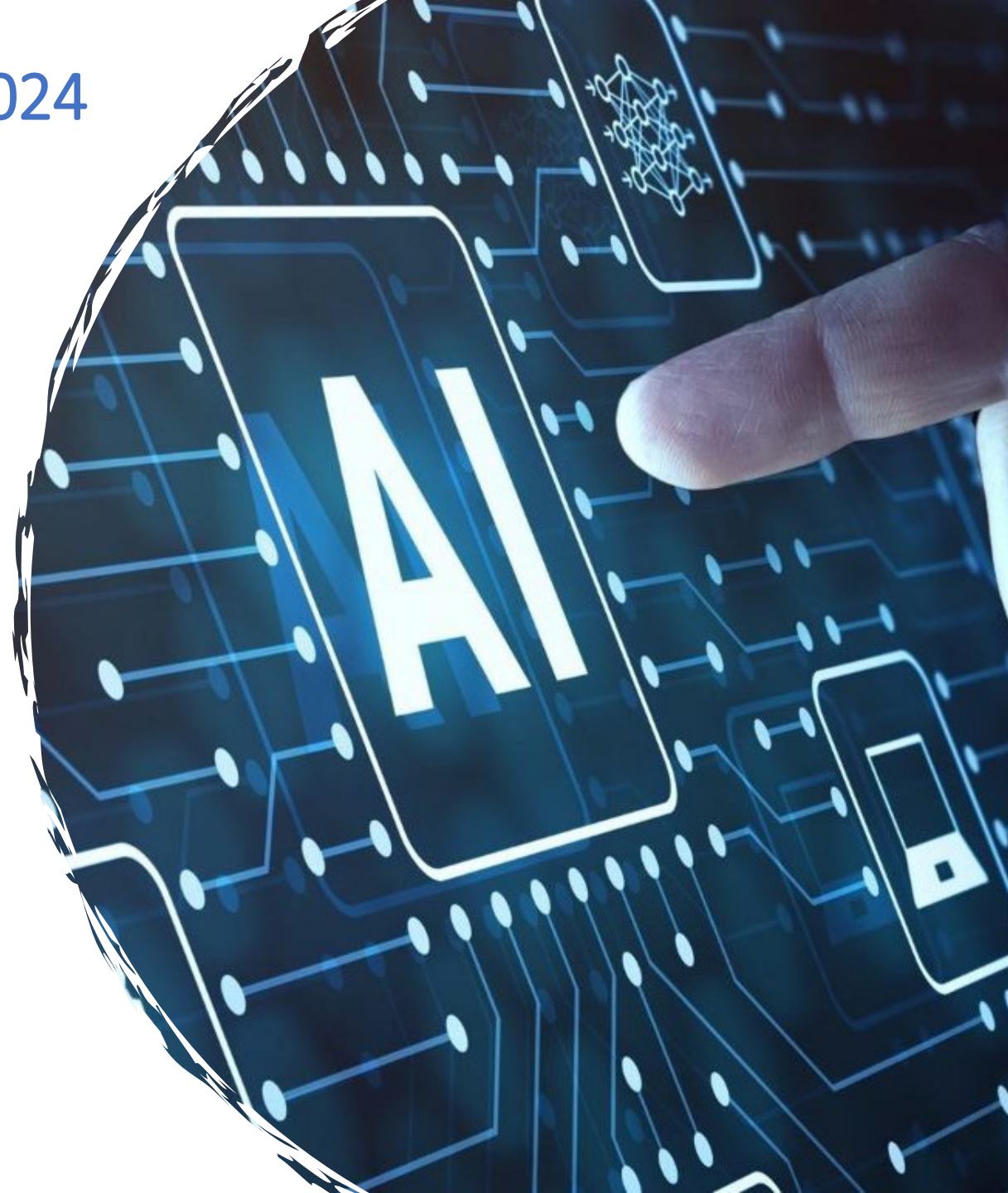


Status of JTC 21 Activities in Response of the Standardization Request on AI

Presented by:

