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07-08 / 10 / 2024

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Leveraging Standards in Your AI Journey

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Budapest, October 7, 2024

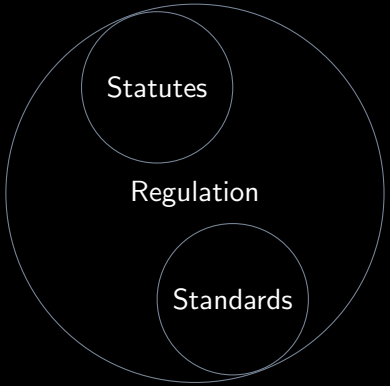
Responsible/Trustworthy AI Requirements

OECD AI Principle	Description	EU AIA Provision	Description
Principle 1.1	Inclusive growth, sustainable development, and wellbeing	Recital 5	Protecting fundamental rights
Principle 1.2	Human-centered values and fairness	Articles 10, 14	Data & data governance, human oversight
Principle 1.3	Transparency and explainability	Article 13	Transparency and provision of information to users
Principle 1.4	Robustness, security, and safety	Articles 9, 17	Risk & quality management system
Principle 1.5	Accountability	Articles 11-12	Technical documentation & record-keeping

Where do you start?

And where do standards come in?

Standards are Part of the Regulatory Toolkit



- Statutes (like the EU AIA) are high-level frameworks:
  - necessary for flexibility (should not contain too much detail),
  - but insufficient for implementation.
- Standards:
  - enable implementation,
  - by containing actionable guidance.

Key Actors in AI Standardization

International level: ISO/IEC JTC 1 SC 42

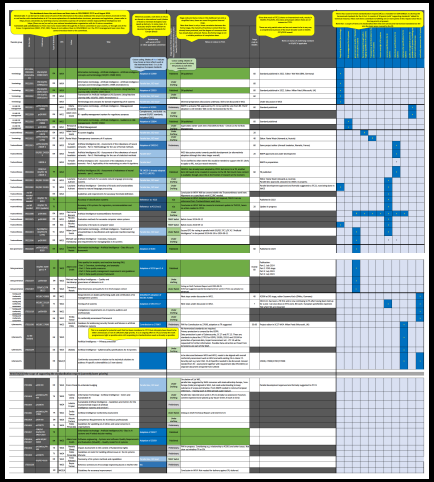
European level (EC standardization request addressed only to CEN/CENELEC!): CEN/CENELEC JTC 21

International AI Standardization

- ISO/IEC JTC 1 SC 42 working groups:
  - 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
  - AHG 4 Liaison with SC 27
  - AHG 7 JTC1 joint development review
  - JAG (with ISO/IEC JTC1/SC 39) AI and sustainability
  - JWG 2 (with ISO/IEC JTC1/SC 7) Testing of AI-based systems
  - JWG 3 (with ISO/TC 215 WG) AI enabled health informatics
  - JWG 4 (IEC TC65/SC65A) Functional safety and AI systems
  - JWG 5 (ISO/TC 37 WG) Natural language processing
- Standards:
  - 31 published, 36 under development.

European AI Standardization

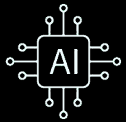
- Thematic groups:
  1. terminology,
  2. AI and risk management,
  3. trustworthiness,
  4. data governance,
  5. testing and conformity assessment,
  6. cybersecurity,
  7. work items beyond the scope of the EC standardization request.
- Relationship to international standardization:
  - based on international standards,
  - development of Europe-specific standards.



Hallensleben LinkedIn

Where do you start implementing all these requirements?

What Exactly Do the Requirements Relate to?



AI systems (product/service/process (PSP))

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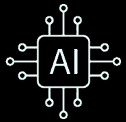


AI systems (product/service/process (PSP))

Providers/users (typically organizations) of PSP

If Organizations, Two Main Options

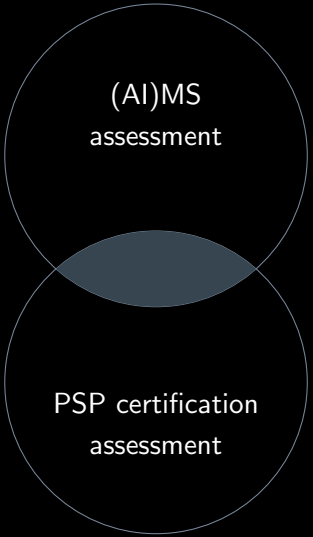
risk management system

Article 9 AIA "risk management system" (ISO/IEC 23894:2023, JT021016, JT021024)

management system

Article 17 AIA "quality management system" (ISO/IEC 42001:2023, JT021011, JT021039)

Coordinating MS and PSP (Certification) Requirements



- PSP certification in the AI context is in early stages:
  - ISO/IEC 17067:2013 (PSP certification scheme design/content; does not contain the requirements that must be met for certification!),
  - ISO/IEC TR 17026:2015 (certification scheme for tangible products),
  - ISO/IEC TR 17028:2017 (certification scheme for services).

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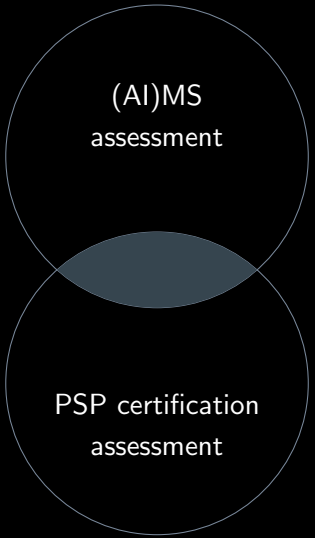

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- These existing standards are not fully adequate for AI systems $\Rightarrow$ need to develop AI-specific equivalents identified.

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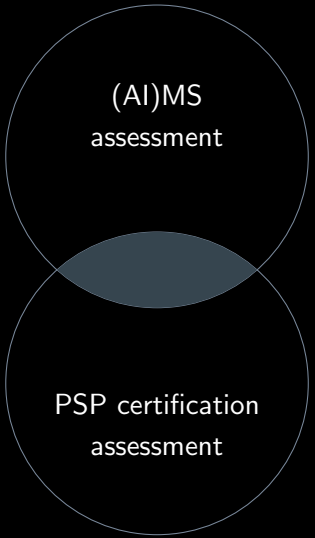

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- MS and PSP certification requirements differ, yielding overlaps/gaps.

Thank you for your attention!