



Ethical Artificial Intelligence caught between regulation and responsibility

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The central question

- On the one hand, we have guidelines for ethical AI, ...
- ... and on the other, we have comprehensive AI regulation in the European Union.
- **Are we acting ethically and responsibly if we comply with regulations?**

In other words:

- **Does AI regulation support ethical AI requirements?**



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REGULATION (EU) 2024/1689 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 13 June 2024

laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act)

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ETHICS GUIDELINES FOR TRUSTWORTHY AI



In 2017, the European Commission convened a panel of experts on artificial intelligence and ethical issues, known as the *High-Level Expert Group on Artificial Intelligence*.

On 8 April 2019, the HLEG published a document entitled

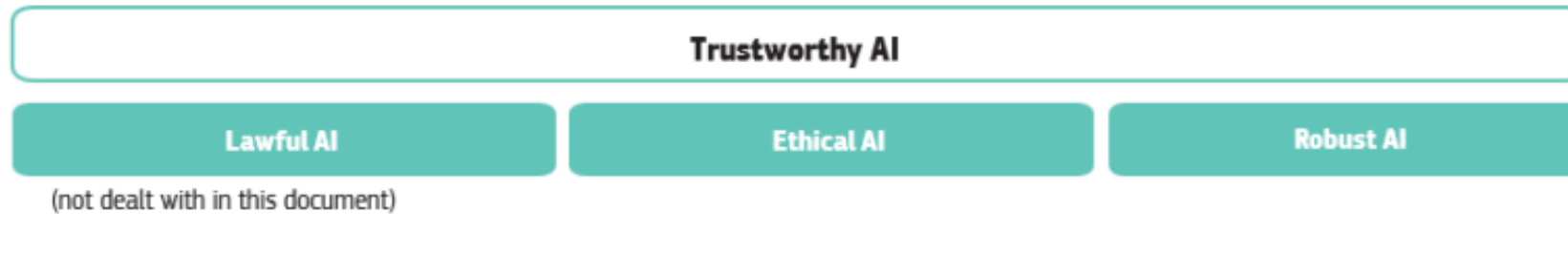
"ETHICS GUIDELINES FOR TRUSTWORTHY AI"*.

- This document is not an EU framework directive or basic regulation and is therefore not legally binding.
- However, it does provide principles and requirements for AI systems.



*) ETHICS GUIDELINES FOR TRUSTWORTHY AI, High-Level Expert Group on Artificial Intelligence (HLEG), European Commission, Brussels, 8 April 2019
<https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai>

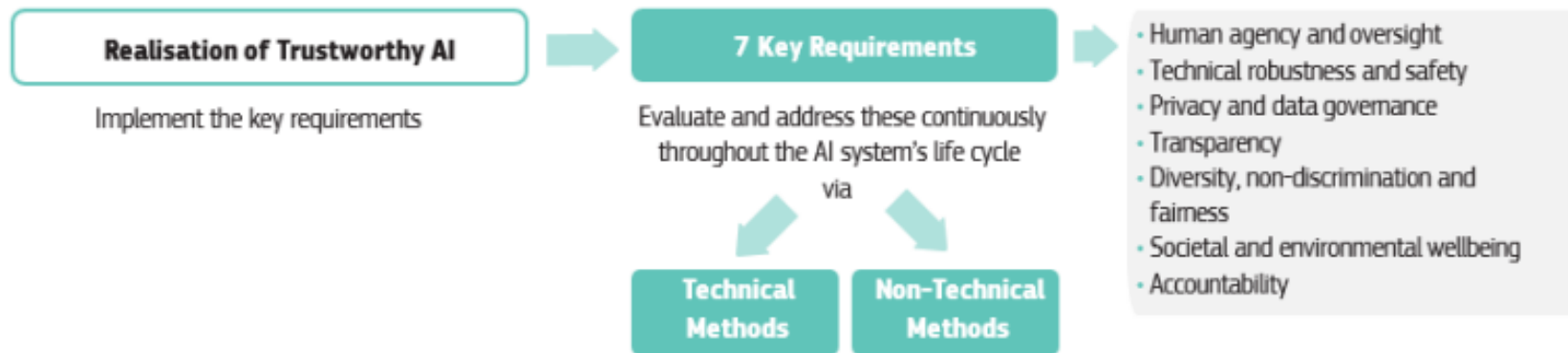
INTRODUCTION



CHAPTER I



CHAPTER II



CHAPTER III



Ethical Principles

- AI systems should improve individual and collective wellbeing.
- To this end, four ethical principles are defined, which are based on fundamental rights and must be observed to ensure that AI systems are developed, deployed, and used in a trustworthy manner.

1) Respect for human autonomy

2) Prevention of harm

Note: “Preventing harm also entails consideration of the natural environment and all living beings.”

3) Fairness

4) Explicability

Key Requirements

- The principles must be translated into concrete requirements to achieve Trustworthy AI.
- These requirements are applicable to different stakeholders partaking in AI systems' life cycle: developers, deployers and end-users, as well as the broader society.
 - 1) Human agency and oversight
 - 2) Technical robustness and safety
 - 3) Privacy and data governance
 - 4) Transparency
 - 5) Diversity, non-discrimination and fairness
 - 6) Societal and environmental wellbeing Including sustainability and environmental friendliness, social impact, society and democracy
 - 7) Accountability Including auditability, minimization and reporting of negative impact, trade-offs and redress.

