ISO/IEC 42001:2023

Artificial Intelligence Management System

CA Nandan Savnal

May 9th 2025

Nemko Digital

Nemko has created Trust since 1933

In our increasingly digital world, trust in digital systems, services, and transactions is paramount. Some of the critical elements of digital trust include Security, Privacy, Reliability, Transparency, Compliance, User Experience, and Ethical Use of Technology.

Nemko Digital offers digital trust solutions, complementing Nemko's existing services, to extend its commitment to its customers and support them into the digital realm.

Physical Trust

Nemko made the physical world a safer place since 1933

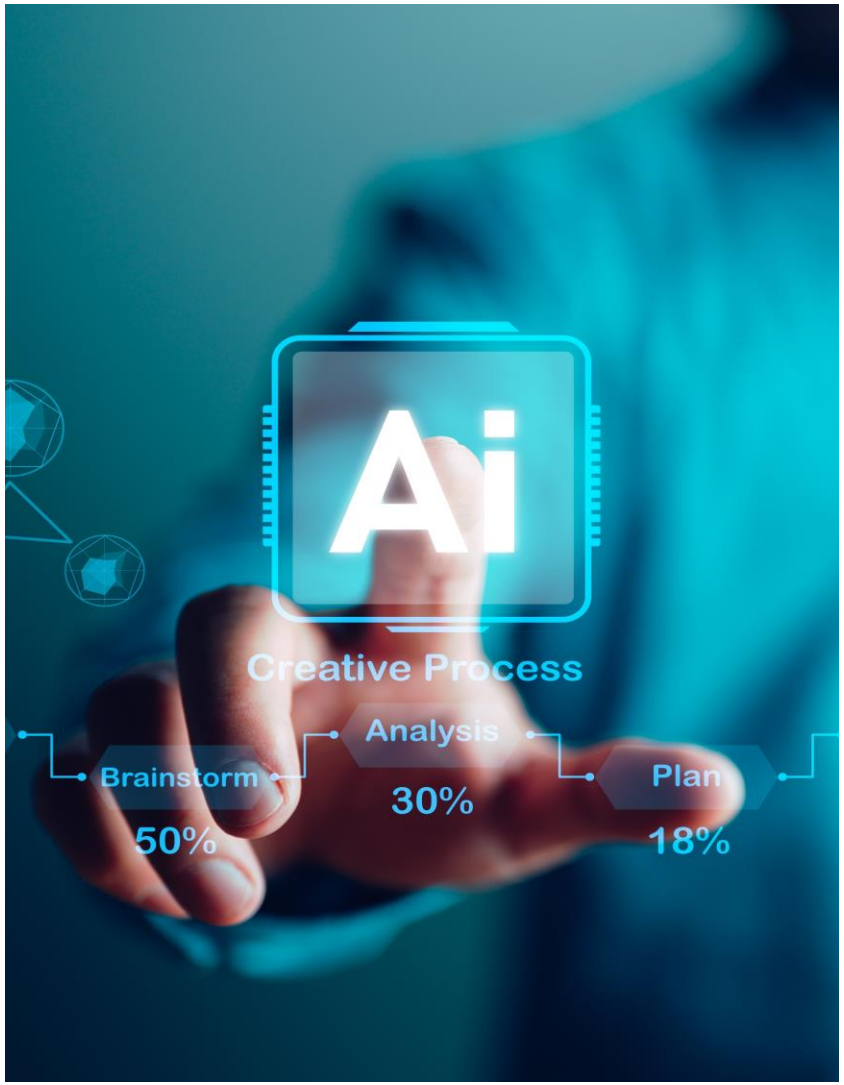
vs.

Digital Trust

Nemko augmented its proposition by Providing Trust in a Digital World

Value drivers for AI governance, compliance & quality management

- Compliance with upcoming regulation
- Reputation as leading global company
- Control to prevent incidents / harm
- Stakeholder demands around use of AI
- Competitive advantage on the market



Key interests from customers

Nemko Digital leverages over 90 years of compliance expertise to offer end-to-end governance, risk assessment, and assurance services tailored to evolving AI regulations and standards in alignments with product legislation.

Key interests

AI trust in products

Roadmap to Compliance

- Global market access
- Risk categorization
- Comprehensive gap analysis

AI Trust Mark

- Aligned with global standards
- Market differentiation and global recognition
- Maturity model integration

AI-leading organization

AI Management Systems

- Capacity building
- Strengthening of AIMS processes
- Full AIMS implementation

Tools and Technologies

- Selection of AI governance tools
- Guidance on Implementation
- Fit-to-scale approach

AI Governance Assessment

- Maturity model
- Comprehensive reports
- Evaluation statements

AI Literacy

- Leadership and awareness
- Define and train AI capabilities
- Governance and continuous growth

CA Gurunandan Savnal

CA, CISA, CFE, CDPSE, COSO Internal Control, CRP, CEH, Lead Cybersecurity Manager – ISO 27032, Lead Auditor ISO 27001, 22301, ISO 37001, ISO 37301, ISO 42001

Member International ISO Technical Committees

Risk Management & Sustainable Finance

Member National Committees

Risk Management Implementation Guidelines,

Risk Maturity Framework

Agenda

1. Introduction
2. AI Growth Engines
3. Introduction to Artificial Intelligence and Machine Learning
4. Rationale for “Responsible AI”
5. ISO 42001:2023 in the evolving AI Landscape
6. Overview of ISO/IEC 42001:2023
7. Implementation Steps
8. Nemko Digital Offerings
9. Q&A Session

