

Preparing for the AI Act

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Preparing for new AI/Data/Digital Regulation

Instrument	Timeline
GDPR	MAY-2018
Digital Services Act	NOV-2022
Digital Market Act	MAY-2023
Data Governance Act	SEP-2023
AI Act	draft
AI Liability Directive	draft
ePrivacy Reg	draft
Data Act	proposed
Health Data Space	proposed
Interop. Act	proposed

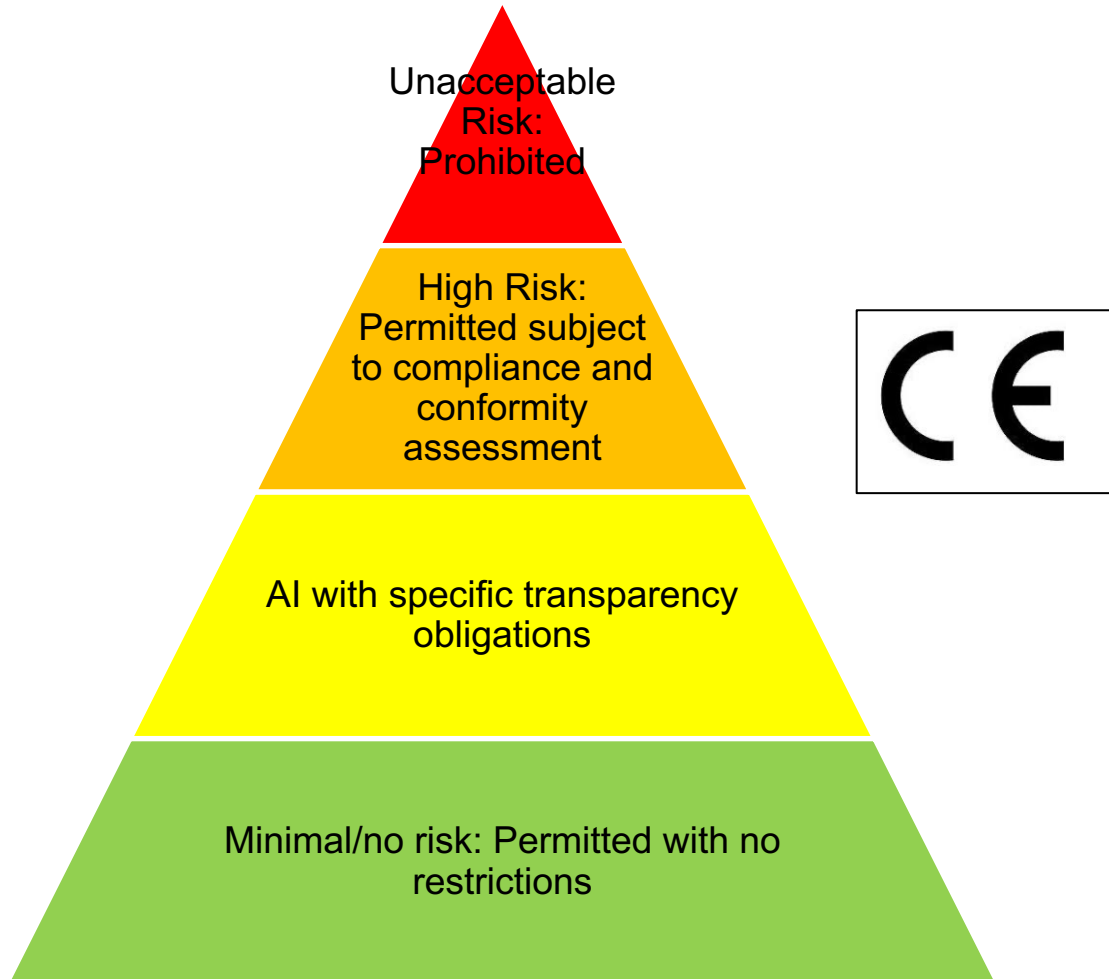
- 
- Assessing Risk
 - Quality Management
 - Documentation Requirements & Tools
 - Tracking Legislation and Standards
 - Local Challenges

Trustworthy AI and Data Governance:

complexities moving from principles to practice:

- Significant initiatives:
 - Emerging Legislation: EU AI Act, US National AI Initiative Act, China, Singapore
 - Emerging Standards: ISO/IEC JTC1 SC42, CEN/CLC JTC 21, IEEE P7000, National Bodies
 - Public Policy: EU HLEG, OECD, UNESCO
 - Organization level policies: tech platforms, public sector, sectoral/vertical, researchers
- Systemic Concerns
 - Workable guidelines
 - Regulatory load vs. benefits
 - Value-chain complexities & liability
 - Who wields oversight authority
 - Stakeholder engagement
 - Ethics Washing
- Divergent pressures
 - Disciplinary: 'problemists' vs 'solutionists'
 - Sectorial
 - Technological
 - Jurisdictional

EU AI Act



- Part of New Legislative Framework for product health and safety harmonization across single market
- Aims to protect **health, safety and fundamental rights**
- Enable access to **EU single market** for AI products/services
- A **Risk-based** approach to regulating AI
- Require product certification for high-risk AI system

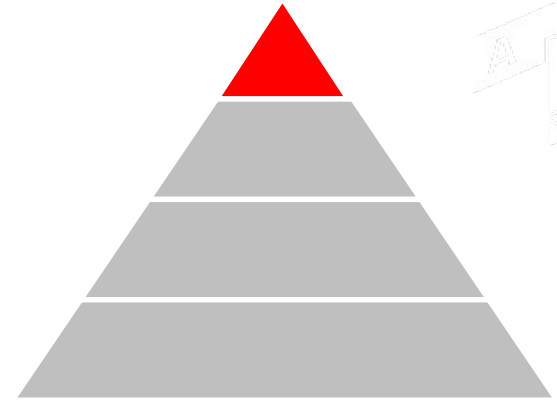
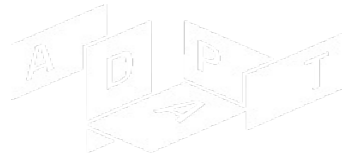
Legal Risk Assessment in AI Act: Three little words “and fundamental rights”

