Metadata Projects – A Yardstick Toward Success

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Introduction

All computer projects start with the goal of achieving success. When we consider the number of metadata projects that actually approach this goal, throughout the industry the number gets even smaller.   Why do some projects succeed while others fail? What steps can be taken to avoid the obstacles and minimize the risks? Let's review some of the critical issues and obstacles that can come into play when trying to implement a metadata project. We will discuss some of the ways to keep our project objectives focused on our target metadata solution.

Criteria for success

- Understanding Metadata
- Objectives based on target
- Metadata readiness
- Metadata planning

Taking the Measurements

First, an organization must have a solid understanding of what is metadata? What are the benefits to be realized from a metadata project and how can it affect all areas of the company and other projects? How much effort will it take to analyze, design and implement a solution for the enterprise? What impact will a metadata project have on the entire enterprise? If the project starts too soon and without a clear and measurable objective, the organizational support and interest for the project may be lost. Too often the driving force for a metadata project originates from one department. This narrows the focus of the project and does not leverage the support of other key players who should be involved. Understanding metadata is the first step for an organization to take prior to making the commitment to commence a metadata project. Understanding the importance of metadata and the willingness of management to support this type of project is the critical to any long-term success.

Objectives should be simple and concise. A high level plan is fine at the beginning of the project, but objectives should be broken down into more detailed functional requirements. This is important when it is necessary to evaluate what products are available to support the metadata architecture. The metadata architecture must be able to accommodate interfaces to different toolsets and be flexible enough to support future enhancements. The objectives for a metadata project must be clearly defined and communicated. For example, if one of the goals is to store all metadata in one metadata repository, then we need to consider where the metadata currently resides. Figure 1 illustrates a sample "current" metadata flow.   While the diagram alone is simple and concise, it does not communicate additional information about the metadata, what tools are actually parts of the solution or what metadata elements flow from one process to the next? Figure 2 presents a sample "proposed" metadata flow.

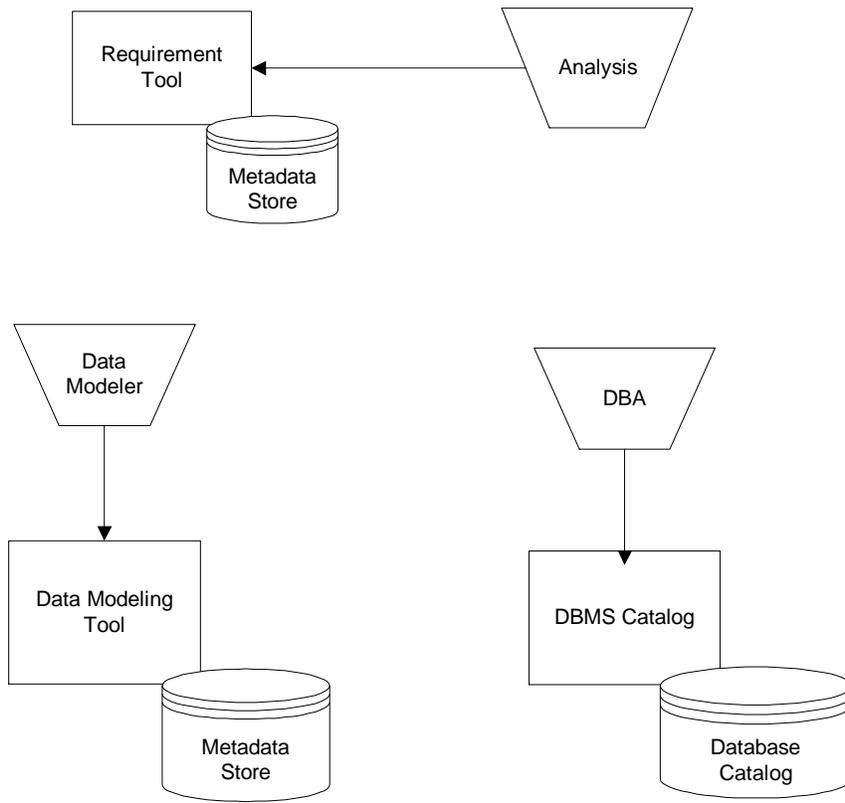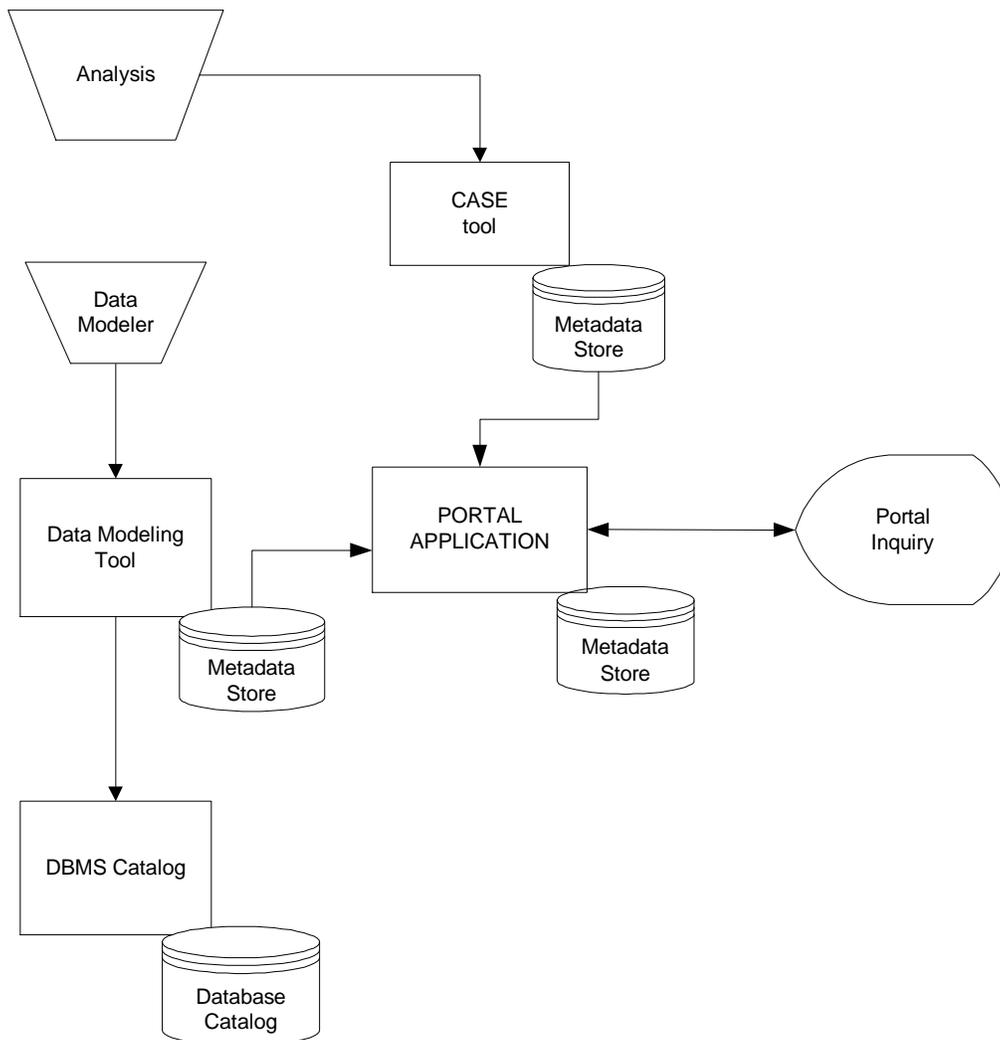Figure: 1 sample "current" metadata flow

