Metadata Strategy – An Overview
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Traditional systems development and implementation has focused on processes, rather than on data as the foundation of the enterprise. A data orientation represents a major cultural change. It is not only a change in the way an organization delivers systems, it also implies a new way of perceiving, accessing and respecting the evolving asset of information by the business community.

The movement toward data orientation is akin to fighting a gravitational force; the opposition can be overwhelming, since many members of the IS community were not taught the fundamental importance of data and the corresponding importance of the meaning of that data. Data is much more stable than process or organization. Success in developing a data orientation requires strong change agents and a set of carefully orchestrated plans. Sometimes, developing a true data orientation requires a reengineering of the IS and business organizations to explain and enforce the collection, management and understanding of the meaning of the data used and stored by the company’s applications.

The development of a data warehouse frequently is the catalyst for recognizing metadata’s importance in the enterprise and the need for developing a uniform approach to metadata management. Many data warehouse and coordinated data mart development projects include the creation and implementation of a metadata “strategy” to assist in the collection and usage of data across the organization.

Metadata is "data about data". It is the collection of information about the data collected in an application or database. Examples of metadata include: definition of the data element, business names of the element, systems abbreviations for that element, the data type (alphanumeric, decimal, etc.) and size of the element, source location, etc. All of these pieces of metadata are of interest to various members of the company’s community, some are of interest only to certain IS staff members, while other pieces would be very useful for business people attempting to navigate through the corporate Data Warehouse or across and through various company/business level data marts. This navigation is possible once the company has identified and documented its metadata for all appropriate applications in formats usable by business staff and technical staff (different formats are necessary since business people need different types of metadata from the technical staff).

A Metadata strategy can assist in the achievement of the goals of data orientation by providing a focus for sharing the data assets of an organization. It offers recognition to the value of data and its components and usage within and throughout the organization. A Metadata Strategy can provide a map for managing the expanding requirements for information that the business places upon the IS environment. A Metadata Strategy highlights the importance of a central data administration department for organizations who are concerned about data quality, integrity and reuse. Finally, development and implementation of a Metadata Strategy enables an organization to begin to measure the value of the information assets under their control. The purchase or development of a metadata storage facility, often called a “repository” associated with the data warehouse or data marts can be an impetus for the creation and implementation of a metadata strategy.

Recently, many companies have embarked upon a strategic plan to redesign their systems environment, now that the issues associated with the millennium change have been addressed successfully. This plan may include the customization of a systems development and implementation methodology, and could result in providing a data/metadata orientation for effective understanding of the business’ data resource. One way to ensure the success of this new orientation is to develop and implement a metadata strategy. This strategy
will advise the IS and business communities in how to view and use the data that the company captures and stores, turning data into information and knowledge.

The components of a Metadata Strategy could include:

- Organizational meanings of “metadata” and its role in the organization
- Decision how metadata would be used in the organization
- Data Stewardship
- Data Ownership
- Decision who would use what metadata and why
- Business definitions and names
- Systems definitions and names
- CASE models and element relationships
- Element sources and targets (programs, files, databases, etc...)
- Determine training requirements
  - Business
  - Systems
- Identify sources of metadata (CASE tools, existing databases and files, paper documentation)
- Determine the quality of the metadata sources (absolute, relative, historical, etc.)
- Determine methods to consolidate metadata from multiple sources
- Identify where metadata will be stored (central, distributed, both)
- Evaluate the metadata products and their capabilities (repository, CASE dictionary, warehouse manager)
- Determine responsibility for:
  - Capturing
  - establishing standards and procedures
  - maintaining and securing the metadata
  - proper use, quality control and metadata update procedures
- Establish metadata standards and procedures
- Naming standards (abbreviations, class words, code values, etc.)
- CASE modeling standards
- Metadata Committee (roles and activities)
- Determine if the metadata storage will be active or passive
- Determine the physical requirements of the metadata storage
- Measure the use and effectiveness of the metadata

A Metadata Strategy is often one of the first steps undertaken during the development of an Information Strategic Plan (ISP). As part of an ISP, a Metadata Strategy details what metadata is important to this organization, why it is important, how the metadata will be captured and stored and used (by technical and business staff) – all at a strategic level. Further refinements of this strategy will be the work of the Metadata Committee, also created by the ISP.
The Metadata Committee, comprised of business data stewards and members of the Information Resource Management function (data analysts, database analysts), is the group that is responsible for implementing the concepts outlined in the ISP Metadata Strategy. This team decides what order will be used to fulfill the requirements in the strategy and the content of the list above. Frequently, Metadata committees use consultants to assist them in the initial phases of metadata development, and to transfer knowledge of specific areas or tools as appropriate.

Enterprise or corporate data models often serve as one of the first discovery areas for metadata management, and the development of data warehouses or data marts is cited as one of the main reasons companies adopt a metadata strategy – to better understand the data that is resident in their systems and to make more efficient use of that data as a corporate resource. With the resurgence of the data warehousing approach to business intelligence, the importance of metadata is growing continually.

The development and implementation of an effective Metadata Strategy enables a company to make better use of the data assets it controls, produces applications and other systems that address the true information needs of the business community IS serves, and promulgates the importance of data for the benefit of the company. Metadata can be called “the foundation” of an organization’s success in realizing the potential value of its data and information, to achieve competitive advantage.

About Anne Marie Smith
Anne Marie Smith is a highly acclaimed author and speaker in the fields of data stewardship, data governance, data warehousing, data modeling and metadata management. She holds a doctorate in Management Information Systems and has taught at LaSalle University. Anne Marie serves on the board of directors of DAMA International and is an expert advisor to DM Review’s Ask the Experts. Anne Marie is the Director of Education and Principal Consultant at EWSolutions, a GSA schedule partner and systems integrator dedicated to providing companies and government agencies with best-in-class business intelligence solutions using data warehousing, enterprise architecture and managed metadata environment technologies (www.EWSolutions.com). She is also an advisor to the DM Forum (http://www.dmforum.org). Anne Marie may be reached directly via email at AMSmith@EWSolutions.com.

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