



ISO 42001 – Using Artificial Intelligence Responsibly

Ensuring Responsible AI Governance
with ISO 42001:2023

Jim Moran, MA Ed. MSP

What we're covering tonight...

ASQ Ottawa 2025

FREE Evening Webinar



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Section



How to use AI responsibly with
ISO 42001:2023 - AI Management System

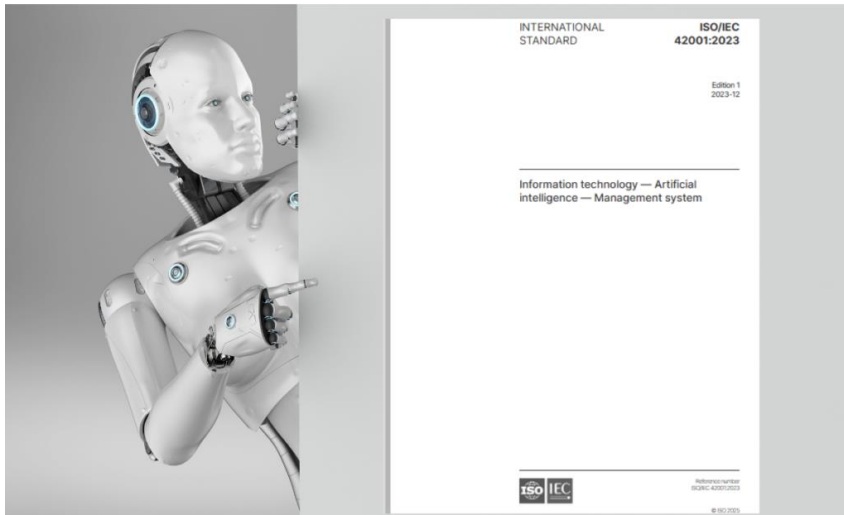
Thursday, Mar 20, 2025
7:00pm – 8:00pm Eastern Time (ET)

Speaker Jim Moran

MA Ed. MSP, President of Simplify ISO Inc. and
the Learning Alliance

Register Now

Everyone Welcome!



Overview of ISO
42001:2023 and Its
Purpose

Key Components of an AI
Management System

Benefits and
Implementation

What are you curious about related
to our topic tonight?

Please use the chat box to respond...

Feel free to use the chat box to ask
any questions – Natalia will read your
question to me.

Part 1: What is ISO 42001?

ISO 42001 is the first international AI Management System Standard.

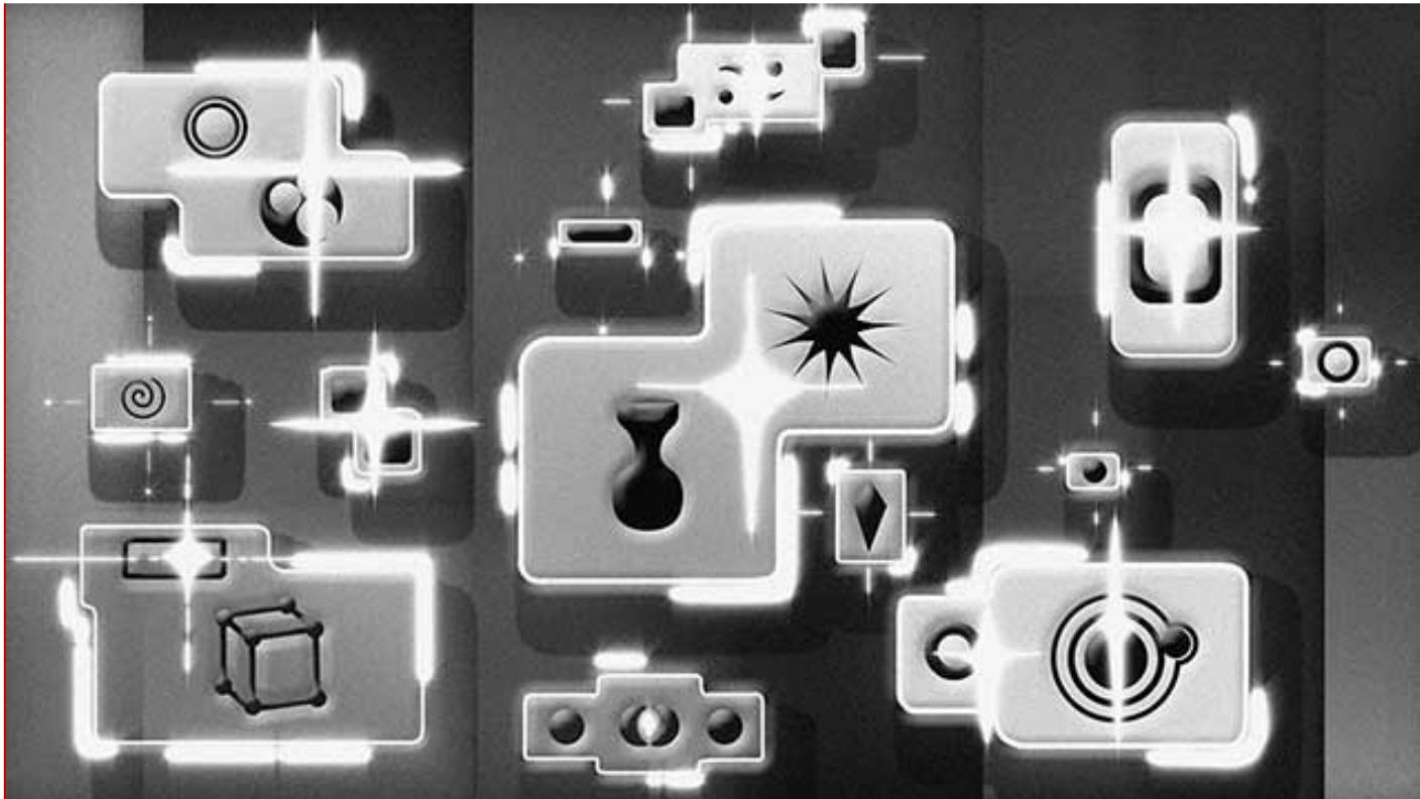
It establishes best practices for safe, ethical, and responsible use of AI.

