

### Data and Information Management

Data and information are becoming more widely recognized as the life force of business today. Data quality, clarity, and organization dictate the way that you are able to communicate inside your organization (or not), as well as with your suppliers, customers, partners, and regulatory agencies.

Data has been described as the critical asset of the organization. Like other valuable assets, it needs to be acquired, organized, maintained, and managed for optimum performance. One would not be able to imagine a company with good financial management practices where the CFO could not answer the questions:

- How much money does the company have?
- How is the money allocated?
- Who has control over what budgets and cost centers?
- What are our monetary acquisition and spending practices?

Is the company data managed as carefully as the company money, or materials, or employees? Is there a Chief Data Officer in the company? Sometimes that falls under the auspices of the Information Systems organization. Can that CIO answer the following questions about the data and information assets?

- How much data does the company have?
- Where is it, what systems use it?
- Do all the systems that feed the Customer Information System, have the same definition of Customer?

- Why do I report a different Net Profit result from the Accounting System vs. the Finance Data Mart?
- What is the policy for data acquisition, distribution, and retirement?
- What systems are affected by a change in a fundamental data element, and how long will it take to implement the change? (remember the Y2K phenomenon)

Data Management is a discipline, just like financial management. This discipline is not of course the same as a tool. Would that it was! If so, we could ensure fiscal health by simply using an accounting software package. Or we could simply purchase an exercise machine and be fit forever!

### The Role of Meta-Data

Meta-data is the full set of descriptions that comprises the blueprint of your information systems. The term literally means "data about data". The full description of your information assets contains meta-data about your data and information, your data movement (ETL) processes, your physical computing environment, and the people and the roles that they play in the overall organization. Meta-data is captured and organized for use in a meta-database, sometimes called a meta-data repository, catalogue, or dictionary. The following tables illustrate the relationship between meta-data and data.



Employee

Last Name	Andrew	McCarthy	Williams	Lane
First Name	William	Ellen	Mary	Gary
Employee ID	78294	44432	2234	7721
Salary/hr	10.45	17.50	125	75

Job Design

Job Name	Load_Host_Order	Process_Error_x-actions	Extract_SAP_to_Finance	Refresh_Customer_Mart
Last Modified	20020501	20010123	20020715	20010410
Author Last Name	McCarthy	Lane	Williams	Williams
Job Type	Server	Server	Server	Mainframe

The first table shows a set of data: “44432”, “125”, “75”, “Andrew”, etc. The left-most column of the table describes that data with its meta-data. It is only by looking at the data within the context of its meta-data that we know what the data means. This is Employee data, specifically an Employee’s Last Name, First Name, Employee ID, and Salary per hour. If it is the definition of a physical Table Definition in a database, it would describe a Database Table object in the meta-database.

The second table shows a set of meta-data and some data about ETL Job Designs. This type of meta-data (plus more) would describe an ETL Job Design object in the meta-database.

It is quite possible for meta-data to get out of sync between business definitions and IS definitions, and for multiple different definitions of the same thing to exist across business units and Information Systems. What if the “Employee ID” was called “EmP #” in one system, and “Empley Badge No” in another, and “Bdg” in yet another?

This phenomenon makes it difficult to answer a fairly simple question, like “How many employees do we have?” It depends. How many are double-counted across these systems? Is the definition of an employee the same from a business perspective everywhere it is used? Is everyone on the payroll counted as an “employee”? What about people who only work part-time, or contractors?

It is the job of the data manager to sort out these distinctions of business rules and ensure that data is faithfully replicated in a standard way across all the information systems. It is especially important to understand the kinds of translations and transformations that must take place as disparate data is brought together in the Data Warehouse environment.

Robust meta-data management allows your business to make decisions for positive change at the speed of business, without fear that critical information pipelines will be disrupted or corrupted. Meta-data management is a key piece of your Information Systems and Data Warehouse architecture.

### About Metaview<sup>360</sup>

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