Webinar

Comissão Técnica 223

Inteligência Artificial

01.10.2024

Isabel Caetano

ANI AGÊNCIA NACIONAL DE INOVAÇÃO Instituto Português da Qualidade itSMF

Principais tópicos

1. Breve introdução sobre o contexto da atividade da CT 223
2. Comités CEN e ISSO na área de AI (Working groups)
3. Ponto de situação sobre o pedido de normalização (standardisation request) e das normas em desenvolvimento

CONTEXTO DA ATIVIDADE DA CT 223

CT 223 – INTELIGÊNCIA ARTIFICIAL

- Acompanhamento das atividades de normalização na área da Inteligência Artificial.
- Elaboração e/ou acompanhamento de normas/outros documentos normativos, e
- Emissão de pareceres no domínio da Inteligência Artificial em geral, incluindo as áreas de intervenção abrangidas nas comissões técnicas internacionais e europeias, nomeadamente na ISO/IEC JTC 1/ SC42 e CEN-CENELEC JTC21 "Artificial Intelligence"

Coordenação

itSMF Portugal — The IT Service Management Forum

ANI AGÊNCIA NACIONAL DE INOVAÇÃO

Instituto Português da Qualidade

Presidente	**Secretário**
Isabel Caetano	Helena Costa (ANI)

Instituto Português da Qualidade

Entidades Representadas:

ALTICE LABS - PT Inovação e Sistemas, SA
ANI – Agência Nacional de Inovação
APCER – Associação Portuguesa de Certificação
APEE - Associação Portuguesa de Ética Empresarial
CEN3TRIC DIGITAL CORE
CLARANET
DEEPNEURONIC
F3M INFORMATION SYSTEMS
FEEDZAI
Fundação Champalimaud
GREATEST DISTANCE
IADE - CREATIVE UNIVERSITY
IGEFE – Instituto de Gestão Financeira de Educação, I.P
INSTITUTO POLITÉCNICO DO CÁVADO E AVE
INTEGRITY
ISQ - INSTITUTO DE SOLDADURA E QUALIDADE
itSMF
LIDINWISE
LUSOLABS
NECHO TECLAW
NTT DATA
PORTUGAL DIGITAL
PROTEGRITY
QUIDGEST - CONSULTORES DE GESTÃO, LDA
SECTRA
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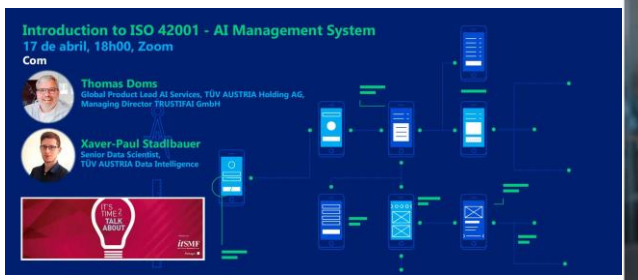
UNIVERSIDADE DE LISBOA - FACULDADE DE CIÊNCIAS
UNIVERSIDADE DE LISBOA - INSTITUTO SUPERIOR TÉCNICO
UNIVERSIDADE DO MINHO

(E peritos independentes)



Webinar

AI Standardisation: Challenges & Opportunities on AI & Emerging Technologies - SME perspectives

11 July 2024 - 11:00 - 11 July 2024 - 12:30
Online

This will entail that the newest circular economy initiatives in Europe must demand that nearly all products sold in the EU comply with a wide range of sustainability requirements that ensure transparency about all stages of a product's life cycle.

Webinar

AI Standardisation: Challenges & Opportunities on Advancing Equity & Ethics in AI

04 July 2024 - 11:00 - 04 July 2024 - 12:30
Online

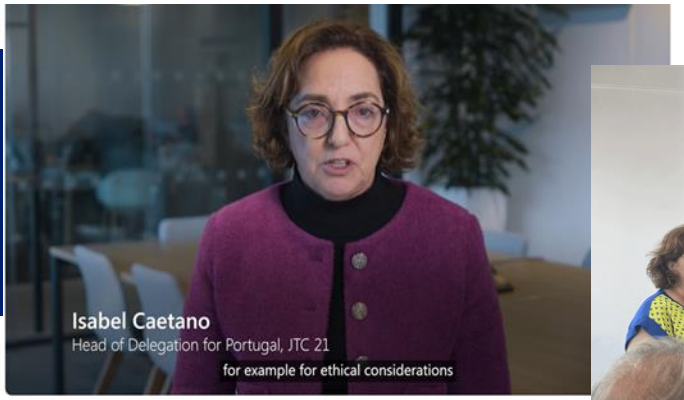
This will entail that the newest circular economy initiatives in Europe must demand that nearly all products sold in the EU comply with a wide range of sustainability requirements that ensure transparency about all stages of a product's life cycle.

Webinar

AI Standardisation: Challenges & Opportunities on AI Use Cases in Key Sectors

27 June 2024 - 11:00 - 27 June 2024 - 12:30
Online

This will entail that the newest circular economy initiatives in Europe must demand that nearly all products sold in the EU comply with a wide range of sustainability requirements that ensure transparency about all stages of a product's life cycle.



Center for Responsible AI

BRIDGE AI PORTUGAL

Overview

WG1 | Risk assessment tools

WG2 | AI Ethics in regulatory processes

WG3 | AI Act interface and implementation

WG4 | AI advanced training and literacy

WG5 | Efforts outside the EU

Takers / Public Administration

ANACOM – Autoridade Nacional de Comunicações
- WG3: Alignment of certification processes and implementation obligations
- WG3&5: Examples of regulatory sandboxes

ama – Agência para a Modernização Administrativa
- WG1: Collaboration to improve GuIA
- WG4: AI literacy for public administration

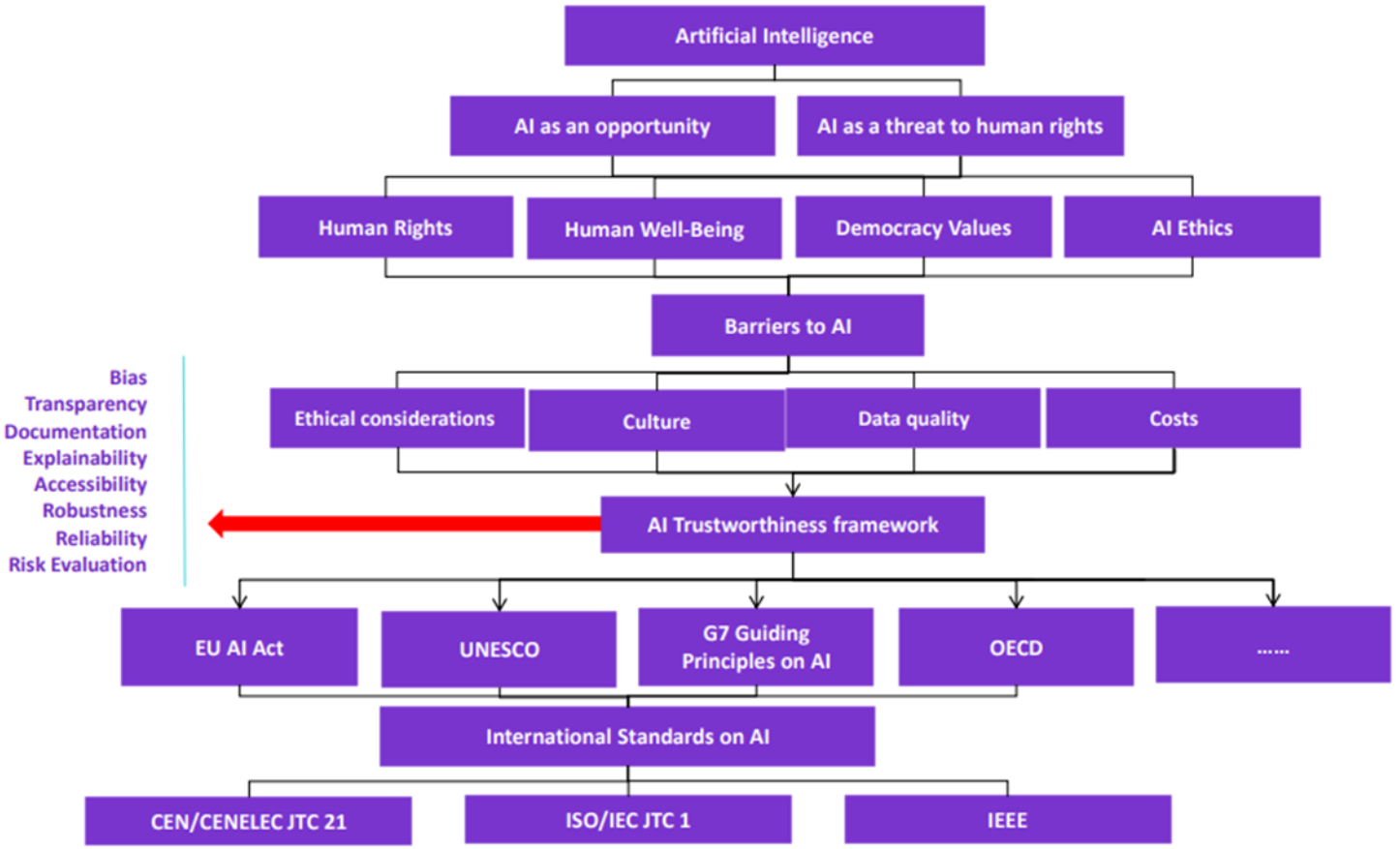
European Artificial Intelligence Office
- Transversal: collaboration to update high-risk use-cases (annex III)
- Transversal: AI Act implementation for other Member States
- WG4: Literacy for foundation models

