

# Chapter 3: Introduction to the European Artificial Intelligence Act

Presented by Prof. Lorenzo Vangelista

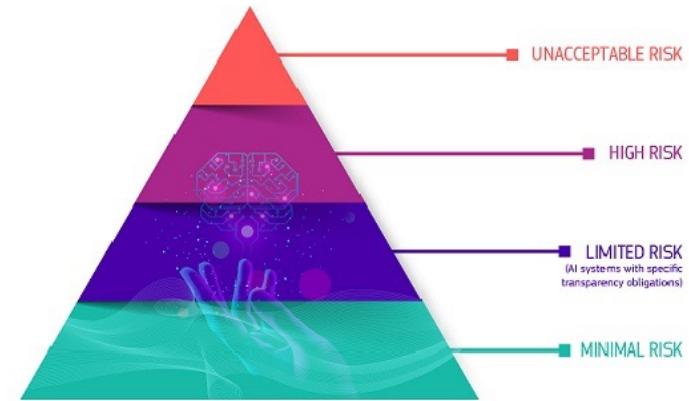
**Note that it looks that the links  
to EU legislation in the book do not work  
Search the web for the titles**

# Ai Act

- Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence
  - <https://eur-lex.europa.eu/eli/reg/2024/1689>
  - See the website <https://artificialintelligenceact.eu/>

The AI Act entered into force on 1 August 2024, and will be fully applicable 2 years later on 2 August 2026, with some exceptions:

- prohibitions and AI literacy obligations entered into application from 2 February 2025
- the governance rules and the obligations for general-purpose AI models become applicable on 2 August 2025
- the rules for high-risk AI systems - embedded into regulated products - have an extended transition period until 2 August 2027



# What is an AI system?

- **Definition:** ‘AI system’ means a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to **generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments.**
- Problems with the definition: there are so many systems generating prediction that can influence physical or virtual environments known since decades and that are not likely to be “AI”:
  - “The Organisation for Economic Co-operation and Development (OECD) has noted that AI systems are developed using machine learning or logic- or knowledge-based approaches, *excluding simple statistical techniques such as linear or logistic regression.*” (Question for written answer E-002564/2024 to the Commission, Rule 144, Axel Voss (PPE), Svenja Hahn (Renew)
  - From [https://www.europarl.europa.eu/doceo/document/E-10-2024-002564\\_EN.html](https://www.europarl.europa.eu/doceo/document/E-10-2024-002564_EN.html)

# Purpose of AI act

- to improve the functioning of the internal market by laying down a uniform legal framework in particular for the development, the placing on the market, the putting into service and the use of artificial intelligence systems (AI systems) in the Union, in accordance with Union values, to promote the uptake of **human centric** and trustworthy artificial intelligence (AI) while ensuring a high level of protection of health, safety, fundamental rights as enshrined in the Charter of Fundamental Rights of the European Union (the ‘Charter’), including democracy, the rule of law and **environmental protection**, to protect against the harmful effects of AI systems in the Union, and **to support innovation**.

# A good introduction of the AI act from the EC commission

- Video
  - <https://webcast.ec.europa.eu/risk-management-logic-of-the-ai-act-and-related-standards-2024-05-30>
- Slides
  - <https://ec.europa.eu/newsroom/dae/redirection/document/105898>

# Timeline – At first

Blue Guide for product rules

[https://single-market-economy.ec.europa.eu/news/blue-guide-implementation-product-rules-2022-published-2022-06-29\\_en](https://single-market-economy.ec.europa.eu/news/blue-guide-implementation-product-rules-2022-published-2022-06-29_en)

# First standardization request (22.5.2023)

- [https://ec.europa.eu/growth/tools-databases/enorm/mandate/593\\_en](https://ec.europa.eu/growth/tools-databases/enorm/mandate/593_en)
- (9) It is therefore appropriate to request CEN and CENELEC to draft new European standards or European standardisation deliverables in support of Union policy on artificial intelligence.
- (12) In order to ensure transparency and facilitate the execution of the requested standardisation activities, CEN and CENELEC should prepare a work programme and submit it to the Commission
- (16) Given that the European Telecommunications Standards Institute (ETSI) has already done work and possesses specific expertise on certain matters relevant to the request, such as security, it is appropriate that European standards or European standardisation deliverables drafted on the basis of this request **take into account**, as appropriate, the relevant ETSI's work.

