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STN	**Informačné technológie Umelá inteligencia Systém manažérstva**	**STN ISO/IEC 42001** 97 4180

Information technology
Artificial intelligence
Management system

Technologies de l'information
Intelligence artificielle
Système de management

Informationstechnik
Künstliche Intelligenz
Managementsystem

Táto slovenská technická norma obsahuje anglickú verziu medzinárodnej normy ISO/IEC 42001: 2023 a má postavenie oficiálnej verzie.

This Slovak standard includes the English version of the International standard ISO/IEC 42001: 2023 and has the status of the official version.

138358

Anotácia

Umelá inteligencia (AI) sa čoraz viac uplatňuje vo všetkých sektoroch využívajúcich informačné technológie a očakáva sa, že bude jednou z hlavných ekonomických hnacích síl. Dôsledkom tohto trendu je, že niektoré aplikácie môžu v nadchádzajúcich rokoch spôsobiť spoločenské výzvy.

Cieľom tohto dokumentu je pomôcť organizáciám zodpovedne vykonávať svoju úlohu v súvislosti so systémami AI (napr. používať, vyvíjať, monitorovať alebo poskytovať produkty alebo služby, ktoré využívajú AI). AI potenciálne vyvoláva špecifické úvahy, ako napríklad:

- Používanie AI na automatické rozhodovanie, niekedy netransparentným a nevysvetliteľným spôsobom, si môže vyžadovať špecifické riadenie nad rámec riadenia klasických IT systémov.
- Použitie analýzy údajov, náhľadu a strojového učenia namiesto logiky kódovanej človekom pri navrhovaní systémov zvyšuje možnosti aplikácie systémov AI a mení spôsob, akým sa takéto systémy vyvíjajú, zdôvodňujú a zavádzajú.
- Systémy AI, ktoré vykonávajú kontinuálne učenie, menia svoje správanie počas používania. Vyžadujú si osobitnú pozornosť, aby sa zabezpečilo, že ich zodpovedné používanie bude pokračovať s meniacim sa správaním.

Tento dokument poskytuje požiadavky na vytvorenie, implementáciu, údržbu a neustále zlepšovanie systému manažérstva AI v kontexte organizácie. Od organizácií sa očakáva, že zamerajú svoje požiadavky na funkcie, ktoré sú jedinečné pre AI.

Systém manažérstva AI by mal byť integrovaný s procesmi organizácie a celkovou štruktúrou riadenia. Pri navrhovaní procesov, informačných systémov a opatrení by sa mali zvážiť špecifické otázky súvisiace s AI. Rozhodujúce príklady takýchto riadiacich procesov sú:

- určenie organizačných cieľov, zapojenie zainteresovaných strán a organizačná politika;
- riadenie rizík a príležitostí;
- procesy riadenia problémov súvisiacich s dôveryhodnosťou systémov umelej inteligencie, ako je bezpečnosť, spravodlivosť, transparentnosť, kvalita údajov a kvalita systémov umelej inteligencie počas ich životného cyklu;
- procesy pre riadenie dodávateľov, partnerov a tretích strán, ktoré poskytujú alebo vyvíjajú systémy AI pre organizáciu.

Tento dokument poskytuje pokyny na nasadenie príslušných opatrení na podporu takýchto procesov.

Národný predhovor

Normatívne referenčné dokumenty

Na nasledujúce dokumenty sa odkazuje v texte takým spôsobom, že časť ich obsahu alebo celý obsah predstavuje požiadavky tohto dokumentu. Pri datovaných odkazoch sa používa len citované vydanie. Pri nedatovaných odkazoch sa používa najnovšie vydanie citovaného dokumentu (vrátane akýchkoľvek zmien).

POZNÁMKA 1. – Ak bola medzinárodná publikácia zmenená spoločnými modifikáciami, čo je indikované označením (mod), použije sa príslušná EN/HD.

POZNÁMKA 2. – Aktuálne informácie o platných a zrušených STN možno získať na webovej stránke www.unms.sk.

ISO/IEC 22989: 2022 prijatá ako STN EN ISO/IEC 22989: 2023 Informačné technológie. Umelá inteligencia. Pojmy a terminológia umelej inteligencie (ISO/IEC 22989: 2022) (97 4163)

Vypracovanie slovenskej technickej normy

Spracovateľ: Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, Bratislava

Technická komisia: TK 37 Informačné technológie

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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 document 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 or www.iec.ch/members_experts/refdocs).

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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. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 42, *Artificial intelligence*.

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 and www.iec.ch/national-committees.

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.

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.

INTERNATIONAL STANDARD **ISO/IEC 42001:2023(E)**

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*