MALAYSIAN STANDARD

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INFORMATION AND DOCUMENTATION - RECORDS MANAGEMENT - PART 1: GENERAL (ISO 15489-1:2001, IDT)

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Committee representation

The Industry Standards Committee on Organisation Management (ISC O) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Department of Occupational Safety and Health Malaysia
Department of Standards Malaysia
Federation of Public Listed Companies
Jabatan Kebajikan Masyarakat Malaysia
Malaysian Association of Standard Users
Malaysian Institute of Corporate Governance
Malaysian International Chamber of Commerce and Industry
Ministry of International Trade and Industry Malaysia
National Archives of Malaysia
PETRONAS Corporate Health, Safety and Environment
Securities Commission
Telekom Malaysia Berhad
The Institution of Engineers, Malaysia

The Technical Committee on Record Management which recommended the adoption of the ISO Standard consists of representatives from the following organisations:

Bank Negara Malaysia
Chief Government Security Officer, Prime Minister's Department
Datarunding Sdn Bhd
Malaysian Administrative, Modernisation and Management Planning Unit
National Archives of Malaysia, Conventional Record Management
National Archives of Malaysia, Electronic Record and Information Technology Management
Petroliam Nasional Berhad
Public Service Department of Malaysia
Universiti Kebangsaan Malaysia
Universiti Teknologi MARA
Versapac Sdn Bhd

NATIONAL FOREWORD

The adoption of the ISO Standard as a Malaysian Standard was recommended by the Technical Committee on Record Management under the authority of the Organisational Management Industry Standards Committee.

This Malaysian Standard is identical with ISO 15489-1:2001, *Information and documentation - Records management - Part 1: General,* published by the International Organization for Standardization (ISO). However, for the purposes of this Malaysian Standard, the following apply:

a) in the source text, "this International Standard" should read "this Malaysian Standard";

b) the comma which is used as a decimal sign (if any), to read as a point; and

c) reference to International Standards should be replaced by equivalent Malaysian Standards as follows:

Referenced International Standards	Corresponding Malaysian Standards
ISO 9001*, Quality management systems - Requirements*	MS ISO 9001, *Quality management systems - Requirements*
ISO 14001*, Environmental management systems - Specification with guidance for use*	MS ISO 14001, *Environmental management systems - Specification with guidance for use*

MS 2223 consists of the following parts, under the general title, *Information and documentation - Records management:*

Part 1: General

Part 2: Guidelines

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

NOTE. IDT on the front cover indicates an identical standard i.e. a standard where the technical content, structure, wording (or is and identical translation) of a Malaysian Standard is exactly the same as in an International Standard or is identical in technical content and structure although it may contain the minimal editorial changes specified in clause 4.2 of ISO/IEC Guide 21-1.

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 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 15489 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 15489-1 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 11, *Archives/records management*.

ISO 15489 consists of the following parts, under the general title *Information and documentation — Records management*:

— *Part 1: General*

— *Part 2: Guidelines* [Technical Report]

Introduction

The standardization of records management policies and procedures ensures that appropriate attention and protection is given to all records, and that the evidence and information they contain can be retrieved more efficiently and effectively, using standard practices and procedures.

This part of ISO 15489 was developed in response to consensus among participating ISO member countries to standardize international best practice in records management using the Australian Standards AS 4390, *Records management* as its starting point.

This International Standard is accompanied by a Technical Report (ISO/TR 15489-2) that is recommended for use with it. ISO/TR 15489-2 provides further explanation and implementation options for achieving the outcomes of this International Standard. It also includes a bibliography.

Information and documentation — Records management —

Part 1: General

1 Scope

This part of ISO 15489 provides guidance on managing records[1)] of originating organizations, public or private, for internal and external clients.

All the elements outlined in this part of ISO 15489 are recommended to ensure that adequate records are created, captured and managed. Procedures that help to ensure the management of records according to the principles and elements outlined in this part of ISO 15489 are provided in ISO/TR 15489-2 (Guidelines).

This part of ISO 15489

— applies to the management of records, in all formats or media, created or received by any public or private organization in the conduct of its activities, or any individual with a duty to create and maintain records,

— provides guidance on determining the responsibilities of organizations for records and records policies, procedures, systems and processes,

— provides guidance on records management in support of a quality process framework to comply with ISO 9001 and ISO 14001,

— provides guidance on the design and implementation of a records system, but

— does not include the management of archival records within archival institutions.