It can accommodate any and all other information security requirements.

This management system is applicable to any organization developing, providing or using products or services that utilize an AI system.

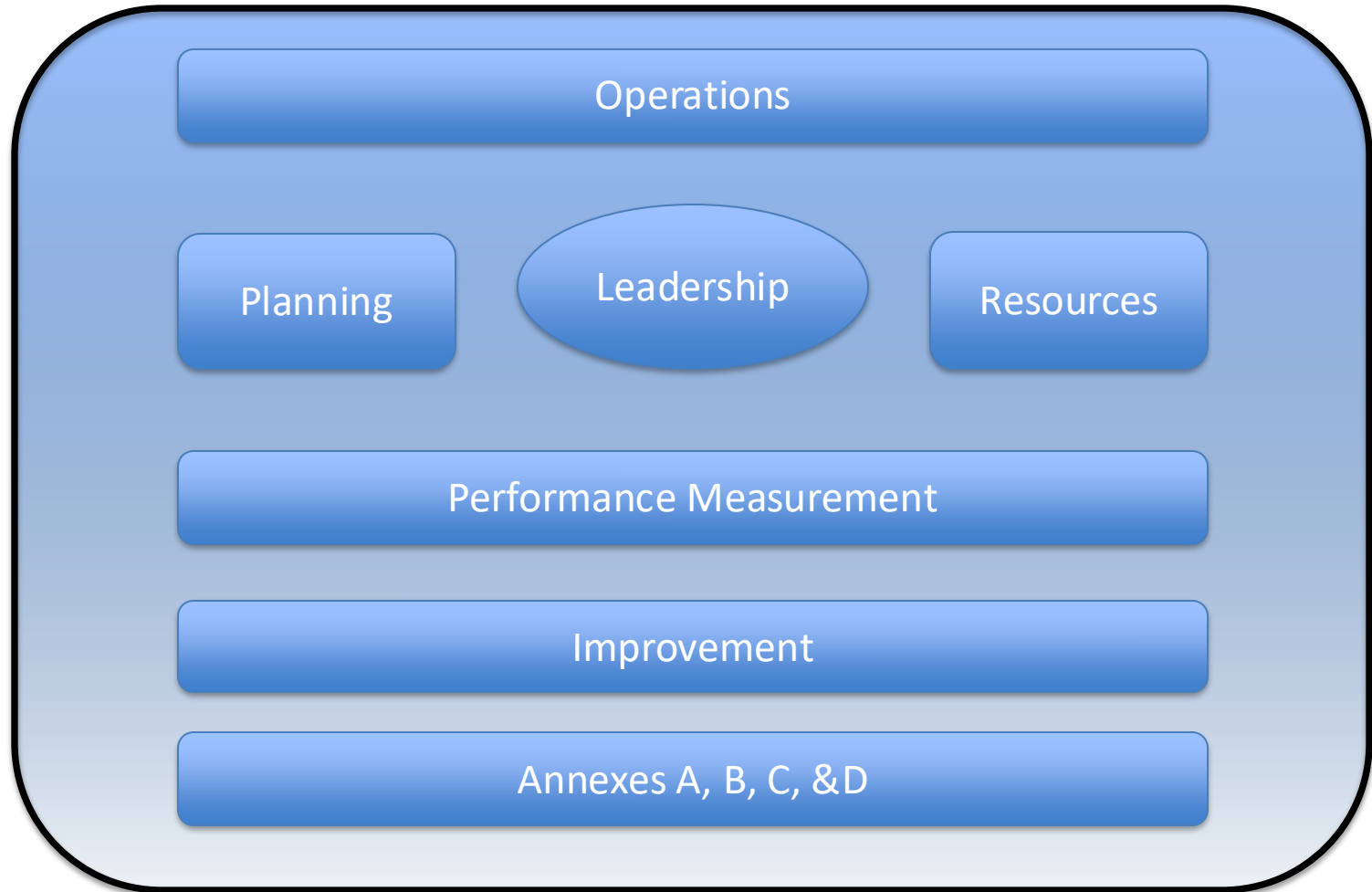
QUALITYDIGEST JUST IN TIME

MARCH 20, 2025



In the Age of AI, Idea Curation Will Eclipse Creation

The structure of ISO 42001



Context

Annex A: A.2 Policies, A.3 Internal organization, A.4 Resources, A.5 Impact assessment, A.6 AI Life cycle, A.7 Data for AI systems, A.8 Information for stakeholders, A.9 Use of AI systems, A.10 Third party and customer relationships

