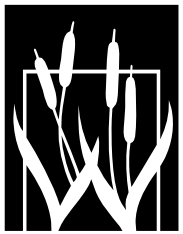

Whitemarsh
Information Systems Corporation

Metabase Metadata Management System
Data Interoperability Need and Solution Characteristics

Whitemarsh Information Systems Corporation
2008 Althea Lane
Bowie, Maryland 20716
Tele: 301-249-1142
Email: Whitemarsh@wiscorp.com
Web: www.wiscorp.com

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
Need: **Interoperable business information systems**	**Need Characteristics**	***Enumeration:*** • An unacceptable quantity of discrete information systems and databases that have been individually created over a long period of time. • The perception that there is data everywhere but information no-where. • Conflicting answers to the same question across the organization, such as How many Customers, What is the Gross Sales, Net Sales, count of employees, what's on back-order, etc. • An unacceptable effort devoted to creating programs that do Extract-Transform-and-Load. • A need to integrate databases across functional areas of the organization. • A need to integrate data from multiple procured packages such an SAP, or Oracle Applications, or those resulting from Mergers and Acquisitions.
	Solution Description	***Data Interoperability Workshop.*** This is a five day workshop where 15 individuals in five groups of three work together on the integration of five legacy database schemas into one or more databases of shared data. They created the shared data systems and created the metadata specifications of all the shared data.
Need: **Data interoperability strategy**	**Need Characteristics**	***Enumeration:*** • An organization is looking for a strategy to accomplish data interoperability across a number of systems. • They answer "negatively" to the Evidence of Need in the data interoperability workshop row. E.g., There is a large quantity of un-integrated systems. Or, Yes there is data everywhere but information no-where, or conflicts as to answers to the same question exist. • An organization wants to "kick the tires" before making a commitment to a particular approach. • An organization wants either to hear discussion about data interoperability problems across multiple organizations or from multiple staff members within a Department and/or projects before deciding on an approach.

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
	Solution Description	***Data Interoperability Strategy Seminar:*** This is a one-day seminar that presents an overview of the data interoperability problem. It presents a clear and complete strategy to achieve data interoperability across a wide collection of legacy database applications. The strategy is not just theory. It is practical and is achievable through the Data Interoperable Workshop
Need: **Project level sets of integrated and non-redundant artifacts across the system development life cycle.**	**Need Characteristics**	***Enumeration:*** • A project for building a data warehouse and/or a traditional business information system is about to be planned, or started, or is now in trouble. • Many different project members are building the same component (data model, process model, etc.) differently. • There is no agreement on what the project deliverables should be or how they should be constructed. • There is no overall methodology for the project. • The project members are not able to access each other's work. • There's no easy way of integrating the work products of one part of a project with another project.
	Solution Description	***Metabase: Project Artifacts.*** This is a use of the Metabase Metadata Management System system to capture and store the key/critical work products associated with a database project that is being accomplished by a group of architects, systems analysts and programmers. The Metabase is installed on a group server and is used as their common work-accomplishment tool. The resulting metadata can then be extracted and loaded into a Department Metabase and/or an Enterprise Metabase.

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
Need: **Department-wide sets of artifacts across all departmental functions and their interrelationships to project level sets of artifacts.**	**Need Characteristics**	***Enumeration:*** • A collection of projects within the overall functional area of the Department. • Common projects are a data warehouse that is being built from multiple and individual projects that exist. • Or a project that is to represent the intersection of separately captured and updated data. Such a project would be needed if there are multiple vendor specific application packages. • Or a project that is to just extract, transform, and load data from one application system database into another database. • Or, one or more traditional business information systems that are about to be planned, or started, or that are now in trouble because of bad planning, unacceptable deliverables, etc. • Many different project members from different projects are building the same component (data model, process model, etc.) differently. There is no standardization on format or content. • There is disagreement on what the project deliverables should be or how they should be constructed. • Metabase system.
	Solution Description	***Department Metabase Artifacts:*** This is a use of the Metabase Metadata Management System system to capture and store the key/critical work products associated with an entire Department. That is, across multiple projects within a single Department. Work is being accomplished by a group of architects, systems analysts and programmers across multiple projects within the same Department. The Metabase is installed on a group server and is used as their common work-accomplishment tool. The resulting metadata can then be extracted and loaded into an Enterprise Metabase.