República Portuguesa – Secretaria de Estado da Modernização e Digitalização
- All outcomes of the project – Science for Policy
- Digitalization, innovation and qualification of public administration

Partners

inesc id lisboa
instituto de telecomunicações
Champalimaud Foundation
Universidade Católica Portuguesa
Carnegie Mellon Portugal
The Alan Turing Institute
British Embassy Lisbon
SGS
Unbabel
JLM & A Consultores
Instituto de conhecimento
ANACOM – Autoridade Nacional de Comunicações
ama – Agência para a Modernização Administrativa
Center for Responsible AI

CT 223 – INTELIGÊNCIA ARTIFICIAL



CT 223 –
INTELIGÊNCIA ARTIFICIAL

O que há de novo?

IMPORTÂNCIA DA INTELIGÊNCIA ARTIFICIAL NO CONTEXTO EUROPEU

- A Inteligência Artificial (IA) emergiu como um catalisador fundamental no cenário tecnológico europeu, promovendo **avanços significativos em praticamente todos os setores e indústrias**. Desempenha um papel crucial na **transformação de setores tradicionais**, como saúde, transporte, agricultura e manufatura, ao facilitar a automação, otimização de processos e tomada de decisões baseada em dados.

- No contexto europeu, a IA é reconhecida como uma **ferramenta essencial para impulsionar a inovação, melhorar a eficiência operacional e fortalecer a competitividade económica da região**.

- A União Europeia reconhece a importância da IA na promoção da **excelência científica** e no fortalecimento da liderança tecnológica global, por meio de investimentos estratégicos em I&D.

- Como parte de uma abordagem holística, a União Europeia também está comprometida em garantir que o desenvolvimento e o uso da IA sejam guiados por princípios éticos, respeitando os direitos humanos, a privacidade e a transparência.

Draghi Report

- The EU should promote cross-industry coordination and data sharing to accelerate the **integration of AI into European industry;**

- Leverage the potential of AI to **drive the twin green and digital transitions** of the EU's energy system. By using AI solutions, the energy system would gain new capabilities offered by emerging digital technologies and could reap additional benefits speeding up the EU's decarbonisation and the decentralisation of the energy system.

O que há de novo?

- Digitalisation and the deployment of artificial intelligence (AI) are also essential to the ability of **public administrations to deliver European public goods**, for example in the field of health, justice, education, welfare, mobility and environmental protection.

New proposal:

AI Vertical Priorities Plan: accelerate **AI development across the ten strategic sectors** where EU business models will benefit most from rapid AI introduction (automotives, advanced manufacturing and robotics, energy, telecoms, agriculture, aerospace, defence, environmental forecasting, pharma and healthcare).

Experimentation should be encouraged via the opening up, EU-wide coordination and harmonisation of **national "AI Sandbox regimes"** to companies participating in the plan…

EMPRESAS 21 julho, 2024 às 10:41

Empresas portuguesas "vão ter de estar" preparadas para aplicar regulação IA

Regras da IA são aplicáveis a partir de fevereiro. Empresas "vão ter de estar" preparadas

Leitura: 8 min 21 julho, 2024 às 09:44

Regras práticas de IA proibidas são aplicáveis a partir de fevereiro

Regulamento europeu, que foi publicado no Jornal Oficial da União Europeia em 12 de julho, entra em vigor 20 dias após a publicação, sendo que tem de estar implementado até agosto de 2026.

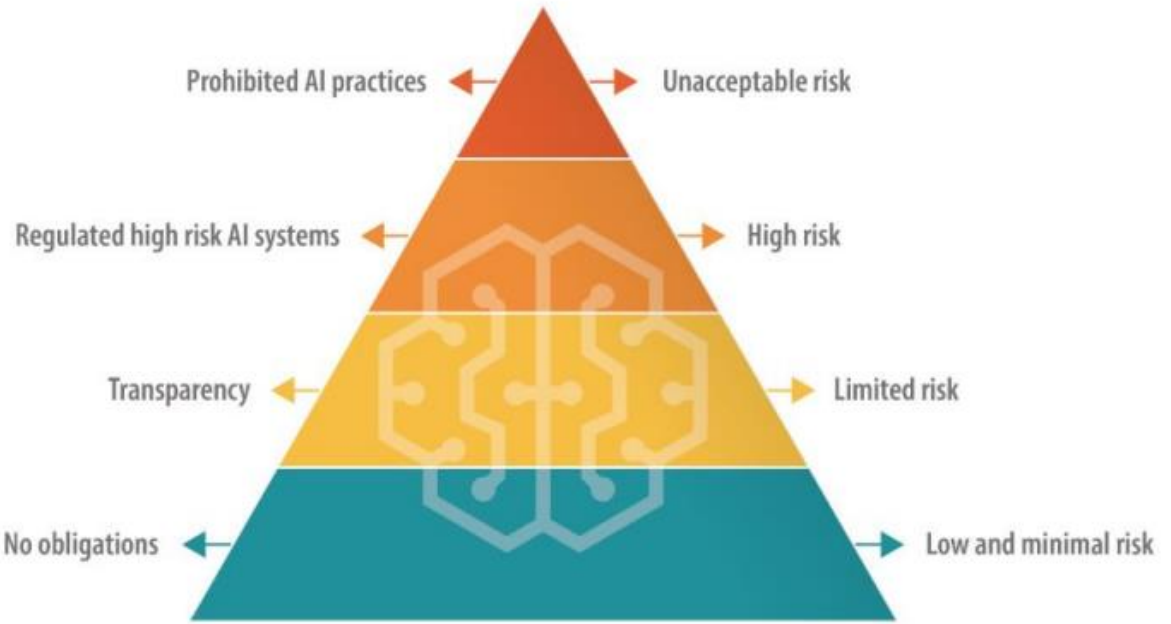
Lusa | 21 de Julho de 2024 às 09:56

REQUISITOS IMPOSTOS PELA UNIÃO EUROPEIA PARA O DESENVOLVIMENTO E IMPLEMENTAÇÃO DE IA

- Os Estados Membros terão dois anos para cumprir todas as disposições do AIA (2026).

- Durante o período de implementação, a Comissão Europeia desenvolverá e adotará normas técnicas suplementares para fornecer regras e diretrizes mais detalhadas sobre o que as organizações devem fazer para serem consideradas compatíveis com o AIA.

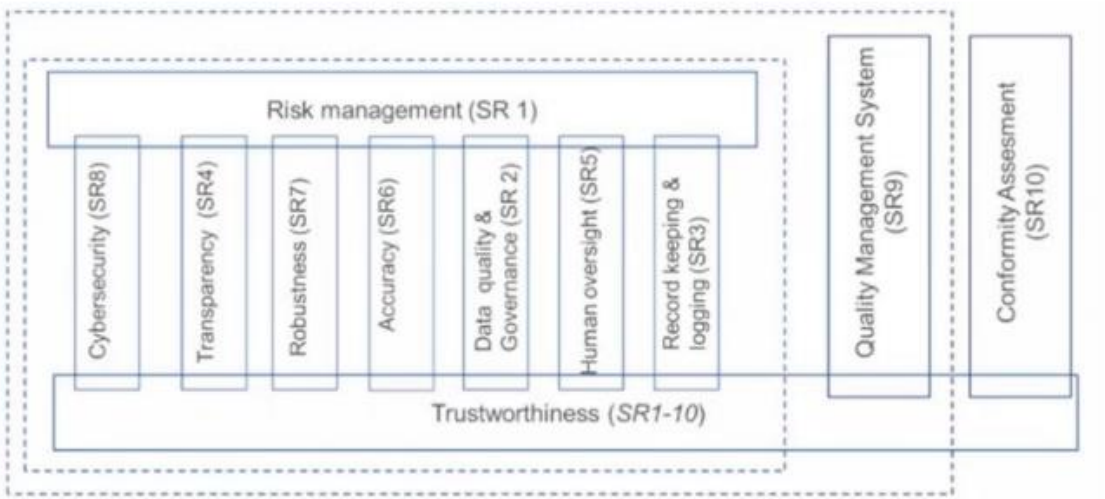
- As Organizações Europeias de Normalização estão a desenvolver as normas a pedido da Comissão. Uma vez adotadas pela Comissão, essas normas também se tornarão direito da UE e serão legalmente vinculativo.



