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Informatika in dokumentacija - Procesi in funkcionalne zahteve za načrtovanje programske opreme za upravljanje zapisov - 2. del: Navodilo za izbiro, načrtovanje, uvedbo in vzdrževanje programske opreme za upravljanje zapisov

Information and documentation - Processes and functional requirements for software for managing records - Part 2: Guidance for selecting, designing, implementing and maintaining software for managing records

Information et documentation -- Principes et exigences fonctionnelles pour les documents d'activité dans les environnements électroniques de bureau -- Partie 2: Lignes directrices et exigences fonctionnelles pour les systèmes de management des documents d'activité

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Information and documentation - Processes and functional requirements for software for managing records —

Part 2:
Guidance for selecting, designing, implementing and maintaining software for managing records

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

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).

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).

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.

This document was prepared by Technical Committee ISO/TC 46, Documentation and Information, Subcommittee SC11, Archives/Records Management.

This second edition cancels and replaces the first edition (ISO 16175-1:2010, ISO 16175-2:2011 and ISO 16175-3:2010), which has been technically revised.

A list of all parts in the ISO 16175- series can be found on the ISO website.

Introduction

All organizations will have at least one, and generally more than one, records system. Records systems are information systems which capture, manage and provide access to records over time. Records systems can consist of technical elements such as software, and non-technical elements such as policy, procedures and agents. Records systems as a whole include the policy, processes, software and people that use and manage records[1]. Records systems exist in many variations: in paper systems, in software specifically designed to meet functionality for managing records, or as business software which capture and manage records. This document is focused on management of records in the digital environment, using software, but the general principles and considerations apply whatever the environment.

Organizations make decisions on what type of software for managing records should support particular business processes, business units or the organization as a whole and consider the risks that are linked to business processes when making such decisions. The scope of software for managing records will be affected by the social and regulatory framework within which an organization operates, by the organizational readiness or maturity around records reflected in its policies and allocation of responsibilities, and by the technologies that are appropriate for organizational use.

Organizations that already rely on digital records to conduct and document business, or that are interested in eliminating paper records from their operations, are seeking solutions to the issues arising from management of digital records. The decisions that organizations make today about the capability of the software, and the organization and structure of information within the software will have a significant impact on the long term sustainability of digital records. The capacity to sustain digital records beyond the lifespan of a single instance of software is closely linked to the design, selection and configuration of software, and should be considered carefully within an organization-wide information governance context.

This international standard makes no distinction between software applications that are used for any business purpose and those applications specifically intended and designed to manage records. Examples of the former include Enterprise Content Management Systems and applications which create records as one part of their functionality such as Contracts Management Systems, Case Management Systems or transactional systems. The term used throughout is therefore 'software for managing records', which is intended to encapsulate the totality of applications that manage records as part of their usual functioning. It is assumed that almost all business applications will generate data that will need to serve as evidence of business activity for future reference and as such will, *inter alia*, need to create, store and manage records, whether within their own functionality or in combination with other applications.

Organizations deploy software applications to automate business activities and transactions. The digital information generated by an application may serve as the only evidence or record of the process or transaction, despite the application not being designed specifically for the purpose of managing records. Without evidence of these activities, organizations are exposed to risk and may be unable to meet legislative, accountability, business and community expectations. Because of the dynamic and manipulable nature of business applications, the capture of records and the ongoing management of their fixity, authenticity, reliability, usability and integrity can be challenging.

Many business applications generate and store data that may be subject to constant updating (dynamic), able to be transformed (manipulable) and only contain current data (non-redundant). While business requirements for dynamic, manipulable and non-redundant data may be entirely legitimate, if records are to serve as reliable evidence of business activity they need to be fixed and inviolable. That is, systems and processes need to be able to guarantee the reliability and authenticity of the records as evidence of past business activity.

1) 'Records system' Information system which captures, manages and provides access to records over time. Note: records system can consist of technical elements such as software, which may be designed specifically for managing records or for some other business purpose, and non-technical elements including policy, procedures, people and other agents, and assigned responsibilities. ISO 15489-1:2016, Definition 3.16

For the purposes of this document the characteristics of records (as defined in ISO 15489-1:2016, Clause 5.2.2) can be applied to any and all of data, documents or information. A records approach enables the traceability of actions documenting business to be maintained for as long as needed to support assertions of authenticity, reliability and integrity. This approach can be applied to data, documents, information and records.

Information and documentation - Processes and functional requirements for software for managing records —

Part 2: Guidance for selecting, designing, implementing and maintaining software for managing records

1 1 Scope

This international standard provides guidelines for the decision making around selection, design, implementation and maintenance of software for managing records, according to the principles specified in ISO 15489-1.

This document is applicable to any kind of records system supported by software but is particularly focussed on software for managing digital records.