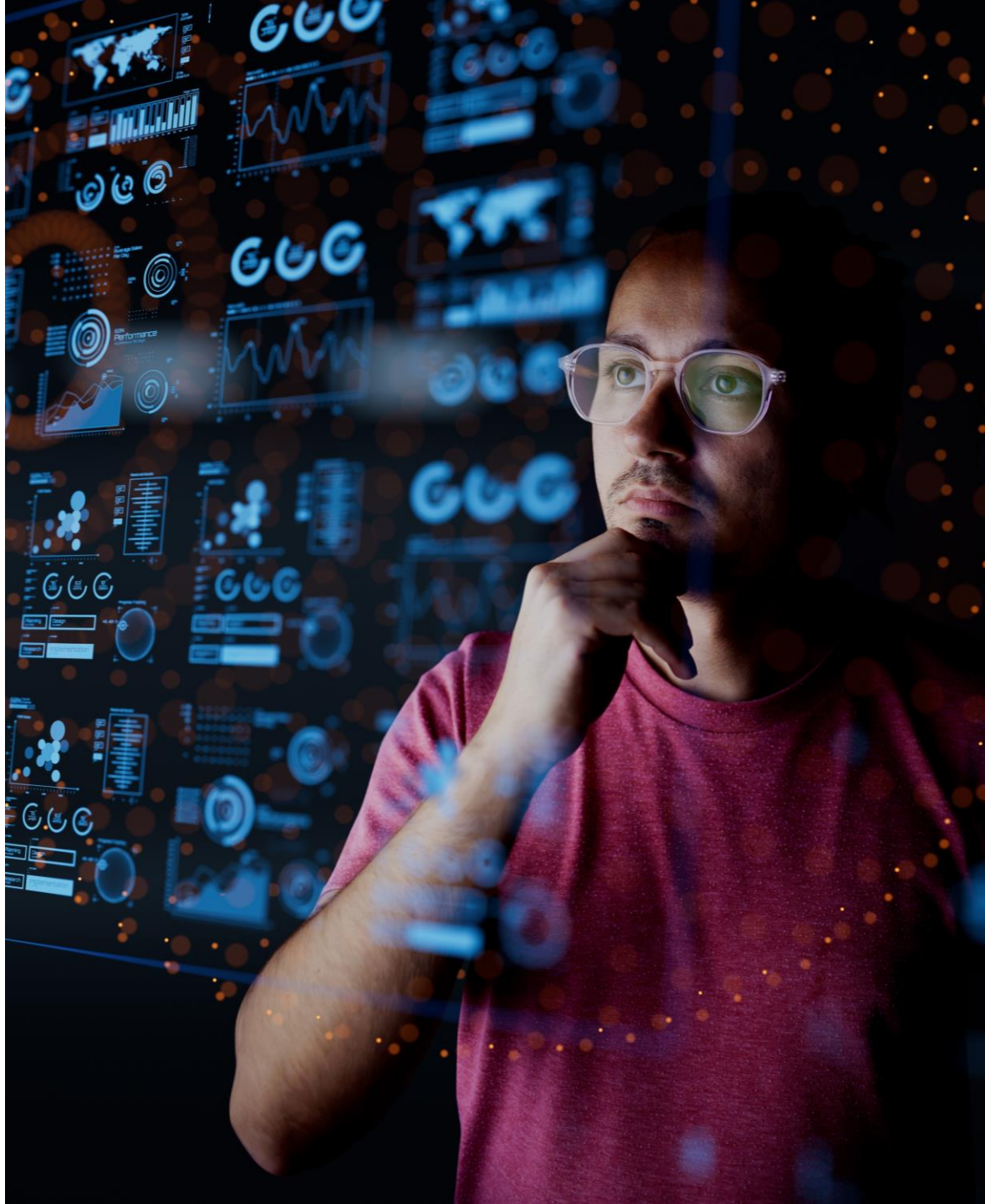
AI Growth Engines

Reasons for AI Growth - Let’s look at some Data Points

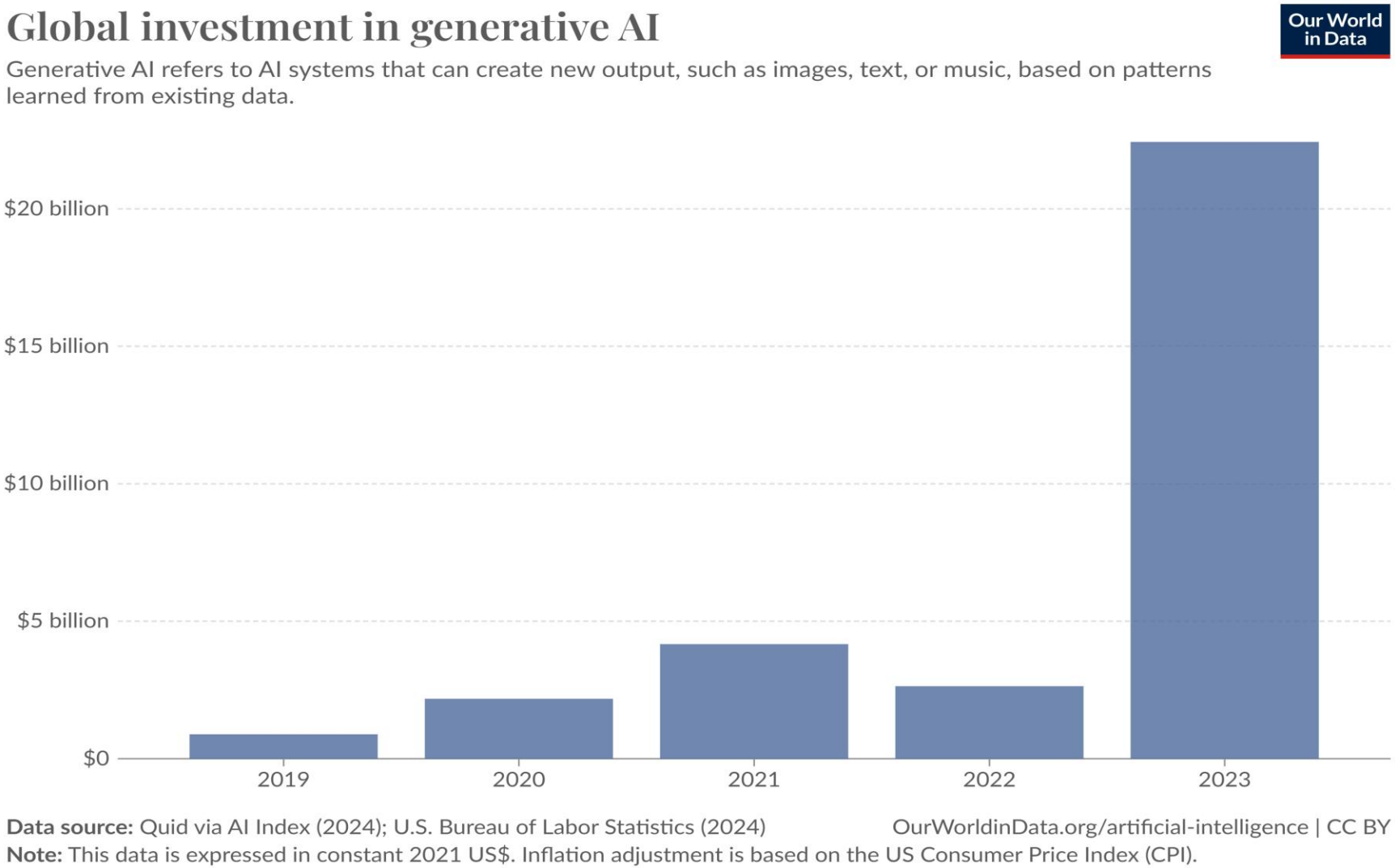
AI Growth Engines

The Main Drivers for Increase of AI

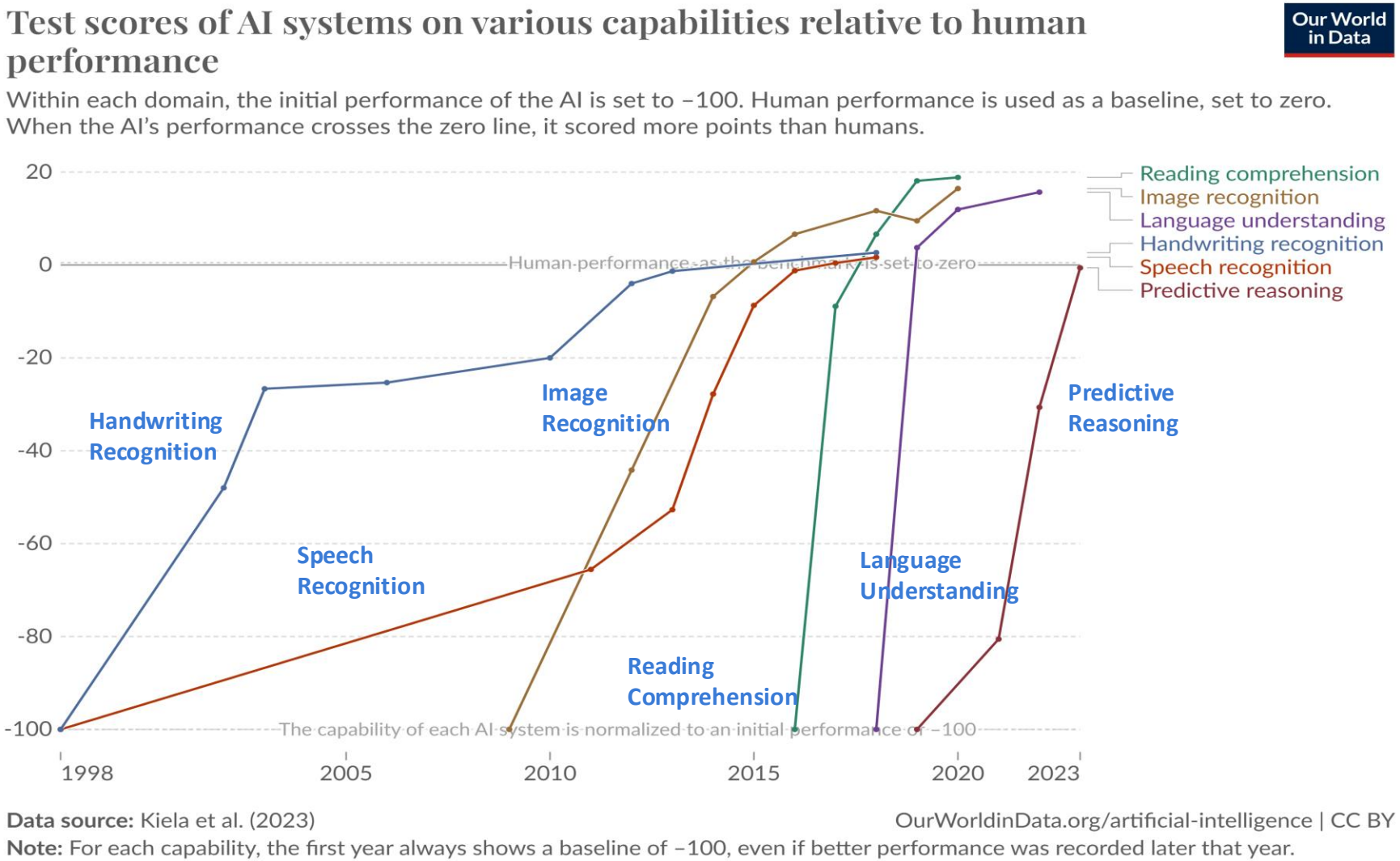
- Advancements in computing capacity;
- Reduction of costs of computation;
- Availability of large amounts of data from many sources;
- Inexpensive online learning curricula; and
- Algorithms capable of meeting or exceeding human level performance in particular tasks for speed and accuracy
- Have enabled practical applications of AI, making it an increasingly important branch of information technology.
- ISO/IEC 22989:2022