Normalização: Comités CEN e ISO

EC AI Act:
Standardization Request to CEN/CENELEC JTC21

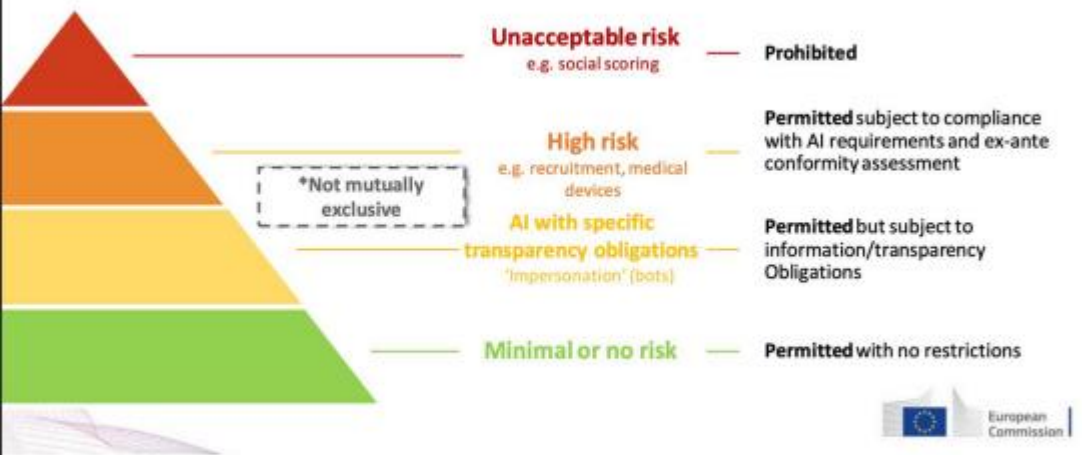
Architecture of standards supporting the AI Act



Set of AI standards to be published by 2Q 2025

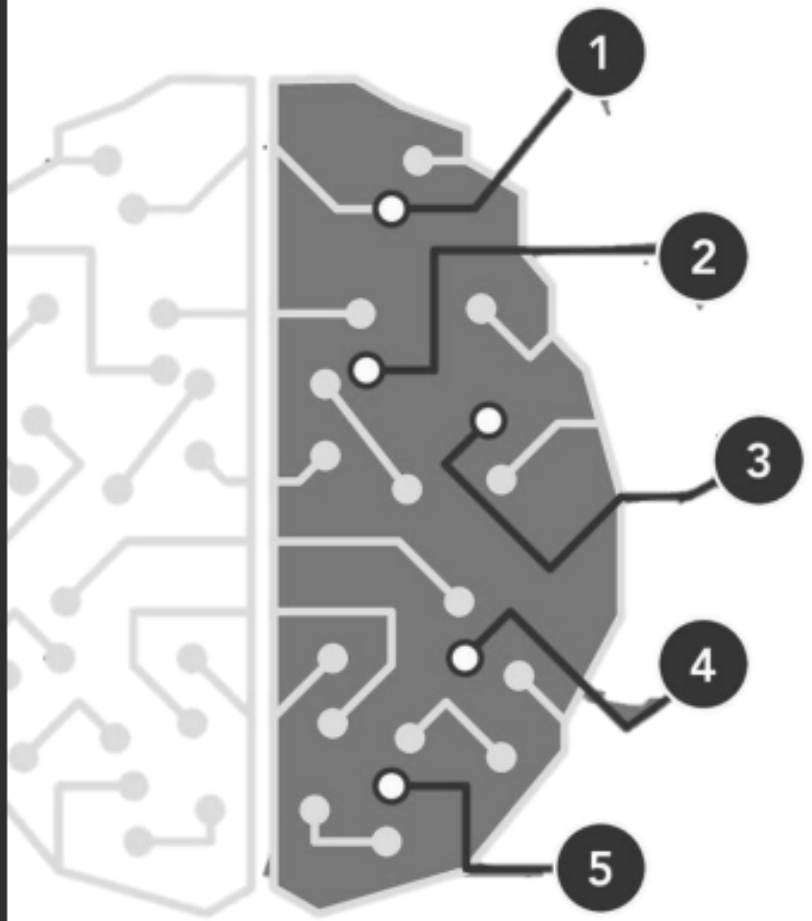
- Adopting/adapting ISO-IEC/SC 42 Standards
- Developing standards jointly with SC 42
- Developing homegrown standard if/when needed

REQUISITOS IMPOSTOS PELA UNIÃO EUROPEIA PARA O DESENVOLVIMENTO E IMPLEMENTAÇÃO DE IA



- O AIA **classifica os sistemas de IA com base no seu potencial risco** para os direitos fundamentais das pessoas, saúde ou segurança, bem como para a sociedade como um todo.
- O AIA **proibirá completamente um número limitado de aplicações de IA devido ao risco inaceitável que representam.**
- A maior parte da legislação foca -se em sistemas de IA de alto risco (ex. emprego, educação e acesso a serviços privados essenciais).
- Embora os sistemas de IA de alto risco sejam permitidos, estarão sujeitos a condições rigorosas. Para minimizar os potenciais riscos, os fornecedores e tomadores finais devem cumprir os requisitos de um conjunto de normas.
- **Cumprir os requisitos para sistemas de IA de alto risco exigirá, para a maioria das organizações, um investimento significativo para estabelecer uma governação forte de produtos, frameworks de gestão de risco, conformidade e capacidades internas de auditoria para avaliações de conformidade**.
- Os fornecedores serão responsáveis pelo cumprimento de alguns dos requisitos mais desafiantes do AIA, incluindo a realização de uma avaliação de conformidade e o registo de sistemas de IA de alto risco numa nova base de dados da UE antes de colocar qualquer sistema de IA de alto risco no mercado. Para alguns casos de uso específicos, serão necessárias auditorias externas independentes para avaliações de conformidade.

Artificial Intelligence Act



01 Usos Proibidos Limitados

Estabelece categorias de usos de inteligência artificial que são considerados inaceitáveis e, por isso, proibidos dentro da União Europeia. Estes incluem aplicações que podem manipular comportamentos humanos de forma subliminar, explorar as vulnerabilidades dos menores e realizar 'social scoring' por entidades governamentais.

02 Estabelecimento de protocolos específicos de auditoria adaptados a cada nível de risco identificado pelo AIA

03 Requisitos Ex-ante

O AI Act requer que os sistemas de IA de alto risco cumpram certos requisitos antes (ex-ante) e depois (ex-post) da sua entrada em funcionamento. Antes de serem lançados, estes sistemas necessitarão de uma **avaliação de impacto e testes rigorosos.**

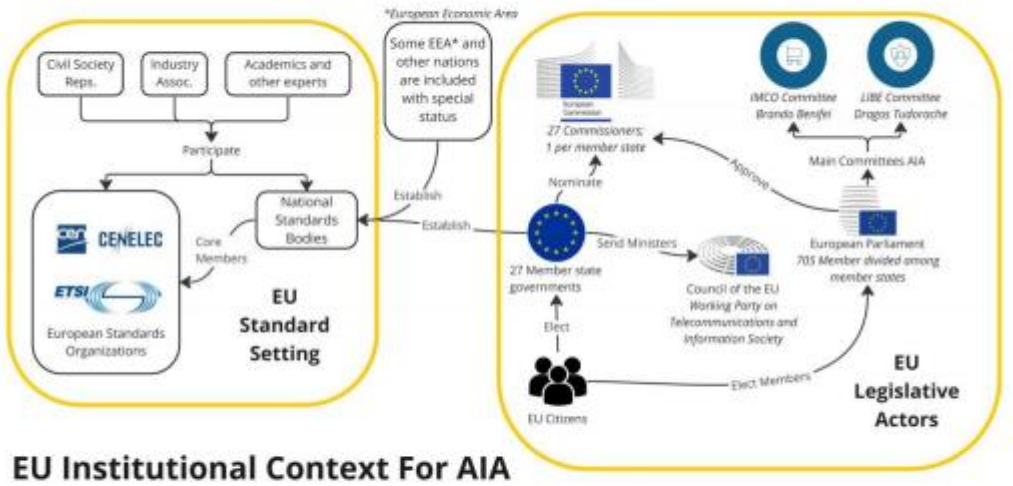
04 Requisitos Ex-post

Após o lançamento, deverão ser **monitorizados continuamente para garantir a manutenção da conformidade**, implicando um esforço contínuo de supervisão por parte dos fabricantes e utilizadores.