This part of ISO 15489 is intended for use by

— managers of organizations,

— records, information and technology management professionals,

— all other personnel in organizations, and

— other individuals with a duty to create and maintain records.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15489. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15489 are encouraged to investigate the

1) In some countries, the management of records also applies to archives management. Archives management is not covered in this part of ISO 15489.

possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 5127:—[2)], *Information and documentation — Vocabulary*

ISO 9001, *Quality management systems — Requirements*

ISO 14001, *Environmental management systems — Specification with guidance for use*

3 Terms and definitions

For the purposes of this part of ISO 15489, the following terms and definitions apply. For terms not included here, see ISO 5127.

3.1
access
right, opportunity, means of finding, using, or retrieving information

3.2
accountability
principle that individuals, organizations, and the community are responsible for their actions and may be required to explain them to others

3.3
action tracking
process in which time limits for actions are monitored and imposed upon those conducting the business

3.4
archival authority
archival agency
archival institution
archival programme
agency or programme responsible for selecting, acquiring and preserving archives, making them available, and approving destruction of other records

3.5
classification
systematic identification and arrangement of business activities and/or records into categories according to logically structured conventions, methods, and procedural rules represented in a classification system

3.6
classification system

SEE **classification** (3.5)

3.7
conversion
process of changing records from one medium to another or from one format to another

SEE **migration** (3.13)

3.8
destruction
process of eliminating or deleting records, beyond any possible reconstruction

2) To be published. (Revision of all previous parts of ISO 5127)

3.9
disposition
range of processes associated with implementing records retention, destruction or transfer decisions which are documented in disposition authorities or other instruments

3.10
document, noun
recorded information or object which can be treated as a unit

3.11
indexing
process of establishing access points to facilitate retrieval of records and/or information

3.12
metadata
data describing context, content and structure of records and their management through time

3.13
migration
act of moving records from one system to another, while maintaining the records' authenticity, integrity, reliability and useability

SEE **conversion** (3.7)

3.14
preservation
processes and operations involved in ensuring the technical and intellectual survival of authentic records through time

3.15
records
information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business

3.16
records management
field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records

3.17
records system
information system which captures, manages and provides access to records through time

3.18
registration
act of giving a record a unique identifier on its entry into a system

3.19
tracking
creating, capturing and maintaining information about the movement and use of records

3.20
transfer
⟨custody⟩ change of custody, ownership and/or responsibility for records

3.21
transfer
⟨movement⟩ moving records from one location to another

4 Benefits of records management

Records management governs the practice both of records managers and of any person who creates or uses records in the course of their business activities. Records management in an organization includes

a) setting policies and standards,

b) assigning responsibilities and authorities,

c) establishing and promulgating procedures and guidelines,

d) providing a range of services relating to the management and use of records,

e) designing, implementing and administering specialized systems for managing records, and

f) integrating records management into business systems and processes.

Records contain information that is a valuable resource and an important business asset. A systematic approach to the management of records is essential for organizations and society to protect and preserve records as evidence of actions. A records management system results in a source of information about business activities that can support subsequent activities and business decisions, as well as ensuring accountability to present and future stakeholders. Records enable organizations to

— conduct business in an orderly, efficient and accountable manner,

— deliver services in a consistent and equitable manner,

— support and document policy formation and managerial decision making,

— provide consistency, continuity and productivity in management and administration,

— facilitate the effective performance of activities throughout an organization,

— provide continuity in the event of a disaster,

— meet legislative and regulatory requirements including archival, audit and oversight activities,

— provide protection and support in litigation including the management of risks associated with the existence of, or lack of, evidence of organizational activity,

— protect the interests of the organization and the rights of employees, clients and present and future stakeholders,

— support and document current and future research and development activities, developments and achievements, as well as historical research,

— provide evidence of business, personal and cultural activity,

— establish business, personal and cultural identity, and

— maintain corporate, personal or collective memory.

5 Regulatory environment

All organizations need to identify the regulatory environment that affects their activities and requirements to document their activities. The policies and procedures of organizations should reflect the application of the regulatory environment to their business processes. An organization should provide adequate evidence of its compliance with the regulatory environment in the records of its activities.

The regulatory environment consists of

a) statute and case laws, and regulations governing the sector-specific and general business environment, including laws and regulations relating specifically to records, archives, access, privacy, evidence, electronic commerce, data protection and information,

b) mandatory standards of practice,

c) voluntary codes of best practice,

d) voluntary codes of conduct and ethics, and

e) identifiable expectations of the community about what is acceptable behaviour for the specific sector or organization.