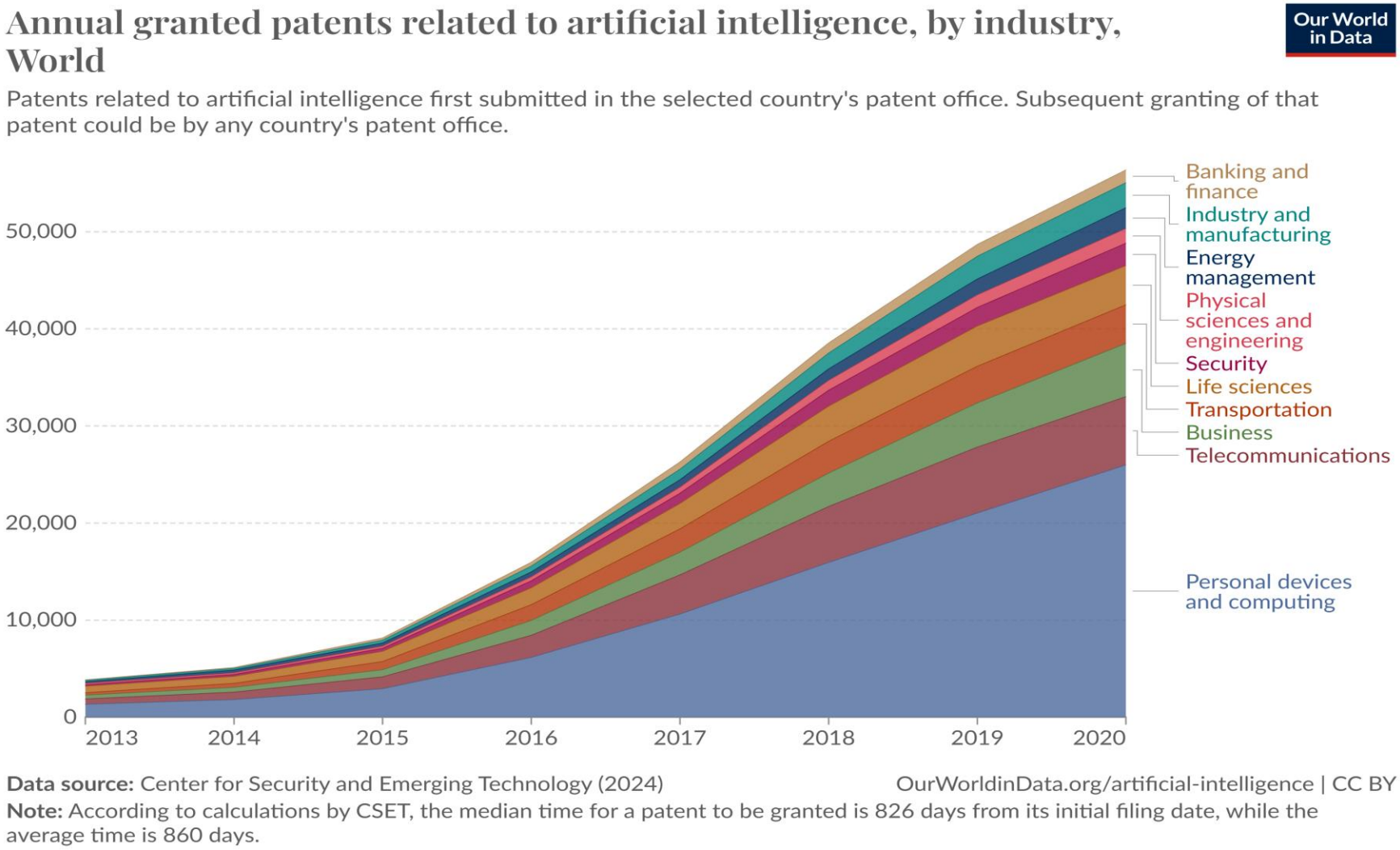
Growth of AI


Global investment in generative AI
Generative AI refers to AI systems that can create new output, such as images, text, or music, based on patterns learned from existing data.
Our World in Data
$20 billion
$15 billion
$10 billion
$5 billion
$0
2019
2020
2021
2022
2023
Data source: Quid via AI Index (2024); U.S. Bureau of Labor Statistics (2024)
OurWorldinData.org/artificial-intelligence | CC BY
Note: This data is expressed in constant 2021 US$. Inflation adjustment is based on the US Consumer Price Index (CPI).

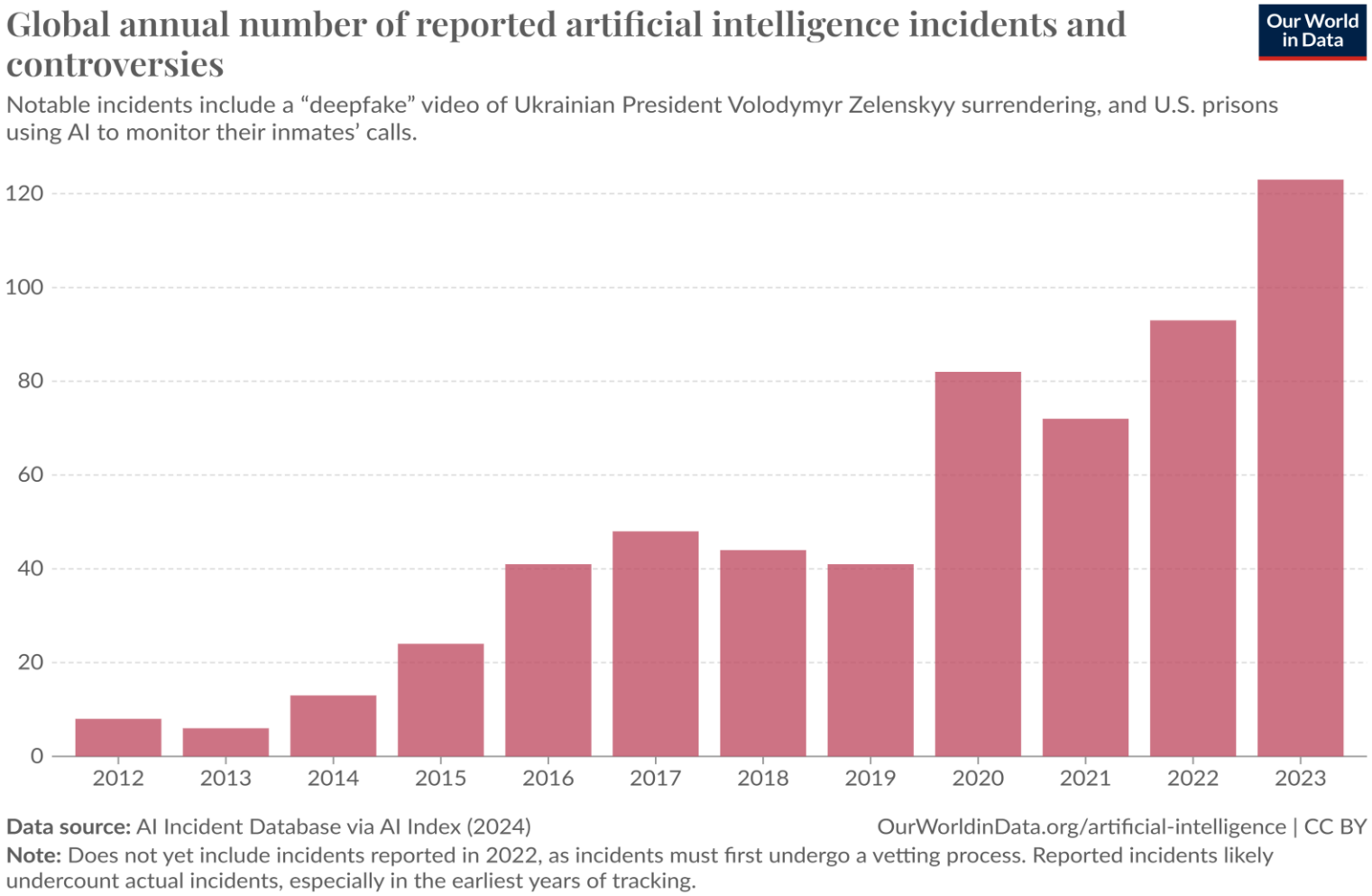
Growth of AI


Test scores of AI systems on various capabilities relative to human performance
Within each domain, the initial performance of the AI is set to −100. Human performance is used as a baseline, set to zero. When the AI's performance crosses the zero line, it scored more points than humans.
Our World in Data
20
0
-20
-40
-60
-80
-100
Human performance as the benchmark is set to zero
The capability of each AI system is normalized to an initial performance of −100
1998
2005
2010
2015
2020
2023
Reading comprehension
Image recognition
Language understanding
Handwriting recognition
Speech recognition
Predictive reasoning
Handwriting Recognition
Image Recognition
Predictive Reasoning
Speech Recognition
Language Understanding
Reading Comprehension
Data source: Kiela et al. (2023)
OurWorldinData.org/artificial-intelligence | CC BY
Note: For each capability, the first year always shows a baseline of −100, even if better performance was recorded later that year.

