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INTERNATIONAL COUNCIL ON ARCHIVES

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# PRINCIPLES AND FUNCTIONAL REQUIREMENTS

## FOR RECORDS IN ELECTRONIC OFFICE ENVIRONMENTS

### OVERVIEW OF IMPLEMENTATION GUIDANCE AND TRAINING PRODUCTS

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OCTOBER 2013

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## **INTERNATIONAL COUNCIL ON ARCHIVES**

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## CONTENTS

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INTRODUCTION.....	4
BACKGROUND – ABOUT ICA-REQ & ISO 16175.....	4
PRODUCTS.....	6
The need for Implementation guidelines and training products.....	6
Aim.....	6
Audience.....	7
Outline of the implementation guidance products and their objectives .....	8
Outline of the training products and their objectives .....	10
ACKNOWLEDGEMENTS .....	12
GLOSSARY .....	12



## INTRODUCTION

In 2008 the ICA (International Congress of Archives) published three modules of its *Principles and Functional Requirements for Records in Electronic Environments (ICA-Req)*. These requirements have been endorsed in a number of jurisdictions and have been adopted by the International Standards Organization and published as ISO 16175<sup>1</sup>.

ICA-Req (ISO 16175) provides the internationally agreed principles and functional requirements for software used to create digital information in office environments.

To assist ICA members and others to understand and implement the principles and functional requirements, the following *ICA-Req Implementation Guidelines and Training Products* have been developed, offering:

- A set of practical implementation guidelines with scenario variants and case studies;
- A training package consisting of customisable learning resource kits, training exercises, PowerPoint slides and workbooks.

## BACKGROUND – ABOUT ICA-REQ & ISO 16175

Since the early 1990's archival institutions have addressed the issues of records management in an electronic environment. Considerable progress has been made in the intervening years in the development of records management standards, metadata standards and a number of jurisdiction-specific standards for the functional requirements for electronic record keeping software<sup>2</sup>. These developments have been undertaken collaboratively within the archives profession and in collaboration with academic institutions, vendors and information consultants.

Though considerable progress had been made in this area there was a recognised need to:

- Have a harmonized statement of requirements for electronic recordkeeping software products that meet the needs of the international archival community and that inform the global software industry of such needs.
- Address records management issues as records are created, stored and used in business systems. Business system transactions are generally dynamic and fluid, but, nevertheless often constitute a record of the business of the organisation. Business systems are designed to conduct business, and rarely include recordkeeping functionality such as the identification of records and the need to ensure their fixity, authenticity and evidentiary value.

As a direct response to these two needs under its Electronic Records and Automation Priority Area, the International Council on Archives (ICA) developed a suite of guidelines and functional requirements that formed the *Principles and*

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<sup>1</sup> ISO 16175: Principles and Functional Requirements in Electronic Office Environments

<sup>2</sup> US DoD 5015.2 Design Criteria Standard; European Union's MoReq (Model Requirements); Germany's DOMEA Concept; Norway's NOARK; UK National Archives' Requirements; National Archives of Australia's ERMS Specs; Archives New Zealand's Systems Standard; Victoria's VERS Standard.

*Functional Requirements for Records in Electronic Office Environments (ICA-Req)*. It sets out the principles and functional recordkeeping requirements for business systems independently of the systems architecture.

ICA-Req is consistent with existing ISO records management standards (ISO 15489<sup>3</sup> and ISO 23081<sup>4</sup>) and consists of three modules:

- Module 1<sup>5</sup>: Gives background information and sets out the fundamental recordkeeping principles that are required in business systems. It is a useful executive overview;
- Module 2<sup>6</sup>: Sets out functional requirements for software systems that are designed principally to manage records;
- Module 3<sup>7</sup>: Sets out the requirements for the management of information that is still in use and is held within business systems. Business systems include line-of-business, case management, content management, human resource management and financial management systems. Module 3 does not provide a complete specification but is a starting point for further development into application-specific functional requirements. Organisations will need to extend these functional requirements based on their business, technical and jurisdictional environments.