1.1 Audience

This international standard provides guidance to records professionals charged with designing, implementing and maintaining systems for managing records using a variety of software. It may also provide assistance to information technology professionals and software vendors seeking to understand records requirements.

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 undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 23081-2, *Information and documentation — Managing metadata for records — Part 2: Conceptual and implementation issues*

ISO 30300, *Information and documentation — Management systems for records — Fundamentals and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 30300 apply.

4 High level requirements for software managing digital records

4.1 Assumptions

This standard assumes

— That records controls (particularly those identified ISO 15489-1:2016, clause 8) are already developed within the organization;

— That projects to implement records requirements in software will be continuous; and

— That all new software implementation projects require implementation of defined records requirements.

Designing, implementing and maintaining software for managing records is an ongoing and continual part of managing records within organizations, to reflect constantly changing technological environments, new business software, and changes to business processes.

4.2 General overview of requirements

The high level requirements included here are consistent with the principles for managing records outlined in ISO 15489-1:2016, Clause 4. Part 1 of this Standard (ISO 16175-1:2018) provides more detailed functional requirements for software that creates or manages digital records.

1. **Software should support the management of digital records as a core component of the business process.**

When automating a business process, records requirements should be met by software.

2. Software managing digital records shall maintain persistent links to the business context.

An understanding of the business context of records is required to enable accurate interpretation of their content. Software should persistently link to the specific business context in which records are created and maintain that linkage over time.

3. **Software managing digital records should be able to capture metadata, automatically generated to the greatest extent possible.**

Software should be designed and implemented in a manner that allows maximum automatic assignment of point of capture records metadata, enabling end-user overwrite capability prior to capture, where needed. Records process metadata should be automatically generated and captured as the system is used.

4. Software should be user-friendly and allow easy records creation and capture.

Software that automates management of records should be designed in a way that makes such activity largely ‘invisible’ to the end-users . Techniques for this may include automatic logging of events occurring on records at all levels of aggregation and minimizing end-user requirements to interact with complex functionality specific to requirements of records professionals.

5. **Software should support interoperability over time and across platforms and domains.**

Digital records often have operational or legal requirements for retention over periods of time that may exceed the lifespan of the hardware or software that created it. Software should be able to present records in a manner that maintains its metadata, useability and enables it to be converted to new formats and/or migrated to other technology platforms.

6. **Software should have the capacity for bulk import and export.**

Records often need to last longer than the system in which they are initially created, captured and managed. Records software should incorporate capabilities for bulk re-formatting as part of import (ingest) or export capability or, at a minimum, via non-proprietary encoding of record metadata.

7. **Software should maintain records in a secure environment.**

Software should not allow unauthorised access or modifications to any records or to records metadata. Where authorised modifications are performed, they should be fully documented. Information which is confidential or which contains personal information should be identified and mechanisms deployed to ensure appropriate access and use protections.

8. **Software should support the disposition of records in a managed, systematic and auditable way.**

Software needs to be able to dispose of records in a systematic and auditable way in line with business or legal requirements and societal and community expectations.

9. Software should rely as much as possible on open, robust and technology neutral standards.

Many software products that create or manage records are developed using proprietary code. Hardware or software dependencies can have adverse effects on access and preservation of records in the long term. Open, robust and technology neutral standards should be used.

5 Assessing organizational readiness to implement records systems and scoping a project

5.1 General

Organizations have distinct cultures which affect their approach to managing records. These cultures are part of the organizational context. The factors that impact the information culture of an organization include:

— The values, attitudes and behaviours of organizational users;

— The technical environment; and

— The societal and organizational requirements, including legislation, standards and related policy containing requirements for managing records and outline compliance.

The organizational culture affects decisions on selection and implementation of systems and software for managing records. Where an organization has a defined information governance framework, the system for managing records should be integrated with the information governance framework.

Where software for managing records supports processes shared by multiple organizations, information culture factors should be considered for each organization. Selection and design of software for managing records should be responsive to the needs of each organization. Responsibility should be clearly assigned for managing cross-organizational systems and the rights in managing records created in such shared software agreed.

Implementing software for managing records should be undertaken within an organisational framework that defines the policies and responsibilities to be implemented, the records control tools and the elements needed to scope the project. The following aspects should be considered during the planning stages of any implementation:

— Organizational maturity or readiness;

— Records controls;

— Technical environment; and

— Project scoping and resources.

5.2 Organizational records maturity

Assessing an organization's maturity for managing records will assist in selecting a software approach suited to the organization. Undertaking an assessment of organizational maturity will enable benchmarking of progress over time, and assessment amongst similar organizations.

The following elements contribute to assessing organizational records maturity:

— Whether strategic responsibilities for managing records are included in the senior management responsibilities;