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Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Context of the organization **5**
4.1 Understanding the organization and its context 5
4.2 Understanding the needs and expectations of interested parties 6
4.3 Determining the scope of the AI management system 6
4.4 AI management system 6

5 Leadership **7**
5.1 Leadership and commitment 7
5.2 AI policy 7
5.3 Roles, responsibilities and authorities 8

6 Planning **8**
6.1 Actions to address risks and opportunities 8
6.1.1 General 8
6.1.2 AI risk assessment 9
6.1.3 AI risk treatment 9
6.1.4 AI system impact assessment 10
6.2 AI objectives and planning to achieve them 10
6.3 Planning of changes 11

7 Support **11**
7.1 Resources 11
7.2 Competence 11
7.3 Awareness 12
7.4 Communication 12
7.5 Documented information 12
7.5.1 General 12
7.5.2 Creating and updating documented information 12
7.5.3 Control of documented information 13

8 Operation **13**
8.1 Operational planning and control 13
8.2 AI risk assessment 13
8.3 AI risk treatment 14
8.4 AI system impact assessment 14

9 Performance evaluation **14**
9.1 Monitoring, measurement, analysis and evaluation 14
9.2 Internal audit 14
9.2.1 General 14
9.2.2 Internal audit programme 14
9.3 Management review 15
9.3.1 General 15
9.3.2 Management review inputs 15
9.3.3 Management review results 15

10 Improvement **15**
10.1 Continual improvement 15
10.2 Nonconformity and corrective action 16

Annex A (normative) **Reference control objectives and controls** **17**

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Annex B (normative) **Implementation guidance for AI controls** **21**
Annex C (informative) **Potential AI-related organizational objectives and risk sources** **46**
Annex D (informative) **Use of the AI management system across domains or sectors** **49**
Bibliography **51**

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Foreword

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Introduction

Artificial intelligence (AI) is increasingly applied across all sectors utilizing information technology and is expected to be one of the main economic drivers. A consequence of this trend is that certain applications can give rise to societal challenges over the coming years.

This document intends to help organizations responsibly perform their role with respect to AI systems (e.g. to use, develop, monitor or provide products or services that utilize AI). AI potentially raises specific considerations such as:

— The use of AI for automatic decision-making, sometimes in a non-transparent and non-explainable way, can require specific management beyond the management of classical IT systems.

— The use of data analysis, insight and machine learning, rather than human-coded logic to design systems, both increases the application opportunities for AI systems and changes the way that such systems are developed, justified and deployed.

— AI systems that perform continuous learning change their behaviour during use. They require special consideration to ensure their responsible use continues with changing behaviour.

This document provides requirements for establishing, implementing, maintaining and continually improving an AI management system within the context of an organization. Organizations are expected to focus their application of requirements on features that are unique to AI. Certain features of AI, such as the ability to continuously learn and improve or a lack of transparency or explainability, can warrant different safeguards if they raise additional concerns compared to how the task would traditionally be performed. The adoption of an AI management system to extend the existing management structures is a strategic decision for an organization.

The organization's needs and objectives, processes, size and structure as well as the expectations of various interested parties influence the establishment and implementation of the AI management system. Another set of factors that influence the establishment and implementation of the AI management system are the many use cases for AI and the need to strike the appropriate balance between governance mechanisms and innovation. Organizations can elect to apply these requirements using a risk-based approach to ensure that the appropriate level of control is applied for the particular AI use cases, services or products within the organization's scope. All these influencing factors are expected to change and be reviewed from time to time.

The AI management system should be integrated with the organization's processes and overall management structure. Specific issues related to AI should be considered in the design of processes, information systems and controls. Crucial examples of such management processes are:

— determination of organizational objectives, involvement of interested parties and organizational policy;

— management of risks and opportunities;

— processes for the management of concerns related to the trustworthiness of AI systems such as security, safety, fairness, transparency, data quality and quality of AI systems throughout their life cycle;

— processes for the management of suppliers, partners and third parties that provide or develop AI systems for the organization.

This document provides guidelines for the deployment of applicable controls to support such processes.

This document avoids specific guidance on management processes. The organization can combine generally accepted frameworks, other International Standards and its own experience to implement crucial processes such as risk management, life cycle management and data quality management which are appropriate for the specific AI use cases, products or services within the scope.

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An organization conforming with the requirements in this document can generate evidence of its responsibility and accountability regarding its role with respect to AI systems.

The order in which requirements are presented in this document does not reflect their importance or imply the order in which they are implemented. The list items are enumerated for reference purposes only.

Compatibility with other management system standards

This document applies the harmonized structure (identical clause numbers, clause titles, text and common terms and core definitions) developed to enhance alignment among management system standards (MSS). The AI management system provides requirements specific to managing the issues and risks arising from using AI in an organization. This common approach facilitates implementation and consistency with other management system standards, e.g. related to quality, safety, security and privacy.

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Information technology — Artificial intelligence — Management system

1 Scope

This document specifies the requirements and provides guidance for establishing, implementing, maintaining and continually improving an AI (artificial intelligence) management system within the context of an organization.

This document is intended for use by an organization providing or using products or services that utilize AI systems. This document is intended to help the organization develop, provide or use AI systems responsibly in pursuing its objectives and meet applicable requirements, obligations related to interested parties and expectations from them.

This document is applicable to any organization, regardless of size, type and nature, that provides or uses products or services that utilize AI systems.

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/IEC 22989:2022, *Information technology — Artificial intelligence — Artificial intelligence concepts and terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 22989 and the following apply.

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

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

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

3.1
organization
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.6)

Note 1 to entry: The concept of organization includes, but is not limited to, sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution or part or combination thereof, whether incorporated or not, public or private.

Note 2 to entry: If the organization is part of a larger entity, the term "organization" refers only to the part of the larger entity that is within the scope of the AI *management system* (3.4).

3.2
interested party
person or *organization* (3.1) that can affect, be affected by, or perceive itself to be affected by a decision or activity

Note 1 to entry: An overview of interested parties in AI is provided in ISO/IEC 22989:2022, 5.19.

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