Requirements

Annex B: B.2 Policies related to A, B.3 Internal organization, B.4 Resources...etc...

Guidance for Annex A

Annex C: Potential AI related objectives and Risk sources C.2 Objectives, C.3 Risk sources

Guidance

Annex D: Using the AI management system across domains or sectors - Integration

Guidance

Why is it important?

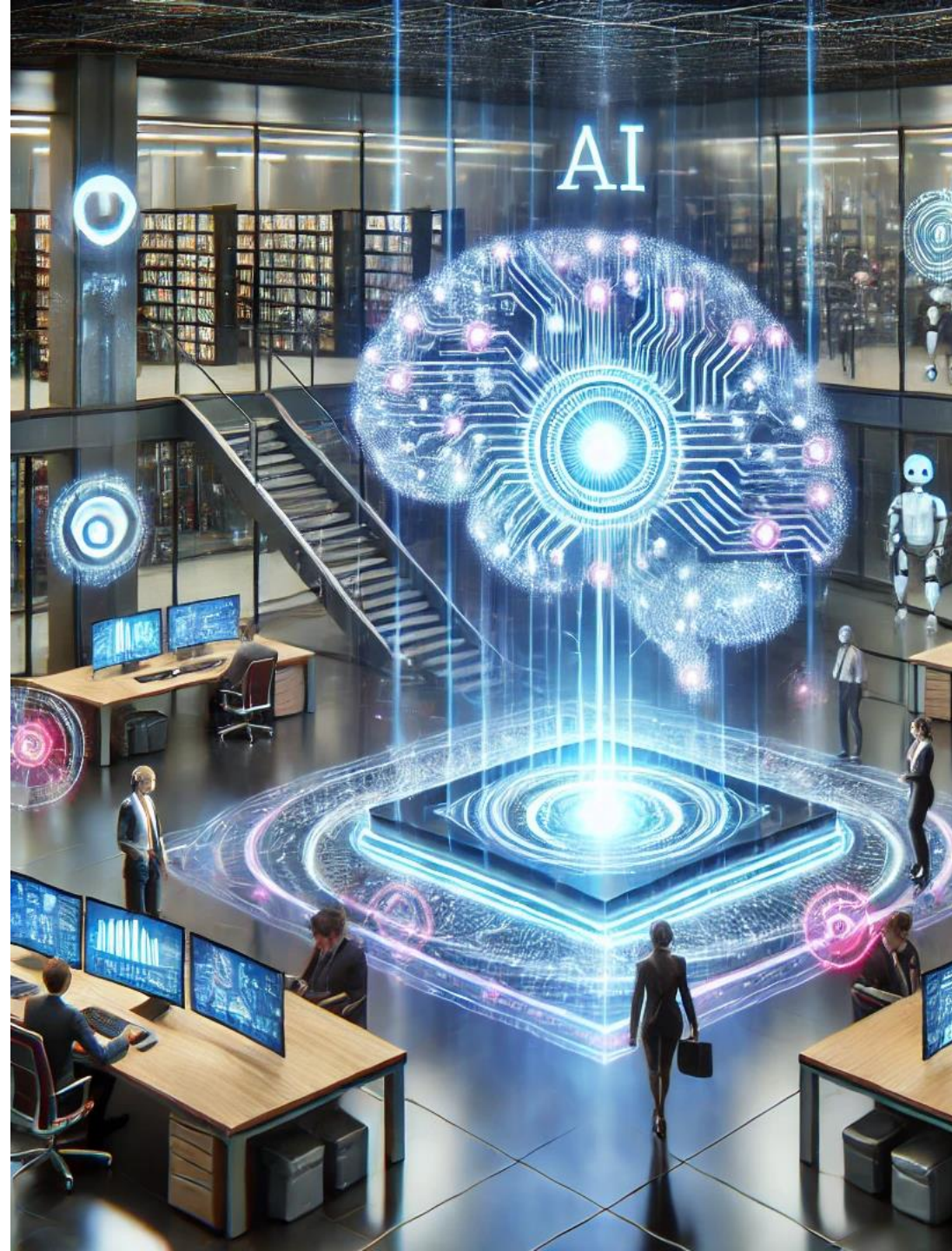
AI adoption is accelerating, but risks like bias, security vulnerabilities, and compliance require a structured approach management.

