The Role of European Standardization for AI - Harmonized Standards: Status, Timeline, and Challenges

Standard Norway – Building a trusted future seminar

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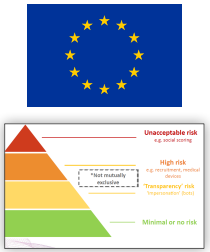
Global three-tier standardisation landscape



New Legislative Framework

Allgemein	Elektrotechnik	Telekommunikation	
ISO International Standardization Organization	IEC International Electrotechnical Commission	ITU International Telecommunication Union	Inter-national
cen Comité Européen de Normalisation	CENELEC Comité Européen de Normalisation Electrotechnique	ETSI European Telecommunications Standards Institute	Europa
DIN Deutsches Institut für Normung	DKE VDE DIN Deutsche Kommission Elektrotechnik Elektronik Informationstechnik in DIN und VDE		Deutsch-land

JTC1 SC42

JTC21

NA 043-01-42

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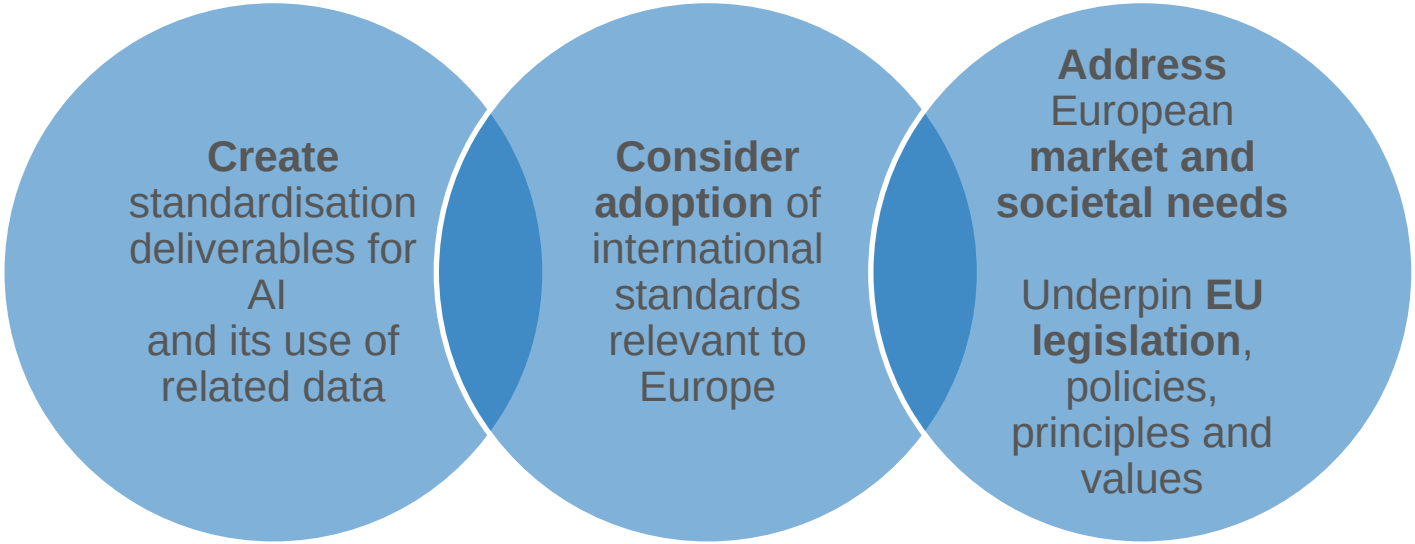
Mission of JTC21



New Legislative Framework - Principles and structure

(as presented by the European Commission)

European Commission

- **Essential requirements** designed to ensure a high-level of protection of public interests. They define the results to be attained, or the hazards to be dealt with, but do not specify the technical solutions for doing so
- **Harmonized standards** detailing technical solutions to meet the essential requirements
  - Voluntary – manufacturers can use other methods
  - Presumption of conformity with the essential requirements they cover
- **Division of responsibilities** along the value & distribution chain of the product
  - Manufacturers, importers, distributors, authorized representatives
- **Conformity assessment procedures**
  - Internal checks
  - Third-party assessment