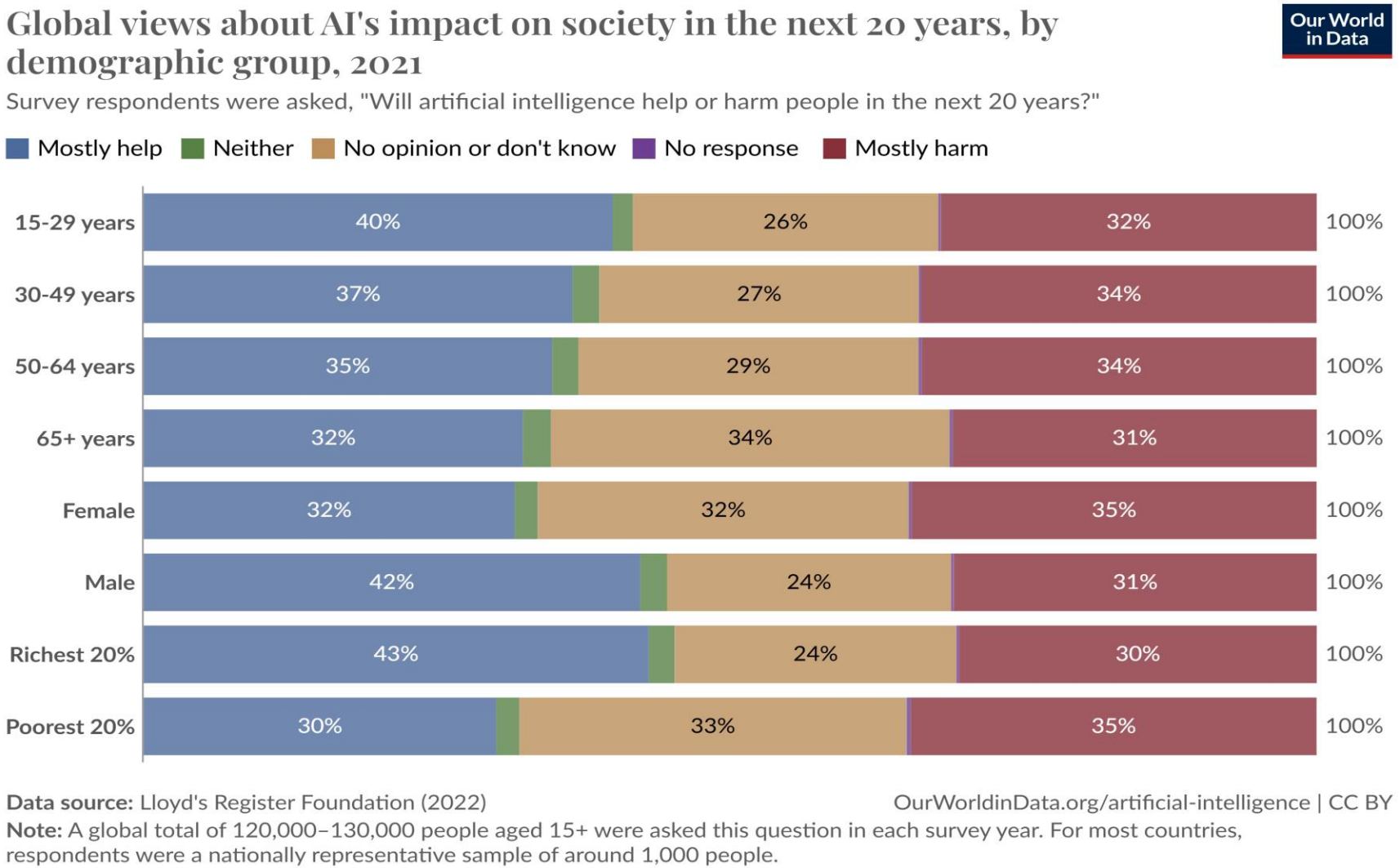
Growth of AI


Annual granted patents related to artificial intelligence, by industry, World
Our World in Data
Patents related to artificial intelligence first submitted in the selected country's patent office. Subsequent granting of that patent could be by any country's patent office.
50,000
40,000
30,000
20,000
10,000
0
2013
2014
2015
2016
2017
2018
2019
2020
Banking and finance
Industry and manufacturing
Energy management
Physical sciences and engineering
Security
Life sciences
Transportation
Business
Telecommunications
Personal devices and computing
Data source: Center for Security and Emerging Technology (2024)
OurWorldinData.org/artificial-intelligence | CC BY
Note: According to calculations by CSET, the median time for a patent to be granted is 826 days from its initial filing date, while the average time is 860 days.

Growth of AI


Global annual number of reported artificial intelligence incidents and controversies
Notable incidents include a “deepfake” video of Ukrainian President Volodymyr Zelenskyy surrendering, and U.S. prisons using AI to monitor their inmates’ calls.
Our World in Data
120
100
80
60
40
20
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Data source: AI Incident Database via AI Index (2024)
OurWorldinData.org/artificial-intelligence | CC BY
Note: Does not yet include incidents reported in 2022, as incidents must first undergo a vetting process. Reported incidents likely undercount actual incidents, especially in the earliest years of tracking.

Growth of AI


Global views about AI's impact on society in the next 20 years, by demographic group, 2021
Survey respondents were asked, "Will artificial intelligence help or harm people in the next 20 years?"
Our World in Data
Mostly help
Neither
No opinion or don't know
No response
Mostly harm
15-29 years
40%
26%
32%
100%
30-49 years
37%
27%
34%
100%
50-64 years
35%
29%
34%
100%
65+ years
32%
34%
31%
100%
Female
32%
32%
35%
100%
Male
42%
24%
31%
100%
Richest 20%
43%
24%
30%
100%
Poorest 20%
30%
33%
35%
100%
Data source: Lloyd's Register Foundation (2022)
OurWorldinData.org/artificial-intelligence | CC BY
Note: A global total of 120,000–130,000 people aged 15+ were asked this question in each survey year. For most countries, respondents were a nationally representative sample of around 1,000 people.

Growth of AI

Top AI Statistics

Discover the most impactful artificial intelligence (AI) statistics that highlight the growth and influence of artificial intelligence, such as chatbots on various industries, the economy and the workforce. Whether it's market-size projections or productivity enhancements, these statistics provide a comprehensive understanding of AI's rapid evolution and potential to shape the future. Learn about the AI trends that will determine the state of technology, business and society in the upcoming years.

AI market size is expected to reach $1,339 billion by 2030

The AI market is projected to reach a staggering $1,339 billion by 2030, experiencing substantial growth from its estimated $214 billion revenue in 2024.[1]

AI will have an estimated 21% net increase on the United States GDP by 2030

AI is expected to contribute a significant 21% net increase to the United States GDP by 2030, showcasing its impact on economic growth.[2]

https://www.forbes.com/advisor/business/ai-statistics/

Growth of AI

Over 75% of consumers are concerned about misinformation from AI

A major concern for consumers is the potential for AI to perpetuate the spread of misinformation. More than 75% of consumers are worried about the impact that AI has on the ability to trust information found on the internet.

ChatGPT had 1 million users within the first five days of being available

ChatGPT's remarkable adoption rate is evident as it garnered 1 million users within the first five days of its release.[2]

One in 10 cars will be self-driving by 2030

It is expected that 10% of vehicles will be driverless by 2030[2], as the global market of self-driving cars is forecasted to increase from 20.3 million in 2021 to 62.4 million.[1]

64% of businesses expect AI to increase productivity

A significant 64% of businesses believe that artificial intelligence will help increase their overall productivity, as revealed in a Forbes Advisor survey. This demonstrates the growing confidence in AI's potential to transform business operations. [4]

https://www.forbes.com/advisor/business/ai-statistics/

Growth of AI

AI Adoption Statistics

Half of U.S. mobile users use voice search every day

Voice search is on the rise, with 50% of U.S. mobile users using it daily, according to UpCity. This trend showcases the growing prevalence of AI-powered voice assistants in everyday life.[5]

AI is expected to see an annual growth rate of 36.6% from 2023 to 2030

AI continues to revolutionize various industries, with an expected annual growth rate of 36.6% between 2023 and 2030, as reported by Grand View Research. This rapid growth emphasizes the increasing impact of AI technologies in the coming years.[6]

72% of businesses have adopted AI for at least one business function

Nearly three out of four businesses have started using AI for at least one business function. In addition, half of survey respondents use AI for two or more of their business functions. This is a sharp uptick from 2023 when less than a third of respondents had reported using AI for at least two business functions.[7]

India is the country with the highest AI adoption rate at 59%

AI adoption rates are the highest for organizations in India (59%), followed closely by the United Arab Emirates (58%). Businesses in Singapore (53%) and China (50%) are also leaders in AI use. In contrast, businesses in Australia (29%), Spain (28%) and France (26%) have been slower to try out AI.[8]

https://www.forbes.com/advisor/business/ai-statistics/

Growth of AI

AI Workforce and Employment Impacts

77% are concerned that AI will cause job loss in the next year

A substantial 77% of people expressed their apprehension that AI could bring about job losses in the imminent future, indicating widespread concern about the potential impact of technology on employment opportunities.[3]