Increasing reliance on AI technologies has created the need for standards to ensure trust, safety, and accountability in AI systems.

What's it for?

ISO 42002 has been published to help organizations responsibly perform their role with respect to AI systems:

- Use of AI
- Development of AI
- Monitoring AI
- Providing products or services that utilize AI

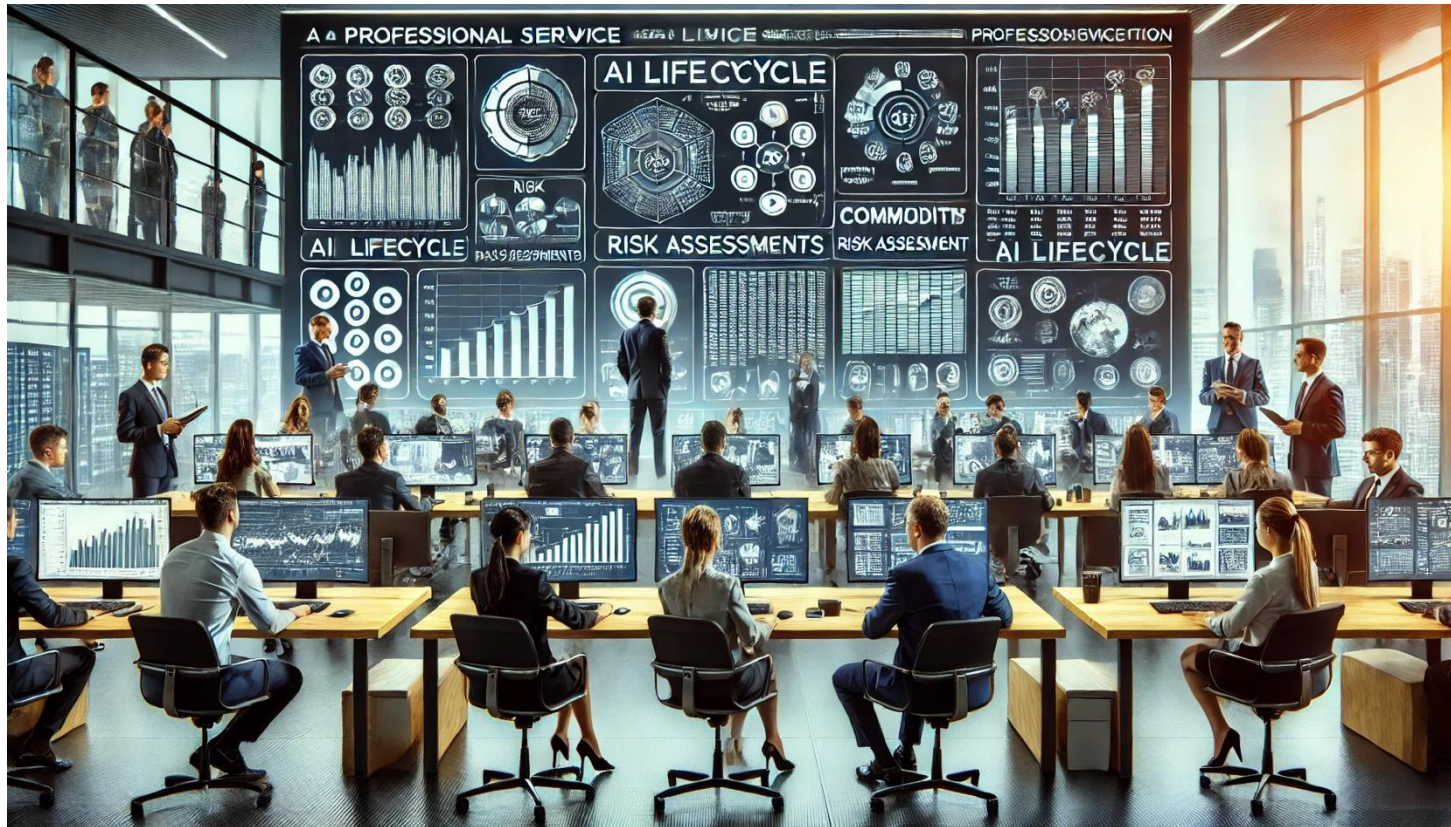


What could possibly go wrong?!?