05 Auditoria

A auditoria e a certificação no âmbito do AI Act são essenciais para assegurar que os sistemas de inteligência artificial cumpram os rigorosos padrões éticos e de segurança da UE. Estes processos validam a conformidade dos sistemas de alto risco, reforçando a confiança e a transparência necessárias para a integração responsável da IA na sociedade.

PROCESSO DO DESENVOLVIMENTO DAS NORMAS



EU Institutional Context For AIA

As normas do AIA:

- desempenham um papel crucial na promoção do desenvolvimento seguro, ético e eficaz da IA.
- têm como objetivo harmonizar os requisitos técnicos e legais para IA na UE, estabelecendo um padrão comum que incentiva inovações responsáveis e protege os direitos dos cidadãos.
- visam garantir que a IA seja desenvolvida e implementada de maneira transparente, ética e compatível com os valores fundamentais da UE.
- incentivam o investimento em I&D na área da IA, impulsionando a competitividade e a inovação no mercado global de IA.

CEN/CENELEC JTC21

Chair: Sebastian Hallensleben

WG1

Strategic Advisory Group

CONVENOR:
Patrick Bezombes

Supports JTC 21 in exploring ways and means for supporting primarily the implementation of EU legislation, policies, principles and values in terms of AI aspects with European standardization deliverables (e.g., standards, technical reports)

WG2

Operational Aspects

CONVENOR:
Emilia Tantar

In-life operation, maintenance, monitoring, auditability, traceability (conformity assessment)

WG3

Engineering Aspects

CONVENOR:
James Davenport

Technical requirements, engineering of AI systems, including accountability quality, safety, accuracy, robustness, risk assessment, data for AI, interoperability, portability, privacy, security, trustworthiness, transparency, fairness, prevention of discrimination, bias, sustainability, green AI, risk management, governance, explainability, verifiability, usability, accessibility

WG4

Foundational & Societal Aspects

CONVENOR:
Laurence Devillers

Horizontal levels of automation/ autonomy. Description of AI system operating domains

WG5

Joint standardization on Cybersecurity for AI systems

CONVENOR:
Annegrit Seyerlein-Klug

Explore ways and means to address cybersecurity standardization specific needs for AI systems to develop relevant standards

EC AI Act:
CEN/CENELEC JTC21

Chair: Sebastian Hallensleben

WG1

Strategic Advisory Group

CONVENOR: Patrick Bezombes

TG Inclusiveness

Project leader: Philippe Saint-Aubin (ETUC)

TG Horizontal/Vertical

Project leader: Antonio Kung (France) and Koen Holtman (Netherlands)

TG Cybersecurity for AI systems

Project leader: Annegrit Seyerlein-Klug (Germany) and Francisco Medeiros (Belgium)

TG Technical Coherence Forum

Project leader: Adam L. Smith (UK)

WG2

Operational Aspects

CONVENOR: Emilia Tantar

PROJECT GROUP "TR AI CONFORMITY ASSESSMENT"

Task group "Risk management and risk catalogue"
Project leader: Renaud di Francesco

Task group "Analysis, Adoption and adaptation of relevant deliverables of ISO/IEC JTC 1/SC 42 for Operational aspects, including conformity assessment aspects"
Project leader: Martina Paul, Marta Janczarsk

Task group "Conformity assessment framework"
Project leader: Susanne Kuch

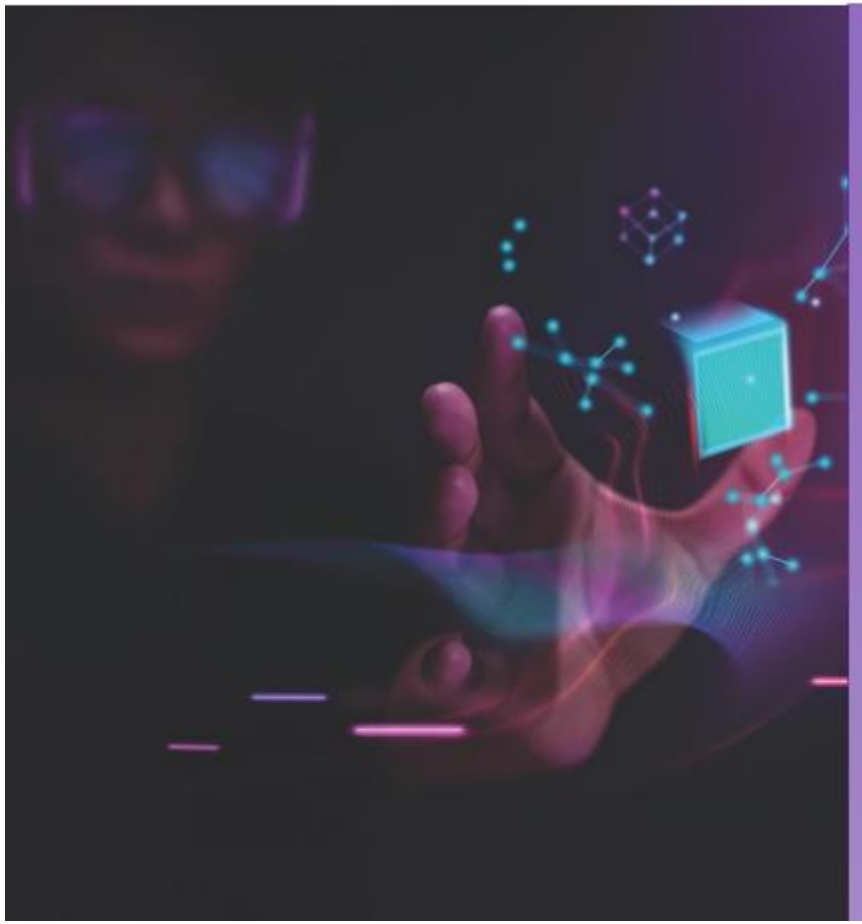
Task group " Verticals" (including operational challenges from verticals as healthcare, automotive/transportation"

Task group "AI Applications in healthcare"
Project leader: Patrick Reichmann

Task group "AI applications in automotive/transportation
Project leader: Abderrahman Matoussi

CEN/CENELEC JTC21

Chair: Sebastian Hallensleben



WG3

Engineering Aspects

CONVENOR: James Davenport

TR 12791 - Treatment of unwanted bias in classification and regression machine learning tasks

TR Data Governance & Quality

NWIP Dataset EN

NWIP Managing Bias EN

NWIP Logging

TR Energy

TR NLP

TR NLP Accuracy

TR Robustness

TR Computer Vision

CEN/CENELEC JTC21

European standards: CEN-CENELEC JTC 21

Chair: Sebastian Hallensleben

WG4

Foundational & Societal Aspects

CONVENOR: Laurence Devillers

Task Group 1 Artificial Intelligence - Green and Sustainable AI

Project leader: Valerie Livina

Task Group 2 AI-enhanced nudging

Project leader: Enrico Panai

Task Group 3 AI Trustworthiness framework

Project leaders: Piercosma Biscontti, Emmanuel Kahembwe, Antonio Kung

Task Group 4 Ethics - Competence Requirements for AI ethicists professionals

Project leader: Enrico Panai

Guidelines on AI Ethical aspects management

Project leader : Juan Pablo Penarubbia

WG5

Joint standardization on Cybersecurity for AI systems

CONVENOR:
Annegrit Seyerlein-Klug

International standards: ISO/IEC Subcommittee SC 42

Chair: Wael William Diab

ISO/IEC JTC 1/SC 42/WG 1 - Foundational standards

CONVENOR:
Paul Cotton

Artificial Intelligence Concepts and Terminology, Framework for Artificial Intelligence Systems Using Machine Learning, AI Lifecycle, AI Management System

