enterprise and has specific accountabilities, which may be governed by law. Regulatory requirements, like Sarbanes-Oxley, mandate the effective application of standards and controls over corporate data, establish reporting requirements, and outline penalties and remedies for breaches of data governance best practices. The requirements of Sarbanes-Oxley have caused many organizations to quickly investigate their responsibility for data governance.

Data Stewardship

A Data Steward is a *person*, a person who has the authority and responsibility to define the business rules for a domain of the company data. The Steward is the authority who defines what the data means and how it can be used. Ideally, this person belongs to the *business* function that creates the data for the company. Data Stewardship is NOT part of the IT function! Data Stewards by business function may comprise the Data Governance Committee of the company.

The Role of IT

Well then, what is the role of IT? They are *facilitators* to Data Stewards and to the Data Governance efforts and system *implementers* of the data policies as defined by Data Governance. IT must ensure that the systems of the enterprise faithfully implement its meta data standards. IT may facilitate the development of formal data definitions as models, and may perform data quality assessments against these meta data standards.

The following job roles often report to the IT organization, but never take the place of the Data Stewards:

- Data Administrators
- Data Base Administrators
- Data Architects
- Data Modelers

Maturity of the Data Management Function

Data Management has changed in mature organizations from being reactive, to pro-active, to strategic. A decade or more ago, events that triggered interest in the company data were typically associated with something “broken” in an information system. “We’re not getting paid on time because our invoices are inaccurate”, or “The Year 2000 is coming and our current systems can’t handle the 4-character year” are two such examples. These types of incidents led to a more pro-active approach to systems development and the separation of data definitions from process definitions. Meta data models were developed and used as the blueprint for new system development. Data Management emerged, typically as a new set of roles within IT.

New Corporate Governance Initiative

In today’s world, data and information management has developed into a strategic *business* initiative. Spurred by laws and competitive pressures, the top levels of businesses are specifying data policies and standards that address organizational accountability, data definition, security, availability, and retention. Discussions and concerns have evolved from “what is ‘broken’?” to “where do we want to be as a business ten years from now”.

About Metaview³⁶⁰

Metaview³⁶⁰ consults in the areas of data integration, data governance, data warehousing, meta data management, and information systems architecture. Metaview³⁶⁰ delivers solutions that positively affect your bottom line. Please visit us at www.metaview360.com

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