JTC 21
Artificial
Intelligence



CEN-CENELEC JTC 21 management



Sebastian Hallensleben
Chair

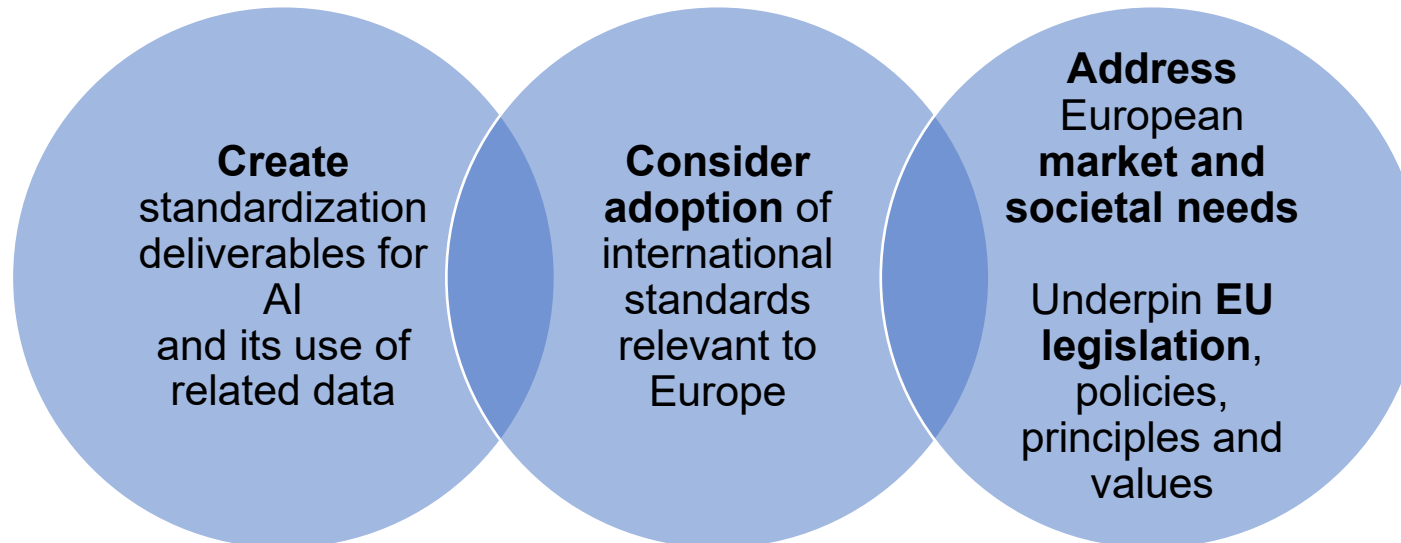


Patrick Bezombes
Vice-chair
WG 1 convenor



Kim Skov Hilding
Secretary

CEN-CENELEC JTC 21 mission



Standardization request of the European Commission

Standardization request



1. **risk management system** for AI systems
2. **governance and quality of datasets** used to build AI systems
3. **record keeping** - built-in logging capabilities in AI systems
4. **transparency and information** to the users of AI systems
5. **human oversight** of AI systems
6. **accuracy** specifications for AI systems
7. **robustness** specifications for AI systems
8. **cybersecurity** specifications for AI systems
9. **quality management system** for providers of AI system
10. **conformity assessment** for AI systems

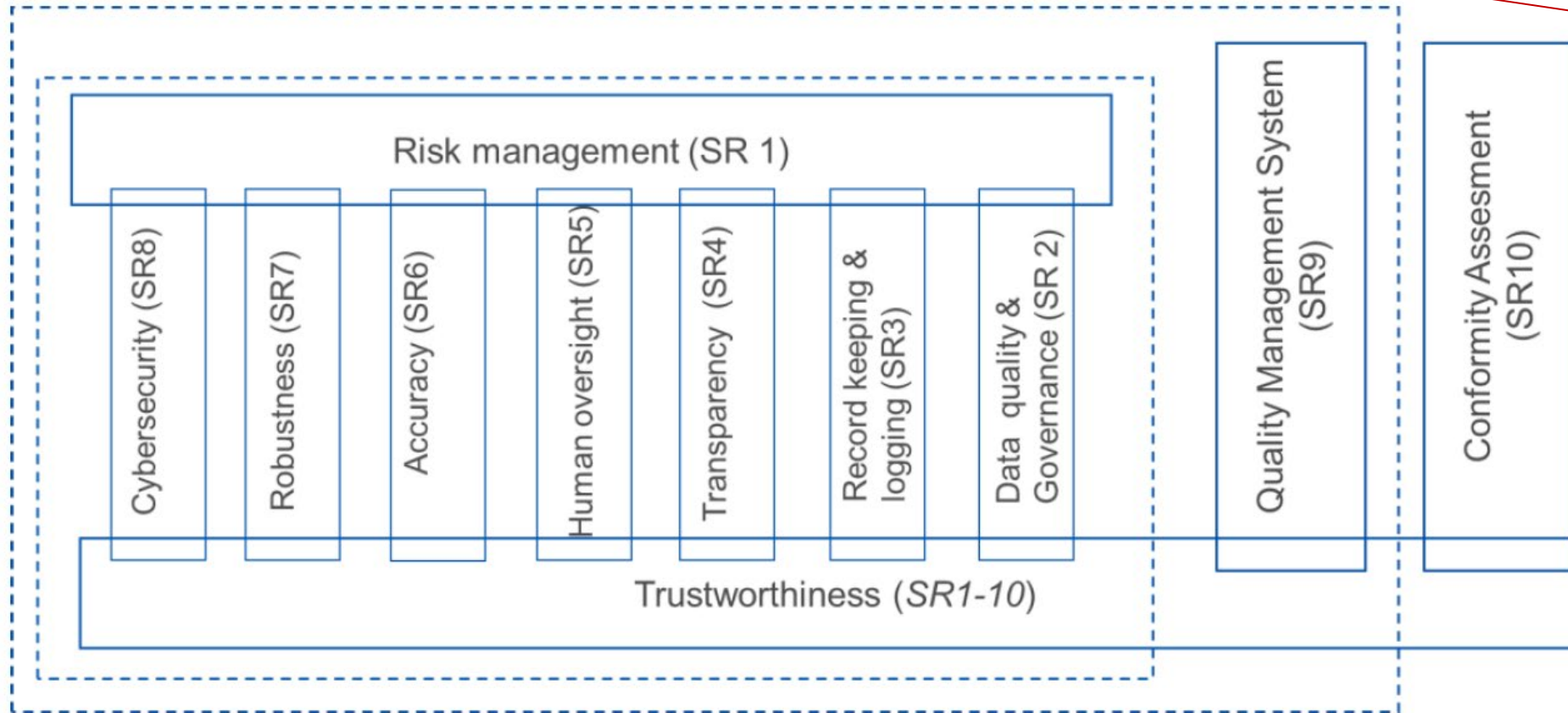
We need a horizontal approach to unleash the potential of artificial intelligence in all areas. **A cross-cutting technology can only be effectively regulated by horizontal rules** that provide solutions to common challenges.