- **Bias & Fairness Issues:** AI models can unintentionally reinforce discrimination if trained on biased data.
- **Transparency & Explainability:** Many AI decisions, especially in deep learning, are opaque.
- **Security & Privacy Threats:** AI systems are vulnerable to cyberattacks and data breaches.
- **Regulatory & Compliance Concerns:** Governments worldwide are implementing AI regulations, and businesses need to stay compliant.

Businesses operating across borders need to be responsible.

ISO 42001 standardizes AI governance globally and uniformly when implemented and audited well.



You can satisfy multiple regulatory frameworks.

The Key Principles of ISO 42001

- **Transparency**
 - Document and disclose how models work.
- **Fairness**
 - Must not discriminate against individuals or groups based on biased data.
- **Accountability**
 - define roles and responsibilities for AI oversight.
- **Risk Management**
 - Use **risk management frameworks** to detect and respond to potential issues proactively.

Takeaways

ISO 42001 is an international standard for managing AI systems responsibly.

An AI management system is needed to ensure trust, safety, and accountability in AI systems.

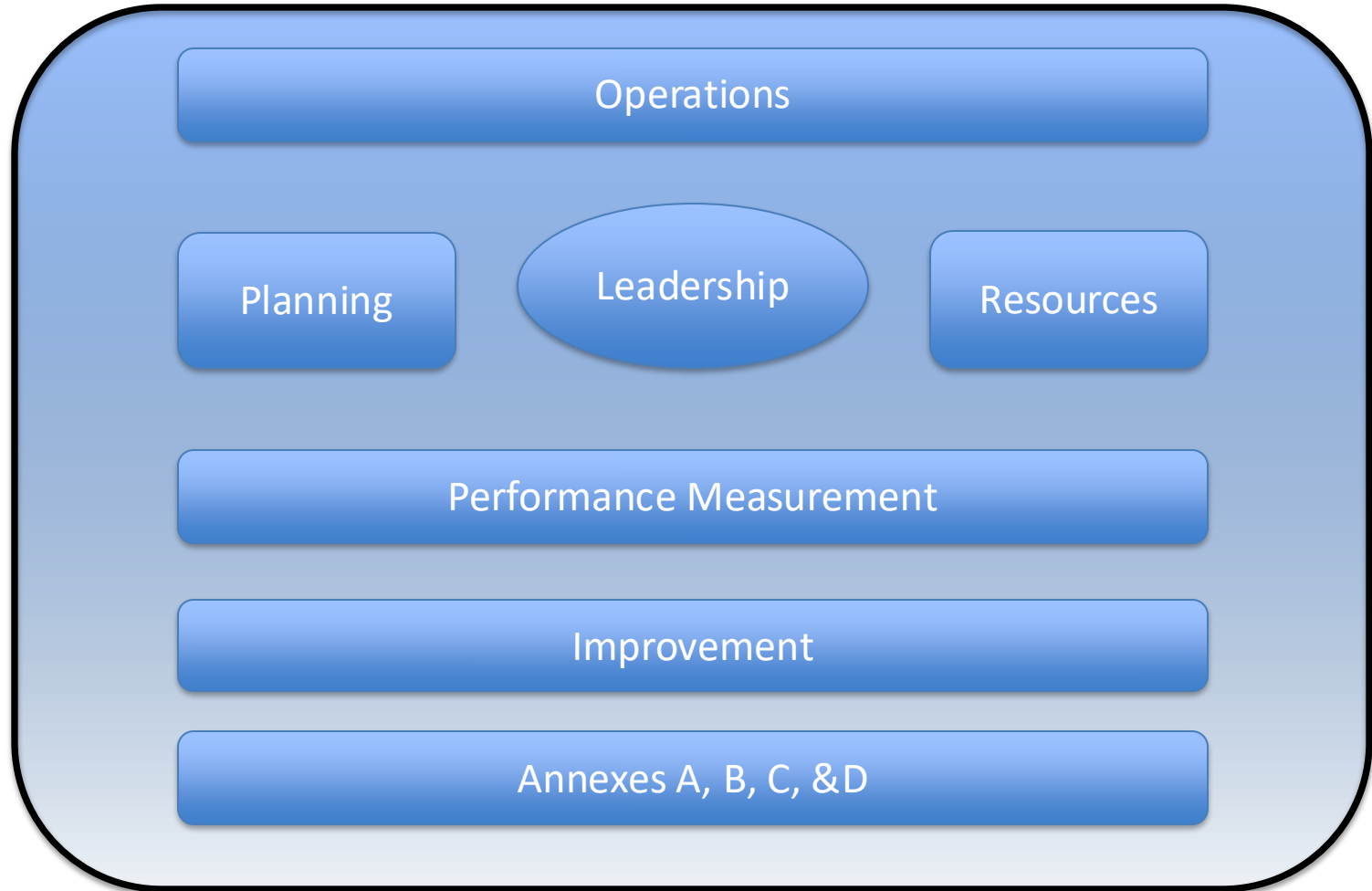
Key principles form a foundation to build a system on

Poll#1

- How do you see yourself using AI in your business life and/or your personal life?