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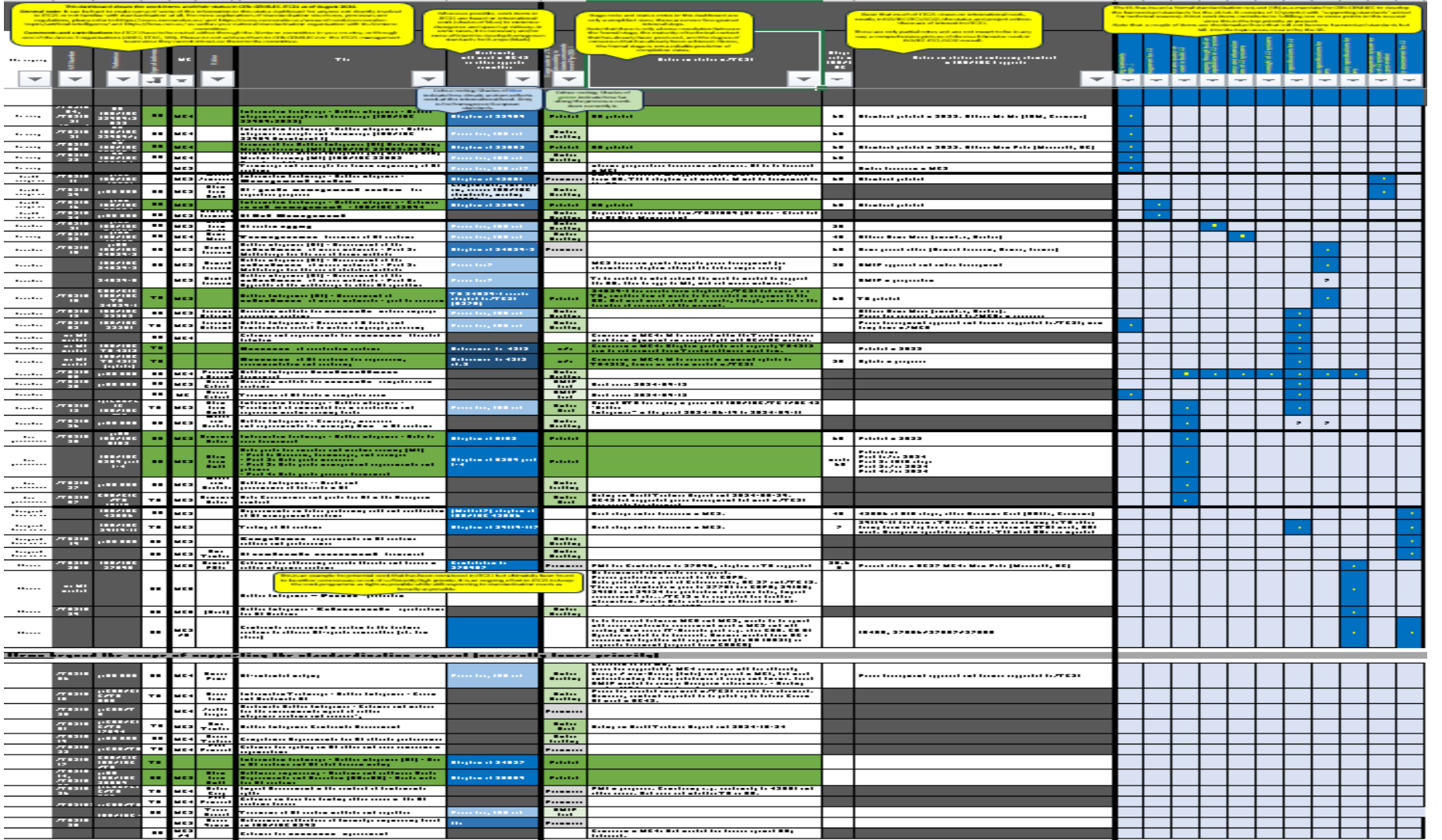
Standardisation request of the European Commission

1.	European standard(s) and/or European standardisation deliverable(s) on risk management system for AI systems
2.	European standard(s) and/or European standardisation deliverable(s) on governance and quality of datasets used to build AI systems
3.	European standard(s) and/or European standardisation deliverable(s) on record keeping through logging capabilities by AI systems
4.	European standard(s) and/or European standardisation deliverable(s) on transparency and information provisions to the users of AI systems
5.	European standard(s) and/or European standardisation deliverable(s) on human oversight of AI systems
6.	European standard(s) and/or European standardisation deliverable(s) on accuracy specifications for AI systems
7.	European standard(s) and/or European standardisation deliverable(s) on robustness specifications for AI systems
8.	European standard(s) and/or European standardisation deliverable(s) on cybersecurity specifications for AI systems
9.	European standard(s) and/or European standardisation deliverable(s) on quality management system for providers of AI systems, including post-market monitoring process
10.	European standard(s) and/or European standardisation deliverable(s) on conformity assessment for AI systems



On ISO/IEC 42001: Management System Standard for AI

- Published November 2023; global wave of consulting and testing offerings
- Why not just adopt 42001 for Europe?
- Clear and early „no“ from the EU due to multiple mismatch:

42001	Bedarf für AI Act
Understanding of risk from ISO 31000 / Guide 73: **risk = uncertainty**	Understanding of risk from IEC Guide 51: **risk = harm x probability of harm**
Refers to an organisation	Refers to a product
Focus on Good Practice	Focus on measureable, enforcable requirements

Approach in JTC21:

EU-specific standards for quality and risk management but with references to ISO/IEC 42001 and other standards.