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
Need: **Enterprise-wide sets of artifacts across all enterprise functions and their interrelationships to department level sets of artifacts that, in turn, relate to project related artifacts**.	**Need Characteristics**	***Enumeration:*** • A collection of Departments within an overall Enterprise. And then a collection of projects within the overall functional area of the Department. • There is a need to understand the overall Enterprise use of standardized data structures and or Enterprise Data Elements across Departments and projects. • Or to understand how one project is in trouble while others that are similar are not. Reports would include Project and Departmental creation of the same type of project deliverables. • Many different project members from different projects are building the same component (data model, process model, etc.) differently. There is no standardization on format or content. • There is disagreement on what the project deliverables should be or how they should be constructed. • There is no overall methodology for the projects. Every project is being done differently. There is no overall multi-project reporting. • The project members from the different projects are not able to access each other's work. Or use each other's work as a way to save time or to cause data and process integration. • There's no easy way of integrating the work products of one part of a project with another project. • There is a need to build Department-wide deliverables that can be used by multiple projects.
	Solution Description	***Metabase: Enterprise Artifacts.*** This is a use of the Metabase Metadata Management System system to capture and store the key/critical work products associated with an entire Enterprise. That is, across multiple Departments and within Departments across multiple projects.

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
Need: **Iterative Evolution of Requirements Through Functional Prototypes to Ensure Valid, Reliable, and Repeatable Specification**	**Need Characteristics**	***Enumeration:*** • An Enterprise and/or large Department expresses a need to have a metadata repository for storing all their metadata artifacts. • The Enterprise, if they have done their homework recognizes and expresses doubt that something of this size and scope will work "right out of the box." • The Enterprise expresses a need to do a formal needs analysis and requirements determination prior to issuing a Request for Proposals (RFP) or of building an Enterprise-wide repository. • The Enterprise wants the Repository Vendors to have a full and complete requirements specification before buying. • The Enterprise would like to prototype the use of a repository within the scope of an individual project and then across multiple projects within a Department and possibly an Enterprise before proceeding. • The Enterprise expresses the need to accomplish the implementation of a metadata repository with the same rigor and precision as is done for quality database projects. That is, rigorously defined deliverables, a highly engineered methodology, time line, and resources.
	Solution Description	**Metabase: Repository Prototype Mechanism**. This is a use of the Metabase Metadata Management System system to capture and store the requirements for an Enterprise Repository. Given that an Enterprise is going to have a full repository such as CA Advantage, the first and necessary step is to fully define its requirements and functionality.
Need: **Community of interest data interoperability specification artifacts**	**Need Characteristics**	***Enumeration:*** • The Enterprise expresses the need for temporary (three months to a year) long projects and supporting organizations that can engineer databases and/or database data exchanges across functional areas within Departments. • The Enterprise expresses a need to collect and store the Community of Interest metadata in the same rigorous

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
		fashion as it does for project and/or Department metadata. • The Enterprise expresses the need to make the Community of Interest metadata permanent and resident at the Enterprise level because it spans multiple Departments or because it spans multiple projects within a particular Department. • The Enterprise wants the Community of Interest metadata to be non-redundant with other metadata and to also integrated. • The Enterprise wants to be able to query, extract and report metadata across the organizations involved in a Community of Interest.
	Solution Description	***Metabase: Community of Interest Repository***. This is a use of the metabase Metadata Management System system to capture and store the requirements for a shared data project. Commonly there are members of this Community of Interest that come from different functional areas and belong to different project groups. The Metabase then is to act as their shared data specification repository. Into the metabase is stored the Mission, Organizations and Functions related to the sharing of the data. Stored are the specifications of the data that is to be shared. Stored are the specifications of the shared data information systems. Finally stored are the business calendars of when data will be extracted from legacy environments and stored in the shared-data database. Once this Community of Interest is finished its mission, the resulting metadata can then be extracted and loaded into a Department Metabase and/or an Enterprise Metabase.