ISO/IEC JTC 1/SC 42/WG 2 – Data

CONVENOR:
David Boyd

Big Data reference architecture, standardization concerning data in the context of Artificial Intelligence, Big Data, and Data Analytics, process management framework for Big Data Analytics, Data Quality for Analytics and ML, Data Quality management requirements and guidelines, Data Quality process framework, Data Quality measures

ISO/IEC JTC 1/SC 42/WG 3 – Trustworthiness

CONVENOR:
David Filip

Bias in AI systems and AI aided decision making, Assessment of the Robustness of Neural Networks, Risk Management, Ethical and Societal Concerns, Quality Model for AI systems, Explainability of ML models and AI systems, Quality evaluation guidelines for AI systems, Controllability of automated artificial intelligence systems

ISO/IEC JTC 1/SC 42/WG 4 - Use cases and applications

CONVENOR:
Fumihiro Maruyama

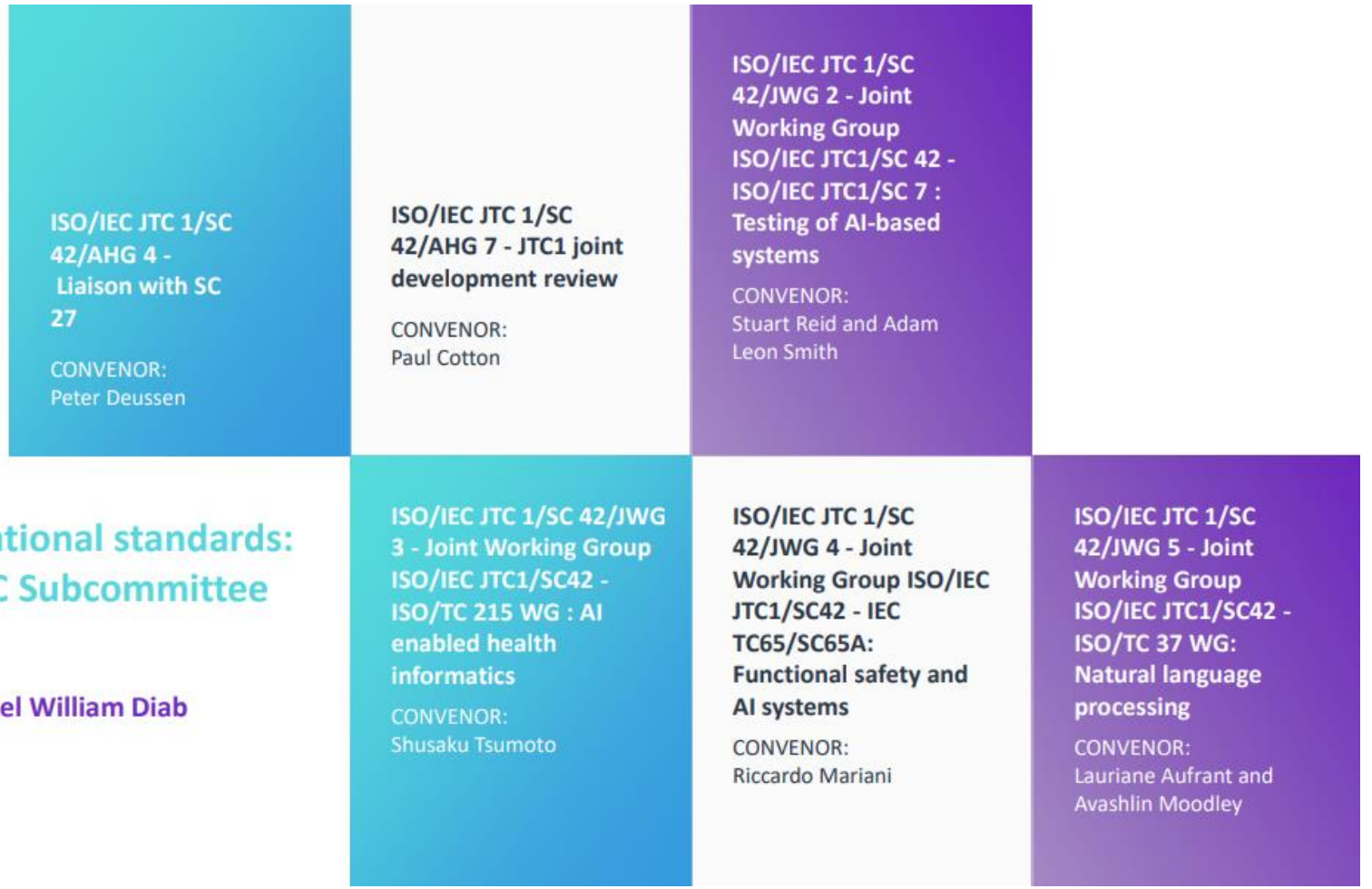
Use cases and applications for AI Standardization, AI system life cycle processes, Guidelines for AI applications

ISO/IEC JTC 1/SC 42/WG 5 - Computational approaches and computational characteristics of AI systems

CONVENOR: Ning Sun

An overview of computational approaches for AI systems, standardization in computational approaches and computational characteristics of AI systems, assessment of machine learning classification performance, reference architecture of knowledge engineering

International standards: ISO/IEC Subcommittee SC 42




ISO/IEC
42001:2023

ISO/IEC 42001:2023

A ISO/IEC 42001:2023 é a primeira norma técnica mundial para sistemas de gestão de IA, estabelecendo requisitos relevantes para a conformidade com o AIA da UE:

• Define os requisitos para estabelecer, implementar, manter e melhorar continuamente um Sistema de Gestão de Inteligência Artificial (AIMS) dentro das organizações.

• Dirige-se a entidades que fornecem ou utilizam produtos ou serviços baseados em IA, visando garantir o uso responsável da IA, abordando desafios como considerações éticas, transparência e aprendizagem contínua.

• Reconhece e aborda desafios únicos da IA, equilibrando inovação e governança. A adoção da ISO/IEC 42001 traz benefícios como gestão de riscos, demonstração de uso responsável da IA, rastreabilidade, transparência e confiabilidade, além de eficiência de custos e ganhos de eficiência.