Preamble	Peace – common values	Universal values	Diversity, etc	Rights more visible	Reaffirms const. and int'l rights	Rights, duties, responsibilities	Rights, freedoms and principles
I Dignity (Articles 1–5)	1 Human dignity	2 Life	3 Integrity of the person	4 Torture and inhuman degrading treatment or punishment	5 Slavery and forced labour		
II Freedoms (Articles 6–19)	6 Liberty and security	7 Private and family life	8 Personal data	9 Marry and found family	10 Thought conscience and religion		
	11 Expression and information	12 Assembly and association	13 Arts and sciences	14 Education	15 Choose occupation and engage in work		
	16 Conduct a business	17 Property	18 Asylum	19 Removal, expulsion or extradition			
III Equality (Articles 20–26)	20 Equality before the law	21 Non-discrimination	22 Cultural, religious and linguistic diversity	23 Equality: men and women	24 The child	25 Elderly	26 Integration of persons with disabilities
IV Solidarity (Articles 27–38)	27 Workers right to information and consultation	28 collective bargaining and action	29 Access to placement services	30 Unjustified dismissal	31 Fair and just working conditions		
	32 Prohibition of child labour and protection of young people at work	33 Family and professional life	34 Social security and assistance	35 Health care	36 Access to services of general economic interest		
	37 Environmental protection	38 Consumer protection					
V Citizens' rights (Articles 39–46)	39 Vote and stand as candidate to EP	40 Vote and stand as candidate at municipal elections	41 Good administration	42 Access to documents	43 European ombudsman		
	44 Petition (EP)	45 Movement and residence	46 Diplomatic and consular protection				
VI Justice (Articles 47–50)	47 Effective remedy and fair trial	48 Presumption of innocence and right of defence	49 Legality and proportionality of criminal offences and penalties	50 <i>Ne bis in idem</i>			
VII General provisions (Articles 51–54)	51 Application	52 Scope and interpretation	53 Level of protection	54 Prohibition of abuse of rights			

- Reference to European Fundamental Rights
- Large expansion in product certification scope
- Requires understanding of legislation that protect these rights

https://commission.europa.eu/aid-development-cooperation-fundamental-rights/your-rights-eu/eu-charter-fundamental-rights_en

AI Act Prohibited AI Systems



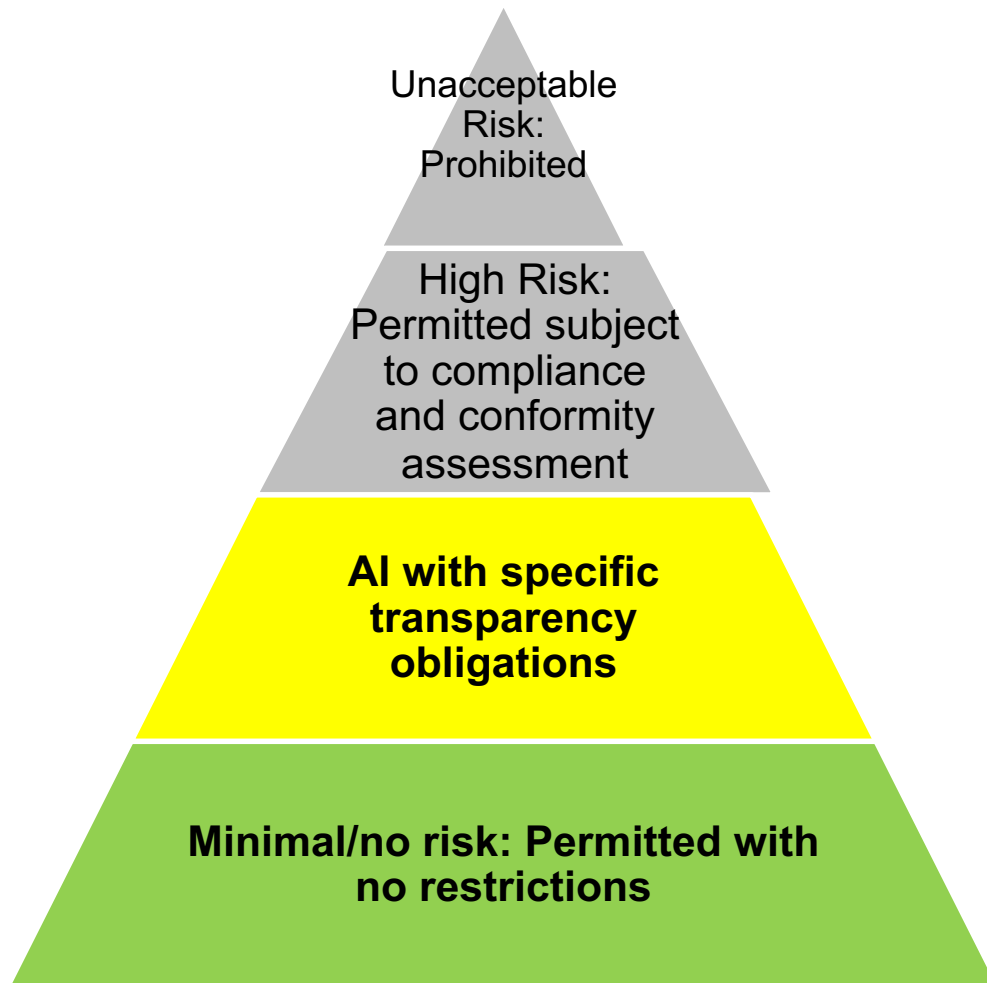
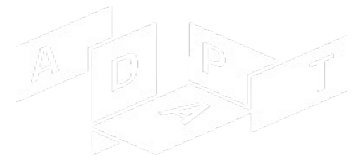
Subliminal manipulation
resulting in physical/
psychological harm

**Exploitation of children
or mentally disabled persons**
resulting in physical/psychological harm

**General purpose
social scoring**

**Remote biometric identification for law
enforcement purposes in publicly
accessible spaces (with exceptions)**

AI Act: Some (most?) AI systems won't be high risk



New transparency obligations for certain AI systems (Art. 52)

