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## **Information and documentation — Records management processes — Metadata for records —**

### **Part 1: Principles**

*Information et documentation — Processus de gestion des  
enregistrements — Métadonnées pour les enregistrements —*

*Partie 1: Principes*



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## ISO 23081-1:2017(E)



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html)

This document was prepared by ISO/TC 46, *Information and documentation*, Subcommittee SC 11, *Archives/records management*.

This second edition cancels and replaces the first edition (ISO 23081-1:2006), which has been technically revised.

A list of all the parts of ISO 23081 can be found on the ISO website.

## ISO 23081-1:2017(E)

### Introduction

ISO 23081 sets a framework for creating, managing and using records management metadata and explains the principles that govern them.

This document gives guidelines for understanding, implementing and using metadata within the framework of ISO 15489. It addresses the relevance of records management metadata in business processes and the different roles and types of metadata that support business and records management processes. It also sets a framework for managing those metadata.

**NOTE** In this part of ISO 23081, business and business activity are used as broad terms, not restricted to commercial activity, but including public administration, non-profit and other activities.

It does not define a mandatory set of records management metadata to be implemented, since these metadata will differ in detail according to organizational or specific requirements for jurisdiction. However, it assesses the main existing metadata sets in line with the requirements of ISO 15489.

ISO 23081-2 and ISO 23081-3 are more explanatory and provide practical guidance on implementation issues and how to assess records management metadata sets against the principles in this document.

# Information and documentation — Records management processes — Metadata for records —

## Part 1: Principles

### 1 Scope

This document covers the principles that underpin and govern records management metadata. These principles are applicable to:

- records and their metadata;
- all processes that affect them;
- any system in which they reside;
- any organization that is responsible for their management.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 15489-1:2016, *Information and documentation — Records management — Part 1: Concepts and principles*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15489-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1

##### **agent**

individual, workgroup or organization responsible for, or involved in record creation, capture and/or records management processes

Note 1 to entry: Technological tools such as software applications can be considered agents if they routinely perform records processes.

#### 3.2

##### **aggregation**

any accumulation of record entities at a level above record object

[SOURCE: ISO 16175-2:2011]

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### 3.3 attribute

characteristic of an object or entity

[SOURCE: ISO 23081-2:2009, 3.2]

### 3.4 business activity

all the functions, activities and transactions of an organisation and its employees Note 1 to entry: Includes public administration as well as commercial business.

[SOURCE: ISO 16175-2:2011, modified]

### 3.5 capture

process of lodging a document or digital object into a records management system and assigning metadata to describe the record and place it in context

[SOURCE: ISO 16175-3:2010, modified]

### 3.6 encoding scheme

controlled list of all the acceptable values in natural language and/or as a syntax-encoded text string designed for machine processing

### 3.7 entity

concrete or abstract thing that exists, did exist, or might exist, including associations among those things

### 3.8 fixity

state of quality of being fixed, that is, protected against unauthorised alteration or disposition

[SOURCE: ISO 16175-3:2010, modified]

### 3.9 metadata for records

structured or semi-structured information, which enables the creation, management, and use of records through time and within and across domains

[SOURCE: ISO 15489-1:2016, 3.12]

### 3.10 metadata schema

logical plan showing the relationships between metadata elements, normally through establishing rules for the use and management of metadata specifically as regards the semantics, the syntax and the optionality (*obligation level*) of values

## 4 Records management metadata

Metadata management is an inextricable part of records management, serving a variety of functions and purposes. In a records management context, metadata for records are defined as structured or semi-structured information which enables the creation, management, and use of records through time and within and across domains. (ISO 15489-1:2016, 3.12). Each domain represents an area of intellectual discourse and of social and/or organizational activity with a distinctive or limited group of people who share certain values and knowledge. Metadata for records can be used to identify, authenticate and contextualize records and the people, processes and systems that create, manage, maintain and use them and the policies that govern them (see [9.1](#)).

Initially, metadata define the record at its point of capture, fixing the record into its business context and establishing management control over it. During the existence of records or their aggregates,



new layers of metadata will be added, because of new uses in other business or usage contexts. This means that metadata continue to accrue, over time. Information relating to the context of the records management and the business processes in which the records are used continues to accumulate as the record is managed and used. The record may also undergo structural changes or changes to its appearance. Metadata can be sourced or re-used by multiple systems and for multiple purposes. Metadata applied to records during their active life may also continue to apply when they cease to be required for current business purposes but are retained for ongoing research or other values.

Metadata ensure authenticity, reliability, usability and integrity over time and enable the management and understanding of information objects, whether these are physical, analogue or digital. However, metadata also should be managed.

Records management has always involved the management of metadata. However, the digital environment requires a different expression of traditional requirements and different mechanisms for identifying, capturing, attributing and using metadata. In the digital environment, authoritative records are those accompanied by metadata defining their critical characteristics. These characteristics must be explicitly documented rather than being implicit, as in some paper-based processes. In the digital environment, it is essential to ensure that the creation and capture of records management metadata are implemented in systems that create, manage and use records. Conversely, the digital environment presents new opportunities for defining and creating metadata and ensuring the complete, contemporaneous capture of records. These records can be evidence of transactions or themselves be transactions.