The nature of the organization and the sector to which it belongs will determine which of these regulatory elements (individually or in combination) are most applicable to that organization's records management requirements.

6 Policy and responsibilities

6.1 General

An organization seeking to conform to this part of ISO 15489 should establish, document, maintain and promulgate policies, procedures and practices for records management to ensure that its business need for evidence, accountability and information about its activities is met.

6.2 Policy

Organizations should define and document a policy for records management. The objective of the policy should be the creation and management of authentic, reliable and useable records, capable of supporting business functions and activities for as long as they are required. Organizations should ensure that the policy is communicated and implemented at all levels in the organization.

The policy should be adopted and endorsed at the highest decision-making level and promulgated throughout the organization. Responsibility for compliance should be assigned.

The policy should be derived from an analysis of business activities. It should define the areas where legislation, regulations, other standards and best practices have the greatest application in the creation of records connected to business activities. In doing so, organizations should take into account their organizational environment and economic considerations. Policies should be regularly reviewed to ensure that they reflect current business needs.

6.3 Responsibilities

Records management responsibilities and authorities should be defined and assigned, and promulgated throughout the organization so that, where a specific need to create and capture records is identified, it should be clear who is responsible for taking the necessary action. These responsibilities should be assigned to all employees of the organization, including records managers, allied information professionals, executives, business unit managers, systems administrators and others who create records as part of their work, and should be reflected in job descriptions and similar statements. Specific leadership responsibility and accountability for records management should be assigned to a person with appropriate authority within the organization. Designations of the responsible individuals may be assigned by law.

Such responsibilities should include statements such as the following.

a) Records management professionals are responsible for all aspects of records management, including the design, implementation and maintenance of records systems and their operations, and for training users on records management and records systems operations as they affect individual practices.

b) Executives are responsible for supporting the application of records management policies throughout the organization.

c) Systems administrators are responsible for ensuring that all documentation is accurate, available and legible to personnel when required.

d) All employees are responsible and accountable for keeping accurate and complete records of their activities.

Archival authorities may be involved in the process of planning and implementing records management policies and procedures.

7 Records management requirements

7.1 Principles of records management programmes

Records are created, received and used in the conduct of business activities[3)]. To support the continuing conduct of business, comply with the regulatory environment, and provide necessary accountability, organizations should create and maintain authentic, reliable and useable records, and protect the integrity of those records for as long as required. To do this, organizations should institute and carry out a comprehensive records management programme which includes

a) determining what records should be created in each business process, and what information needs to be included in the records,

b) deciding in what form and structure records should be created and captured, and the technologies to be used,

c) determining what metadata should be created with the record and through records processes and how that metadata will be persistently linked and managed,

d) determining requirements for retrieving, using and transmitting records between business processes and other users and how long they need to be kept to satisfy those requirements,

e) deciding how to organize records so as to support requirements for use,

f) assessing the risks that would be entailed by failure to have authoritative records of activity,

g) preserving records and making them accessible over time, in order to meet business requirements and community expectations,

h) complying with legal and regulatory requirements, applicable standards and organizational policy,

i) ensuring that records are maintained in a safe and secure environment,

j) ensuring that records are retained only for as long as needed or required, and

k) identifying and evaluating opportunities for improving the effectiveness, efficiency or quality of its processes, decisions, and actions that could result from better records creation or management.

Rules for creating and capturing records and metadata about records should be incorporated into the procedures governing all business processes for which there is a requirement for evidence of activity.

Business continuity planning and contingency measures should ensure that records that are vital to the continued functioning of the organization are identified as part of risk analysis, protected and recoverable when needed.

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3) In this part of ISO 15489, business activity is used as a broad term, not restricted to commercial activity, but including public administration, non-profit and other activities.

7.2 Characteristics of a record

7.2.1 General

A record should correctly reflect what was communicated or decided or what action was taken. It should be able to support the needs of the business to which it relates and be used for accountability purposes.

As well as the content, the record should contain, or be persistently linked to, or associated with, the metadata necessary to document a transaction, as follows:

a) the structure of a record, that is, its format and the relationships between the elements comprising the record, should remain intact;

b) the business context in which the record was created, received and used should be apparent in the record (including the business process of which the transaction is part, the date and time of the transaction and the participants in the transaction);

c) the links between documents, held separately but combining to make up a record, should be present.

Records management policies, procedures and practices should lead to authoritative records which have the characteristics given in 7.2.2 to 7.2.5.

