

● Artificial Intelligence (AI) Standard

BSI Thailand

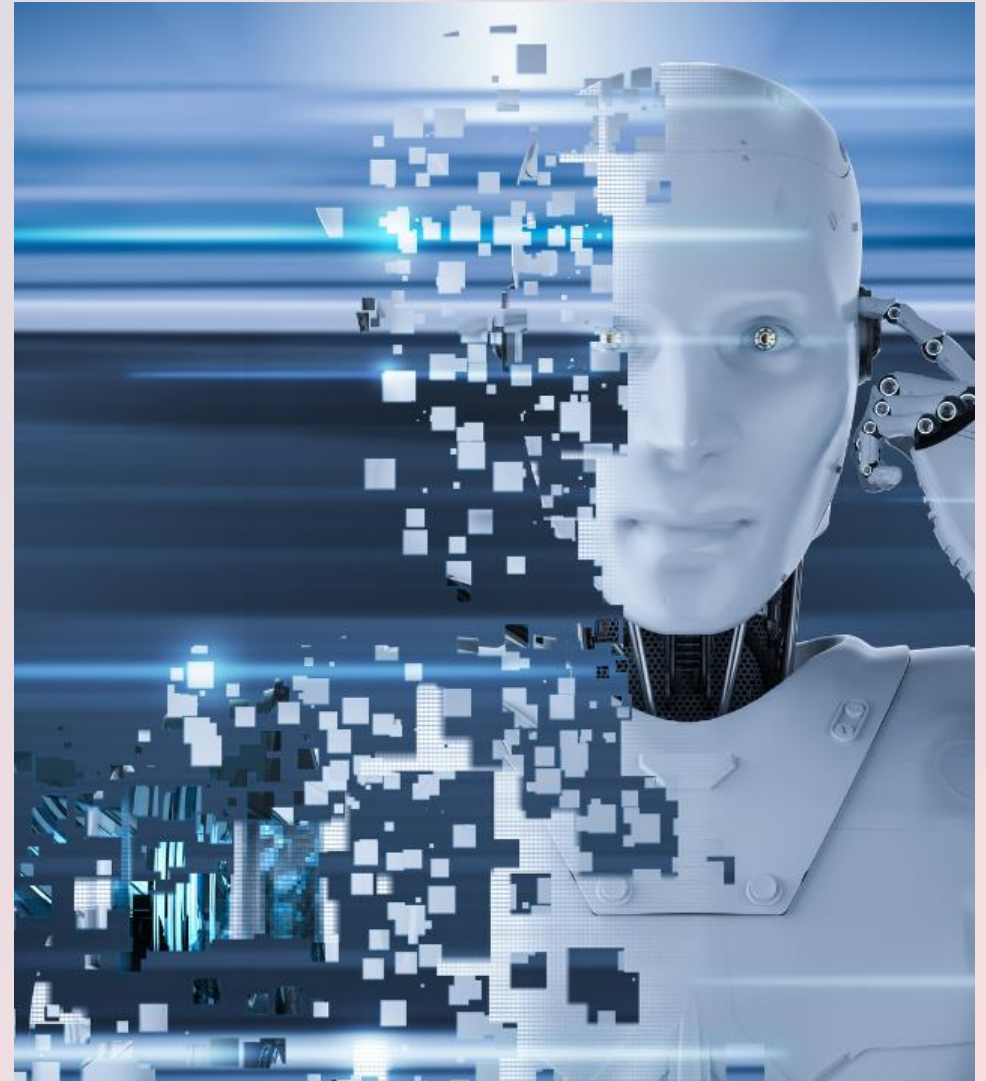


● Discussion items

ความ สำคัญ และ ประเด็น ของ AI (Artificial Intelligence) ในปัจจุบัน


What is AI (Artificial Intelligence) Management System (ISO/IEC 42001)


Combine ISO/IEC 42001 with other management system and updated status



- 
- ความ สำคัญ และ ประเด็น ของ AI (Artificial Intelligence) ในปัจจุบัน







สร้างสรรคงานเขียน

สามารถช่วยในการเขียนบทความ เรื่องสั้น บทกวี เขียนโค้ดโปรแกรม เขียนงานวิจัย หรือแม้แต่การแต่งเพลง ที่เราสามารถบอกเนื้อหาและสไตล์ ลงไปได้ด้วย