- **Notify humans** that they are **interacting with an AI system** unless this is evident
- Notify humans that emotional recognition or biometric categorisation systems are applied to them
- Apply **label to deep fakes** (unless necessary for the exercise of a fundamental right or freedom or for reasons of public interests)

Possible voluntary codes of conduct for AI with specific transparency requirements (Art. 69)

- No mandatory obligations
- Commission and Board to encourage drawing up of codes of conduct intended to foster the **voluntary application of requirements to low-risk AI systems**

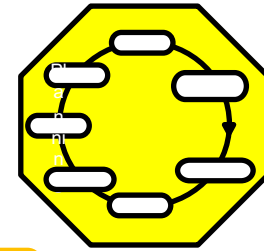
Source: European Commission

AI Act: Requirements on High Risk AI Systems



Determine if classified as High Risk

Ensure Design and Development are in compliance with Reg: risk management, data quality, transparency, traceability, auditability, robustness, accuracy, cybersecurity, human oversight



Quality Management System

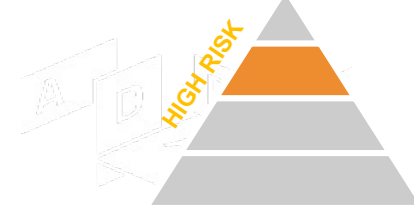
Third Party or Internal Conformity assessment procedure

Affix CE mark

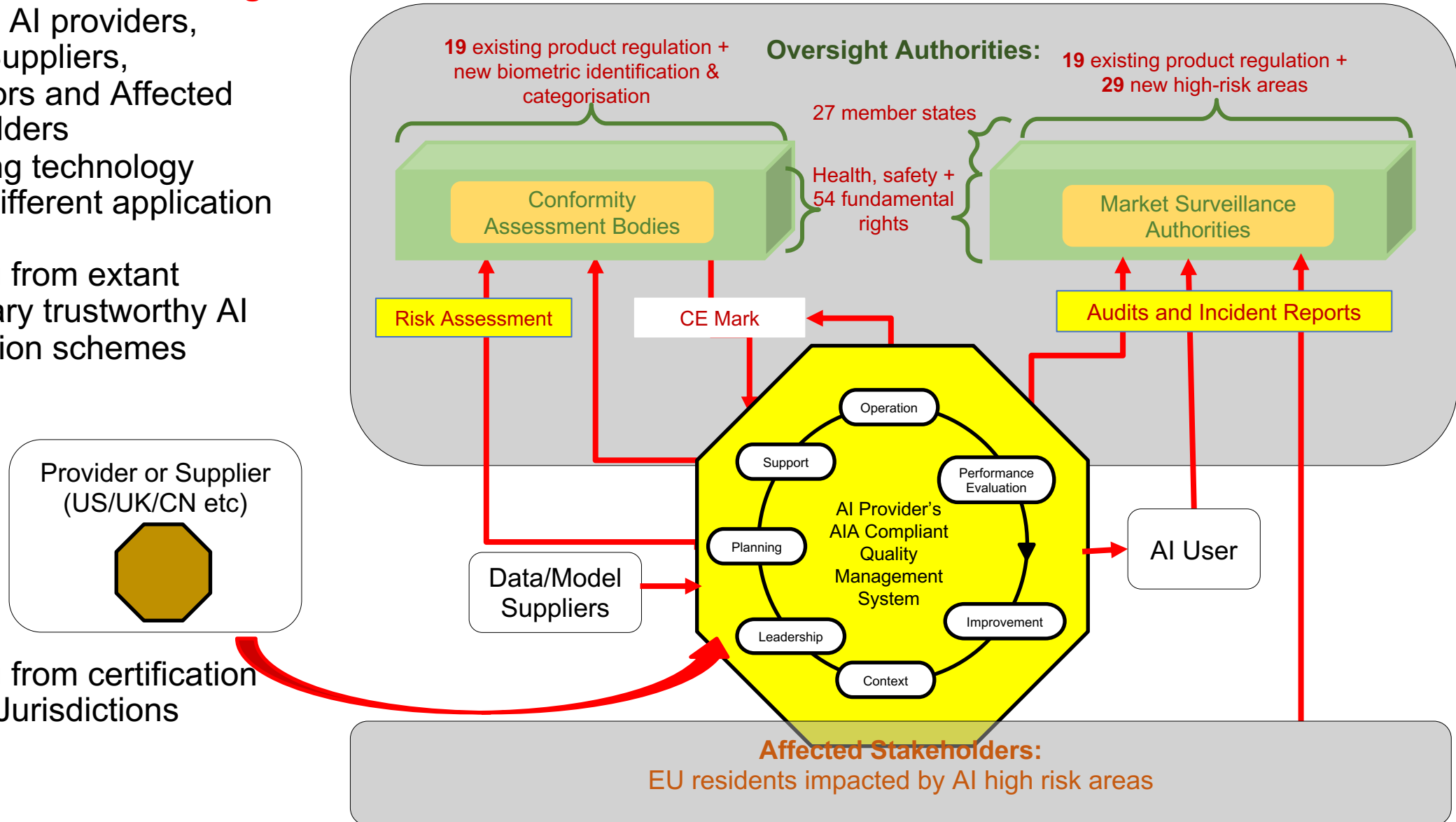
Put on Market/into Service

Source: European Commission

Stakeholder Information Sharing Requirements for the AI Act



- **Consistent info exchange** between AI providers, Users, Suppliers, Regulators and Affected Stakeholders
- Deploying technology across different application areas
- Mapping from extant proprietary trustworthy AI certification schemes
- Mapping from certification in other Jurisdictions



AI Act Annex II: High Risks AI already subject to Harmonised Legislation – map to existing IE authorities