## 5 Perspectives and purpose of records management metadata

### 5.1 Purpose and benefits of records management metadata

Metadata support business and records management processes by:

- a) protecting records as evidence and ensuring their accessibility and usability through time;
- b) facilitating the ability to understand records;
- c) supporting and ensuring the evidential value of records;
- d) helping to ensure the authenticity, reliability and integrity of records;
- e) supporting and managing access, privacy and rights;
- f) supporting efficient retrieval;
- g) supporting reuse and repurposing of records
- h) supporting interoperability strategies by enabling authoritative capture of records created in diverse technical and business environments and their sustainability for as long as required;
- i) providing logical links between records and the context of their creation, and maintaining them in a structured, reliable and meaningful way;
- j) supporting the identification of the technological environment in which digital records were created or captured, and the management of the technological environment in which they are maintained in order that authentic records can be reproduced as long as they are needed;
- k) supporting efficient and successful migration of records from one environment or computer platform to another or any other preservation strategy.

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### 5.2 Records management metadata that should be applied in an organization

#### 5.2.1 General

Organizations should make decisions on which of the metadata requirements outlined in this document are necessary in any or all organizational systems. These decisions will be dependent on:

- a) business needs;
- b) the regulatory environment;
- c) risks affecting business operations.

This assessment may identify which types of metadata need to be applied in different areas of the organization, depending on business risks or needs.

Different perspectives on records management metadata are possible and may coexist. These include:

- 1) the business perspective, where records management metadata support business processes;
- 2) the records management perspective, where metadata capture the characteristics of records and their business context, and support their management over time;
- 3) the use perspective within or outside the records creating business context, where metadata enable the retrieval, understandability and interpretation of records.

Broader levels of contextual detail may be required to understand and use records through time, particularly their use in business environments outside those in which they were created.

Records management metadata consist of:

- i) metadata that document the business context in which records are created or captured, as well as the content, structure and appearance of those records;
- ii) metadata that document records management and business processes in which records are subsequently used, including any changes to the content, structure and appearance.

#### 5.2.2 Metadata at the point of record capture

Metadata at the point of record capture include information about the context of record creation, the business context, the agents involved and metadata about the content, appearance, structure and technical attributes of the records themselves. They allow records to be used in an application or information system and make them readable, usable and understandable. The context of records includes information about the business processes in which they are created. These metadata will allow users to understand the reliability of the record-creating authority, the environment in which records were created, the purpose or business activity being undertaken and their relationships with other records or aggregations. The metadata documenting the business context should be an integral part of the records produced by the records creator and they should be captured at the same time as records are captured into the records system.

The structure of a record consists of:

- a) its physical or technical structure;
- b) its logical structure, i.e. the relationships between the data elements comprising the record.

These aspects are as important as the content itself. Metadata about technical aspects should describe the system with which records are created or captured, and the technical characteristics of the digital components of which they are comprised.

### 5.2.3 Metadata after record capture

All records management processes performed upon a record, or on an aggregation of records, should be documented. In order to preserve records and guarantee their authenticity, reliability, usability and integrity over time, it is necessary to create metadata that facilitate the triggering or documentation of these records management processes (in this document referred to as “process metadata”). These metadata should include information about the management processes that have been or will be applied to each record. The level of detail for documenting records management processes will vary according to predetermined management needs. Metadata about records management processes can be applied throughout the record’s existence. Records management processes also create and use technical metadata for the rendering and reproduction of digital records, which should be recorded. Additionally, any changes in the record content, context and structure caused by management activities should be captured.

Business processes that access records should also be documented in the metadata throughout the record’s life. Such business uses include associating records with actions, action triggers and other records.

All metadata about the record and those accruing in its management and use also form a record: the metadata record that also should be managed. It is essential to keep this metadata record at least for as long as the original record exists. In the case of disposition of records, either by transfer of custody or ownership, or by destruction, some metadata about them may still be needed to account for their existence, management and disposition.

## 6 Roles and responsibilities

Roles and responsibilities with respect to records management metadata should be defined, assigned and promulgated throughout the organization. Where a specific need to create and capture records management metadata is identified, it should be clear who is responsible for taking the necessary action (ISO 15489-1:2016, 6.3).

These responsibilities are a subset of the roles and responsibilities for carrying out business and records management processes and should be assigned to all employees in the organization who create, capture or manage metadata. This includes records professionals, allied information professionals, executives, business unit managers, systems administrators and others who create or capture records and associated metadata as part of their work. Specific leadership, responsibility and accountability for the management of metadata should be assigned to a person with appropriate authority within the organization and should be reflected in job descriptions, policies and similar statements.

Such responsibilities include the following.

- a) Records professionals are responsible for the reliability, authenticity, usability and integrity of metadata associated with records, and for training users on capturing, managing and using metadata. Records professionals participate in the definition of metadata requirements, develop related policies and strategies, and monitor the process of metadata creation.
- b) All agents are accountable for ensuring the accuracy and completeness of the records management metadata for which they are responsible.
- c) Executives are responsible for ensuring that internal controls are in place so that customers, auditors, courts, and other authorized users can rely on the information that the organization produces. Executives are responsible for supporting the use of records management metadata and related policies throughout the organization.
- d) Information technology personnel are responsible for the reliability, usability and integrity of the systems used to capture and maintain metadata. They are responsible for ensuring that all records management metadata are linked to the related records and that these links are persistently maintained.