รวบรวมข้อมูล

เก็บรวบรวมจากหลายแหล่งข้อมูลทั่วโลก เช่น Website E-book หรือ Wikipedia มาประมวลผลเป็นคำตอบในรูปแบบ ของตัวเองได้

ปรึกษาปัญหาชีวิต

สามารถแนะนำได้ทุกปัญหาชีวิต ตั้งแต่การรับมือกับความเครียด คำแนะนำหลังจากอกหัก วิธีก้าวออกจาก Friend Zone เป็นต้น

ช่วยเขียนโปรแกรม

สามารถเขียนโปรแกรมได้ โดยใช้ภาษาโปรแกรม เช่น JavaScript, Python และยังสามารถตรวจสอบ ข้อบกพร่องได้อีกด้วย

ตอบคำถามความรู้รอบตัว

การตอบคำถามของ ChatGPT จะแตกต่างกับ Google ตรงที่ว่า จะคล้ายกับตอนอยู่ในห้องเรียน ที่เราสามารถยกมือถามเพิ่มเติม หรือขอให้ขยายความส่วนที่ไม่เข้าใจ ได้ทันที

Checklist ก้นลิ้ม

เสมือนเป็นผู้ช่วยคอยเตือนความจำ ก่อนเราจะทำกิจกรรม เช่น สิ่งที่ต้องเตรียมก่อนไปต่างประเทศ สิ่งที่ต้องเตรียมก่อนเปิดร้านขายสินค้า สิ่งที่ต้องเตรียมก่อนไปเที่ยวสถานที่ต่างๆ

ช่วยสร้างแนวคิดใหม่

เสมือนเป็นผู้ช่วยส่วนตัว เช่น แนวคิด ในการเลือกของขวัญปีใหม่ การสร้าง เนื้อหาอย่างไรให้เป็นที่น่าสนใจ ไปจนถึงสามารถแนะนำเมนูอาหาร ที่ดีต่อสุขภาพให้เรา

ChatGPT

สามารถทำอะไรได้บ้าง ?



จีนดัน “การแพทย์ AI”
วินิจฉัยโรคเพื่อความแม่นยำมากขึ้น

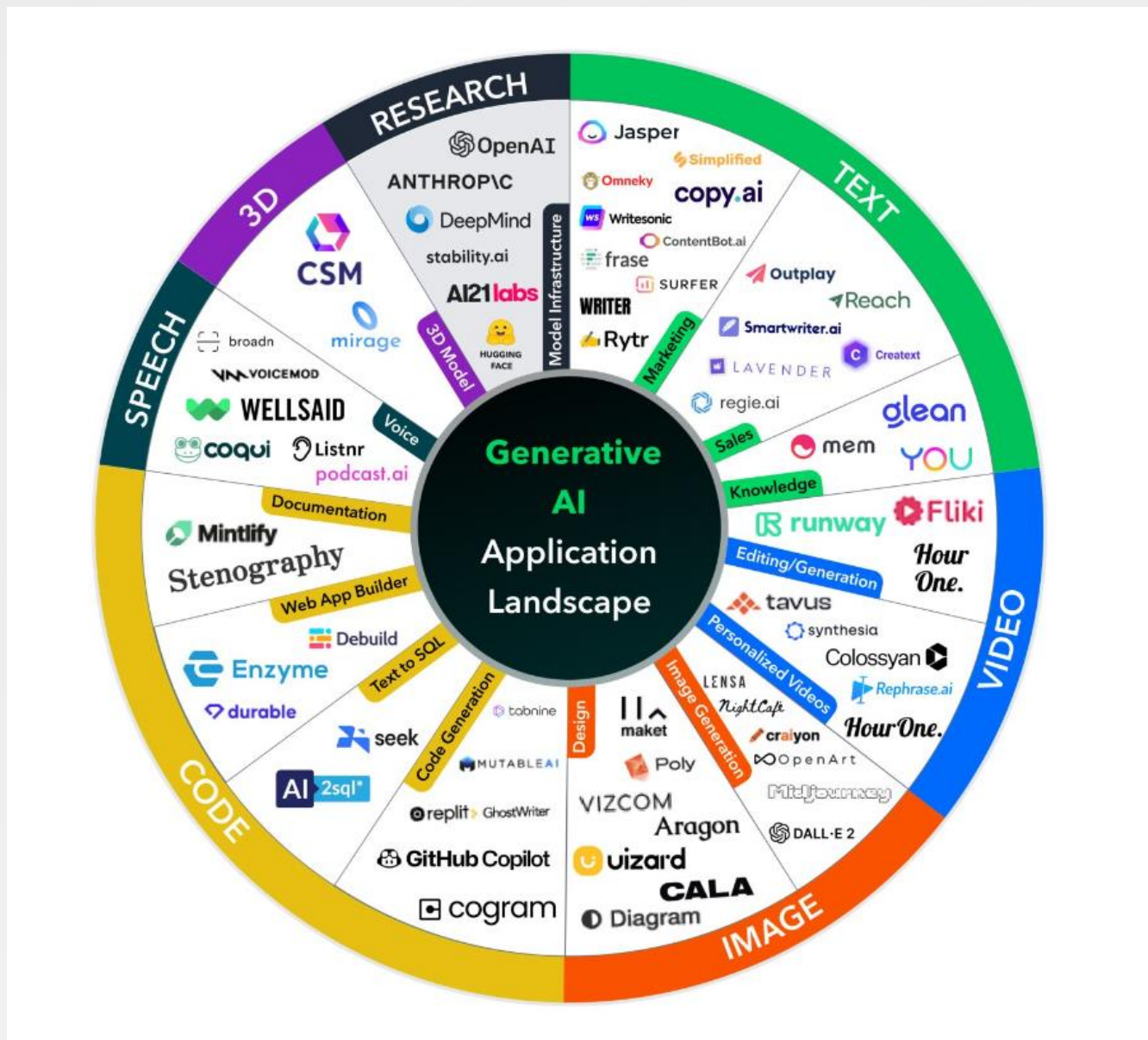
<https://globthailand.com/china-26092019/>