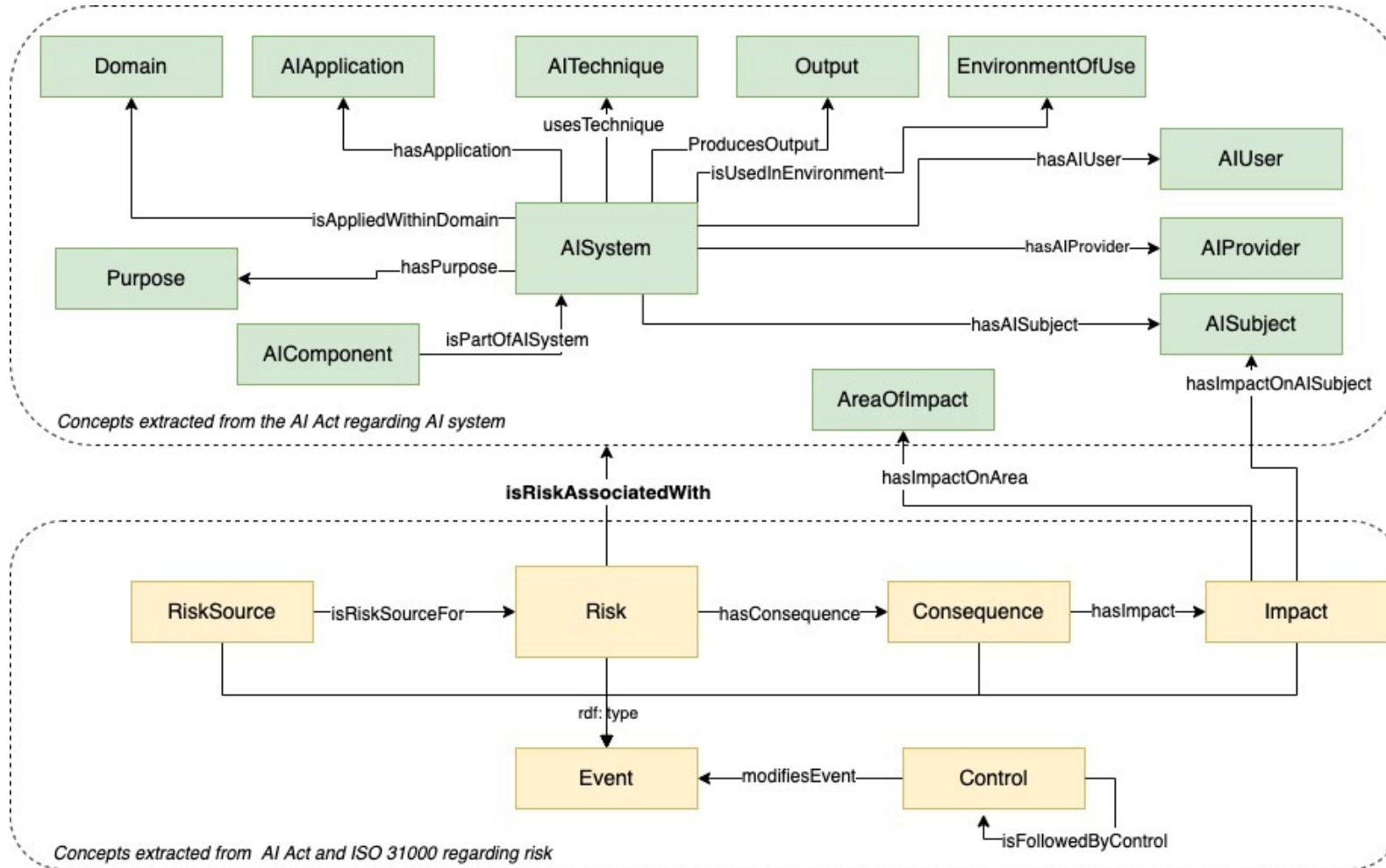
Area	Harmonised legislation	Responsible Irish Body
machinery	2006/42/EC	Health and Safety Authority
toys	2009/48/EC	Competition and Consumer Protection Commission
recreational/personal watercraft	2013/53/EU	Dept of Transport
lifts	2014/33/EU	Health and Safety Authority
explosive gasses	2014/34/EU	Health and Safety Authority
radio equipment harmonised legislation	2014/53/EU	ComReg
pressure equipment harmonised legislation	2014/68/EU	Health and Safety Authority
cableway installation harmonised legislation	2016/424	Commission for Railway Regulation
personal protective equipment harmonised legislation	2016/425	Health and Safety Authority & Competition and Consumer Protection Commission
burning gaseous fuels harmonised legislation	2016/426	Health and Safety Authority & Competition and Consumer Protection Commission
medical devices harmonised legislation	2017/745	Health Products Regulatory Authority
in vitro diagnostic medical devices harmonised legislation	2017/746	Health Products Regulatory Authority
civil aviation harmonised legislation	300/2008	Irish Aviation Authority
two- or three-wheel vehicles and quadricycles harmonised legislation	168/2013	Under consideration
agricultural and forestry vehicles harmonised legislation	167/2013	Minister for Agriculture, Food and the Marine
marine equipment harmonised legislation	2014/90	Department of Transport. Marine Survey Office
rail systems harmonised legislation	2016/797	Commission for Railway Regulation
motor vehicles and their trailers and components harmonised legislation	2018/858	Road Safety Authority of Ireland
civil aviation safety harmonised legislation	2018/1139	Irish Aviation Authority

High-risk Artificial Intelligence Systems (Title III, Chapter 1 & Annexes II and III)



- High risk application identified in Annex III:
 - Biometric identification and categorisation of natural persons (externally certified)
 - Management and operation of critical infrastructure
 - Education and vocational training
 - Employment and workers management, access to self-employment
 - Access to and enjoyment of essential private services and public services and benefits
 - Law enforcement
 - Migration, asylum and border control management
 - Administration of justice and democratic processes