400 million workers could be displaced because of AI

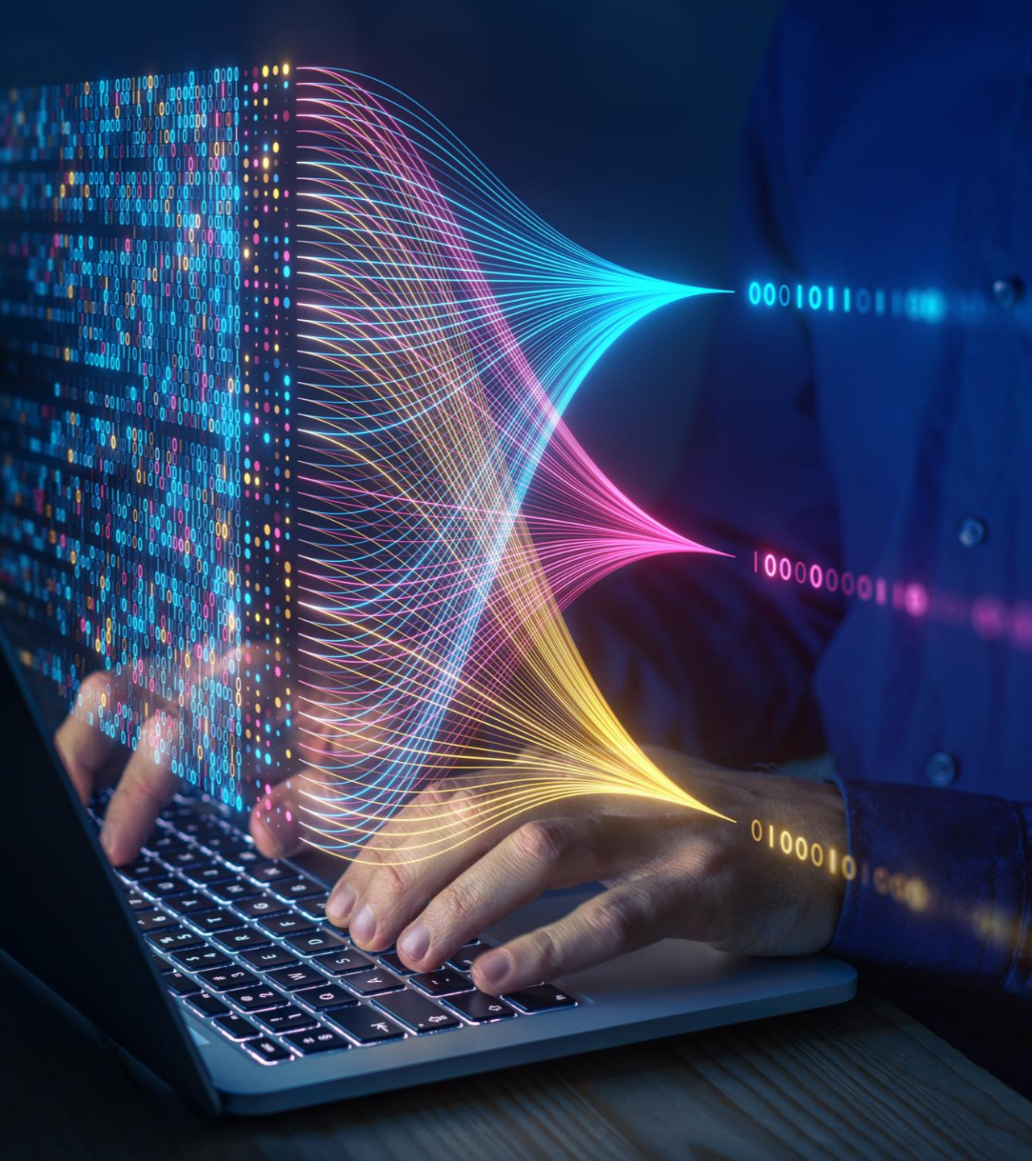
As AI evolves, it could displace 400 million workers worldwide. A McKinsey report predicts that between 2016 and 2030, AI-related advancements may affect around 15% of the global workforce.[7]

Healthcare and automotive industries are expected to see the most impact from AI use

Both of these industries have the highest long-term AI adoption rate of 40% for healthcare and 18% for automotive.[9]

https://www.forbes.com/advisor/business/ai-statistics/

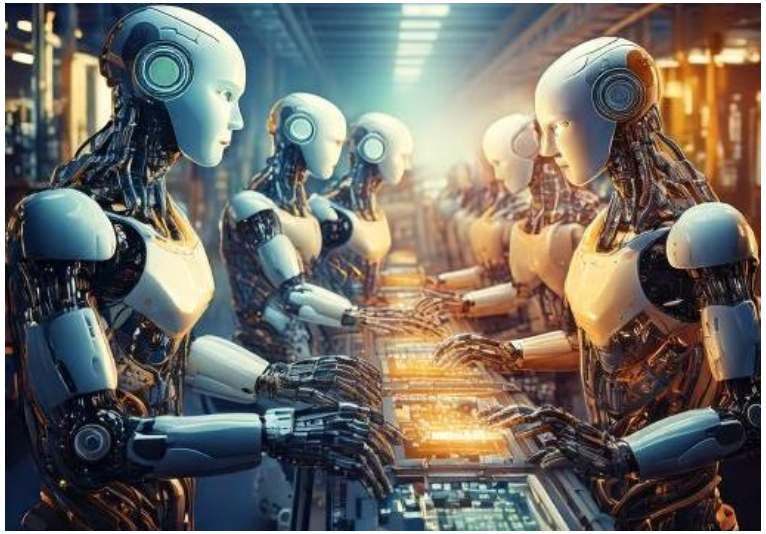
Introduction to AI and ML



Machine Learning Concepts

1. Supervised Machine Learning
2. Unsupervised Machine Learning
3. Semi-Supervised Machine Learning
4. Reinforcement Learning
5. Transfer Learning
6. Training Data
7. Training Model
8. Validation and Test Data
9. Retraining
10. Continuous Learning

Autonomy, Heteronomy and Automation



Autonomy, Heteronomy and Automation

		Level of automation	Comments
Automated system	Autonomous	6 - Autonomy	The system is capable of modifying its intended domain of use or its goals without external intervention, control or oversight.
	Heteronomous	5 - Full automation	The system is capable of performing its entire mission without external intervention
		4 - High automation	The system performs parts of its mission without external intervention
		3 - Conditional automation	Sustained and specific performance by a system, with an external agent being ready to take over when necessary
		2 - Partial automation	Some sub-functions of the system are fully automated while the system remains under the control of an external agent
		1 - Assistance	The system assists an operator
		0 - No automation	The operator fully controls the system

AI Use Cases

Healthcare:

- Diagnostic Imaging
- Drug Discovery

Finance:

- Fraud Detection
- Algorithmic Trading

Retail:

- Personalized Recommendations
- Inventory Management

Autonomous Vehicles:

- Self-Driving Cars

Education:

- Adaptive Learning Platforms
- Automated Grading

Manufacturing:

- Predictive Maintenance
- Quality Control

Customer Service:

- Chatbots and Virtual Assistants
- Voice Assistants

Natural Language Processing (NLP):

- Language Translation
- Sentiment Analysis

Cybersecurity:

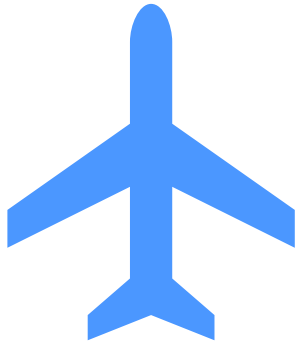
- Anomaly Detection
- Threat Intelligence

Agriculture:

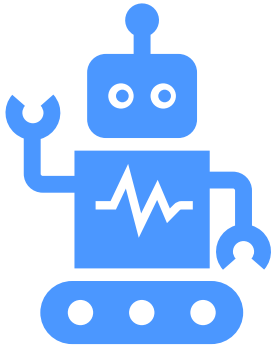
- Precision Farming Crop Monitoring

Rationale for Responsible AI

Real Life Case Studies



Airline Chatbot Case Study



Manufacturing – AI and Human

Responsible AI

ISO 42001:2023 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).

Specific considerations raised by AI

- 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**, r**ather 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.

RESPONSIBILITY AND ACCOUNTABILITY

An organization conforming with the requirements in ISO 42001:2023 can generate evidence of its responsibility and accountability regarding its role with respect to AI systems.

Responsible AI

Included but not restricted to…

- **Leadership Role** - Establishing, encouraging and modelling a **culture** within the organization, **to take a responsible approach** to using, development and governing AI systems can be an important demonstration of commitment and leadership by top management.

- **Ensuring awareness of and compliance with such a responsible approach** and in support of the AI management system through leadership can aid the success of the AI management system.

Rationale for an ISO Standard

- **Standardized concepts and terminology are needed** by stakeholders of the technology **to be better understood and adopted by a broader audience**.
- Furthermore, concepts and categories of AI allow for a comparison and classification of different solutions with respect to properties like **trustworthiness**, **robustness**, **resilience**, **reliability**, **accuracy**, **safety**, **security** and **privacy**.
- **This enables stakeholders to select appropriate solutions** for their applications and **to compare the quality of available solutions on the market**.
- **Accepted by Stakeholders**
- **Best Practices Implementation Methodology**
- **Auditable Standard**
- **Evidence to Stakeholders of a Certified Artificial Intelligence Management System**

Key Elements of Responsible AI

Key Elements of Responsible AI

1. Leadership Commitment
2. Governance
3. AI Policy
4. AI Objectives
5. Risk Based Approach
6. System Impact Assessment
7. AI Policies and Procedures, including Reporting of Concerns
8. AI System Life Cycle Management
9. Incident Management
10. People Expertise
11. Technical Resources
12. Monitoring and Measurement
13. Reviews
14. Testing, Evaluation, Verification and Validation
15. Continual Improvement
16. Auditing

Responsible AI Objective Annex C.2

1. Accountability
2. AI Expertise
3. Availability and quality of training and test data
4. Environmental Impact
5. Fairness
6. Maintainability
7. Privacy
8. Robustness
9. Safety
10. Security
11. Transparency and Explainability

Annex B.9.3 – Some Additional Guidance on Objectives

12. Reliability
13. (Robustness) and Redundancy
14. Accessibility

Annex A Controls of Responsible AI

Control #	Control Name	Control Description
A.6.1.2	**Objectives for Responsible Development of AI System**	The organization shall identify and document objectives to guide the responsible development of AI systems, and take those objectives into account and integrate measures to achieve them in the development life cycle.
A.6.1.3	**Processes for responsible design and development of AI systems**	The organization shall define and document the specific processes for the responsible design and development of the AI system
A.6.2.5	**AI System Verification and Validation**	This phase can be based on – Responsible AI System development and use Responsible AI objectives
A.9.3	**Objectives for Responsible use of AI System**	The organization shall identify and document objectives to guide the responsible use of AI systems
A.10.2	**Allocating Responsibilities**	The organization shall ensure that responsibilities within their AI system life cycle are allocated between the organization, its partners, suppliers, customers and third parties
A.10.3	**Suppliers**	The organization shall establish a process to ensure that its usage of services, products or materials provided by suppliers aligns with the organization's approach to the responsible development and use of AI systems.
A.1014	**Customers**	The organization shall ensure that its responsible approach to the development and use of AI systems considers their customer expectations and needs.