The requirements set out in ISO 16175 replicate those in ICA-Req and they are based on the minimum requirements for records functionality defined in the international standard for records management, ISO 15489. ISO 16175 does not cover functional requirements for the long-term preservation of digital records.

ISO 16175, as an international standard, is applicable to any jurisdiction. Whilst other standards such as the European *MoReq2010*, the US Department of Defence's *Electronic Records Management Software Applications Design Criteria Standard* and the British National Archives' *Requirements for Electronic Records Management Systems* are available to organisations, ISO 16175's value is that it is:

- Non-jurisdictional
- Address all electronic records created and maintained by an organisation in any business system, not just those in EDRMS systems.

Therefore ICA-Req acts as a framework to ensure that organisational records held in business systems are effectively created, maintained and disposed of in a timely manner in compliance with relevant regulation and legislation.

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<sup>3</sup> ISO 15489, Parts 1-2: Information and Documentation-Records management.

<sup>4</sup> ISO/TR 23081, Parts 1-3: Information and Documentation-Managing metadata for records.

<sup>5</sup> ICA Principles and Functional Requirements for Records in Electronic Office Environments. Module 1: Overview and Statement of Principles.

<sup>6</sup> ICA Principles and Functional Requirements for Records in Electronic Office Environments. Module 2: Guidelines and Functional Requirements for Electronic Records Management Systems.

<sup>7</sup> ICA Principles and Functional Requirements for Records in Electronic Office Environments. Module 3: Guidelines and Functional Requirements for Records in Business Systems.

The relationships between ISO 16175 and related standards is explained in Adrian Cunningham's 2012 article *Relationships between the ISO 16175 Series of Standards and Other Products of ISO/TC46/SC11: Archives and Records Management*<sup>8</sup>.

## **PRODUCTS**

### **The need for Implementation guidelines and training products**

ICA-Req outlines a set of requirements and implementation guidelines aimed at ensuring that recordkeeping functionalities are incorporated into the design and architecture of business systems. However, despite ICA –Req's value as a standard, there is a need for additional guidance and training on how to implement its high level principles and functionalities it into a variety of business environments and business systems.

Therefore a number of implementation guidelines and training products have been developed which include:

- Advocacy material
- Digital-readiness assessment tool
- Implementation guidance on Modules 1 and 3
- Functional Requirements checklists for Modules 2 and 3
- Case studies
- Training material for ICA-Req Modules 2 and 3

The above products are published on the ICA website for download and re-use by ICA Members.

### **Aim**

The guidelines and training products aim to:

- Raise awareness of the importance of records and archives, especially for good governance;
- Influence the development and application of new technologies in the use of records and archives (for example in dealing with information overload, administrative reform, e-government, access and intellectual property rights in the digital age);
- Build capacity in the archives profession, including an understanding of the standard, and training in its implementation;
- Build networks between and amongst ICA members and build relationships with other external bodies, and professional bodies that have a stake in progressing good records management;

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<sup>8</sup> <http://www.ica.org/12989/articles-papers-reports-and-proceedings/relationship-between-the-iso-16175-series-of-standards-and-other-products-of-isotc46sc11-archivesrecords-management.html>

- Act as a framework which organisations can use to design or audit business systems that hold records;
- To assist organisations in identifying their recordkeeping requirements and assist project managers in incorporating recordkeeping functionalities into the functional specifications for business systems. ICA-Req can also be used to assess how well current business systems meet the recordkeeping requirements of an organisation.

### **Audience**

The primary audience for the guidelines are staff responsible for designing, reviewing and/or implementing business systems in organisations, such as business analysts and groups overseeing information and communications technologies procurement or investment decisions.