7.2.2 Authenticity

An authentic record is one that can be proven

a) to be what it purports to be,

b) to have been created or sent by the person purported to have created or sent it, and

c) to have been created or sent at the time purported.

To ensure the authenticity of records, organizations should implement and document policies and procedures which control the creation, receipt, transmission, maintenance and disposition of records to ensure that records creators are authorized and identified and that records are protected against unauthorized addition, deletion, alteration, use and concealment.

7.2.3 Reliability

A reliable record is one whose contents can be trusted as a full and accurate representation of the transactions, activities or facts to which they attest and can be depended upon in the course of subsequent transactions or activities. Records should be created at the time of the transaction or incident to which they relate, or soon afterwards, by individuals who have direct knowledge of the facts or by instruments routinely used within the business to conduct the transaction.

7.2.4 Integrity

The integrity of a record refers to its being complete and unaltered.

It is necessary that a record be protected against unauthorized alteration. Records management policies and procedures should specify what additions or annotations may be made to a record after it is created, under what circumstances additions or annotations may be authorized, and who is authorized to make them. Any authorized annotation, addition or deletion to a record should be explicitly indicated and traceable.

7.2.5 Useability

A useable record is one that can be located, retrieved, presented and interpreted. It should be capable of subsequent presentation as directly connected to the business activity or transaction that produced it. The contextual linkages of records should carry the information needed for an understanding of the transactions that created and used them. It should be possible to identify a record within the context of broader business activities and functions. The links between records that document a sequence of activities should be maintained.

8 Design and implementation of a records system

8.1 General

Records management strategies are based on developing and adopting policies, procedures and practices, and designing and implementing systems in ways that meet the operational needs of the organization and that accord with the regulatory environment.

Strategies adopted by an organization for documenting its business activity should determine what records are required and when, how and where they should be captured into records systems.

Implementation strategies for compliant records systems may include

a) designing records systems,

b) documenting records systems,

c) training records practitioners and other personnel,

d) converting records to new records systems, formats and controls,

e) setting standards and measuring compliance and performance against them, and

f) determining retention periods and making decisions about records which have continuing value, in keeping with the regulatory environment.

Records management strategies should be documented in a strategic plan, such as an Information Management Strategic Plan, which should be incorporated into organization-wide planning documentation.

Information systems, business applications and communication systems, and the business processes which they support, should be designed, modified or redesigned so that adequate records can be created and captured as a routine part of undertaking business activities.

8.2 Records systems characteristics

8.2.1 Introduction

Records systems should support records that contain the characteristics identified in 7.2. The systems should have the characteristics described in 8.2.2 to 8.2.6.

8.2.2 Reliability

Any system deployed to manage records should be capable of continuous and regular operation in accordance with responsible procedures.

A records system should

a) routinely capture all records within the scope of the business activities it covers,

b) organize the records in a way that reflects the business processes of the records' creator,

c) protect the records from unauthorized alteration or disposition,

d) routinely function as the primary source of information about actions that are documented in the records, and

e) provide ready access to all relevant records and related metadata.

The reliability of the system should be documented by creating and maintaining records of systems operation. These records should demonstrate that the system satisfied the criteria listed above.

A records system should be responsive to changing business needs but any changes in the system should not have an impact on the characteristics of the records in the system. Similarly, when records are transferred from one records system to another, the transfer should be carried out in a way that does not adversely affect the characteristics of the records.

8.2.3 Integrity

Control measures such as access monitoring, user verification, authorized destruction and security should be implemented to prevent unauthorized access, destruction, alteration or removal of records. These controls may reside within a records system or be external to the specific system. For electronic records, the organization may need to prove that any system malfunction, upgrade or regular maintenance does not affect the records' integrity.

8.2.4 Compliance

Records systems should be managed in compliance with all requirements arising from current business, the regulatory environment and community expectations in which the organization operates. Personnel creating records should understand how these requirements affect the business actions they perform. Records system compliance with such requirements should be regularly assessed and the records of these assessments retained for evidential purposes.

8.2.5 Comprehensiveness

Records systems should manage records resulting from the complete range of business activities for the organization, or section of the organization, in which they operate.

8.2.6 Systematic

Records should be created, maintained and managed systematically. Records creation and maintenance practices should be systematized through the design and operation of both records systems and business systems.

A records system should have accurately documented policies, assigned responsibilities and formal methodologies for its management.