Commissioner Thierry Breton

- Set of harmonised standards (hEN) to be published
- Revised standardization request is expected to include two further items:
 - **sustainability of AI**
 - **generative AI**

Architecture of standards in response to the EU standardization request

> 130 experts
> 24 countries



How can we build solid European harmonised standards in 2 years? (instead of 3-5 years)

- Adopt or Adapt from ISO/IEC; Collaborate with ETSI
(where available)
- Adapt from other standardisation and similar organisations, e.g. IEEE, IETF, W3C, OECD, GAIA-X, BDVA, ...
(where available and legal)
- Involve experts from other technical committees like CEN-CENELEC JTC 13 Cybersecurity and data protection
- Build on research and open consortial specifications
(where available)



Examples of homegrown CEN-CENELEC standards

Homegrown standards (EN) in support of the AI Act (publication in 2026)

- AI Trustworthiness Framework
- AI Risk Management (and Risk Catalogue)
- Data Governance and quality for AI in the European context

Technical reports (TR) for publication in 2024

- Overview of AI tasks and functionalities related to natural language processing
- Green and Sustainable AI
- Artificial Intelligence Conformity Assessment

Examples of ISO/IEC adoptions/adaptions/parallel development

- EN ISO/IEC 22989:2023
Artificial intelligence concepts and terminology (ISO/IEC 22989:2022)
Published
- EN ISO/IEC 23053:2023
Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML) (ISO/IEC 23053:2022)
Published
- EN ISO/IEC 42001
Information technology - Artificial intelligence - Management system
In process
- EN ISO/IEC 23894
Guidance on risk management
In process
- EN ISO/IEC 24029-2
Assessment of the robustness of neural networks - Part 2: Methodology for the use of formal methods
In process
- EN ISO/IEC 24029-3
Assessment of the robustness of neural networks - Part 3: Methodology for the use of statistical methods
In process
- EN ISO/IEC xxx
Accuracy of NLP systems
In process – parallel development
- EN ISO/IEC xxx
Logging
In process – parallel development

**Close cooperation between
Horizontal and Vertical (sectorial)
standardization is essential**

Principles for horizontal/vertical standardization interplay

- Horizontal standards set the foundations for operationalizing the AI Act essential requirements
- Horizontal standards set terminology, concepts, requirements and methodologies
 - *Note: JTC 21 will consider AI terminology, concepts, requirements and methodologies in existing sectorial standards in cooperation with sectorial stakeholders with the goal to have common approaches as far as possible*
- Vertical standards should align with the terminology and requirements of their sector legislation
- Vertical standards build upon horizontal standards
 - *Note: Vertical standards reference, integrate, adopt or adapt horizontal standards as appropriate*
- Vertical standards only add sector or technology specifics

6th JTC 21 Plenary Meeting in Brussels

16./17. Januar 2023



Working Groups



- WG 1: Strategic Advisory Group
- WG 2: Operational Aspects
- WG 3: Engineering Aspects
- WG 4: Foundational and Societal Aspects
- WG 5: Joint standardization on Cybersecurity for AI systems



What talents do we need in JTC 21?

People with **technical and societal** expertise

People with **process** expertise

People with **domain** expertise (health, energy, ...)

People who **can write** (!)

... as project editors

People who **can build consensus** (!!)

... as project editors and working group convenors and ad-hoc group convenors

Questions?

You are always welcome to contact the JTC 21 secretariat

jtc21@ds.dk