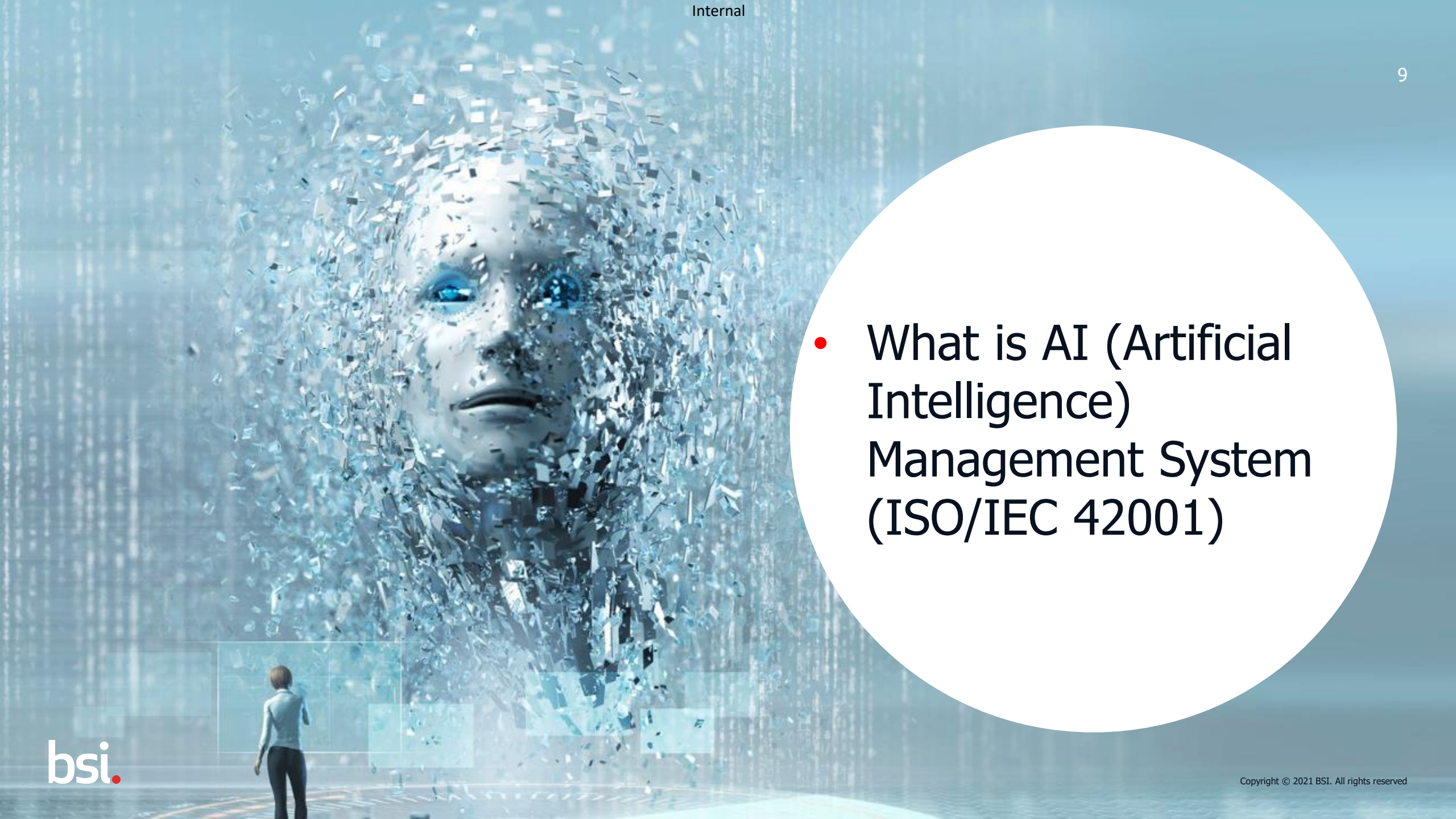
รถยนต์ไร้คนขับ อนาคตอัน...ใกล้ หรือ...อีกไกล?