Part 2 – Key components

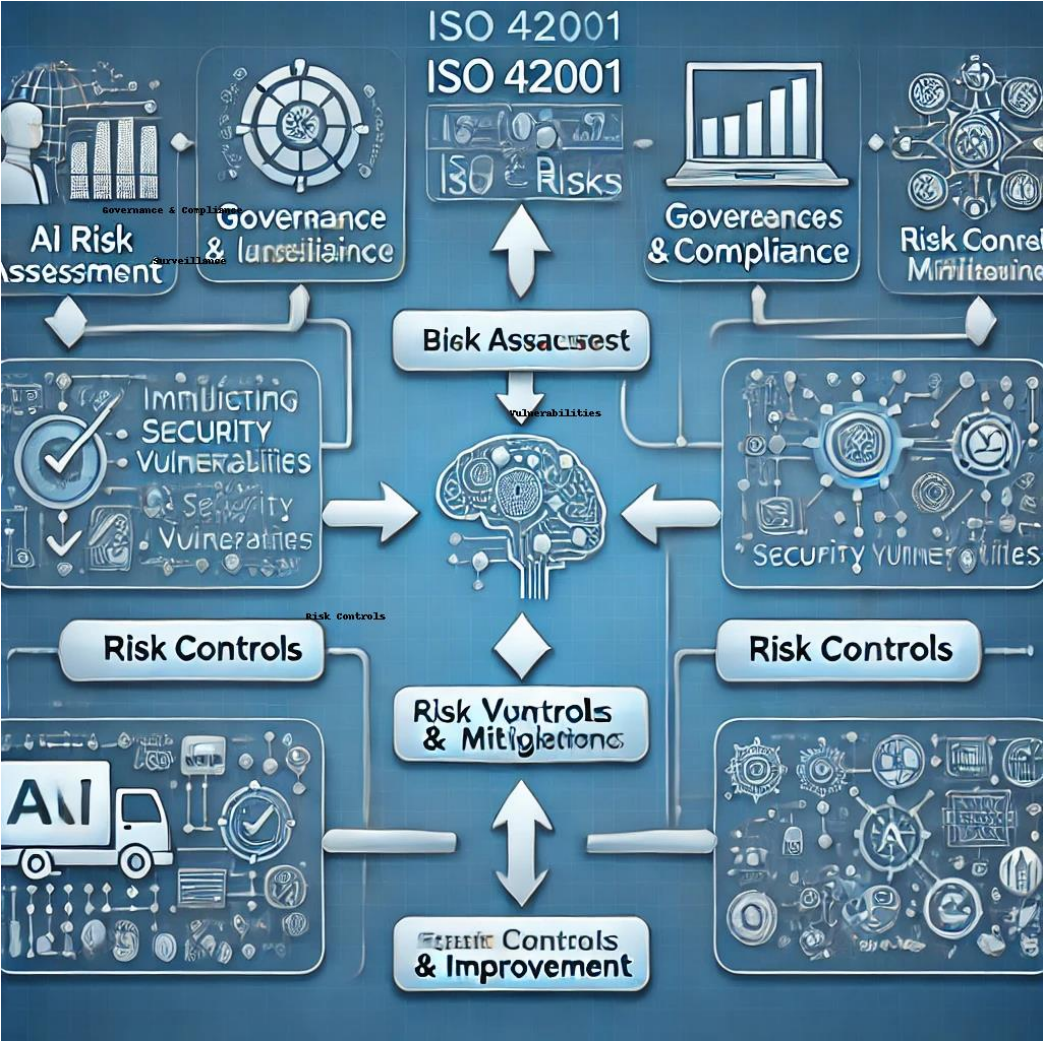


Context

Risk Related Clauses

- As in all the other HS standards, clause 6.1.1 talks about identifying risks
- 6.1.2 requires a risk assessment
- 6.1.3 is the 'risk treatment' clause
- 6.1.4 requires an impact assessment related to risks
- Annex C refers to Potential AI-related organizational objectives and risk sources
- Includes C3 – Risk sources such as complexity, lack of transparency, machine learning, hardware issues and technology readiness