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Figure 2: Sample "Proposed" Metadata Flow

How will we get the metadata into the "one metadata repository"? Will a centralized repository be the right solution for the enterprise? Would a distributed solution match the requirements? How will the integrity of the metadata be assured? These questions will determine the kind of solution that will need to be designed. Is it necessary that all interfaces be automated? Can some metadata be loaded manually? Clearly defined user requirements are a must to support the kind of metadata solution that will meet today's needs and anticipate future requirements.

Defining these objectives is a part of the metadata readiness analysis that must take place at the beginning of the metadata project. During this time we will identify all persons and applications that need to be part of the targeted solution. It is important to include all significant players and tools within the metadata solution's scope. This will ensure that the solution is complete and integrated. The importance of one subject area cannot be decided on the basis of one person or the current organization structure. Organizational structures and personnel are constantly in motion in today's business environment. Objectives for a metadata solution must be founded on the knowledge and information that is essential to how the business functions.   Metadata supports the business. When the business changes, its metadata must be able to adapt to these changes.

Determining the objective is accomplished by interviewing those persons who are the subject matter expects for each of the groups that are sources of data and information within the enterprise. Defined subject areas, although used as a template for the upcoming interviews, are as important as the selected persons to be interviewed. Key stakeholders from most functional areas should be participants in defining metadata requirements.   This not only results in the identification of the current sources of metadata, but also assists in confirming how committed an organization is to making the project a success.   The interview process confirms the original scope. If the interview process is overlooked or does not discover the metadata to support the objectives, the project may start out looking like it is going in the right direction only to discover that not everyone's requirements are met. If there are too many interviews or groups involved, the metadata solution may get lost in endless discussion and unresolved issues. In this case, it will never get designed. It is important to approach a metadata solution based on what the enterprise can accomplish in a given period of time, with the resources available, and the support organization to maintain the metadata solution for later implementation phases.

Developing a plan and proceeding with a solid methodology is also imperative to achieving success. If metadata project experience such as knowledge of metamodels, data modeling, or repository implementation is not present within the organization, then the company should consider metadata professionals to assist in developing a metadata solution. In achieving success for any endeavor it is experience that makes the difference. Although this is true for all projects, it is even more critical for a metadata project, since metadata supports everyone's understanding of the enterprise's business.

Conclusion
Achieving success requires many ingredients and this article mentions the major areas to be considered. Metadata solutions are not a one size fits all. What may be the right solution for company "X" will not satisfy the requirements for company " Y". Each enterprise has its own requirements and a metadata solution should address each one on its own merits.   When we measure how successful the solution is, it is fit that matters most. The requirements should match the solution and the solution should match the goals and objectives.