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
Need: **Information systems plans and supporting metabase system metadata sets of artifacts.**	**Need Characteristics**	***Enumeration:*** • A Department or an Enterprise expresses that their information systems planing, that is, what to build and/or maintain, when to build and/or maintain, and the overall costs to build and/or maintain are not as well engineered and predictable as they would like. • There are constant changes in both what is built and/or maintained, and in the sequence of what is built and/or maintained. • The Department or Enterprise expresses a need to have an overall information systems plan that is defensible based on business needs. And that builds the right components at the right time and in the right sequence to maximize data and process interoperability, minimize or eliminate redundancy, and to maximize re-use of already created information technology components.
	Solution Description	***Metabase: Metadata Management System.*** This is the use of the Metabase for capturing and using metadata for determining the right contents of business information systems, for determining their sequence, and for creating rough orders of magnitude of the resources required for their completion. Used are the existing sets of Missions, Organizations, and Functions Metadata. Used also are the existing sets of Data Models and Business Information Systems Metadata. Created in the process of developing an information systems plan are the Information Needs Analysis data that specifies the information needs of functions within organizations that are accomplishing missions, and also the Resource Life Cycle data that identifies the sequences of when (and for what purpose) information is required from the databases and information systems. Collectively this metadata is employed to identify what business information systems and databases have to be built, in what sequence, and what business functions and missions are supported when these are built. Finally, all this metadata is then related to the Project Management Metadata that provides the Rough Order of Magnitude for project accomplishment and also a high level methodology for accomplishing the Information System Plan projects. Because all the Information Systems Plan metadata is contained in the Metabase, the metadata can be revisited, changed and new Information Systems Plans can be accomplished on a yearly basis.

Enterprise Data Interoperability Needs, Need Characteristics, and Solution Description		
Need: **Metadata Management System Deployment**	**Need Characteristics**	***Enumeration*:** • There is a need of an Enterprise and/or large Department to have a metadata management system that collects, stores, evolves, and reports the complete set of metadata artifacts required for the complete understanding of the missions, organizations, functions, databases, business information systems, and other critical metadata artifacts necessary to understand, plan, execute, and evolve the enterprise. • There is a need for a formal needs analysis and requirements determination prior to issuing a Request for Proposals (RFP) for, or for a custom-engineered Enterprise-wide repository so that good proposals and/or development are received and are able to be evaluated. • There is a need to prototype a repository within the scope of an individual project, across multiple projects within a Department, and possibly across the Enterprise before proceeding so that realistic efforts can be determined and set against determined benefits. • The need to accomplish the implementation of a metadata management system with the same rigor and precision as is done for quality database projects so that there can be a high probability of success given a solid set of requirements and project plans as evidenced in a rigorously defined set of deliverables, a highly engineered methodology, time line, and resources.
	Solution Description	The use of the Metabase metadata management system to capture and store the requirements for an Enterprise Metadata Management System. Given that an Enterprise is going to have a full repository such as CA Advantage, the first and necessary step is to fully define its requirements and functionality. The Metabase metadata management system is a very good tool for capturing these requirements and intended functionality. Inserted into the Metabase metadata management system would then be the critical requirements information regarding the Repository's Mission, using organizations, and functions. Included would be the required meta-entities, meta-attributes, and meta-relationships among the meta-entities. Included would be the requirements for the Business Information Systems that would be needed to scrape metadata from production environments. Once these requirements data were collected and stored into the Metabase metadata management system a full requirements document could be produced that could be reviewed and iterated. Once complete it could then be delivered to Repository Vendors as a Requirements Request for Proposal.