An ISMS supports risk management

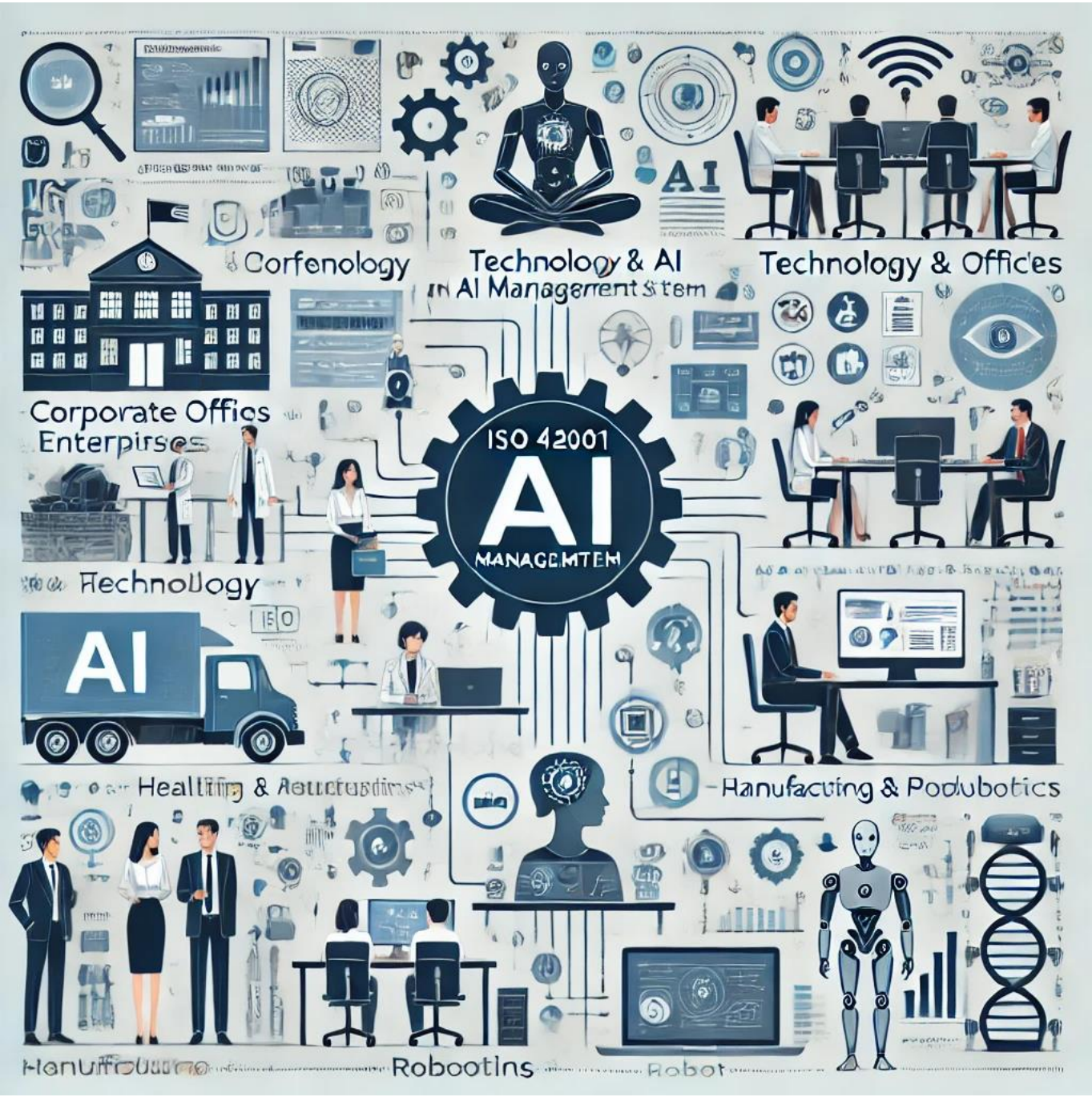


The Need for AI Governance

- Challenges in AI Implementation:
 - Bias and fairness concerns
 - Transparency and explainability issues
 - Security risks (cyber threats, data privacy)
 - Compliance with global regulations (e.g., EU AI Act, U.S. AI guidelines)
- Solution: A standardized AI management system for structured oversight

Who Should Adopt ISO 42001?

- Industries:
 - Healthcare, Finance, Manufacturing, Retail & E-commerce as well as any organization that creates or uses AI
- Business Size:
 - Useful for startups, SMEs, and large enterprises



Corporate Offices Enterprises



Technology



Manufacturing

Corfenology



Technology & AI
in AI Management System



Robotics

Technology & Offices



Manufacturing & Robotics



Robot

Business Benefits of ISO 42001 Certification

- Regulatory Compliance
- Trust & Transparency
- Operational Efficiency
- Competitive Advantage