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ISO/IEC 42001:2023

In the evolving AI landscape

ISO 42001:2023 in the evolving AI Landscape

1. AI is permeating almost every area of our life
2. AI is climbing the value chain of becoming “autonomous”
3. Many organizations adopting AI
4. Need for Responsible AI increasing
5. Users of AI will need confidence on the AI Systems
6. Society will need assurance on AI Systems
7. Risks and Negatives of AI Systems will need to be managed
8. Climate Change is becoming a relevant issue

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OVERVIEW OF ISO/IEC 42001:2023

ISO/IEC 42001:2023

- Requirements and guidance for establishing, implementing, maintaining and continually improving an AI management system.
- **PDCA framework**
- Use by an organization providing or using products or services that utilize AI systems.
- 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**.

Its scope

Specifies the **requirements** and **provides guidance**

Intended for use by an organization

- **providing** or
- **using products** or services that utilize AI systems.

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.

Generic Nature - Applicable to any organization, regardless of size, type and nature, that provides or uses products or services that utilize AI systems.

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.

Generic Nature

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.

High Level Structure – ISO/IEC 42001:2023

Foreword

Introduction

1. Scope
2. Normative References
3. Terms and Definitions
4. Context of the Organisation
5. Leadership
6. Planning
7. Support
8. Operation
9. Performance Evaluation
10. Improvement

Annex – A to D

Annex A – Normative – Reference Control Objectives and Controls (9 domains - 10 Control Objectives with 38 Controls)

Annex B – Normative – Implementation guidance for AI Controls

Annex C – Informative – Potential AI – related organisational objectives and Risk Sources

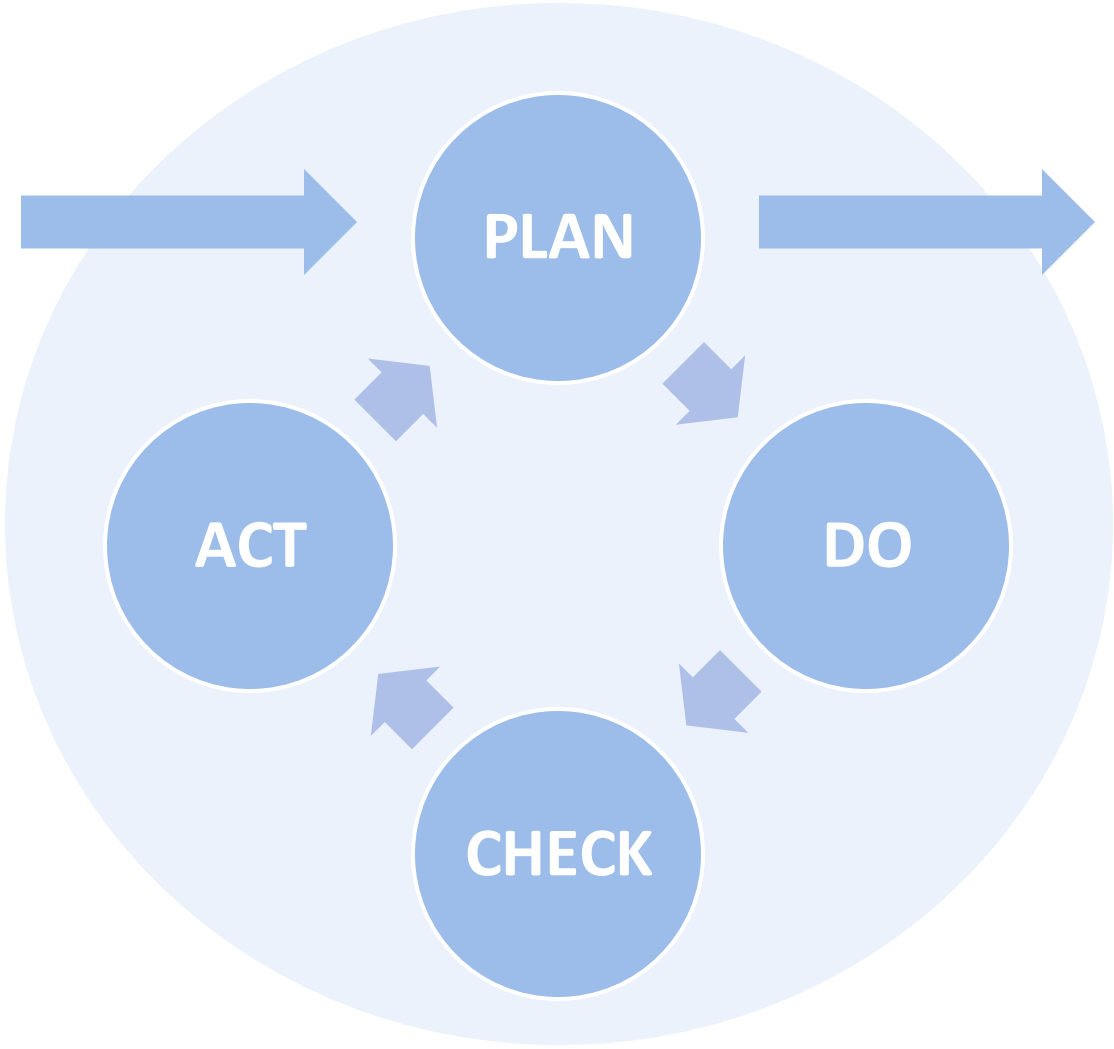
Annex D – Informative – Use of the AI management system across domains or sectors

Bibliography

Plan – Do – Check –Act (The Familiar PDCA Model)

Needs and Expectations of Interested Parties

- External Parties
- Internal Parties
- Legal and Regulatory Obligations



Needs and Expectations of Interested Parties Met

4. Understanding the Context

5. Leadership

6. Planning

7. Support

8. Operation

9. Performance Evaluation

10. Improvement

AI Management Systems

Prepare for ISO/IEC 42001 with tailored AI governance support and implement a robust AIMS

4.1 Understanding the Organisation and its Context

4.1 – Role Determination

4.2 – Interested Parties

4.3 – AIMS Scope

4.4 AI Management System

1. Determination of External and Internal Issues
2. Determination whether Climate Change is a Relevant Issue


4.1 Und. Org and its Context


4.1 – Role Determination


4.2 – Interested Parties


4.3 – AIMS Scope

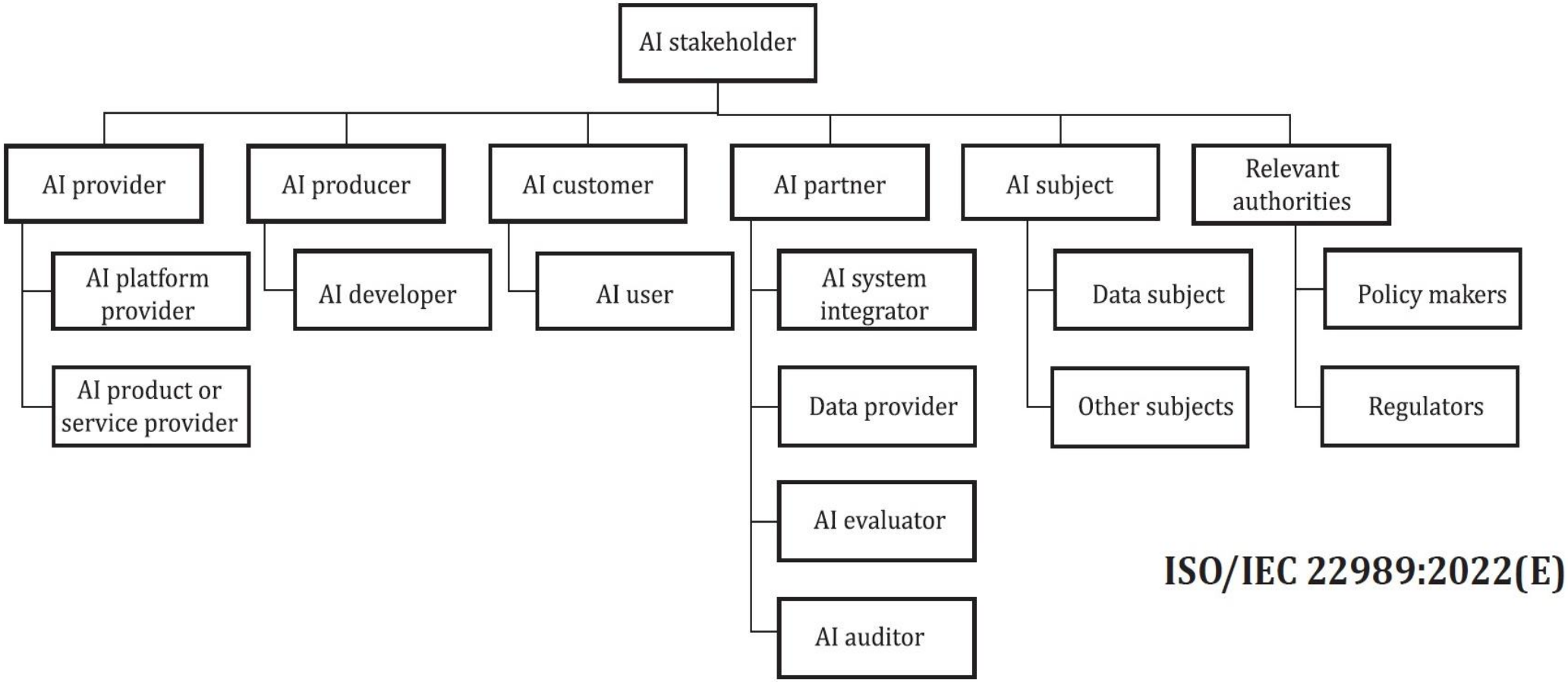

4.4 AI Management System

1. The organization shall consider the **intended purpose** of the AI systems that are developed, provided or used by the organization.
2. The organization shall **determine its roles** with respect to these AI systems