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The Artificial Intelligence Act

Based on the requirements of *High-Level Expert Group on Artificial Intelligence*, the European Commission, together with the European Parliament and the European Council, has derived a regulation for artificial intelligence. The Artificial Intelligence Act **(AI Act)** has been in force since August 1, 2024.



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Regulations – Systematics

In contrast to the holistic approach of the HLEG ...

...the legislative bodies opted for a risk-based regulatory approach!

Regulations for different **categories** of AI systems

- Prohibited practices (Art. 5) **All AI systems**
- Requirements for high-risk systems (Art. 8 ff) **High-risk systems**
- Transparency obligations (Article 50 ff) **"Certain systems" / general purpose**
- Codes of conduct (Article 95) **Non-high-risk systems**

Regulations – Overview

- Prohibited practices (Art. 5)
- Requirements for high-risk systems (Art. 8 ff)
- Transparency obligations (Article 50 ff)
- Codes of conduct (Article 95)
- subliminal influence, exploiting a weakness or vulnerability, social scoring, ...
- listed in Annex III, among others: management and operation of critical infrastructure, law enforcement, accessibility and use of basic private and public services
- interaction, with natural persons, deep fakes, general-purpose AI models with/with systemic risks
- no requirements, (only) voluntary application of specific requirements

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ETHICS GUIDELINES vs. AI Act

- Back to the central question
- Are we acting ethically and responsibly if we comply with regulations?

In other words:

- Does AI regulation support ethical AI requirements?
- What from the ETHICS GUIDELINES report can we find in the AI Act?
- Let's have a deeper look at the four categories of regulation.

Prohibited practices (category 1)

- **Prohibited practices are unethical!**



Source: Pixabay

High-risk AI systems (category 2)



- The focus of regulation is on high-risk systems.
- The four **Ethical Principles** and the **six of seven Key Requirements** of the HLEG were largely adopted here.
- **Exception:** The requirement for **societal and environmental wellbeing** is not reflected in the requirements for high-risk systems.
- But at least the other requirements are reflected in the regulation.
- But only for **High-risk AI systems!**
- But when do we deal with **High-risk AI systems** in insurance?

“5. (c) AI systems intended to be used for risk assessment and pricing in relation to natural persons in the case of health and life insurance; ...”

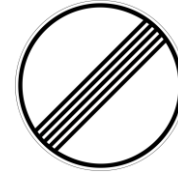
Source: Pixabay

Transparency obligations (category 3)



- Only the transparency requirements (number 4) were included in category three, i.e. AI Systems with specific Transparency obligations.
- We cannot find any other core requirements here!

Codes of conduct (category 4)



Most of what we do in terms of AI does not fall into any of the first three categories, but rather into category four.

- And for Category 4 applications, **no explicit requirements** are formulated in the AI Act.
- Providers, operators, and users are requested to formulate voluntary commitments (Code of Conducts), considering the **Ethical Principles** and the **Key Requirements** of the HLEG.
- Including the requirement for **diversity, non-discrimination and fairness**.
 - (d) facilitating an inclusive and diverse design of AI systems, including through the establishment of inclusive and diverse development teams and the promotion of stakeholders' participation in that process;
- Including the requirement for **societal and environmental wellbeing**.
 - (b) assessing and minimising the impact of AI systems on environmental sustainability, including as regards energy-efficient programming and techniques for the efficient design, training and use of AI;

Article 95

Source: Pixabay

Conclusion

- The vast majority of AI applications that we as actuaries deal with fall into category 4, for which no explicit requirements have been formulated.
- We find binding requirements for ethical conduct in dealing with AI (almost) exclusively at high-risk systems.
- And here, the requirements for societal and environmental wellbeing are left out of the equation.
- **BUT:** As actuaries, data scientists, and citizens, we have a responsibility to ensure that “our” AI applications treat people ethically.
- And that doesn't just mean our customers, the policyholders.

What should be done?

- Policyholders entrust us with their money and rely on us to handle it correctly and to always calculate premiums and provisions accurately.
- They trust us to handle their data in accordance with the law.
- But that's not enough, because they trust us to act fairly, transparently and ethically, even when we use AI.
- **Therefore, as actuaries, let us accept this task and take responsibility for the ethical use of AI in insurance.**

What does that mean specifically? (1)

- For every AI project and every AI application, even if it falls into category 4, we should:
- Always consider the four **Ethical Principles** from the outset!
 - 1) **Respect for human autonomy**: No automatic decisions by AI applications
 - 2) **Prevention of harm**: Preventing harm to our customers, as well as to our environment and all living creatures
 - 3) **Fairness**: Always act in good faith
 - 4) **Explicability**: Avoid black-box models

What does that mean specifically? (2)

Always check whether and how we can meet the seven **Key Requirements!**

- Including the requirement for **diversity, non-discrimination and fairness.**
 - With a view to achieving balance within the collective, it must always be decided to what extent the progressive individualization of insurance products with the help of AI applications is compatible with the principle of fairness.
- Including the requirement for **societal and environmental wellbeing.**
 - Preventing harm also entails consideration of the natural environment and all living beings.
 - -> Climate protection, biodiversity conservation, environmental protection

Speaker & Company

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