8.3 Designing and implementing records systems

8.3.1 General

A records system should have the functionality that enables it to carry out and to support the records management processes described in clause 9.

Decisions about design and implementation of records systems and the processes they support need to be considered in relation to existing organizational systems.

8.3.2 Documenting records transactions

Records systems should contain complete and accurate representations of all transactions that occur in relation to a particular record. These include the processes associated with individual records. Such details may be documented as part of the metadata embedded in, attached to, or associated with, a specific record. Alternatively, they may be recorded as audit trails which should be kept at least as long as the document to which they relate is retained.

8.3.3 Physical storage medium and protection

Appropriate storage environment and media, physical protective materials, handling procedures and storage systems should be considered when designing the records system. Knowing how long the records will need to be kept and maintained will affect decisions on storage media. The records system should address disaster preparedness to ensure that risks are identified and mitigated. Integrity should be demonstrably maintained during and after recovery from disaster.

8.3.4 Distributed management

Records systems should be capable of supporting alternative options for the location of records. In some cases, where the legal and regulatory environment allows this, records may be physically stored with one organization, but the responsibility and management control reside with either the creating organization or another appropriate authority. Such arrangements, distinguishing between storage, ownership and responsibility for records, are particularly relevant for records in electronic records systems. Variations in these arrangements may occur at any time in the systems' existence, and any changes to these arrangements should be traceable and documented.

8.3.5 Conversion and migration

Records systems should be designed so that records will remain authentic, reliable and useable throughout any kind of system change, including format conversion, migration between hardware and operating systems or specific software applications, for the entire period of their retention (see 8.5).

8.3.6 Access, retrieval and use

Records systems should provide timely and efficient access to, and retrieval of, records needed in the continuing conduct of business and to satisfy related accountability requirements.

Systems should include and apply controls on access to ensure that the integrity of the records is not compromised. They should provide and maintain audit trails or other methods to demonstrate that records were effectively protected from unauthorized use, alteration or destruction.

8.3.7 Retention and disposition

Records systems should be capable of facilitating and implementing decisions on the retention or disposition of records. It should be possible for these decisions to be made at any time in the existence of records, including during the design stage of records systems. It should also be possible, where appropriate, for disposition to be activated automatically. Systems should provide audit trails or other methods to track completed disposition actions.

8.4 Design and implementation methodology

In order to design and implement sustainable record systems, a design and implementation methodology is essential.

The methodology given in items a) to h) is not designed to be linear. The tasks may be undertaken in different stages, iteratively, partially or gradually, in accordance with organizational needs, formal compliance requirements and changes to the organizational and records management environment.

a) **Preliminary investigation.** Collect information from documentary sources and through interviews; identify and document the role and purpose of the organization, its structure, its legal, regulatory, business and political environment, critical factors and critical weaknesses associated with records management.

b) **Analysis of business activity.** Collect information from documentary sources and through interviews; identify and document each business function, activity and transaction and establish a hierarchy of them, that is, a business classification system, and identify and document the flow of business processes and the transactions which comprise them.

c) **Identification of requirements for records.** Collect information from documentary sources and through interviews; identify the requirements for evidence of and information about each business function, activity and transaction which should be satisfied through records. The requirements can be derived from an analysis of the organization's regulatory environment (see clause 5) and the risk of not creating and maintaining the records. Determine how each requirement may be satisfied through records management processes, and articulate and document the requirements for records. Choose the appropriate records structure which best satisfies each business function, activity or transaction.

d) **Assessment of existing systems.** Identify and analyse existing records systems and other information systems to measure their performance against the requirements for records.

e) **Identification of strategies for satisfying records requirements.** Identify strategies for satisfying records requirements, which may include adopting policies, standards, procedures and practices, designing new systems and implementing systems in a way which satisfies a requirement for records. Strategies may be applied to each records requirement separately or in combination. Strategies should be selected on the basis of the degree of risk involved through failure to satisfy a requirement, either within the business function which the records system is intended to support, the existing systems environment or the corporate culture in which the strategy should succeed (see clause 7).

f) **Design of a records system.** Design a records system which incorporates the strategies, processes and practices described in this part of ISO 15489; ensure that the records system supports, and does not hinder, business processes; assess and, if necessary, redesign business processes and operational business and communication systems to incorporate records management.

g) **Implementation of a records system.** Implementing a records system should be undertaken systematically using project planning and methodologies appropriate to the situation and with a view to integrating the operation of records systems with business processes and related systems.

h) **Post-implementation review.** Gather information about the performance of the records system as an integral and ongoing process. This may be undertaken by interviewing members of management and key employees, using questionnaires, observing the system in operation, examining procedures manuals, training materials and other documentation, and carrying out random checks on the quality of records and control measures. Review and assess the performance of the system, initiate and monitor corrective action and establish a regime of continuous monitoring and regular evaluation.