To understand the organization and its context, it can be helpful for the organization to determine its role relative to the AI system. These roles can include, but are not limited to, one or more of the following:

- **AI providers**, including AI platform providers, AI product or service providers;
- **AI producers**, including AI developers, AI designers, AI operators, AI testers and evaluators, AI deployers, AI human factor professionals, domain experts, AI impact assessors, procurers, AI governance and oversight professionals;
- **AI customers**, including AI users;
- **AI partners**, including AI system integrators and data providers;
- **AI subjects**, including data subjects and other subjects;
- **relevant authorities**, including policymakers and regulators

Establishment of the Role of the Organisation



ISO/IEC 22989:2022(E)

Figure 2 — AI stakeholder roles and their sub-roles

The organization shall determine:

1. **The interested parties** that are relevant to the AI management system;
2. The relevant requirements of these interested parties;
3. Which of these requirements will be addressed through the AI management system.

NOTE Relevant interested parties can have requirements related to climate change.

Clause 4.3 – AIMS Scope Determination

Clause 4.4. - The organization shall establish, implement, maintain, continually improve and document an AI management system, including the processes needed and their interactions, in accordance with the requirements of this document

5.1 Leadership and Commitment

5.2 – AI Policy

5.3 – Roles, Responsibilities & Authorities

Top management shall demonstrate leadership and commitment with respect to the AI management system by:

1. Establishment of **AI policy and AI objectives** and compatibility with the strategic direction of the organization;
2. **Integration** of the AI management system requirements into the organization's business processes;
3. **Resources** needed are available;
4. **Communicating** the importance of effective AI management and of conforming to the AI management system requirements;
5. **Intended Result(s)** of AI management system are achieved
6. **Directing and supporting persons** to contribute to the effectiveness of the AI management system;
7. **Promoting continual improvement**;
8. **Supporting other relevant roles** to demonstrate their leadership as it applies to their areas of responsibility.

5.1 Leadership and Commitment

5.2 – AI Policy

5.3 – Roles, Responsibilities & Authorities

Top management shall establish an AI policy that:

a) is **appropriate to the purpose** of the organization;
b) provides a **framework for setting AI objectives**;
c) includes a commitment to meet **applicable requirements**;
d) includes a **commitment to continual improvement** of the AI management system.

5.1 Leadership and Commitment

5.2 – AI Policy

5.3 – Roles, Responsibilities & Authorities

Top management shall ensure that the **responsibilities and authorities for relevant roles** are assigned and communicated within the organization

6.1.1 - Risks and Opportunities - General

6.1.2 – AI Risk Assessment

6.1.3 – AI Risk Treatment

6.1.4 – AI System Impact Assessment

6.2 – AI Objectives

6.3 – Planning of Changes

When planning for the AI management system, the organization shall consider the issues referred to in 4.1 and the requirements referred to in 4.2 and determine the risks and opportunities that need to be addressed


6.1.1 - Risks and Opportunities - General


6.1.2 – AI Risk Assessment


6.1.3 – AI Risk Treatment


6.1.4 – AI System Impact Assessment


6.2 – AI Objectives


6.3 – Planning of Changes

Define and establish an AI risk assessment process that:

a) is **informed by and aligned with the AI policy and AI objectives**;
b) is designed such that repeated AI risk assessments can produce consistent, valid and comparable results;
c) Identifies risks that **aid or prevent achieving its AI objectives**;
d) analyses the AI risks;
e) **evaluates the AI risks**

The organization shall retain documented information about the AI risk assessment process.


6.1.1 - Risks and Opportunities - General


6.1.2 – AI Risk Assessment


6.1.3 – AI Risk Treatment


6.1.4 – AI System Impact Assessment


6.2 – AI Objectives


6.3 – Planning of Changes

a. Select **appropriate AI risk treatment options**;

b. Determine **all controls that are necessary** and compare the controls with those in **Annex A** to verify that no necessary controls have been omitted;

c. Consider the controls from Annex A that are relevant for the implementation of the AI risk treatment options;

d. Identify if additional controls are necessary beyond those in Annex A in order to implement all risk treatment options

e. Consider the guidance in Annex B for the implementation of controls

f. Produce a **Statement of Applicability** and provide justification for inclusion and exclusion of controls

g. Formulate an AI **Risk Treatment Plan**

SYSTEM IMPACT ASSESSMENT

- Define a process for assessing the **Potential Consequences** for individuals or groups of individuals, or both, and societies that can result from the development, provision or use of AI systems.
- Determine the potential consequences an AI system's deployment, **intended use and foreseeable misuse** has on **individuals or groups of individuals, or both, and societies**.
- Consider the **results of the AI System Impact Assessment in the risk assessment** (see 6.1.2). A.5 in Table A.1 provides controls for assessing impacts of AI systems.


6.1.1 - Risks and Opportunities - General


6.1.2 – AI Risk Assessment


6.1.3 – AI Risk Treatment


6.1.4 – AI System Impact Assessment


6.2 – AI Objectives


6.3 – Planning of Changes

ISO 42005 – Guidance for Performing System Impact Assessment

Type of Impact Assessment	Information
HRIA	**Human Rights Impact Assessments** that relate to an activity of the business that will be in some way augmented or impacted by the AI under assessment;
PIA	**Privacy Impact Assessments** that relate to data that is to be processed in the AI system;
EIA	**Environmental Impact Assessments** that relate to an environment that the AI system will be impacting or operating in;
SIA	**Security Impact Assessments** that relate to changes to an organizational information system related to the AI system;
FIA	**Financial Impact Assessments** that relates to the expenditures and revenues related to the AI system;
BIA	**Business Impact Assessments** that relate to potential consequences to business function and process related to the AI system.

AI OBJECTIVES - ANNEX C.2

1. **Accountability**
2. **AI Expertise**
3. **Availability and quality of training and test data**
4. **Environmental Impact**
5. **Fairness**
6. **Maintainability**
7. **Privacy**
8. **Robustness**
9. **Safety**
10. **Security**
11. **Transparency and Explainability**

Annex B.9.3 – Some Additional Guidance on Objectives

12. Reliability
13. (Robustness) and Redundancy
14. Accessibility

When the organization determines the need for changes to the AI management system, the changes shall be carried out in a planned manner.


7.1 - Resources


7.2 - Competence


7.3 - Awareness


7.4 - Communication


7.5 – Documented Information

CRITICAL BUILDING BLOCKS OF RESPONSIBLE AI

CLAUSE #	ADDITIONAL INFORMATION
RESOURCES	Reference Annex B.4 – Documentation, Data, Tooling, Systems and Computing Resources, Human Resources,
COMPTENCE	Not Limited to – Data Scientists, Human Oversight, Experts on RAI, Trustworthy, Safety, Security and Privacy
AWARENESS	AI Policy, Contribution to AMS, Implications of not conforming to AIMS, ;
COMMUNICATION	Internal and External – e.g. System Documentation, External Reporting, Incident, Information for Interested Parties, Reporting of Concerns, Audits, Various Reviews, Regulatory Agencies, etc
DOCUMENTED INFORMATION	Mandatory and Required Documentation required by AIMS

4. Understanding the Context | 5. Leadership | 6. Planning | 7. Support | **8. Operation** | 9. Performance Evaluation | 10. Improvement

8.1 – Operation Planning & Control

8.2 – AI Risk Assessment

8.3 – AI Risk Treatment

8.4 – AI System Impact Assessment

THE IMPLEMENTATION PHASE – DO PHASE OF ISO 42001:2023

CLAUSE	ADDITIONAL INFORMATION
8.1 – Operation Planning & Control	1. Implement Plans determined in Clause 6 2. Implement Controls 3. Monitor Effectiveness of Controls 4. Documented Information to extent necessary for Confidence in AIMS 5. Control Planned Changes 6. Ensure Externally Provided Process and Services are controlled
8.2 – AI Risk Assessment	Perform AI risk assessments in accordance with 6.1.2 at planned intervals or when significant changes are proposed or occur
8.3 – AI Risk Treatment	1. Implement Risk Treatment Plans and Verify its effectiveness 2. RTP for New Risks that are identified 3. Review Risk Treatment Options that are not Effective
8.4 – AI System Impact Assessment	1. Perform AI System Assessments at planned intervals and when significant changes are proposed or occur

