

# Metadata

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Metadata literally means “data that describes other data.” While true, that definition isn’t very useful. The ISO Records Management standard, (ISO 15489), defines metadata as “Data describing context, content, and structure of documents and records and their management through time.” Metadata not only includes information in a document, but any related information. For example, imaging metadata would include some of the data on a form, but also information about its digital conversion, the image format, and handling of the image. By contrast, not all information captured from a document will be held as metadata or used to index the item.

Metadata is an essential part of any information management program, as it is the tool for organization and management. Metadata is particularly useful when collected into electronic catalogs, because it supports quick, complete, and accurate location of relevant items.

In addition to facilitating the location and management of electronic documents, metadata:

Serves as the mechanism for documenting the lifecycle of information, including creation, usage, and disposition.  
Preserves the context and history of a particular piece of information.  
Documents how that object behaves, its function, use, and its relationships to other information objects.  
One way to categorize metadata is:

Descriptive: Information describing the content used for search and retrieval.  
Structural: Information that ties this item with others, such as pages in a book, or the documents in a case folder.  
Administrative: Information used to manage and control access to the item.  
An alternative set of three categories based upon document lifecycles is:

Content, which is based upon the information in the document and the form of the content. This also involves if needed, recording the location of the related item.  
Records management metadata, covering the classification, maintenance, and preservation of the document.  
Usage metadata, recording the capture, access, review, utilization, and disposition.  
A primary use of metadata is to permit locating a specific item and then its retrieval and display. Metadata is also used to ensure the authenticity, reliability, integrity, and usability of a document as a record.

Metadata can be stored within a document (e.g., email messages with descriptive headers) or stored separately (e.g., in an external catalog). An advantage of storing metadata with the record is that when the record is copied or moved, the metadata moves with it. When the record is deleted, the metadata is deleted as well. A significant disadvantage of only having embedded metadata is that all items need to be examined to satisfy a query. Another is that changes require changing the document, potentially violating trustworthiness.

The advantage of storing metadata separately in an electronic catalog, usually a database, is that it makes searching and maintenance more efficient. A disadvantage of this method is that the linkage between an item and its metadata could be lost. To prevent this, mechanisms need to be created to ensure that the associated metadata and the linkage with the related document are maintained.

If approaches are used, you will need to synchronize the two sets as changes occur.

Whenever a document or record is first identified, a number of initial metadata will be associated. In ECM this tends to be the indexing values, as well as the internal data maintained by the ECMS.

After the initial acquisition of a document and its metadata, additional metadata elements will accrue as changes in the logical and physical structure and technical attributes of the record occur, to describe new contexts in which the record is used, and to document new relationships with other documents or aggregations. This would involve usage of the item in other documents and auditing information.

There are a number of metadata standards in use. The Dublin Core Metadata Initiative has released a number of recommendations focused on standardizing the structure and vocabularies used across a number of applications. ISO 15836:2003 and ANSI/NISO Z39.85 - 2001 represent integration of these recommendations into formal standards. Many industry associations have produced standards for the information associated with their documents.

Records management standards and best practices, such as ISO 15489, ISO/ DIS 23081-1, and U.S. DOD 5015.2 as well as the European Model Requirements (MoReq) have identified metadata information of particular interest to records managers. They specifically require metadata to be captured and maintained by compliant records management systems.

Metadata is nothing arcane, but something we use every day.

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