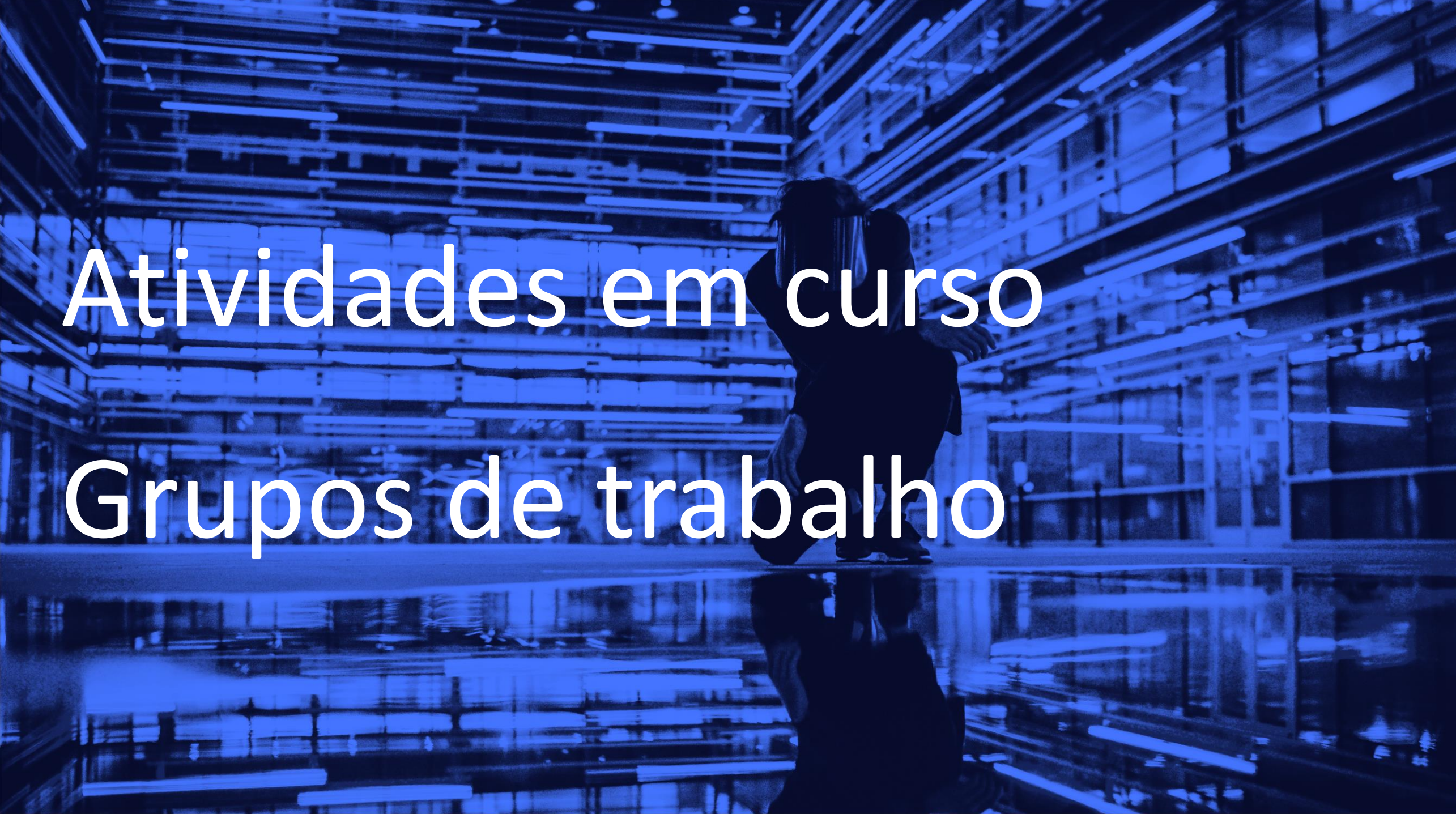
NORMA INTERNACIONAL

ISO/IEC 42001

Primeira edição
2024-03

Tecnologias da informação — Inteligência artificial — Sistema de gestão

Tecnologias da informação — Inteligência artificial — Sistema de gestão



Atividades em curso

Grupos de trabalho

Participação em Grupos de Trabalho (WG)

IPQ/CT 223
Inteligência Artificial

CEN/CENELEC
JTC 21 – Artificial Intelligence

- WG 1 - Strategic Advisory Group (SAG)
- WG 2 - Operational aspects
- WG 3 - Engineering aspects
- WG 4 - Foundational and societal aspects
- WG 5 - Joint standardization on Cybersecurity for AI systems

ISO/IEC JTC 1
SC 42 – Artificial Intelligence

- WG 1 - Foundational standards
- WG 2 - Data
- WG 3 - Trustworthiness
- WG 4 - Use cases and applications
- WG 5 - Computational approaches and computational characteristics of AI systems

ISO/IEC/JTC 1/SC42

Normas Publicadas

Reference	Title
ISO/IEC TS 4213:2022	Information technology — Artificial intelligence — Assessment of machine learning classification performance
ISO/IEC 5259-1:2024	Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 1: Overview, terminology, and examples
ISO/IEC 5259-3:2024	Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 3: Data quality management requirements and guidelines
ISO/IEC 5259-4:2024	Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 4: Data quality process framework
ISO/IEC 5338:2023	Information technology — Artificial intelligence — AI system life cycle processes
ISO/IEC 5339:2024	Information technology — Artificial intelligence — Guidance for AI applications
ISO/IEC 5392:2024	Information technology — Artificial intelligence — Reference architecture of knowledge engineering
ISO/IEC TR 5469:2024	Artificial intelligence — Functional safety and AI systems
ISO/IEC 8183:2023	Information technology — Artificial intelligence — Data life cycle framework
ISO/IEC TS 8200:2024	Information technology — Artificial intelligence — Controllability of automated artificial intelligence systems
ISO/IEC TR 17903:2024	Information technology — Artificial intelligence — Overview of machine learning computing devices
ISO/IEC 20546:2019	Information technology — Big data — Overview and vocabulary

ISO/IEC/JTC 1/SC42

Normas Publicadas

Reference	Title
ISO/IEC TR 20547-1:2020	Information technology — Big data reference architecture — Part 1: Framework and application process
ISO/IEC TR 20547-2:2018	Information technology — Big data reference architecture — Part 2: Use cases and derived requirements
ISO/IEC 20547-3:2020	Information technology — Big data reference architecture — Part 3: Reference architecture
ISO/IEC TR 20547-5:2018	Information technology — Big data reference architecture — Part 5: Standards roadmap
ISO/IEC 22989:2022	Information technology — Artificial intelligence — Artificial intelligence concepts and terminology
ISO/IEC 23053:2022	Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML)
ISO/IEC 23894:2023	Information technology — Artificial intelligence — Guidance on risk management
ISO/IEC TR 24027:2021	Information technology — Artificial intelligence (AI) — Bias in AI systems and AI aided decision making
ISO/IEC TR 24028:2020	Information technology — Artificial intelligence — Overview of trustworthiness in artificial intelligence
ISO/IEC TR 24029-1:2021	Artificial Intelligence (AI) — Assessment of the robustness of neural networks — Part 1: Overview
ISO/IEC 24029-2:2023	Artificial intelligence (AI) — Assessment of the robustness of neural networks — Part 2: Methodology for the use of formal methods

ISO/IEC/JTC 1/SC42

Normas Publicadas

Reference	Title
ISO/IEC TR 24030:2024	Information technology — Artificial intelligence (AI) — Use cases
ISO/IEC TR 24368:2022	Information technology — Artificial intelligence — Overview of ethical and societal concerns
ISO/IEC TR 24372:2021	Information technology — Artificial intelligence (AI) — Overview of computational approaches for AI systems
ISO/IEC 24668:2022	Information technology — Artificial intelligence — Process management framework for big data analytics
ISO/IEC TS 25058:2024	Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Guidance for quality evaluation of artificial intelligence (AI) systems
ISO/IEC 25059:2023	Software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality model for AI systems
ISO/IEC 38507:2022	Information technology — Governance of IT — Governance implications of the use of artificial intelligence by organizations
ISO/IEC 42001:2023	Information technology — Artificial intelligence — Management system

ISO/IEC/JTC 1/SC42

Normas em desenvolvimento

Reference	Title
ISO/IEC AWI 4213	Artificial intelligence — Performance measurement for AI classification, regression, clustering and recommendation tasks
ISO/IEC FDIS 5259-2	Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 2: Data quality measures
ISO/IEC DIS 5259-5	Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 5: Data quality governance framework
ISO/IEC CD TR 5259-6	Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 6: Visualization framework for data quality
ISO/IEC CD TS 6254	Information technology — Artificial intelligence — Objectives and approaches for explainability and interpretability of ML models and AI systems
ISO/IEC DTS 12791.2	Information technology — Artificial intelligence — Treatment of unwanted bias in classification and regression machine learning tasks
ISO/IEC DIS 12792	Information technology — Artificial intelligence — Transparency taxonomy of AI systems
ISO/IEC AWI TS 17847	Information technology — Artificial intelligence — Verification and validation analysis of AI systems
ISO/IEC AWI TR 18988	Artificial intelligence — Application of AI technologies in health informatics
ISO/IEC CD TR 20226	Information technology — Artificial intelligence — Environmental sustainability aspects of AI systems
ISO/IEC CD TR 21221	Information technology – Artificial intelligence – Beneficial AI systems

ISO/IEC/JTC 1/SC42

Normas em desenvolvimento

Reference	Title
ISO/IEC AWI TS 22440-1	Artificial intelligence — Functional safety and AI systems — Part 1: Requirements
ISO/IEC AWI TS 22440-2	Artificial intelligence — Functional safety and AI systems — Part 2: Guidance
ISO/IEC AWI TS 22440-3	Artificial intelligence — Functional safety and AI systems — Part 3: Examples of application
ISO/IEC AWI TS 22443	Information technology — Artificial intelligence — Guidance on addressing societal concerns and ethical considerations
ISO/IEC 22989:2022/AWI Amd 1	Information technology — Artificial intelligence — Artificial intelligence concepts and terminology — Amendment 1
ISO/IEC 23053:2022/AWI Amd 1	Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) — Amendment 1
ISO/IEC AWI TR 23281	Artificial intelligence — Overview of AI tasks and functionalities related to natural language processing
ISO/IEC AWI 23282	Artificial Intelligence — Evaluation methods for accurate natural language processing systems
ISO/IEC AWI 24029-3	Artificial intelligence (AI) — Assessment of the robustness of neural networks — Part 3: Methodology for the use of statistical methods
ISO/IEC AWI 24970	Artificial intelligence — AI system logging
ISO/IEC AWI 25029	Artificial intelligence — AI-enhanced nudging

ISO/IEC/JTC 1/SC42

Normas em desenvolvimento

Reference	Title
ISO/IEC AWI 25059	Software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality model for AI systems
ISO/IEC AWI TS 29119-11	Software and systems engineering — Software testing — Part 11: Testing of AI systems
ISO/IEC DIS 42005	Information technology — Artificial intelligence — AI system impact assessment
ISO/IEC DIS 42006	Information technology — Artificial intelligence — Requirements for bodies providing audit and certification of artificial intelligence management systems
ISO/IEC AWI 42102	Information technology — Artificial intelligence — Taxonomy of AI system methods and capabilities
ISO/IEC AWI TR 42103	Information technology — Artificial intelligence — Overview of synthetic data in the context of AI systems
ISO/IEC AWI 42105	Information technology — Artificial intelligence — Guidance for human oversight of AI systems
ISO/IEC AWI TR 42106	Information technology — Artificial intelligence — Overview of differentiated benchmarking of AI system quality characteristics
ISO/IEC AWI TR 42109	Information technology — Artificial intelligence — Use cases of human-machine teaming
ISO/IEC AWI TS 42112	Information technology — Artificial intelligence — Guidance on machine learning model training efficiency optimisation

CEN/CENELEC/JTC 21

WG 2 - Operational aspects

Scope

Supports JTC 21 with operational aspects of standardization in artificial intelligence, including conformity assessment topics and needed support standards.