The audience also includes records professionals who are involved in advising or assisting in such processes' and software vendors and developers who wish to incorporate records functionality within their products. It is important that all stakeholders i.e. management, archivists, records managers and ICT experts work together to ensure the successful incorporation of recordkeeping requirements into the development and implementation of business systems.

Given the target audience for the guidelines, the use of specific records management terminology has been kept to a minimum. Also as the focus of the guidelines and training products is on electronic records in business systems the following definition is used throughout all products:

A business system is an automated system that creates or manages data about an organisation's activities, typically containing dynamic data that is subject to constant updates (timely), able to be transformed (can be manipulated) and holds current data (non-redundant).

Examples of business systems include:

- E-commerce systems
- Client-relationship systems
- Purpose-built or customised databases
- Finance or human resources systems

## **Outline of the implementation guidance products and their objectives**

The following products make up the Implementation Guidelines and Training Material package:

### **ADVOCACY MATERIAL**

Advocacy brochures have been developed with specific messages for different audiences. The brochures explain the relevance and utility of ICA-Req and highlight the good governance and business efficiency benefits of creating and managing records as an organic part of business processes and systems.

Advocacy brochures are available in pdf format and designed to print as A4 tri-fold brochures. The following brochures are available:

- ICA-Req for managers
- ICA-Req for auditors and ombudsmen
- ICA-Req for software vendors
- ICA-Req for records professionals
- ICA-Req for IT professionals

### **IMPLEMENTATION GUIDANCE FOR ICA-REQ MODULE 1**

This guidance gives detail on topics covered in ICA-Req Module 1 such as development of policy frameworks, change management/corporate culture and training, risk management and post-implementation review. Module 1 is a non-technical overview that focuses on first principles, key concepts, and implementation issues fundamental to understanding recordkeeping software.

Central to Module 1 is a set of 12 principles (4 relating to records and 8 relating to systems) that should guide the development of any systems designed to make and manage records be they business systems with records functionality or separate ERM systems.

### **IMPLEMENTATION GUIDANCE FOR ICA-REQ MODULE 3**

This guidance has three parts:

*Part 1: Identifying recordkeeping requirements using ISO 15489<sup>9</sup>*, is a useful starting point for anyone considering recordkeeping processes for an organisation regardless of the size or type of organisation, or the level of technology used. It is consistent with the International Standard for records management, ISO 15489 and includes a number of examples from government agencies but the processes are also applicable to non-government organisations.

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<sup>9</sup> ISO 15489: 2001 Information and Documentation - Records Management



*Part 2: Identifying recordkeeping requirements using ISO/TR 26122<sup>10</sup>*, is designed to assist people who are carrying out detailed analyses of recordkeeping for the purpose of improving business processes, particularly:

- Records professionals and/or records managers responsible for creating and managing records in either a business system or dedicated records application software;
- Analysts responsible for designing business processes and/or systems that will create or manage records.

It provides information that is required to carry out two different types of analyses:

- functional analysis, which is the breakdown of functions into processes;
- sequential analysis, which is the investigation or breakdown of the flow of transactions.

*Part 3: Functional Requirements for Records in Business Systems*, aims to help users to understand the role and use of the functional requirements identified in Module 3. These requirements outline the recordkeeping functionalities that need to be incorporated into digital business systems for them to effectively create, capture or manage digital records. The need for each records management functional requirement should be assessed against the core objectives of the respective business system. Hence, not all functional requirements will apply to every system. Scenario-based implementation variants (see below) suggest a reduced set of functional requirements relevant to three different system types.

#### SCENARIO-BASED IMPLEMENTATION VARIANTS.

Three different scenario-based implementation products are provided to outline how ICA-Req can be designed into:

- Recordkeeping requirements for database based business systems;
- Recordkeeping requirements for business systems that do not manage records;
- Recordkeeping requirements for multiple functions supported by one business system.

The products provide users with a reduced set of functional requirements relevant to each scenario.