9.1 – Monitoring, Measurement, Analysis & Evaluation

9.2 – Internal Audit

9.3 – Management Review

THE PERFORMANCE EVALUATION PHASE – CHECK PHASE OF ISO 42001:2023

CLAUSE	ADDITIONAL INFORMATION
9.1 – Monitoring, Measurement, Analysis & Evaluation	Determine: 1. What needs to be Monitored & Measured 2. Methods of Monitoring, Measurement, Analysis – for Valid Results 3. When would monitoring & Measuring be performed 4. When the results shall be analysed
9.2 – Internal Audit	1. Conduct Internal Audits at Planned Intervals 2. Internal Audit Programme 3. Objectivity and Impartiality 4. Objectives, Criteria and Scope for Each Audit 5. Reporting of Audit Results
9.3 – Management Review	1. Review for Continuing Suitability, Adequacy and Effectiveness 2. Management Review Inputs 3. Management Review Results – Changes and Opportunities for Improvement

10.1 – Continual Improvement

10.2 – Non-conformity and Corrective Action

THE IMPROVEMENT EVALUATION PHASE – ACT PHASE OF ISO 42001:2023

CLAUSE	ADDITIONAL INFORMATION
10.1 – Continual Improvement	The organization shall continually improve the suitability, adequacy and effectiveness of the AI management system

10.2 – Nonconformity and Corrective Action	1. Correction
	2. Deal with the Consequences
	3. Corrective Action
	  1. Review the Nonconformity
	  2. Root Cause Analysis
	  3. Determine if similar Nonconformities exist / Potentially exist
	  4. Implement Actions needed
	  5. Review effectiveness
	4. Make Changes to the AIMS, if necessary

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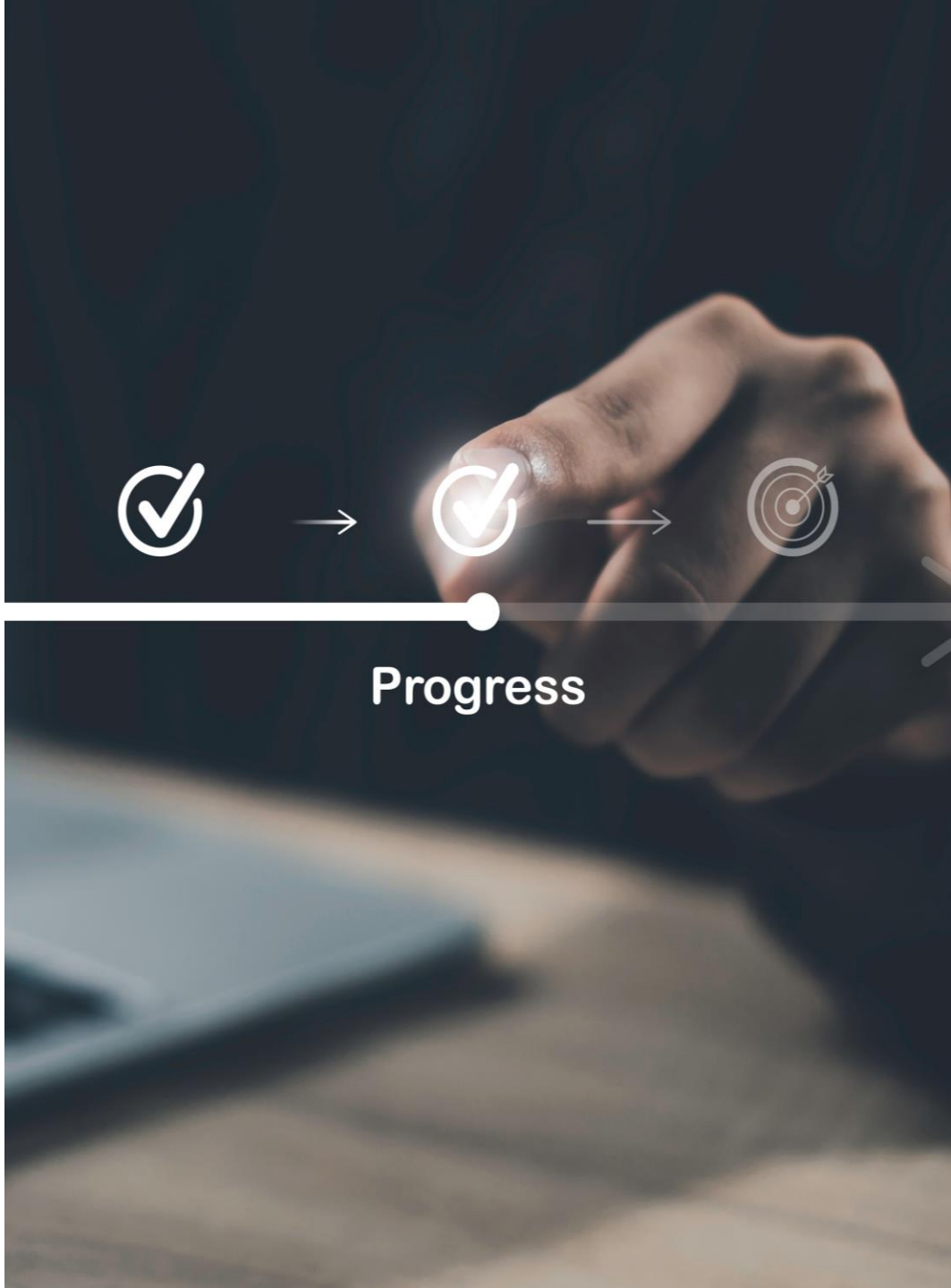
Implementation Steps

Implementation Steps

1. AI Steering Committee Formation
2. AI Organisation Structure incl. Governance Structure
3. AI Capacity Building
    1. Executive Team Training
    2. Implementation Team Training
4. AI Policy Formulation
5. AI Specific Objectives
6. AI Specific Documentation, including AI Project Selection Criteria
7. Risk Assessments and AI System Impact Assessments
8. Control Implementation and Statement of Applicability
9. Internal Audit Training and Internal Audits
10. Improvement Phase
11. Management Review
12. Certification Audit



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Nemko Digital – Your Trusted Partner in Your AI Journey

1. **AI Assessments**
2. **Capacity Building**
   a. Board and Governance Body Trainings
   b. Implementation Team Trainings
   c. Internal Audit Trainings
   d. Lead Auditor Trainings
3. **Management System Certification**
4. **Second Party Audits** (Auditing your AI Vendors and Partners)

Our 30-min webinars

May 27th

EU AI ACT

Deep dive and visualise the timeline and summary of key compliance deadlines for organizations under the EU AI Act

June 12th

AI Literacy

Our AI literacy program guides organization on how to assess, prepare, and train your teams and departments on AI Literacy.

June 23rd

AI Trust Mark

AI Trust Mark for products and services assures clients of transparency, reliability, and regulatory alignment, enhancing user confidence and market credibility.

TBC

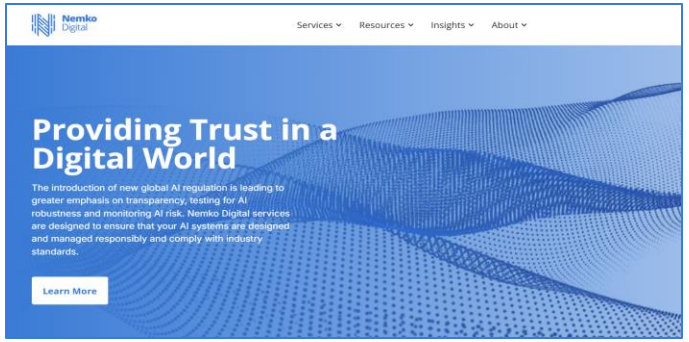
AI Maturity Model

Our maturity scan helps clients identify gaps, mitigate risks, and enhance compliance, ensuring responsible and effective AI implementation.

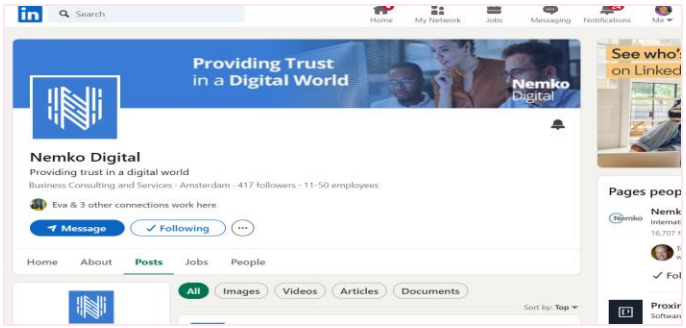
How to learn more about our service offering

Service brochure

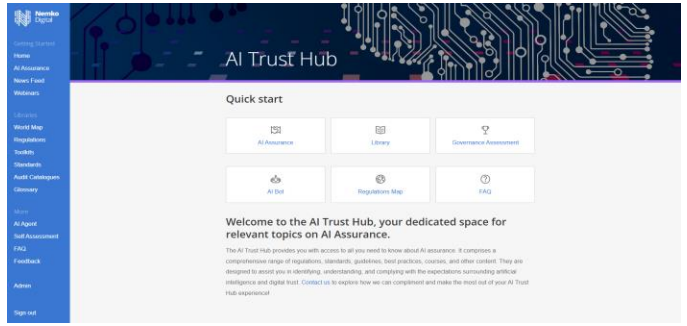
Website



LinkedIN community



AI Trust Hub



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Next steps

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15-Minute AI Consultation: Tailored Insights for Your Business

Additionally, we provide a 1 – 1,5 hour deep dive session to help evaluate your product and how we can best support you and your team.

Thank you!
Q&A

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