



ENTERPRISE INTEGRATION
I N C O R P O R A T E D

TECHNICAL NOTE:

WHAT IS DATA LIFECYCLE MANAGEMENT?



IMPLEMENTING SAP FROM END-TO-END BUSINESS PROCESS SCENARIOS

INTRODUCTION

This technical note is included in the Enterprise Integration, Inc. (Eii) Frequently Asked Questions (FAQ) series. This series addresses questions that are presented for clarification by our customers. The question addressed in the title is extremely important for our enterprise implementation customers who must plan and execute **Data Lifecycle Management**. Data Lifecycle Management is a subset of Enterprise Information Management,⁴ and umbrella term that contains Enterprise Information Integration, Master Data Management, and other information management methods and methodologies.

DATA LIFECYCLE MANAGEMENT

Data Lifecycle Management (DLM) is the process of managing business data throughout its lifecycle, from conception until disposal. The lifecycle crosses different application systems and storage media, within the constraints of a business process. This business process could be enabled by an integrated system or by a composite application. The Data Lifecycle Management plan describes a management agreement on how the implementing organization(s) will create, organize, and resource an approach for managing the data lifecycle. The particular context for the plan varies, but it usually focuses on the identification of source data in a legacy environment, data quality management, conversion to a new system, and storage. In some cases the DLM plan includes the eventual data maintenance in a production enterprise system database.

⁴ See David Stodder, Mission Intelligence, *Intelligent Enterprise*, Vol. 8 #7 (July, 2005), p. 5.

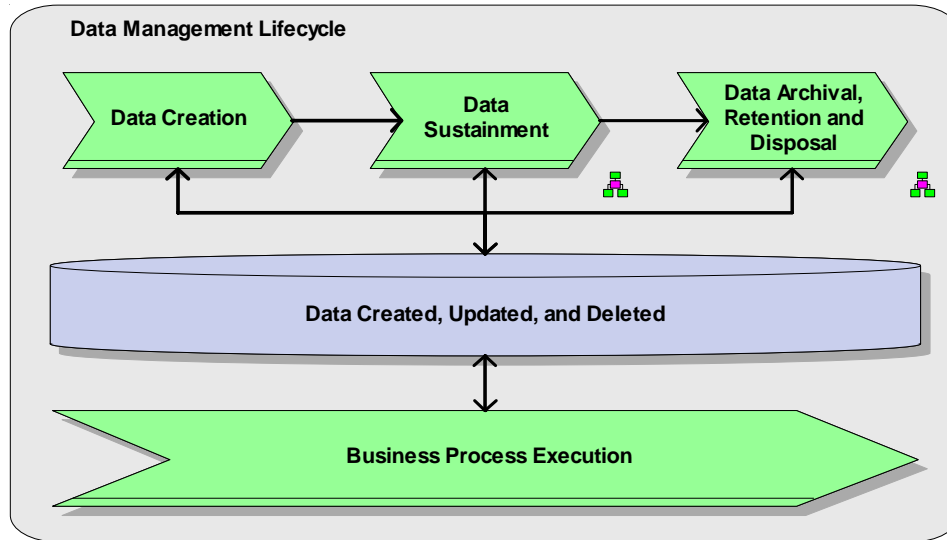


Figure 1 - The Data Management Lifecycle

CONTEXT AND ADDITIONAL DEFINITIONS

Defining Data Lifecycle Management as a process decouples the function (e.g., activity) from the products and solutions that may be in place to support the process. Once the process is understood and documented, these enabling solutions (i.e., ETL, manual approaches, etc.) may be linked to the process and analyzed relative to their ability to support or enhance the business process. This approach also supports the common understanding that DLM is already part of our clients' businesses today, even though only a few parts of the process may be automated. For example, creating backup copies of data is fairly well-automated in most organizations, whereas archival, cleansing, or extraction of a specific subset of business data typically requires manual intervention brought on by pressing operational needs, and disrupts the ability to search, access, or process data.

The lifecycle is the time from the moment data is created until it is deleted or stored indefinitely. Tying Data Lifecycle Management to the business process allows the implementing organization to model the lifecycle of the corresponding business data to the various stages, aspects, and applications that determine the business processes. The identification of a particular piece of data's lifecycle enables organizations to develop a comprehensive and quantifiable approach to data management, including:

- Intra- and Inter-Enterprise data sharing. Organizations can establish standard methods such as Service Oriented Architecture (SOA), Enterprise Information Integration (EII), and other technologies to lower the barriers to information exchange and sharing.
- Data Governance, Roles, and Permissions. Organizations are now realizing that information, and hence its component data, is an Enterprise asset that must be protected and controlled to ensure integrity, auditability, and quality. Large federated

organizations benefit greatly from establishing strong data object and element level governance.

For reference purposes, storage is considered the container resource for data objects, and Storage Resource Management is the capacity, property, and provisioning management thereof. A data object consists of data and a set of metadata, which could include some level of application and usage context. The data is seen as a collection of bits and bytes, for which the actual content is unknown or transparent.

For data to be considered information, its full context, its (end-user) representation, the application, and preferably the corresponding business process must be known. In our case, the Eii approach formally makes the business process linkage a requirement, since service-orientation (e.g. SOA) requires business process orchestration. This explains the need to maintain the business process views within the Solution Architecture for every large-scale enterprise system implementation. For example, for an SAP implementation project, this requires that all configuration content be stored as a full business process representation inside of the SAP Solution Manager.

THE DATA LIFECYCLE MANAGEMENT PLAN

The data source defines the initial node in the Data Lifecycle Management process. The consuming business process is the “sink.” The Lifecycle spans from source to sink. The Data Lifecycle Management plan defines the process for moving from source to sink, while meeting certain objectives, business rules, and constraints. For example, the Data Lifecycle Management process may reflect that for a single “sink” there may be multiple sources that require evaluation in order to establish a single version of the truth. These realities can drive policy and management actions to enable a single Enterprise view of data in a future state.

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