BLOG 3 MIN 4070 25

21 พ.ค. 2020





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- What is AI (Artificial Intelligence) Management System (ISO/IEC 42001)

- Overview artificial intelligence (AI) requirements

BS ISO/IEC 42001 Information Technology - Artificial intelligence Management system – **14 November 2022 - 22/30426041 DC**

It is draft for public comment – BSI

For organization Providing or Using Product or service that utilized AI system

Management System requirement same as ISMS requirement – 4-10 and Annex A control objective and control

Draft for Public Comment Form 36

DPC: 22 / 30426041 DC

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Date: 14 November 2022
Origin: International

Latest date for receipt of comments: 2 January 2023 Project No. 2020/02422

Responsible committee: ARI/1 Artificial Intelligence
Interested committees:

Title: Draft BS ISO/IEC 42001 Information Technology - Artificial intelligence - Management system

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- Overview Artificial BS ISO/IEC 42001 Information Technology - Artificial intelligence Management system

• **BS ISO/IEC 42001** Information Technology - Artificial intelligence Management system – 14 November 2022 - 22/30426041 DC ¹²

- PDCA Model

- Intended for use by organization Providing or Using Product or service that utilized AI system

- Help organization develop or use AI system responsibly in pursuing its objectives, and meet applicable regulatory requirement, obligations related to interested parties and expectation from them

- Applicable for any organization provided or used products or services that utilized AI system

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Latest date for receipt of comments: 2 January 2023 Responsible committee: AR/1: Artificial Intelligence Interested committees:		Project No: 2020-02222
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- Requirement 4-10 PDCA framework, Management system
- Annex A – Control objective and control
- Annex B – Implement Guide for AI control
- Annex C – Potential AI – Related organizational objectives and risk sources
- Annex D – Use of AI management system across domain or sectors

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4 Context of the organization

- 4.1 Understanding the organization and its context
- 4.2 Understanding the needs and expectations of interested parties
- 4.3 Determining the scope of the AI management system
- 4.4 AI management system

5 Leadership

- 5.1 Leadership and commitment
- 5.2 AI Policy
- 5.3 Organizational roles, responsibilities and authorities

6 Planning

- 6.1 Actions to address risks and opportunities
 - 6.1.1 General
 - 6.1.2 AI risk assessment
 - 6.1.3 AI risk treatment
 - 6.1.4 AI System Impact assessment
- 6.2 AI objectives and planning to achieve them
- 6.3 Planning of changes

7 Support

- 7.1 Resources
- 7.2 Competence
- 7.3 Awareness
- 7.4 Communication
- 7.5 Documented information

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8 Operation

- 8.1 Operational planning and control
- 8.2 AI risk assessment
- 8.3 AI risk treatment
- 8.4 AI System Impact Assessment

9 Performance evaluation

- 9.1 Monitoring, measurement, analysis and evaluation
- 9.2 Internal audit
- 9.3 Management review

10 Improvement

- 10.1 Continual improvement
- 10.2 Nonconformity and corrective action

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Annex A (normative)

Reference control objectives and controls

A.1 General

The controls detailed in Table A.1 provide the organization with a reference for meeting organizational objectives and addressing risk related to the design and operation of AI systems. Not all the control objectives and controls listed in Table A.1 are required to be used, and the organization can design and implement their own controls (see clause 5.1.3).