# First standardization request (22.5.2023) - II

- [https://ec.europa.eu/growth/tools-databases/enorm/mandate/593\\_en](https://ec.europa.eu/growth/tools-databases/enorm/mandate/593_en)
- Article 1 Requested standardisation activities
  - The European Committee for Standardisation (CEN) and the European Committee for Electrotechnical Standardisation (CENELEC) are requested to draft the new European standards or European standardisation deliverables, as listed in Annex I, in support of Union policy on artificial intelligence **by 30 April 2025**.
- Article 4 Validity of the standardisation request
  - Where, in accordance with Article 10(3) of Regulation (EU) No 1025/2012, CEN and CENELEC indicate that they do not accept the request referred to in Article 1, that request may not constitute a basis for the standardisation activities referred to in that Article.
  - **This Decision shall expire on 28 February 2026.**

# Timeline - II

European Commission	European Standards Organisations
<u>20 May 2022</u> : Released first draft standardisation request in support of safe and trustworthy AI.	
	<u>End of June 2022</u> : Draft sent back with amendments and requests for clarification.
<u>5 December 2022</u> : Published draft based on ESO and stakeholder consultation.	
<u>22 May 2023</u> : Commission adopts standardisation request C(2023)3215, accepted by CEN and CENELEC.	
	<u>Ongoing</u> : CEN and CENELEC Joint Technical Committee 21 adapt standards from ISO/IEC and develop new standards.
	<u>30th April 2025</u> : Deadline for deliverables from standardization request C(2023)3215.
<u>2026</u> : Requirements for high-risk AI systems (where AI standards play a large role) begin to apply.	

# CEN/CLC/JTC 21 - Artificial Intelligence Workprogramme

- Available here (as of 2025-04-25)(colors below from me)

[https://standards.cencenelec.eu/dyn/www/f?p=205:22:0:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:2916257,25&cs=1827B89DA69577BF3631EE2B6070F207D](https://standards.cencenelec.eu/dyn/www/f?p=205:22:0:::FSP_ORG_ID,FSP_LANG_ID:2916257,25&cs=1827B89DA69577BF3631EE2B6070F207D)

