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Fundamentals of Classification (Classification of AI systems under the EU AI Act)

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- Member, EU Commission Expert Group on “Liability and new technologies, New technologies formation” (2018–2020)
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Julian Sartorio, lic. en droit



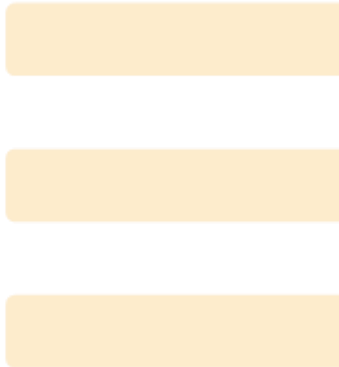
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Agenda

- I. The classification of high-risk AI systems under the AI Act**
- II. Specific risk assessment, Article 6(3) AI Act**
 1. Example: FRAUKE
 2. Borges / Elborg: Saarbrücken Taxonomy for high-risk AI systems

1
2
3





The classification of high-risk AI systems under the AI Act

The classification of high-risk AI systems under the AI Act

Article 6: Two concepts of high-risk AI systems

Article 6(1) in conjunction with Annex I

Article 6(2) and (3) in conjunction with Annex III

- 1. AI systems as safety components of a regulated product, Article 6(1) in conjunction with Annex I**
 - » An AI system is classified as a high-risk AI system if the product is subject to European product safety legislation and, as a result, requires a conformity assessment by an independent third party
- 2. AI systems intended for use in high-risk areas, Article 6(2) and (3) in conjunction with Annex III**
 - » Two-stage system for classification as a high-risk AI system
 - 1) Use of the output of the AI system in a high-risk area
 - 2) Specific risks posed by the system, Art. 6(3)

Function AI Act: to supplement European product safety law with regard to AI systems

Function AI Act: Product safety law for software posing risks to personal rights

The classification of high-risk AI systems under the AI Act

Article 6: Two concepts of high-risk AI systems

Article 6(1) in conjunction with Annex I

Article 6(2) and (3) in conjunction with Annex III

1. AI systems

Article 6(1)

» An AI system subject to the requirements of Article 6(1) requires a conformity assessment by an independent third party

2. AI systems intended for use in high-risk areas, Article 6(2) and (3) in conjunction with Annex III

- » Two-stage system for classification as a high-risk AI system
 - 1) Use of the output of the AI system in a high-risk area
 - 2) Specific risks posed by the system, Art. 6(3)

2) Specific risks posed by the system, Art. 6(3)

Function AI Act:
Product safety law for software posing risks to personal rights



Specific risk assessment, Article 6(3) AI Act

Example: FRAUKE

Automated judicial decisions

Example: "FraUke"
('Frankfurt Judgment Configurator Electronic')

- FRAUKE's services
 - Information extraction from pleadings
 - Comparison with information from databases
 - Subsumption using an algorithm
 - Preparation of a draft judgment
- Field of application: Air passenger law



Example: FRAUKE

The use of AI systems in a high-risk area


Benchmark: Intended use of the result generated by the AI system in a high-risk area

- **Justice as a high-risk sector, Annex III No. 8(a)**

AI systems intended to be used by or on behalf of a judicial authority to assist a judicial authority in the investigation and interpretation of facts and legal provisions and in the application of the law to specific cases, or which are intended to be used in a similar manner for alternative dispute resolution; [...]

- **Problem:** narrow or broad interpretation of Annex III No. 8a)?

Mediating approach

covered	not covered
<ul style="list-style-type: none">» Processes relating to decision-making– not just subsumption– also: determination of facts + legal position / procedural design 	<ul style="list-style-type: none">» Administration / maintenance of the judiciary as such

Borges / Elborg: Saarbrücken Taxonomy for High-Risk AI Systems

Criteria for classifying specific risks

- **Objective AI Act: protection against specific risks posed by AI systems**
- **Two fundamentally different approaches to distinguishing the degree of risk**

(1) Risks to data subjects

- Risks to data subjects arising from faulty operations
- The greater the **potential harm** to data subjects caused by the process ⇒ The higher the risk

(2) Risks posed by the AI system

- Significance of the AI system in the process
- The more **human activity is replaced** by the AI system ⇒ The higher the risk

Concept: Relevance of both aspects risk assessment with two components

- Criticality of the process (1)
- Impact of the AI system on the process (2)

Borges / Elborg: Saarbrücken Taxonomy for High-Risk AI Systems

The interaction of the criteria

- **2 criteria with a total of 6 levels**
 - Criticality of the process: 3 classes
 - System influence: 2 classes

Criticality	Impact	High-risk AI system?
High	High	+
High	low	+
low	low	-
low	high	-
medium	high	+
medium	low	-

Borges / Elborg: Saarbrücken Taxonomy for High-Risk AI Systems

The interaction of the criteria

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Criticality	Impact	High-risk AI system?
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low	low	-
low	high	-
medium	high	+
medium	low	-



Thank you very much for your attention!

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Further reading:

Borges, G.:
The European AI Act (AI Act) – Part 1: Overview, Scope and Initial Assessment, CR 2024, 497 ff.

Borges, G.:
The European AI Act (AI Act) – Part 2: Risk Management for High-Risk AI Systems, CR 2024, 565 ff.

Borges, G.:
The European AI Act (AI Act) Part 3 – Transparency Requirements, Enforcement, Overall Assessment, CR 2024, 633 ff.