8.5 Discontinuing records systems

When a records system is discontinued or decommissioned, no further records may be added to the system, although they should continue to be accessible. Records may be removed from the system in accordance with retention and disposition guidelines in force, or with conversion and migration strategies. The process of discontinuing systems should be documented, as such detail will be required to maintain the authenticity, reliability, useability and integrity of records still held within that system, including conversion plans or data mapping (see 7.2).

9 Records management processes and controls

9.1 Determining documents to be captured into a records system

Determining which documents should be captured into a records system is based on an analysis of the regulatory environment, business and accountability requirements and the risk of not capturing the records. The requirement is likely to differ according to the type of organization and the legal and social context in which it operates.

Documents are created and received in a variety of media using technology that is constantly changing. The primary characteristic of documents is their dynamic nature. They may be created by multiple creators, exist in multiple versions and exist in formative stages for varying periods of time.

Business or personal actions should be captured as records and linked with metadata which characterize their specific business context when they commit an organization or individual to action, render an organization or individual accountable, or document an action, a decision or decision-making process.

9.2 Determining how long to retain records

Decisions about how long records should be maintained within a records system are based on an assessment of the regulatory environment, business and accountability requirements and the risk. Initially, such decisions should involve the unit administering the specific business activity, the designated records manager and others as required, in compliance with the external and internal records management policies or standards and the requirements for records associated with the specific business activity. Statutory or other regulatory requirements may demand minimum retention periods or submission to an authorizing body such as an archival authority or auditors for any necessary approval. The rights and interests of all stakeholders should be considered when determining how long records need to be maintained. The decisions should not be made intentionally to circumvent any rights of access.

Records retention should be managed to

a) meet current and future business needs by

   1) retaining information concerning past and present decisions and activities as part of the corporate memory to inform decisions and activities in the present and in the future,

   2) retaining evidence of past and present activities to meet accountability obligations,

   3) eliminating, as early as possible and in an authorized, systematic manner, records which are no longer required, and

   4) retaining the context of the record which will enable future users to judge the authenticity and reliability of records, even in cases where the records systems in which they are retained have been closed or have undergone significant changes,

b) comply with legal requirements, by ensuring that the regulatory environment applicable to records management for specific business activities is documented, understood and implemented, and

c) meet the current and future needs of internal and external stakeholders by

   1) identifying the enforceable or legitimate interests that stakeholders may have in preserving the records for longer than they are required by the organization itself; they may include stakeholders such as business partners, clients and other people affected by the organization's decisions or actions, and others to whom the organization should make its records available to meet accountability requirements, such as auditors, regulatory authorities and investigative bodies, archives authorities or researchers,

   2) identifying and assessing legal, financial, political, social or other positive gains from preserving records to serve the interests of research and society as a whole, and

   3) following regulations of the appropriate archival authority where applicable.

Records identified for continuing retention are likely to be those which

— provide evidence and information about the organization's policies and actions,

— provide evidence and information about the organization's interaction with the client community it serves,

— document the rights and obligations of individuals and organizations,

— contribute to the building of an organization's memory for scientific, cultural or historical purposes, and

— contain evidence and information about activities of interest to internal and external stakeholders.

9.3 Records capture

The purpose of capturing records into records systems is to

— establish a relationship between the record, the creator and the business context that originated it,

— place the record and its relationship within a records system, and

— link it to other records.

This process can be undertaken by the allocation of explicit metadata, embedded in, attached to or associated with, the specific record irrespective of its format. This should be designed into the procedures of a records system. This metadata is essential for retracing, with authority, the status, structure and integrity of the record at any particular time and demonstrating its relationships with other records.

Techniques to ensure capture of records may include

a) classification and indexing which allow appropriate linking, grouping, naming, security protection, user permissions and retrieval, disposition, and identifying vital records,

b) arrangement in a logical structure and sequence, whether a physical file or an electronic directory, which facilitates subsequent use and reference,

c) registration which provides evidence of the existence of records in a records system, and

d) systems which profile or template the actions undertaken in doing business, which

   1) provide metadata describing the business context,

   2) provide evidence of where a record is located,

   3) identify what action is outstanding,

   4) identify who has accessed a record,

   5) identify when such access took place, and

   6) provide evidence of the transactions that have been undertaken on the record.