Main tasks

- Develop and maintain the JTC 21 conformity assessment standardization deliverables existing relevant approaches and concepts to the conformity assessment of AI systems, i.e. national initiatives.

- Give recommendations and draft supporting elements regarding the adoption of relevant international standards to conformity assessment and operational aspects.

- Systematically assess operational aspects of JTC 21 standardization initiatives and how existing AI standards can operationally support European regulations and policies.

CEN/CENELEC/JTC 21

WG 2 - Operational aspects

Work In Progress:

- Project group “TR AI Conformity assessment”
- Task group “Risk management and risk catalogue” (VCC)
- Task group “Analysis, Adoption and adaptation of relevant deliverables of ISO/IEC JTC 1/SC 42 for Operational aspects, including conformity assessment aspects”
- Task group “ Verticals” (including operational challenges from verticals as healthcare, automotive/transportation”

CEN/CENELEC/JTC 21

Normas Publicadas

WG	Reference	Title
WG2	EN ISO/IEC 23894:2024	Information technology - Artificial intelligence - Guidance on risk management (ISO/IEC 23894:2023)
WG3	CEN/CLC ISO/IEC/TR 24027:2023	Information technology - Artificial intelligence (AI) - Bias in AI systems and AI aided decision making (ISO/IEC TR 24027:2021)
	CEN/CLC ISO/IEC/TR 24029-1:2023	Artificial Intelligence (AI) - Assessment of the robustness of neural networks - Part 1: Overview (ISO/IEC TR 24029-1:2021)
	EN ISO/IEC 8183:2024	Information technology - Artificial intelligence - Data life cycle framework (ISO/IEC 8183:2023)
	EN ISO/IEC 22989:2023	Information technology - Artificial intelligence - Artificial intelligence concepts and terminology (ISO/IEC 22989:2022)
	EN ISO/IEC 23053:2023	Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) (ISO/IEC 23053:2022)

CEN/CENELEC/JTC 21

Normas em desenvolvimento

WG	Reference	Title
WG2	prEN XXX(WI=JT021024)	AI Risk Management
	prCEN/CLC/TR 17894(WI=JT021001)	Artificial Intelligence Conformity Assessment
	prCEN/CLC/TR XXX(WI=JT021009)	AI Risks - Check List for AI Risks Management
WG3	prCEN/CLC/TR XXXX(WI=JT021002)	Artificial Intelligence - Overview of AI tasks and functionalities related to natural language processing
	prEN ISO/IEC 23282(WI=JT021012)	Artificial Intelligence - Evaluation methods for accurate natural language processing systems
	FprCEN/CLC ISO/IEC/TS 12791(WI=JT021013)	Information technology - Artificial intelligence - Treatment of unwanted bias in classification and regression machine learning tasks (ISO/IEC DTS 12791:2024)
	FprCEN/CLC/TR 18115(WI=JT021007)	Data governance and quality for AI within the European context
	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
	prEN XXX(WI=JT021025)	AI tasks and evaluation methods of computer vision systems
	(WI=JT021028)	Reference architecture of knowledge engineering based on ISO/IEC 5392

CEN/CENELEC/JTC 21

Normas em desenvolvimento

WG	Reference	Title
WG4	prCEN/CLC/TR XXX(WI=JT021010)	Environmentally sustainable Artificial Intelligence
	prEN XXX(WI=JT021008)	AI trustworthiness framework
	prEN XXXXX(WI=JT021006)	AI-enhanced nudging
	prEN ISO/IEC 12792(WI=JT021022)	Information technology - Artificial intelligence - Transparency taxonomy of AI systems (ISO/IEC DIS 12792:2024)
	prCEN/TS(WI=JT021034)	Guidelines on tools for handling ethical issues in AI system life cycle
	prCEN/TS(WI=JT021035)	Sustainable Artificial Intelligence – Guidelines and metrics for the environmental impact of artificial intelligence systems and services
	prCEN/TS(WI=JT021033)	Guidance for upskilling organisations on AI ethics and social concerns
WG5	(WI=JT021029)	Technical solutions to address AI specific vulnerabilities
	(WI=JT021030)	Contributions towards ISO/IEC 27090
	EN ISO/IEC 22989:2023/prA1(WI=JT021031)	Information technology — Artificial intelligence — Artificial intelligence concepts and terminology — Amendment 1
	EN ISO/IEC 23053:2023/prA1(WI=JT021032)	Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) — Amendment 1
	prEN ISO/IEC 25059(WI=JT021014)	Software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Quality model for AI systems (ISO/IEC 25059:2023)
	prCEN/CLC/TR XXX(WI=JT021026)	Impact assessment in the context of the EU Fundamental Rights
	prEN ISO/IEC 42001(WI=JT021011)	Information technology - Artificial intelligence - Management system

Próximas reuniões plenárias:

ISO/IEC JTC 1/SC 42

14th meeting of SC 42 "Artificial Intelligence"

7 – 12 October 2024
INRIA, Paris, France

CEN/CENELEC/JTC 21

4 - 6 novembro
Torino, Italy

Relembrar o AI Act:

*"We need a horizontal approach to unleash the potential of artificial intelligence in all areas**. A cross-cutting technology can only be effectively regulated by horizontal rules** that provide solutions to common challenges."*