Project	Title	Status	Initial Date	Current Stage	Next Stage	Forecasted voting date
EN ISO/IEC 22989/2023/prA1(WI=JT021031)	Information technology — Artificial intelligence — Artificial intelligence concepts and terminology — Amendment 1	Under Drafting	2024-05-04	2024-05-04	2024-11-04	2026-06-15
EN ISO/IEC 23053/2023/prA1(WI=JT021032)	Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) — Amendment 1	Under Drafting	2024-05-06	2024-05-06	2024-11-06	2026-06-15
prCEN/CLC/TR XXX(WI=JT021026)	Impact assessment in the context of the EU Fundamental Rights	Preliminary		2024-02-16		
prCEN/CLC/TR XXX(WI=JT021009)	AI Risks - Check List for AI Risks Management	Preliminary		2022-09-30		
prCEN/TS(WI=JT021034)	Guidelines on tools for handling ethical issues in AI system life cycle	Preliminary		2024-06-10		
prCEN/TS(WI=JT021035)	Sustainable Artificial Intelligence — Guidelines and metrics for the environmental impact of artificial intelligence systems and services	Preliminary		2024-06-10		
prCEN/TS(WI=JT021033)	Guidance for upskilling organisations on AI ethics and social concerns	Preliminary		2024-06-10		
prEN ISO/IEC 12792(WI=JT021022)	Information technology - Artificial intelligence - Transparency taxonomy of AI systems (ISO/IEC DIS 12792:2024)	Under Approval	2023-08-23	2025-01-14	2025-04-22	2025-01-14
prEN ISO/IEC 23282(WI=JT021012)	Artificial Intelligence - Evaluation methods for accurate natural language processing systems	Under Drafting	2023-11-22	2023-11-22	2024-05-22	2026-01-02
prEN ISO/IEC 24029-2(WI=JT021015)	Artificial intelligence (AI) - Assessment of the robustness of neural networks - Part 2: Methodology for the use of formal methods	Preliminary		2023-01-10		
prEN ISO/IEC 24970(WI=JT021021)	Artificial Intelligence — AI system logging	Under Drafting	2024-08-21	2024-08-21	2025-02-21	2026-09-29
prEN ISO/IEC 25029(WI=JT021046)	Artificial Intelligence - AI-enhanced nudging	Under Drafting	2024-12-04	2024-12-04	2025-06-04	2027-01-14
prEN ISO/IEC 25059 rev(WI=JT021027)	Software engineering - Systems and software Quality Requirements and Evaluation (SquaRE) - Quality model for AI systems (ISO/IEC 25059:2023)	Under Drafting	2024-08-12	2024-08-12	2025-02-12	2026-09-21
prEN ISO/IEC 42001(WI=JT021011)	Information technology - Artificial intelligence - Management system	Preliminary		2022-09-29		
prEN ISO/IEC 42102(WI=JT021045)	Information technology - Artificial intelligence - Taxonomy of AI system methods and capabilities	Under Drafting	2024-10-28	2024-10-28	2025-04-28	2026-12-07
prEN ISO/IEC 5259-1(WI=JT021040)	Artificial intelligence - Data quality for analytics and machine learning (ML) - Part 1: Overview, terminology, and examples (ISO/IEC 5259-1:2024)	Under Approval	2024-09-16	2025-04-17	2026-06-24	2026-06-24
prEN ISO/IEC 5259-2(WI=JT021041)	Artificial intelligence - Data quality for analytics and machine learning (ML) - Part 2: Data quality measures (ISO/IEC 5259-2:2024)	Under Approval	2024-09-16	2025-04-17	2026-06-24	2026-06-24
prEN ISO/IEC 5259-3(WI=JT021042)	Artificial intelligence - Data quality for analytics and machine learning (ML) - Part 3: Data quality management requirements and guidelines (ISO/IEC 5259-3:2024)	Under Approval	2024-09-16	2025-04-17	2026-06-24	2026-06-24
prEN ISO/IEC 5259-4(WI=JT021043)	Artificial intelligence - Data quality for analytics and machine learning (ML) - Part 4: Data quality process framework (ISO/IEC 5259-4:2024)	Under Approval	2024-09-16	2025-04-17	2025-12-17	2025-12-17
prEN ISO/IEC TR 23281(WI=JT021002)	Artificial Intelligence - Overview of AI tasks and functionalities related to natural language processing	Under Drafting	2024-02-21	2024-02-21	2024-08-21	
prEN XXX(WI=JT021036)	Artificial Intelligence - Concepts, measures and requirements for managing bias in AI systems	Under Drafting	2024-08-21	2024-08-21	2024-12-18	2026-06-03
prEN XXX(WI=JT021019)	Competence requirements for AI ethicists professionals	Under Drafting	2024-06-19	2024-11-25	2025-02-12	2020-04-01
prEN XXX(WI=JT021024)	AI Risk Management	Under Drafting	2024-03-20	2024-03-20	2024-07-17	2026-09-30
prEN XXX(WI=JT021008)	AI trustworthiness framework	Under Drafting	2024-03-20	2024-11-12	2024-11-13	2025-12-31
prEN XXX(WI=JT021044)	Artificial Intelligence - Taxonomy of AI tasks in computer vision	Under Drafting	2024-11-20	2024-11-20	2025-03-19	2026-09-02
prEN XXX(WI=JT021038)	AI Conformity assessment framework	Under Drafting	2024-10-16	2024-10-16	2025-02-12	2026-07-29
prEN XXX(WI=JT021029)	Artificial intelligence - Cybersecurity specifications for AI Systems	Under Drafting	2024-10-02	2025-02-10	2025-05-28	2026-07-15
prEN XXX(WI=JT021039)	Artificial Intelligence - Quality management system for EU AI Act regulatory purposes	Under Drafting	2024-10-16	2024-10-16	2025-01-12	2026-07-29
prEN XXX(WI=JT021025)	Artificial Intelligence - Evaluation methods for accurate computer vision systems	Under Drafting	2024-11-20	2024-11-20	2025-03-19	2026-09-02
prEN XXX(WI=JT021037)	Artificial Intelligence - Quality and governance of datasets in AI	Under Drafting	2024-09-05	2024-09-05	2025-01-02	2026-06-18
(WI=JT021028)	Reference architecture of knowledge engineering based on ISO/IEC 5392	Preliminary		2024-03-04		
(WI=JT021030)	Contributions towards ISO/IEC 27090	Preliminary		2024-03-04		