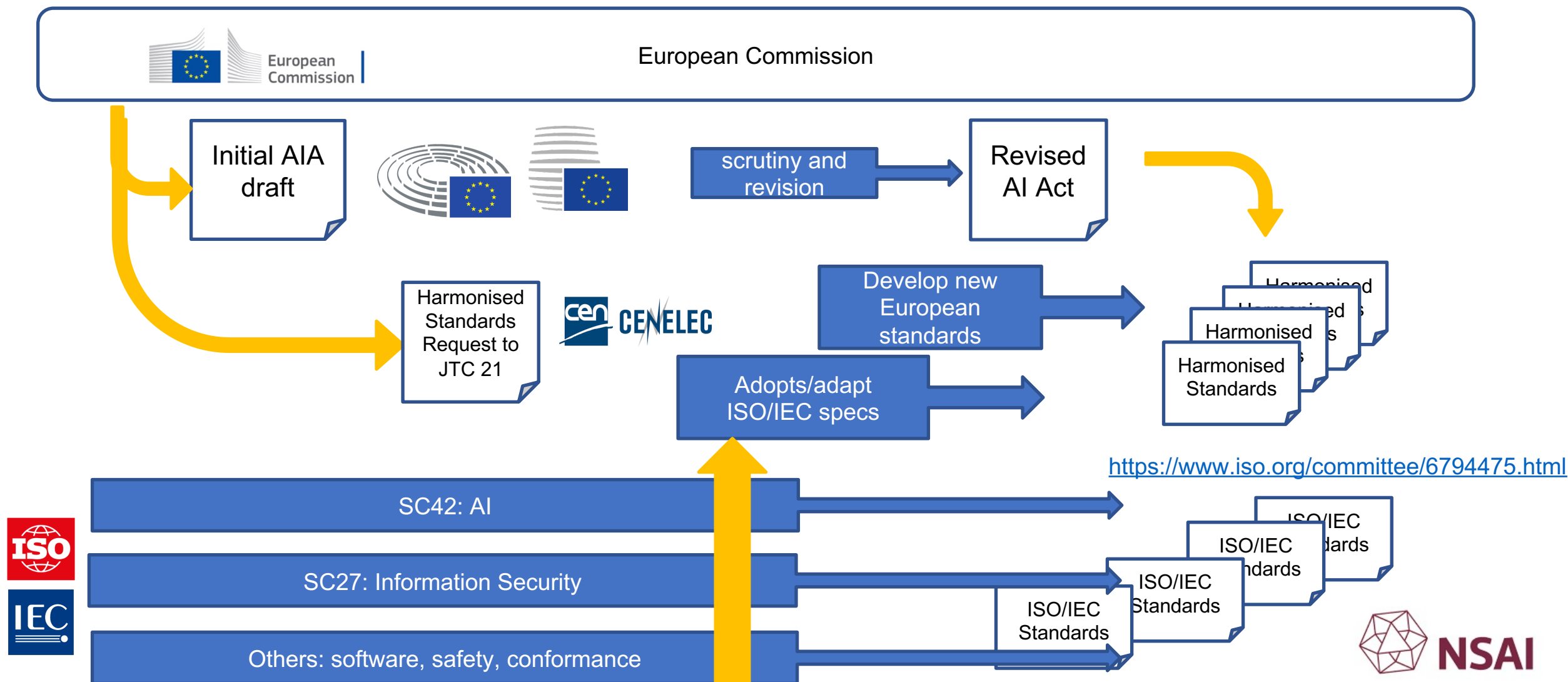
Examples from ADAPT: Open Vocabulary for AI Act Risk classification



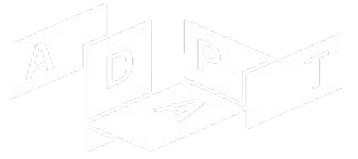
- Bridges risk requirement of AIA with ISO risk management
- Semantic interoperability (with AIA traceability) for document generation, checking and exchange
- E.g. knowledge graph constraints definition for checking high-risk application status