Comissioner Thierry Breton

01 **Risk management system** for AI systems

02 **Governance and quality of datasets** used to build AI systems

03 **Record keeping** built-in logging capabilities in AI systems

04 **Transparency and information** to the users of AI systems

05 **Human oversight** of AI systems

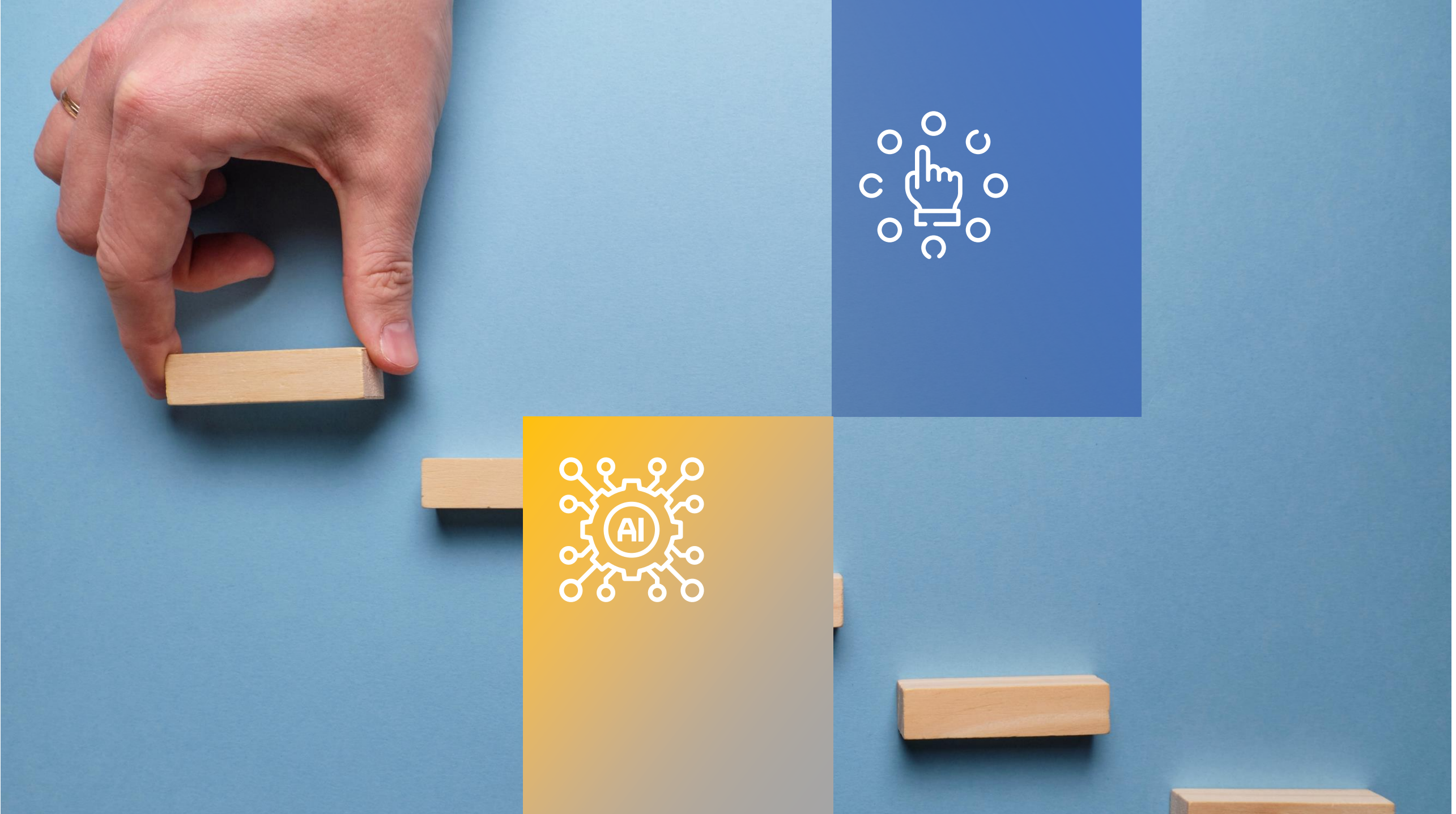
06 **Accuracy** specifications for AI systems

07 **Robustness** specifications for AI systems

08 **Cybersecurity** specifications for AI systems

09 **Quality management system** for providers of AI systems

10 **Conformity assessment** for AI systems


AI

Decisions WG2 TG risk @ 2024-09-26 Cagliari meeting
CEN-CLC-JTC 21-WG 2

D1 - TG risk/SIGs (Special Interest Groups) are invited to propose/comment resolutions in their areas of focus, as presented and agreed on 2024-09-26 as soon as possible, by October 14.

D2 - TG risk's Editorial Team will propose comment resolutions for the remaining comments (not yet addressed by SIGs) by October 14.

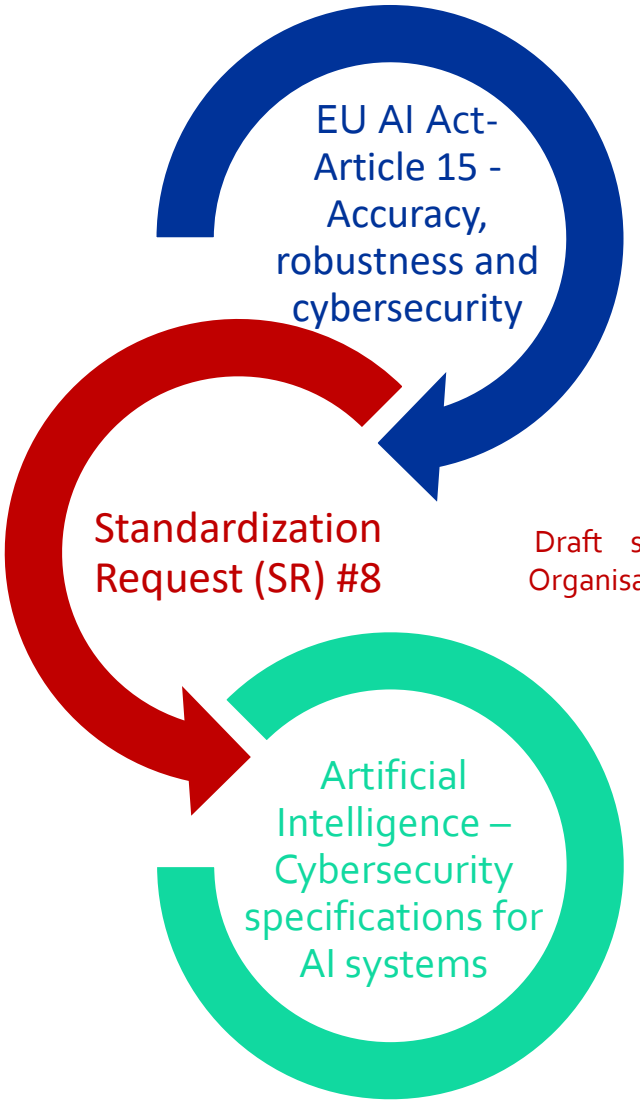
D3 - WG2/TG risk will review the proposed comment resolutions resulting from D1 or D2 above, received by October 14th, and resolve all comments by October 21st.

D4 - For reducing instabilities in the OSD while comments are being carefully processed, comments issued after 2024-09-26 will not be considered during the comment resolution phase described by D1, D2, D3.
Experts are advised to keep potential comments they might want to make outside of the OSD until 22nd October, and only insert them starting 22nd October. Comment consideration for these new comments also opens on the 22nd October. New comments inserted should not re-open the same issues already resolved by comment resolution consensus under D3 at the date of October 21st.

D5 - After 21st October, a Committee Internal Ballot, replacing the one intended to be launched on October 15, is considered, on a sound basis where all comments entered in the OSD prior to 2024-09-26 have been resolved. Such clean OSD text obtained on 21st October will be the basis for the CIB consultation.

Webinar Inteligência Artificial: O futuro é agora

IPQ CT223: Atividades de Normalização CEN/CENELEC JTC21 / WG5 - Cybersecurity



REGULATION (EU) 2024/1689 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 June 2024

Draft standardisation request to the European Standardisation Organisations in support of safe and trustworthy artificial intelligence

Projeto a ser aprovado pelo BT e integrado no working programme of JTC 21/WG 5 "Joint standardization on Cybersecurity for AI systems"

Webinar Inteligência Artificial: O futuro é agora

IPQ CT223: Atividades de Normalização CEN/CENELEC JTC21 / WG5 - Cybersecurity

Reference	REGULATION (EU) 2024/1689 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 June 2024
Article 15 - Accuracy, robustness and cybersecurity	(1) **High-risk AI systems** shall be **designed and developed** in such a way that they **achieve an appropriate level** of **accuracy**, **robustness**, and **cybersecurity**, and that they **perform consistently** in those respects **throughout their lifecycle**.
	(4) **High-risk AI systems** shall be as **resilient** as possible regarding **errors**, **faults** or **inconsistencies** that may occur **within the system** or **the environment in which the system operates**, **in particular** due to **their interaction** with **natural persons** or **other systems**. **Technical** and **organisational measures** shall be taken in this regard. …
	(5) **High-risk AI systems** shall be **resilient against attempts** by **unauthorised third parties** to **alter** their **use**, **outputs** or **performance** by **exploiting system vulnerabilities**. …

Webinar Inteligência Artificial: O futuro é agora

IPQ CT223: Atividades de Normalização CEN/CENELEC JTC21 / WG5 - Cybersecurity

Reference	Draft standardisation request to the European Standardisation Organisations in support of safe and trustworthy artificial intelligence
Standardization Request (SR) #8	**European standard(s)** and/or **European standardisation deliverable(s)** on **cybersecurity specifications** for **AI systems**
	This (these) **European standard(s)** or **European standardisation deliverable(s)** shall **provide** suitable **organisational** and **technical solutions**, to ensure that **AI systems** are **resilient against attempts** to **alter** their **use**, **behaviour**, **performance** or **compromise** their **security properties** by **malicious third parties exploiting** the **AI systems' vulnerabilities**.
	European standardisation deliverable(s) shall **take due account** of the **essential requirements** for **products with digital elements** as listed in sections 1 and 2 of Annex I to the **proposal for a Regulation on horizontal cybersecurity requirements for products with digital elements*** adopted by the Commission in September 2022. *Cybersecurity Resilience Act

Próximos passos

Áreas de interesse

Participação na CT223

AGÊNCIA NACIONAL DE INOVAÇÃO

Instituto Português da Qualidade

itSMF