Annex B provides implementation guidance for all the controls listed in Table A.1. The first column in Table A.1 provides the cross-reference for a specific clause in Annex B.

Table A.1 — Control objectives and controls

B.2 Policies related to A.		
Objective: To provide management direction and support for AI systems according to business requirements and applicable legal obligations (including contractual obligations).		
B.2.2	AI policy	Control The organization shall document a policy for the development or use of AI systems.
B.2.3	Alignment with other organizational policies	Control The organization shall determine where other policies can be affected by or apply to, the organization's objectives with respect to AI systems.
B.2.4	Review of the AI policy	Control The AI policy shall be reviewed at planned intervals or additionally as needed to ensure its continuing suitability, adequacy and effectiveness.

B.3 Internal organization

Objective: To establish accountability within the organization to uphold its responsible approach for the implementation, operation and management of AI systems.

B.3.2	AI roles and responsibilities	Control Roles and responsibilities for AI shall be defined and allocated according to the needs of the organization.
B.3.3	Reporting of concerns	Control The organization shall define and put in place a process for employees of the organization to report concerns about the organization's role with respect to an AI system throughout its life cycle.

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B.4 Resources for AI systems		
Objective: To ensure that the organization accounts for the resources (including AI system components and assets) of the AI system in order to fully understand and address risks and impacts.		
B.4.2	Resource documentation	Control
		The organization shall identify and document relevant resources required for the activities at given AI system life cycle stages and other AI-related activities relevant for the organization.
B.4.3	Data resources	Control As part of resource identification, the organization shall document information about the data resources utilized for the AI system.
B.4.4	Tooling resources	Control As part of resource identification, the organization shall document information about the tooling resources utilized for the AI system.
B.4.5	System and computing resources	Control As part of resource identification, the organization shall document information about the system and computing resources utilized for the AI system.
B.4.6	Human resources	Control As part of resource identification, the organization shall document information about the human resources utilized for the development, deployment and operation of the AI system.

B.5 Assessing impacts of AI systems		
Objective: To assess system impacts to interested parties of the AI system throughout its life cycle.		
B.5.2	AI system impact assessment process	Control The organization shall assess the potential consequences for individuals and societies that would result from the development or use of AI systems.
B.5.3	Documentation of AI system impact assessments	Control The organization shall document the results of AI system impact assessments and retain results for a defined period.
B.5.4	Assessing AI system impact on individuals and groups of individuals	Control The organization shall assess and document the potential impacts of AI systems to individuals or groups of individuals throughout the system's life cycle.
B.5.5	Assessing societal impacts of AI systems	Control The organization shall assess and document the potential societal impacts of their AI systems throughout their life cycle.

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B.6 AI system life cycle		
Objective: To ensure that the organization identifies and documents objectives and implements processes for the responsible design and development of AI systems.		
B.6.1 Management guidance for AI system development		
B.6.1.2	Objectives for responsible development of AI system	Control The organization shall identify and document objectives to guide the development of trustworthy AI systems, and take those objectives into account and integrate measures to achieve them in the development life cycle.
B.6.1.	Processes for trustworthy AI system design and development	Control The organization shall define and document the specific processes for the design and development of the AI system.

B.6.2 AI system development life cycle		
B.6.2.2	AI system requirements and specification	Control The organization shall specify and document requirements for new AI systems or material enhancements to existing systems.
B.6.2.3	Documentation of AI system design and development	Control The organization shall document the AI system design and development based on organizational objectives, documented requirements and specification criteria.
B.6.2.4	AI system verification and validation	Control The organization shall define and document verification and validation measures for the AI system and specify criteria for their use.
B.6.2.5	AI system deployment	Control The organization shall document a deployment plan and ensure that appropriate requirements are met prior to deployment.
B.6.2.6	AI system operation and monitoring	Control The organization shall define and document the necessary elements for the ongoing operation of the AI system. At the minimum this should include system and performance monitoring, repairs, updates and support.
B.6.2.7	AI system technical documentation	Control The organization shall determine what AI system technical documentation is needed for each relevant category of interested parties, such as users, partners, supervisory authorities, and provide the technical documentation to them in the appropriate form.
B.6.2.8	AI system recording of event logs	Control While the AI system is in operation, automatic record keeping of event logs should be enabled when necessary.