Track Legal and Technical Development of AI Act

<https://www.euractiv.com/section/artificial-intelligence/news/>



Emerging International Standards for AI: ISO/IEC SC42

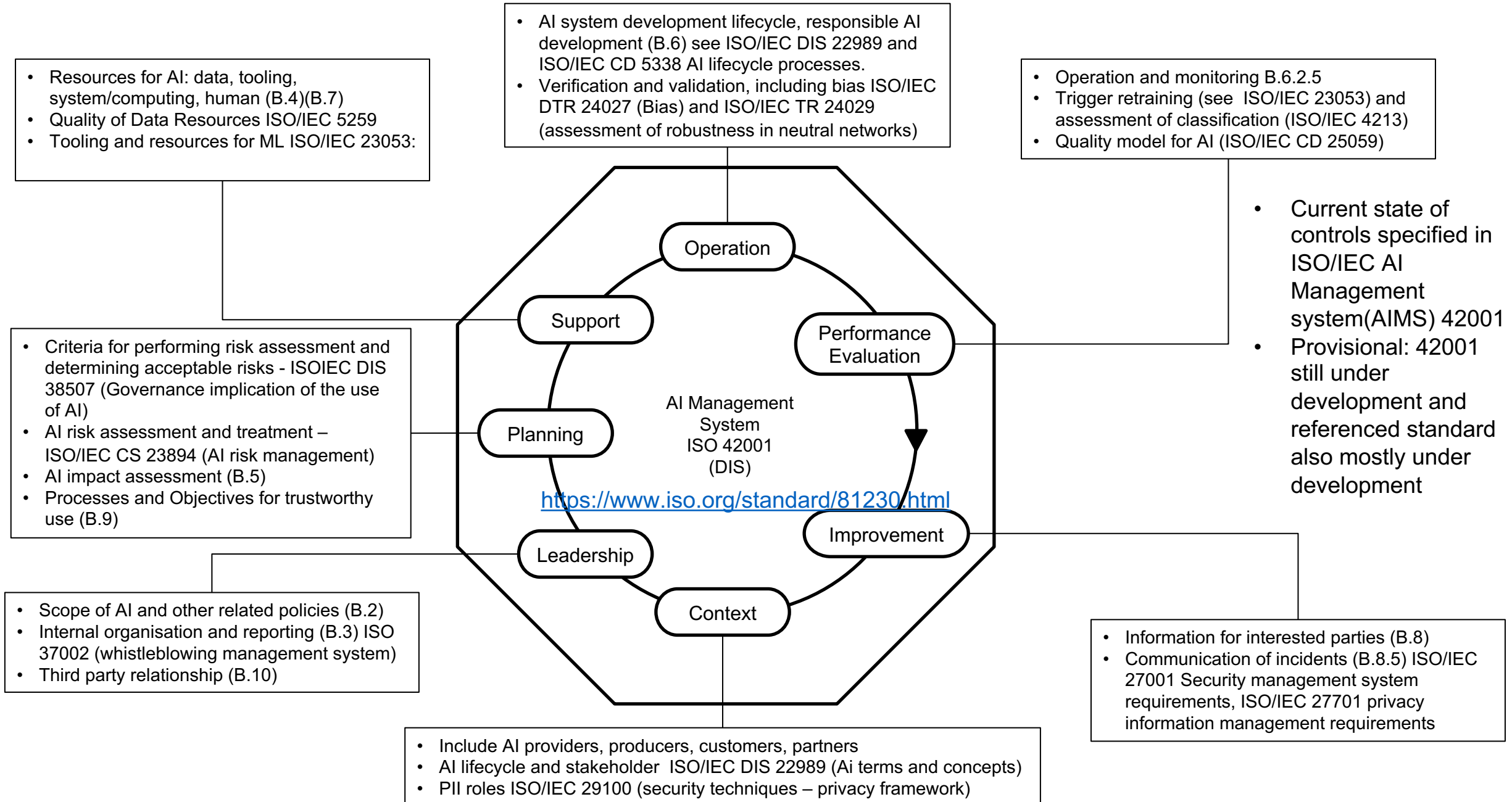


AI Foundations	<u>Trustworthy AI</u>	AI Systems
<ul style="list-style-type: none">• Big Data Reference Framework• Terms and Concepts• ML Framework• Use Cases• ...	<ul style="list-style-type: none">• Overview of Trustworthy AI• Neural Net Robustness• Risk Management• Bias• Ethical and Societal Issues• ...	<ul style="list-style-type: none">• Governance• Systems Engineering• Management System Standard• Oversight• Testing• AI Quality• Data Quality for ML• ...

<https://www.iso.org/committee/6794475.html>

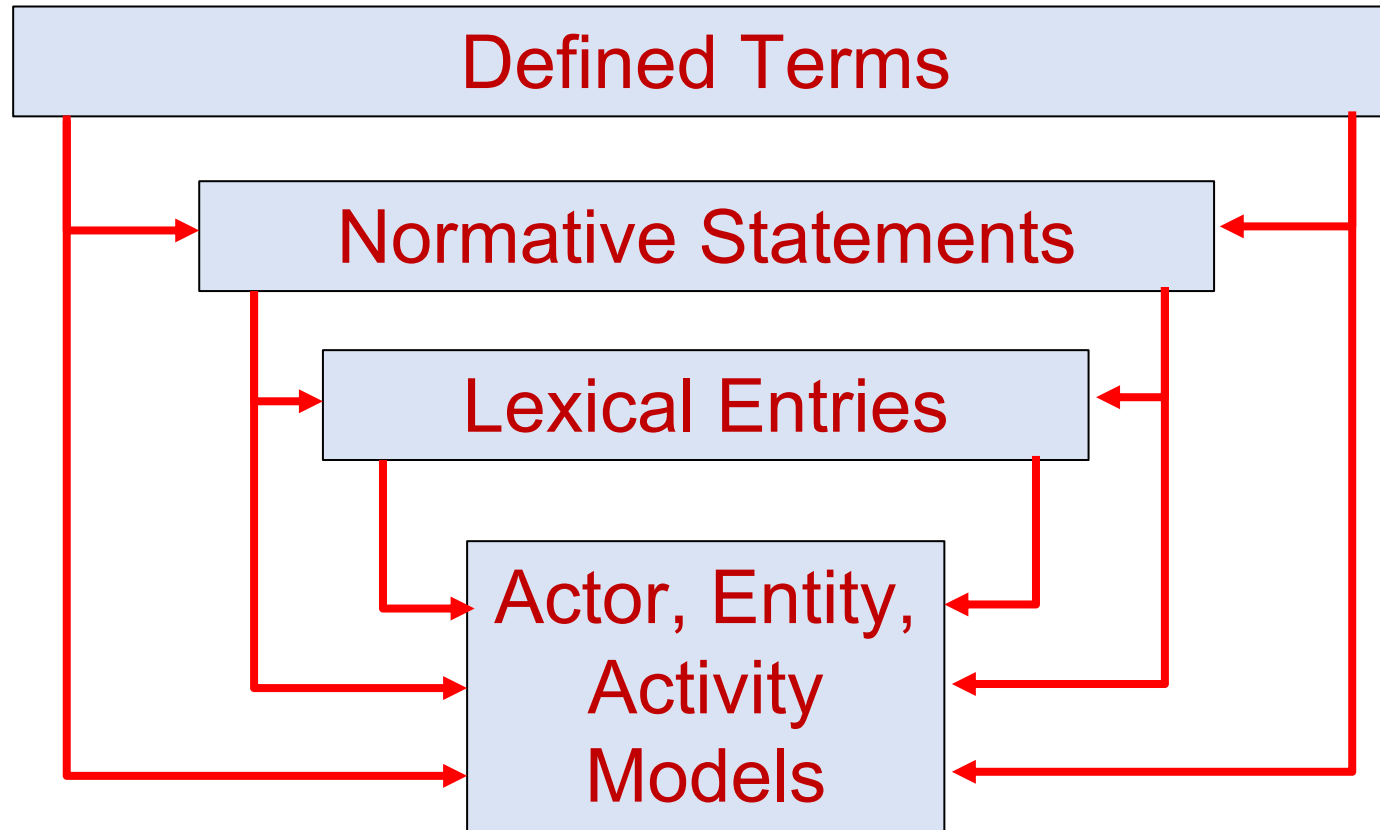
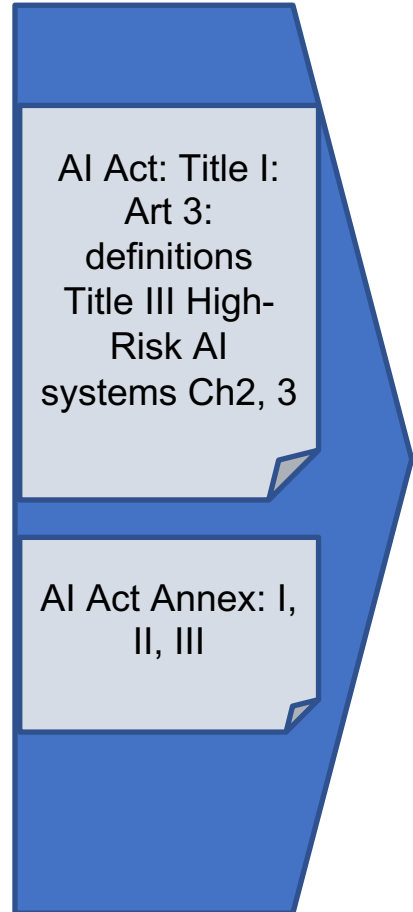