Key Takeaways

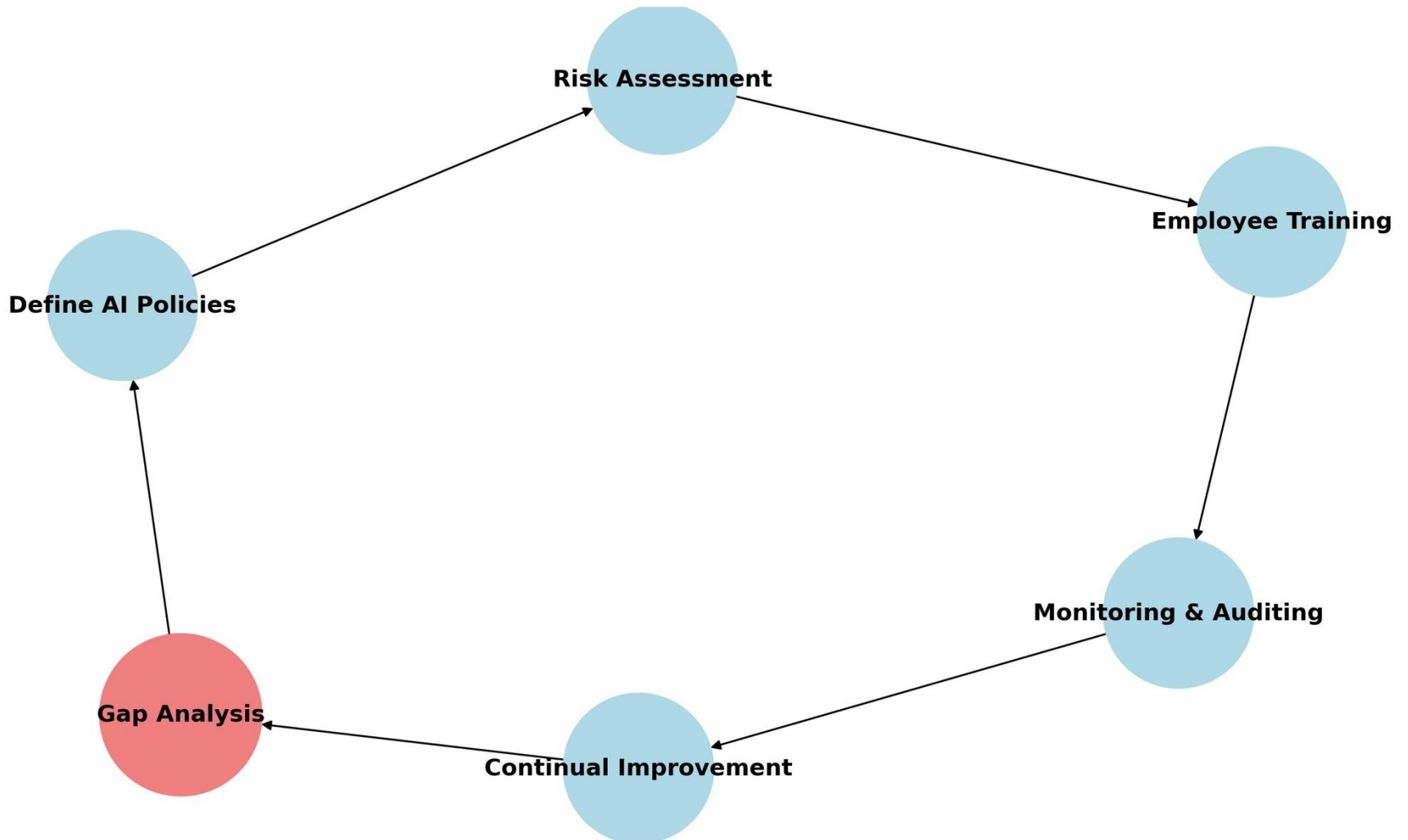
- Can be used by any size or type of organization
- Everyone will eventually be using AI as part of their daily lives
- It is heavily risk focused
- Aligns with all ISO Harmonized Standards

Poll #2

- Do you think the use of AI should (could) be managed and why?



Implementation Steps



Challenges in Implementing ISO 42001

- Complexity – it's everywhere!
- Cost – technical expertise, integrating, training
- Continuous Monitoring – who's using it and how are they using it?

The Future of AI Standards



Real-World Case Study – AI in Healthcare

- Example: AI in Medical Diagnostics
 - Challenge: Ensuring fairness in AI-driven disease detection
 - Solution: A hospital could adopt ISO 42001 to structure its AI governance
 - Outcome: Improved model accuracy, reduced bias, and gained regulatory approval

Real-World Case Study – AI in Finance

- Example: AI for Fraud Detection
 - Challenge: Preventing false positives in fraud detection models
 - Solution: A bank could implementt ISO 42001 to create clear AI auditing policies
 - Outcome: Reduce false positives by X%, improving customer experience

Key Takeaways

- ISO 42001 provides a structured framework for responsible AI
- Helps businesses manage AI risks and ensure compliance
- Builds trust, enhances efficiency, and offers a competitive edge

What's next?

- Consider how your organization can integrate ISO 42001
- Stay informed about AI governance trends



Poll #3

- Do you think the use of AI should (could) be managed and why?



Thank you!



Jim@SimplifyISO.com

<https://simplifyiso.com/>