JT021011	prEN ISO/IEC 42001		WG2	Marta Janczarski	Information technology - Artificial intelligence - **Management system**	Adoption of 42001	Preliminary
JT021039	prEN XXX	EN	WG2	Adam Leon Smith	AI - **quality management system** for regulatory purposes	Complements, and builds on, several ISO/IEC standards, including 42001	Under Drafting

Working Groups

~200 experts directly in JTC21
~25 countries
>1000 experts at national level

- WG1: Strategic Advisory Group
- WG2: Operational Aspects
- WG3: Engineering Aspects
- WG4: Foundational and Societal Aspects
- WG5: Cybersecurity
  (in collaboration with ETSI, ENISA and CEN-CENELEC JTC13)

How stakeholders participate in JTC21

- **Through national AI mirror committees**
- **Through Annex 3 organisations**
- **Indirectly through liaisons**
  including other technical committees, associations, networks etc.
- **Through ETSI**
  Mode 4 cooperation in place, including (but not limited to) cybersecurity

Challenges in (AI) standardisation as an almost integral part of regulation (I)

- **Legitimacy**

  Theory: Consensus of „all relevant stakeholders“
  including companies of all sizes, academia, civil society,
  broad spectrum of countries, whole AI lifecycle, ...

  Practice: Who has got time, technical specialists and process knowledge?
  Documents vs. people

- **Very divergent interests**

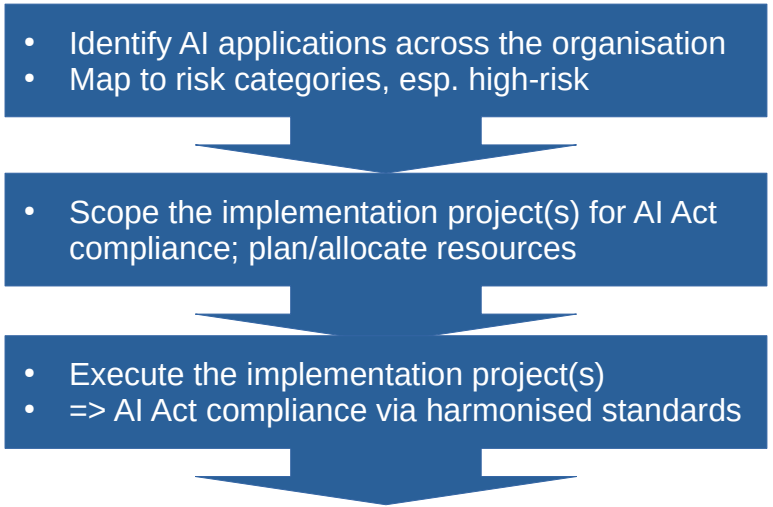
  Global companies shape European standards
  Specific European perspectives and interests; sovereignty
  Differences between national mirror committees

Challenges in (AI) standardisation as an almost integral part of regulation (II)

- **Policy making vs. standardisation**
  Need to respect outcome of political processes.
- **International standards designed for a different purpose**
  Differences in testability, enforcability, links to regulation
- **Tight collaboration of broad spectrum of talents needed**
  People with **technical** expertise in AI
  People with **process** expertise in standardisation
  People with **domain** expertise (health, energy, ...)
  People who **can write** (!)
  People who **can build consensus** (!!)

Timeline

- CEN-CENELEC: AI Focus Group since **2019** | JTC21 since **2021**
- AI Act **final:** August 2024
- Stocktaking review by COM / AI Office **Feb 2025**
  => shared understanding of remaining gaps
- Public consultation for drafts of
  harmonised standards („**Enquiry Vote**“)
  mostly from **Q3 / 2025**
- Integration of feedback („**Comment Resolution**“)
  mostly in **Q4 / 2025** and early 2026 => mature content
- Implementation deadline high-risk requirements **Aug 2026**
- Formal processes in CEN-CENELEC and COM / AI Office
  for finalisation, harmonisation and OJEU publication



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JTC21 standards are currently distinct from the Code of Practice

	JTC21 harmonised standards	Code of Practice
Providing implementation steps for …	Requirements on AI systems in high-risk applications – Articles 8 to 15 • **All** types of AI • **Late** stage of value chain	Requirements on General Purpose Models – Articles 53, 55 • Generative AI **only** • **Early** stage of value chain
Development context and process	• Broadly applicable complex set of CEN-CENELEC regulations • Decision making power with standardisation bodies at national level who also provide secretarial support (~25 countries) • Input from ISO/IEC (under Vienna/Frankfurt agreements) • Ongoing feedback/guidance from EC at working level	• Custom process and structure created for CoP development purposes • Process directed by AI Office with outsourced facilitation support • Decision making power with the AI Office

Potentially initiation of a standardisation request based on the CoP

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