Standards work as part of an AI Management System

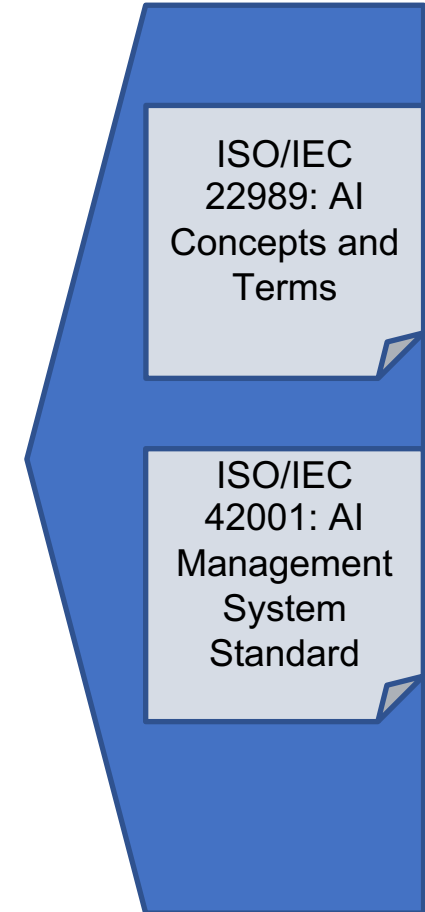


Examples from ADAPT: Mapping Legal to Technical Requirements

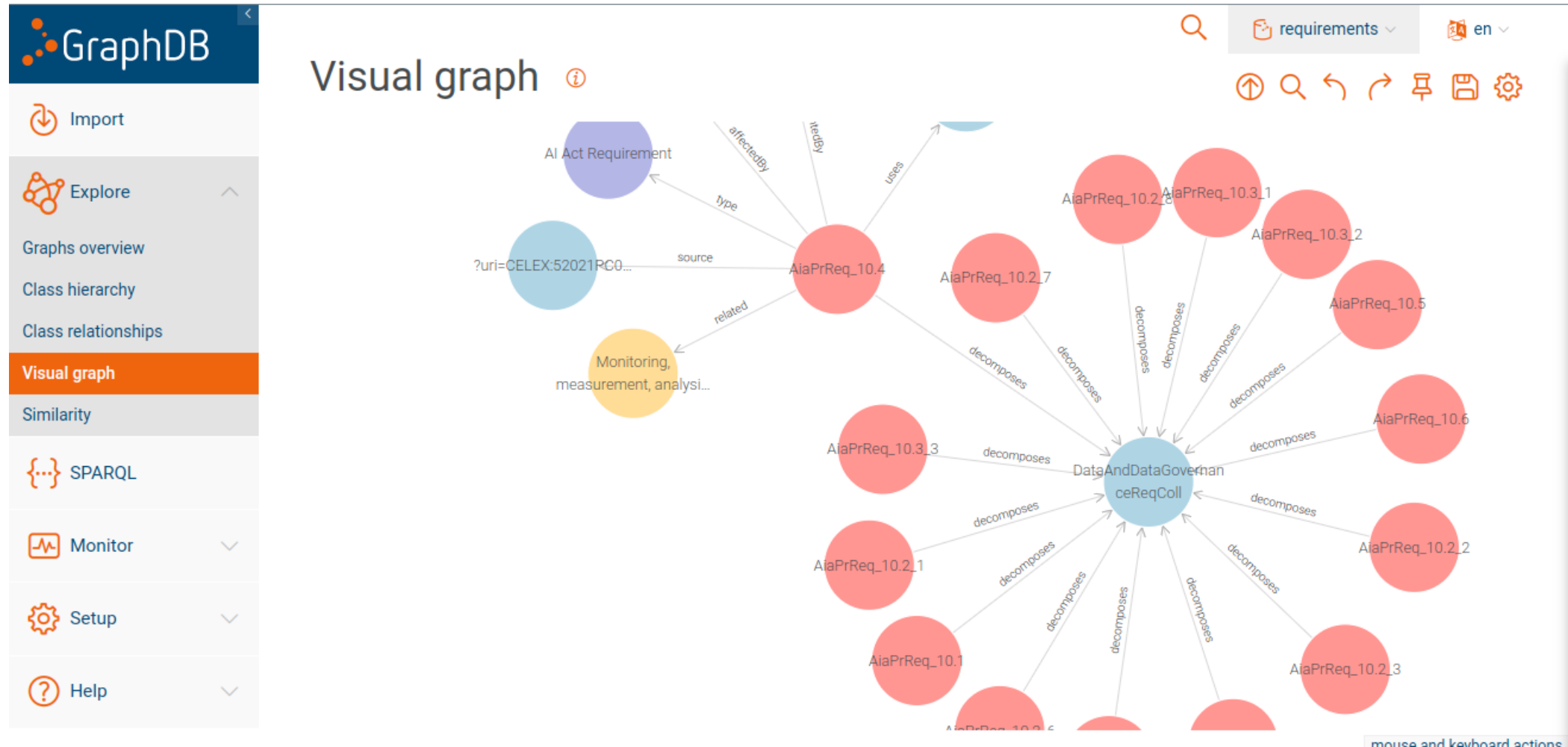
Draft AI Act Text



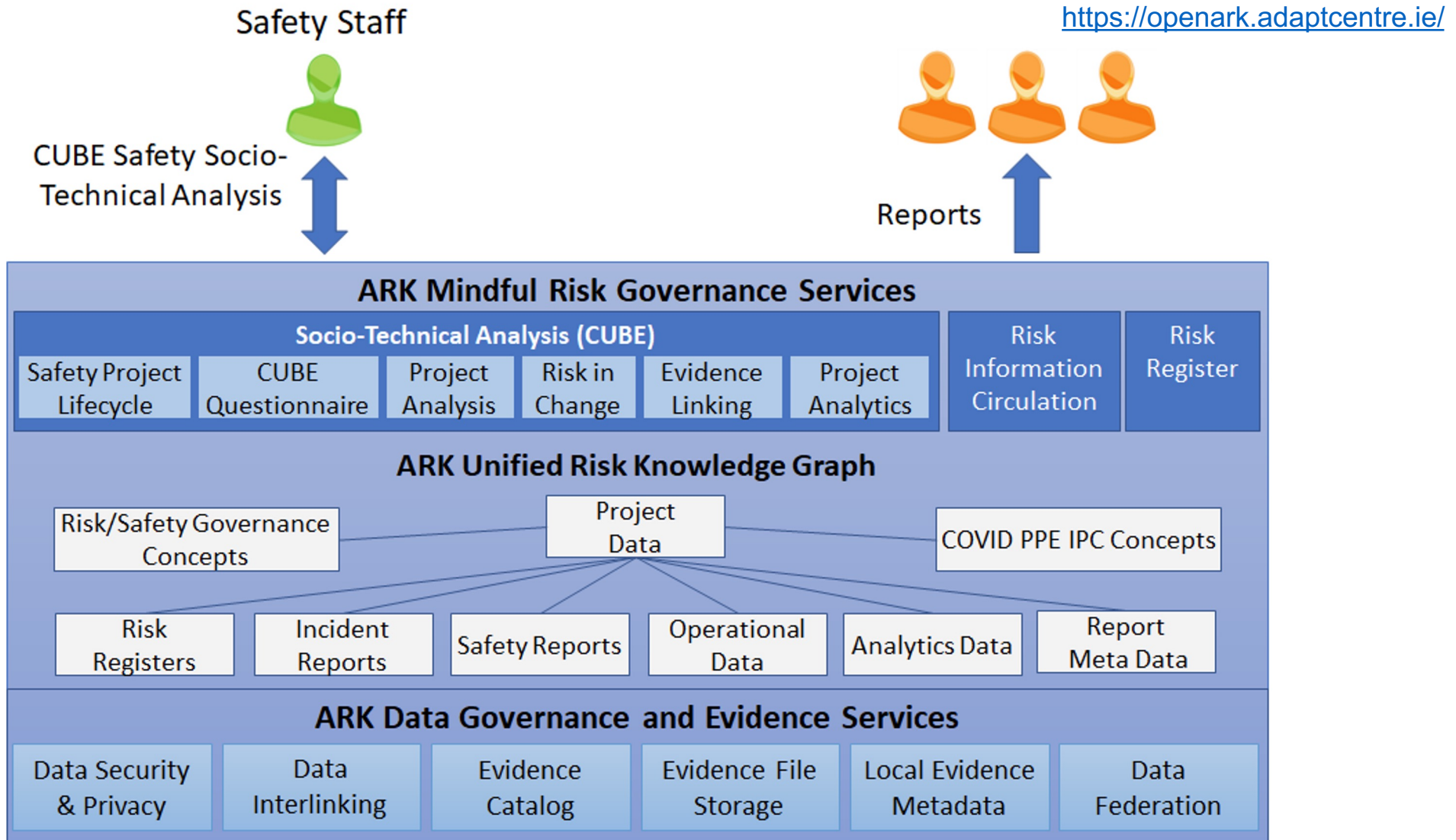
ISO IEC SC42
Standards



Open Knowledge Graph: AI Act/SC42 conformance concepts and requirements



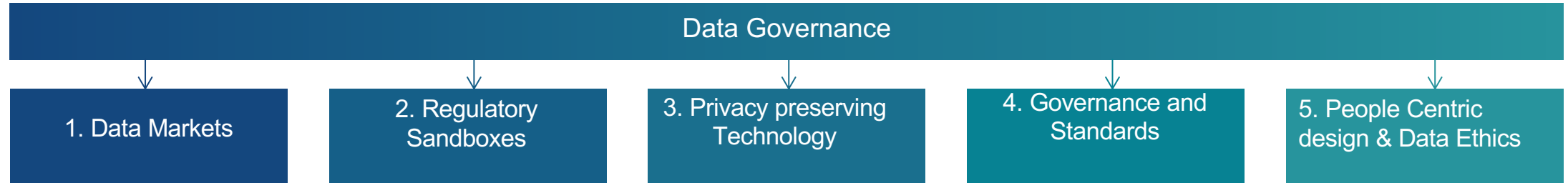
Example from ADAPT: ARK-Virus Risk Management Tool for health info sharing



Irish Challenges in Implementing AI Act

- Sandbox Infrastructure:
 - See Spanish Pilot: <https://digital-strategy.ec.europa.eu/en/events/launch-event-spanish-regulatory-sandbox-artificial-intelligence>
 - AI incident report repositories, e.g. <https://www.aiaaic.org/>
- Develop vertical stakeholder-agreed test sets for self-certification
 - e.g. AI bias for access to essential services or processing job applications with synthetic data sets
- Will we have Irish AIA Certifiers (Notified Bodies)?
 - e.g. AI inclusion in medical device certification, remote biometric identification
- Mapping from other standards/guides to AIA/SC42 normative terminology,
 - e.g. NIST Risk Management, Microsoft Responsible AI standard, IEEE P7001 (with IDA?)
- AI conformance training, especially for SME sector (with EI?) eg <https://emildai.eu/>

Don't do it Alone: EMPOWER Community of Practice (CoP)



The EMPOWER CoP brings together senior leaders from a diverse group of organisations, including **(industry, academia, public sector and society)** to work collectively to co-create a **Data Governance Roadmap** for Ireland with concrete recommendations and actions that will directly contribute to ensuring Ireland is a world leader in the data economy.



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Thank You

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