#### DIGITAL-READINESS ASSESSMENT TOOL.

The digital readiness assessment tool is designed for use by organisations that are contemplating adopting digital recordkeeping technology. By answering a series of questions the tool allows organisations to assess their resources, policies, procedures, tools, technologies, training and organisational culture to help them determine their level of readiness to pursue a digital records strategy.

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<sup>10</sup> ISO/TR 26122:2008 Information and documentation – Work process analysis for records

For further information about choosing a digital records strategy, refer to Guideline 14 of the PARBICA Recordkeeping for Good Governance Toolkit: Digital Recordkeeping – Choosing the Best Strategy<sup>11</sup>.

## CHECKLISTS

Checklists for Modules 2 and 3 are simplified lists of all the Functional Requirements in each module. They are provided as a modifiable excel spreadsheet so that users can manage the requirements to suit their own situation. For example, users may wish to focus on one cluster level, or sort by obligation level.

## CASE STUDIES

Case studies are intended to assist with the implementation of ICA-Req by learning lessons from real situations. The range of case studies will grow over time as ICA-Req is implemented around the globe.

### Outline of the training products and their objectives

Training products have been developed for Modules 2 and 3. Module 2 training products are designed for records professionals. Module 3 training products have versions tailored for records professionals and IT professionals.

The products are intended to be used by trainers and educators to teach and coach in using the Module as well as by records professionals themselves as a primer or self-learning resource. It is expected that trainers will modify the products to suit the audience and their own training style.

The *Training in ICA-Req Module 2* toolkit consists of:

- A set of possible **learning outcomes** which can be used by trainers and educators in developing their own training.
- **Sample slides** which show how the workbook can be used as the basis for presentations in more formal teaching or training environments. The sample slides include exercises.
- A **Workbook** which is intended to inform decisions when designing or assessing recordkeeping functionality within digital recordkeeping products. It is aimed at:
  - organisational records professionals or system procurement project leaders;
  - jurisdictional standard-setters and the wider recordkeeping community;
  - software vendors and developers who market and/or develop electronic records management system products.

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<sup>11</sup> [http://www.parbica.org/content/RGGT14\\_tcm50-74704.pdf](http://www.parbica.org/content/RGGT14_tcm50-74704.pdf)

- An **Evaluation form** as an example of how to assess the workshop against the learning outcomes.

The *Training in ICA-Req Module 3* toolkit consists of:

- Sets of possible **learning outcomes for RM or IT audiences** which can be used by trainers and educators in developing their own training;
- **Sample slides for RM audience** which show how the workbook can be used as the basis for presentations in teaching or training environments, including exercises;
- **Sample slides for IT audience** which show how the workbook can be used as the basis for presentations in teaching or training environments;
- A **Workbook for RM audience** which provides the rationale for Module 3, explains what a business system is, describes how the requirements work and outlines how to tailor and use them for software procurement projects or audits;
- A **Workbook for IT audience** which provides the rationale for Module 3, compares a recordkeeping system to a business system, defines records, documents and information, and advocates ICA-Req for IT professionals;
- **Exercise slides and handouts** as tools to assist training participants understand a business system;
- **Evaluation forms for RM or IT audiences** as examples of how to assess workshops against the learning outcomes.

## ACKNOWLEDGEMENTS

Partners in the development of the ICA-REQ Implementation Guidelines and Training Products have come from government archives, universities and respected archival organisations.

They include:

- National Archives of Australia
- International Records Management Trust
- Public Record Office of Victoria
- State Archives Administration of China
- Archives Directory of France
- National Archives of Singapore
- National Archives of Netherlands
- Moi University of Kenya
- Renmin University of China
- Archives New Zealand
- The Archive-Skills Consultancy (UK)

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- Australasian Digital Recordkeeping Initiative
- South African Bureau of Standards
- Republic of South Africa ICA-Req Project Workgroup

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## GLOSSARY

The terms used in the ICA-Req implementation and training products are used as defined in the glossary in *ICA-Req Module 1: Overview and Statement of Principles*.





