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Health Informatics — Methodology for analysis of business and information needs of health enterprises to support standards based architectures

National foreword

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Foreword

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

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

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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 215, *Health informatics*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Healthcare organizations need to have coordinated and systematic methodologies for business management, quality management and information management. These methodologies also support creating of a coherent business and information architectures as one of the prerequisites for achieving semantic interoperability in both the healthcare enterprises and their information and communications technology (ICT).

Healthcare is a business sector where high quality information is crucial for the quality of the services delivered. In healthcare it is critical to be able to share information between different healthcare providers regionally, nationally and sometimes also internationally. Therefore, business and information architectures should be coherent and based on standards. To achieve this, an appropriate methodology should be used for creation of such architectures.

This document describes the methodology for analysis of business and information needs of health enterprises to support standards based architectures, BIA methodology. The purpose of the methodology is to provide an efficient business and information needs analysis for an optimal healthcare enterprise description in order to create a standards based business and information architectures.

The BIA methodology starts with describing of the organization's mission and vision.

The organization's mission defines the type of business to be conducted and its extent. A defined business always has a purpose to state why it exists.

The business vision drives the business forward, stating the direction for streamlining and thereby development of the business.

There should be a comprehensive holistic overview that describes the current state and the target state of the business and its information management, as well as how to move from the current state to the target state, thereby allowing the vision to be more easily achieved.

The BIA methodology is used for the analysis and descriptions of a defined business. The resultant descriptions comprise the basis for decisions made for different purposes, ranging from the production of a holistic overview as a basis for the business development, information supply, ICT strategies as well as ICT requirements-setting.

The methodology consists of several steps that analyse and describe different aspects of a business. It also defines how these aspects relate to each other in order to achieve an effective and lean analysis of the business and its information needs. The analysis results in descriptions of:

— Goals - long-term, strategic, wider goal, not precisely quantifiable

— Objectives - more short-term, on operational level, specific measurable

— Stakeholders - roles/actors/target groups that directly interact in the business or have an interest that business is operative

— Concepts - the concepts that are fundamental and anchored in the business

— Process from value processing perspective - patterns for action that shall ensure that the objectives are achieved

— Process from a collaboration perspective - crystallizing of the processing perspective that shows the business roles in collaboration

— Information needs – what type of information that business roles are needed in their collaboration

— Information structure - a comprehensive and structured description of the type of information managed by the different roles in the process

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— Codes, classifications and terminologies - agreed and predefined values which describe a certain type of information related to a specific attribute in the information structure

Using an established and specific for healthcare system methodology ensures that the result is fit for its purpose, maintaining quality at a high level. It also increases opportunities for comparing and re-using different analytical results as well as producing an optimal business description which can be used for different purposes.

The BIA methodology also points out a number of International Standards to use as reference models in development of the standards based coherent business and information architectures.

This document is targeted at experts working with strategic issues such as devising a business goals, objectives and strategies as well as those working with the production of industry frameworks, creating of standards based business and information architectures, business and information analyses, information structuring and requirements setting for ICT or their information supply.

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TECHNICAL SPECIFICATION **ISO/TS 22272:2021**

Health Informatics — Methodology for analysis of business and information needs of health enterprises to support standards based architectures

1 Scope

This document presents a methodology which supports and enables the development of standards based business and information architectures that contribute to good quality of healthcare and patient safety. The methodology is used to develop descriptions of healthcare enterprises from different aspects. Those aspects are covering what, how, where, who, when, why[1] and are based on standards.

2 Normative references

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

ISO 9000, *Quality management systems — Fundamentals and vocabulary*

ISO 13940, *Health informatics — System of concepts to support continuity of care*

EN 15224, *Quality management systems*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9000, ISO 13940, and EN 15224 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
business mission
purpose and scope of a business

3.2
business vision
future or ideal goals that a business strives to achieve

3.3
holistic view of the business
description of the business current state, the target state and how to move from the current to the target state

3.4
time dimension
view of the business in the current state or the target state

3.5
strategy for transition to the target state
overall description for displacement of business from current state to target state

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