9.4 Registration

In a records system which employs registration processes:

a) a record is registered when it is captured into the records system;

b) no further processes affecting the record can take place until its registration is complete.

The primary purpose of registration is to provide evidence that a record has been created or captured in a records system, and an additional benefit is that it facilitates retrieval. It involves recording brief descriptive information or metadata about the record and assigning the record an identifier, unique within the system. Registration formalizes the capture of the record into the records system.

Records may be registered at more than one level or aggregation within a records system. In the electronic environment, records systems may be designed to register records through automatic processes, transparent to the user of the business system from which it is captured and without the intervention of a records manager.

9.5 Classification

9.5.1 Classification of business activities

Classification of business activities acts as a powerful tool to assist the conduct of business and in many of the processes involved in the management of records including

a) providing linkages between individual records which accumulate to provide a continuous record of activity,

b) ensuring records are named in a consistent manner over time,

c) assisting in the retrieval of all records relating to a particular function or activity,

d) determining security protection and access appropriate for sets of records,

e) allocating user permissions for access to, or action on, particular groups of records,

f) distributing responsibility for management of particular sets of records,

g) distributing records for action, and

h) determining appropriate retention periods and disposition actions for records.

9.5.2 Classification systems

Classification systems reflect the business of the organization from which they derive and are normally based on an analysis of the organization's business activities. The systems can be used to support a variety of records management processes. Organizations need to determine the degree of classification control they require for their business purposes.

9.5.3 Vocabulary controls

Classification systems and indexes may be supported by vocabulary controls that are suited to the complexity of the records of an organization. Such vocabulary controls should explain organization-specific definitions or usage of terms.

9.5.4 Indexing

Indexing can be done manually or be automatically generated. It may occur at various levels of aggregation within a records system.

Guidance on indexing can be found in ISO 5963, *Documentation — Methods for examining documents, determining their subjects, and selecting indexing terms*.

9.5.5 Allocation of numbers and codes

Shorthand methods of referencing records by means other than the title are commonly used. The allocation of numbers or codes is usually undertaken for an aggregation of records.

The purpose of coding is associated with a location function, where the number or code indicates the "address" of the record, so that the record may be retrieved by specifying the residence within the records system.

9.6 Storage and handling

Records should be stored on media that ensure their useability, reliability, authenticity and preservation for as long as they are needed (see 8.2). Issues relating to the maintenance, handling and storage of records arise throughout their existence, not only when they become inactive.

Records require storage conditions and handling processes that take into account their specific physical and chemical properties. Records of continuing value, irrespective of format, require higher quality storage and handling to preserve them for as long as that value exists. Storage conditions and handling processes should be designed to protect records from unauthorized access, loss or destruction, and from theft and disaster.

Organizations should have policies and guidelines for converting or migrating records from one records system to another.

Systems for electronic records should be designed so that records will remain accessible, authentic, reliable and useable through any kind of system change, for the entire period of their retention. This may include migration to different software, re-presentation in emulation formats or any other future ways of re-presenting records. Where such processes occur, evidence of these should be kept, along with details of any variation in records design and format.

9.7 Access

Organizations should have formal guidelines regulating who is permitted access to records and in what circumstances.

The regulatory environment, in which the organization operates, establishes broad principles on access rights, conditions or restrictions that should be incorporated into the operation of records systems. There may be specific legislation covering areas such as privacy, security, freedom of information and archives. Records may contain personal, commercial or operationally sensitive information. In some cases, access to the records, or information about them, should not be permitted.

Restrictions on access can be applied both within an organization and to external users. Restricted records should be identified only where specifically required by business needs or the regulatory environment. Restrictions should be imposed for a stated period, to ensure that the additional monitoring required for these records is not enforced for longer than required. The need to place restrictions on accessibility can change with the passing of time.

Ensuring appropriate access controls is done by assigning access status to both records and individuals.

Managing the access process involves ensuring that

a) records are categorized according to their access status at a particular time,

b) records are only released to those who are authorized to see them,

c) encrypted records can be read as and when required and authorized,

d) records processes and transactions are only undertaken by those authorized to perform them, and

e) parts of the organization with responsibility for particular business functions specify access permissions to records relating to their area of responsibility.

The monitoring and mapping of user permissions and functional job responsibilities is a continuing process which occurs in all records systems, regardless of format. Electronic records systems, particularly those accessible across geographically distributed systems, may inherit user identification protocols from other applications.