# The AI pact

- To facilitate the transition to the new regulatory framework, the Commission has launched the AI Pact, a voluntary initiative that seeks to support the future implementation, engage with stakeholders and invite AI providers and deployers from Europe and beyond to comply with the key obligations of the AI Act ahead of time
- <https://digital-strategy.ec.europa.eu/en/policies/ai-pact>

# AI Act and EU institutions - I

- **The European AI Office**, established in February 2024 within the Commission, oversees the AI Act's enforcement and implementation in the EU Member States. It will also be responsible to supervise the most powerful AI models, so-called general-purpose AI models.
- The European AI Office and the **national market surveillance authorities** are responsible for implementing, supervising and **enforcing** the AI Act.
  - Market surveillance authorities supervise and enforce the rules for AI systems, for example the prohibitions and rules for high-risk AI. **Each Member State has to designate and empower market surveillance authorities until 2 August 2025.** Market surveillance authorities will have powers to investigate and enforce compliance with the AI Act, in line with EU market surveillance rules.

## AI Act and EU institutions - II

- The **AI Act's governance** will be steered by three advisory bodies:
  - the **European Artificial Intelligence Board**, composed of representatives from the EU Member States,
  - the **Scientific Panel**, composed of independent experts in the field of AI,
  - the **Advisory Forum**, representing a diverse selection of stakeholders, both commercial and non-commercial.

# Responsibility for AI Act in Italian Institutions

## INTELLIGENZA ARTIFICIALE



COMUNICATO STAMPA

CONSIGLIO DEI MINISTRI N. 78

23/04/2024

PALAZZO CHIGI

### ***Disposizioni e delega al Governo in materia di intelligenza artificiale (disegno di legge)***

Il Consiglio dei ministri, su proposta del Presidente Giorgia Meloni e del Ministro della giustizia Carlo Nordio, ha approvato, con la previsione della richiesta alle Camere di sollecita calendarizzazione nel rispetto dei regolamenti dei due rami del Parlamento, un disegno di legge per l'introduzione di disposizioni e la delega al Governo in materia di intelligenza artificiale.

#### *2. Autorità nazionali per l'intelligenza artificiale*

Si istituiscono le **Autorità nazionali** per l'intelligenza artificiale, disponendo l'affidamento all'Agenzia per l'Italia digitale (AgID) e all'Agenzia per la cybersicurezza nazionale (ACN) del compito di garantire l'applicazione e l'attuazione della normativa nazionale e dell'Unione europea in materia di AI.

AgID e ACN, ciascuna per quanto di rispettiva competenza, assicurano l'istituzione e la gestione congiunta di spazi di sperimentazione finalizzati alla realizzazione di sistemi di intelligenza artificiale conformi alla normativa nazionale e dell'Unione europea.