



Whitemarsh
Information Systems Corporation

*Data Management Program:
Projects and Data Asset Products*

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

Table of Contents

Acknowledgments	iii
1. Introduction	1
2. Classes of Data Management Projects	3
3. Products Required for Specific Data Management Projects	5
3.1 Data management Projects	5
3.2 Data Management Architecture Projects	5
3.2.1 Data Management Overall Process	6
3.2.2 Governing Technology Standards	6
3.2.3 Metrics	6
3.2.4 Project Management	7
3.2.5 Data Asset Projects	7
3.2.6 Data Management Metadata Repository System	9
3.3 Concept of Operations Projects	10
3.4 Data Management Planning Environment Projects	11
3.5 Data Management Metadata Repository Infrastructure Projects	11
3.6 Training and Awareness Projects	12
3.7 Methodology Projects	12
3.8 Technical Support Projects	12
4.0 Data Asset Product Specifications	13
4.1 Data Asset Project Plans	13
4.2 Conceptual Data Models	14
4.3 [ISO 11179] Data Elements	15
4.5 Database Domains	18
4.6 Database Objects	18
4.7 Logical Data Models	19
4.8 Physical Data Models	20
4.9 View Data Models	21



Acknowledgments

This material is an evolution of documents that were updated during the time frame: September 2003 through December 2004. The primary contributors were Bruce Haberkamp, James Blalock, and Michael Gorman of the Office of the CIO, United States Army. The foundational components of this work has been favorably reviewed by subject matter experts within the U.S. Department of Defense.



1. Introduction

In general, data management, as in information technology discipline, supports the collection, development and maintenance of information about data required by the enterprise constituency of organizations to accomplish its mission tasks. Data management planning produces complete, implementable projects that include all data asset product specifications in the form of metadata, measures, studies, plans, prototypes, models and databases necessary to: 1) enable subsequent and improved data integration and reuse; and 2) provide improved project scoping, responsiveness to business change, management of systems development sequencing and prioritization, and level of business involvement.

Data management planning also results in the development of the data asset project action plans that set out the plans to achieve the net-centric goals for data.

Data management planning projects do not actually effect the creation and/or evolution of data assets. Rather data management planning projects identify, plan, and manage data asset project accomplishment. Data asset projects thus develop and/or use the data asset product's metadata necessary to create or evolve a specific data asset, that is, the existing and proposed: a) data model(s); b) business rules that govern the definition, production, storage, ownership, management, exchange formats, and replication of data, based on data categories (e.g., per-soldier personnel data); and c) data standardization/interoperability efforts and issues that relate to accomplishing the organization's mission(s).

To eliminate the possibility of stovepipe data assets, a certain class of data asset projects may need to create products in the areas of mission, event, information systems, function, and organization so that the various data assets can be set within their proper contexts thus ensuring proper integration across all other data assets of the enterprise, within a community of interest and/or across communities of interest.

To illustrate, a primary focus of a data asset project within data management planning may be to model data and create the specification of how data will be stored, transferred and managed. Thus, a data model may state that a person's name is related to the person's Social Security Number (SSN). Data models alone are not sufficient to specify that the SSN is Privacy Act data and must be protected from unauthorized access, nor will it say how the Person Identifier is created, assigned, physically stored in databases, and formatted for data exchange. These additional rules are part of other data asset products that might be created in this or other data asset projects. Because there exists an integrated metadata repository that would contain all these data asset product specifications they could be available for use by all. Simply put, the purpose of data management planning is to create and manage an environment within an enterprise that enables the development of data assets that are flexible, interoperable, and evolvable. Anything short of that is failure.