9.8 Tracking

9.8.1 General

Tracking of the movement and use of records within a records system is required to

a) identify outstanding action required,

b) enable retrieval of a record,

c) prevent loss of records,

d) monitor usage for systems maintenance and security, and maintain an auditable trail of records transactions (i.e. capture or registration, classification, indexing, storage, access and use, migration and disposition), and

e) maintain capacity to identify the operational origins of individual records where systems have been amalgamated or migrated.

9.8.2 Action tracking

Action tracking may be implemented in a records system for processes where time limits for actions are imposed by or on the organization. Action tracking

a) allocates steps to be taken in response to decisions or transactions documented in a record,

b) assigns responsibility for action to a designated person, and

c) records dates by which the predefined action is to be taken and dates when those actions occur.

Action tracking can only be effectively implemented if material is registered in the records system prior to forwarding to the designated persons.

9.8.3 Location tracking

The movement of records should be documented to ensure that items can always be located when required. Tracking mechanisms may record the item identifier, the title, the person or unit having possession of the item and the time/date of movement.

The system should track the issue, transfer between persons, and return of records to their "home" location or storage, as well as their disposition or transfer to any other authorized external organization including an archives authority.

9.9 Implementing disposition

Disposition authorities that govern the removal of records from operational systems should be applied to records on a systematic and routine basis, in the course of normal business activity. No disposition action should take place without the assurance that the record is no longer required, that no work is outstanding and that no litigation or investigation is current or pending which would involve relying on the record as evidence.

Disposition action may encompass

a) immediate physical destruction, including overwriting and deletion,

b) retention for a further period within the business unit,

c) transfer to an appropriate storage area or medium under organizational control,

d) transfer to another organization that has assumed responsibility for the business activity through restructure, sale or privatization,

e) transfer to a storage area managed on behalf of the organization by an independent provider with whom appropriate contractual arrangements have been established,

f) transfer of responsibility for management to an appropriate authority while physical storage of the record is retained by the creating organization,

g) transfer to an organizational archive, or

h) transfer to an external archives authority.

The following principles should govern the physical destruction of records.

— Destruction should always be authorized.

— Records pertaining to pending or actual litigation or investigation should not be destroyed.

— Records destruction should be carried out in a way that preserves the confidentiality of any information they contain.

— All copies of records that are authorized for destruction, including security copies, preservation copies and backup copies, should be destroyed.

9.10 Documenting records management processes

Documentation describing records management processes and records systems should address legal, organizational and technical requirements. Authority for records management processes, such as classification, indexing, review and disposition of records, should be clearly stated.

Relevant legislation, standards and policies should be recorded, to determine requirements for practice, review, audit and testing of records management processes. Close attention should be paid to other information systems and policies in use within the organization to maintain the corporate integrity of the information management environment.

All decisions on which records should be captured and how long records should be maintained should be clearly documented and retained. Decisions may be presented as a disposition authority. Formal documentation of the analysis or other assessment that results in decisions to capture and retain records should be prepared and submitted to senior management for approval. The documentation should contain details of business activities and the records that result from each business activity, and specify their retention periods and disposition actions

clearly and unambiguously. Events that activate or enable disposition actions should be clearly identified. Instructions for the transfer of records to alternative forms of storage (e.g. off-line or off-site storage) should be included. Where necessary, such documentation should be submitted to an external authorizing body, such as an archival authority, auditors, etc. for necessary approval. A record of disposition actions, once they have been carried out, should be maintained.

10 Monitoring and auditing

Compliance monitoring should be regularly undertaken to ensure that the records systems procedures and processes are being implemented according to the organizational policies and requirements and meet the anticipated outcomes. Such reviews should examine organizational performance and user satisfaction with the system.

The regulatory environment may require that external bodies undertake monitoring and auditing.

Modifications to the records systems and records management processes should be made if these are found to be unsuitable or ineffective.

Systems compliance and monitoring should be documented and reports should be maintained.

11 Training

An organization seeking to conform to this part of ISO 15489 should establish an ongoing programme of records training. Programmes for training in requirements for records management and specific practices should encompass the roles and responsibilities of, and be addressed to, all members of management, employees, contractors, volunteers and any other individuals responsible for the whole or part of a business activity of an organization in making records during their work and in capturing those records into records systems. The training programmes can be designed and set up in cooperation with external organizations.

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Acknowledgements

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