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

**Part 1:
Principles**

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*Information et documentation — Processus de «Records
management» — Métadonnées pour les documents —*

Partie 1: Principes

ISO/TS 23081-1:2004

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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.

ISO/TS 23081-1 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 11, *Archives/records management*, in collaboration with ISO/TC 10, *Technical product documentation* and ISO/TC 171, *Document management applications*.

Parts 2, *Implementation issues*, and 3, *Evaluation of existing metadata sets and initiatives to ISO 15489*, of this International Standard are in preparation

Introduction

ISO 23081 is a guide to understanding, implementing and using metadata within the framework of ISO 15489, *Information and documentation — Records management*. 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 processes¹⁾. It also sets a framework for managing those metadata.

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.

This Technical Specification sets a framework for creating, managing and using records management metadata and explains the principles that govern them.

The proposed Parts 2 and 3 will be more explanatory and provide practical guidance on implementation issues and how to use existing metadata sets. These future Parts will be Technical Reports that should be considered as time-bound documents that will need regular updates.

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1) In this Technical Specification, business and business activity are used as broad terms, not restricted to commercial activity, but including public administration, non-profit and other activities.

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

Part 1: Principles

1 Scope

This part of ISO 23081 covers the principles that underpin and govern records management metadata.

2 Normative references

The following referenced documents are indispensable for the application 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 15489-1:2001, *Information and documentation — Records management — Part 1: General*

3 Terms and definitions (standards.iteh.ai)

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

3.1 agent

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

3.2 qualifier

refinement of an element defining its semantics or values

3.3 schema

framework that specifies and describes a standard set of metadata elements and their interrelationships

NOTE Schemas provide a formal syntax (or structure) and semantics (or definitions) for the metadata elements

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 are defined as data describing the context, content and structure of records and their management through time (ISO 15489-1:2001, 3.12). As such, metadata are structured or semi-structured information that enables the creation, registration, classification, access, preservation and disposition of records through time and within and across domains. Each of these domains 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. Records management metadata 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 and relating to structural changes to the record or its appearance. Metadata can be sourced or reused 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 need to 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 and manage 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 Purpose of records management metadata

5.1 Records management metadata that should be applied in an organization

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

- a) business needs,
- b) the regulatory environment, and
- 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 views and perspectives on records management metadata are possible and may coexist. These include

- 1) the business view, where records management metadata support business processes,
- 2) the records management view, where metadata capture the characteristics of records and their business context, and support their management over time, and
- 3) the use view 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.

5.2 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 interoperability strategies by enabling authoritative capture of records created in diverse technical and business environments and their sustainability for as long as required,
- h) providing logical links between records and the context of their creation, and maintaining them in a structured, reliable and meaningful way,
- i) supporting the identification of the technological environment in which digital records were created 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, and
- j) supporting efficient and successful migration of records from one environment or computer platform to another or any other preservation strategy.

5.3 Perspectives of records management metadata

Two main perspectives of records management metadata can be distinguished:

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

These perspectives do not preclude others, particularly relating to digital records.

5.3.1 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 people 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 need to 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, and
- b) its logical structure, that is to say, 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, and the technical characteristics of the digital components of which they are comprised.

5.3.2 Metadata after record capture

All records management processes performed upon a record, or on a group or 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 documented.

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 has to be managed. It is essential to keep this metadata record at least for as long as the 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 15489-1:2001, 6.3, *Responsibilities*).

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 managers, 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.

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Such responsibilities include the following <https://standards.iteh.ai/catalog/standards/sist/fe10c87c-7f17-43ca-955b-e8401b1f0172/iso-ts-23081-1-2004>

- a) Records management 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 management professionals participate in the definition of metadata requirements, develop related policies and strategies, and monitor the process of metadata creation.
- b) All employees are responsible and 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 maintained.

Training programs should support the performance of these responsibilities. Audit procedures should monitor their performance.

7 Records management metadata in relation to other metadata areas

Metadata may be created and used for a single, particular purpose or for multiple business purposes. These purposes may include e-business, preservation, resource description, resource discovery and rights management. Records management metadata can be shared by all of these purposes. For example, metadata at the point of record capture may inherit and extend the resource description and may be used for resource discovery. Records management metadata can be inherited or extracted from workflow systems, standard office software, email systems and other business systems.

Neither point of record capture metadata nor process-related metadata for records management can exist in isolation. It is therefore appropriate and necessary to consider the creation and capture of metadata for records management within this broader context to ensure that appropriate links and relationships are established and metadata are neither duplicated nor unnecessarily produced.

7.1 Metadata for e-business

Metadata help enable e-business, including e-commerce and e-government. Metadata about all stages of the e-business processes can be captured. This encompasses the location of a product, service, provider and customer, the agreement of business terms and conditions, digital signatures and the business process transactions themselves. These metadata provide information about the business context and may therefore overlap with contextual metadata (9.2.1) as well as structural and storage metadata (9.2.1), security metadata (9.2.4), and some accessibility metadata (9.2.3).

7.2 Metadata for preservation

The preservation of information, especially digital information, for continued access is the concern of records management, library and archives communities. Information technology is relatively volatile in comparison with print-to-paper technology. Technical metadata are required to meet the challenge of constantly changing technology. Additional structural and storage metadata (9.2.1) and some metadata about records management processes (9.6) are needed to support preservation. This includes metadata about records management processes including access and security, migration, conversion and transfer activities to ensure not only the accessibility of records through time, but also their continued authenticity, reliability, usability and integrity.

7.3 Metadata for resource description

One of the primary uses of metadata is for the description of resources. These resources might be books, journals, videos, documents, images and artefacts. They also include records transferred into archival custody. The metadata are needed to *identify* the resource and can include the title, creator(s), date(s), unique identifier, relationship to other resources (e.g. within the same series) and its extent (e.g. size or length). Some of these metadata elements are also used in a records management context. They are similar to, and may overlap with, elements of the initial metadata at the point of record capture documenting a record's content. However, descriptive metadata for records management and archival purposes are generally broader than standard resource description metadata and can include other elements such as, for example, contextual metadata (9.2.1).

There is a strong relationship between the type of metadata outlined and the archival description. Archival institutions use metadata to describe archival records in order to preserve their meaning over time, to place them in their records management and administrative contexts and to facilitate their use and management. Therefore, the existing standards of archival description, such as ISAD/G and ISAAR(CPF)²⁾, have an extensive overlap with records management metadata, because both are concerned with documenting business context and management processes. Archival management, including archival description, is a complementary and continuing activity for those records that are identified as having archival value.

2) ISAD/G and ISAAR (CPF) are standards issued by the International Council on Archives (ICA, www.ica.org). ISAD/G is the International Standard for Archival Description (General Principles) and provides guidelines for describing records and their aggregations. ISAAR (CPF) is the International Standard Archival Authority Record (Corporate Bodies, Persons, Families) and provides guidelines for describing records-creating bodies.