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B.7 Data for AI systems

Objective: To ensure that the organization understands the role and impacts of data in AI systems in the application and development, provision or use of AI systems through their life cycles.

B.7.2	Data for development and enhancement of AI system	Control The organization shall define, document and implement data management processes related to the development of AI systems.
B.7.3	Acquisition of data	Control The organization shall determine and document details about the acquisition and selection of the data used in AI systems.
B.7.4	Quality of data for AI systems	Control The organization shall define and document requirements for data quality and ensure that data used to develop and operate the AI system meet those requirements.
B.7.5	Data provenance	Control The organization shall define and document a process for verifying and recording the provenance of data used in its AI systems over the life cycles of the data and the AI system.
B.7.6	Data preparation	Control The organization shall define and document their needs for and approaches to data preparation.

B.8 Information for interested parties of AI systems

Objective: To ensure that relevant interested parties have the necessary information to understand and assess the risks and their impacts (both positive and negative).

B.8.2	System documentation and information for users	Control The organization shall determine and provide the necessary information to users of the system.
B.8.3	Understandability of provided information	Control Information provided to interested parties shall be clear, understandable and appropriate for them.
B.8.4	External reporting	Control The organization shall provide capabilities for reporting adverse impacts of the system.
B.8.5	Communication of incidents	Control The organization shall determine and document a plan for communicating incidents to users of the system.
B.8.6	Information for interested parties	Control The organization shall determine and document their obligations to reporting information about the AI system to interested parties.

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B.9 Use of AI systems		
Objective: To ensure that the organization uses AI responsibly and per organizational policies.		
B.9.2	Processes for responsible use of AI	Control The organization shall define and document the processes for the responsible use of AI systems.
B.9.3	Objectives for responsible use of AI system	Control The organization shall identify and document objectives to guide the responsible use of AI systems.
B.9.4	Intended use of the AI system	Control The organization shall ensure that the AI system is used according to the intended uses of the AI system and its accompanying documentation.

B.10 Third party relationships		
Objective: To ensure that, when third parties are involved at any stage of the AI system life cycle, the organization understands its responsibilities and remains accountable for these, while being able to assess and mitigate the risk of reliance on third parties for responsibilities allocated to them and enable third parties to assess and treat the risks related to reliance on AI products and services developed by the organization.		
B.10.2	Allocating responsibilities	Control The organization shall ensure that responsibilities within their AI system life cycle are allocated between the organization, its partners, suppliers, customers and third parties.
B.10.3	Suppliers	Control The organization shall ensure that its suppliers commit to a responsible approach to the development of AI systems.
B.10.4	Customers	Control The organization shall ensure its responsible approach to the development of AI systems considers their customer expectations and needs.

Annex C – Potential AI – Related organizational objectives and risk sources

Objective and risk sources as ISO/IEC 23894 Information technology — Artificial intelligence — Guidance on risk management

Objective:

- Fairness
- Security
- Safety
- Privacy
- Robustness
- Transparency and Explainability
- Accountability
- Availability
- Maintainability
- Availability and quality of training data
- AI expert

Annex C – Potential AI – Related organizational objectives and risk sources

Objective and risk sources as ISO/IEC 23894 Information technology — Artificial intelligence — Guidance on risk management


Risk sources:

- Level of automation
- Lack of transparency and explainability
- Complexity of environment
- System life cycle issues
- System hardware issues
- Technology readiness
- Risk sources related to machine learning

Annex D – Use of AI management system across domain or sectors

- Applicable to any organization providing or using product or service that utilize AI System
- Integration of AI management system with other management system standard
 - Example ISO/IEC 27001, ISO/IEC 27701, ISO 9001
- Certification scheme



- 
- Combine ISO/IEC 42001 with other management system

Combine ISO/IEC 42001 with other management system and updated status

From Annex D

- ISO/IEC 42001 can be certified in organization
- ISO/IEC 42001 can be integrated, combined in other management

ISO/IEC 42001 – Now

- **ISO/IEC FDIS 42001** Information technology — Artificial intelligence — Management system



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