

The background of the entire page is a blue-toned digital grid. On the left side, there is a profile of a human head, and on the right side, there is a profile of a head made of a white wireframe mesh. The text is centered between these two profiles.

# Ethics in AI: How to Make Your AI System Responsible

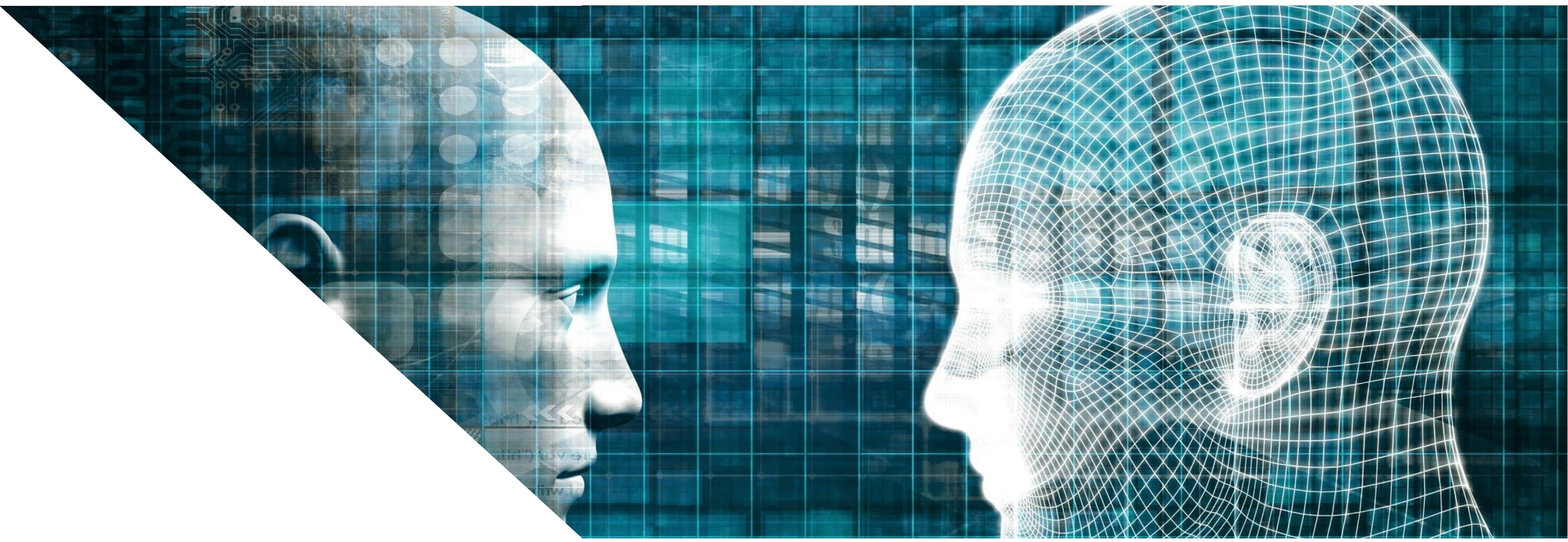
Are you already harnessing the power of AI or considering its implementation soon? Perhaps you are concerned about the potential impact that AI applications could have on your company, your customers, or society. Many organisations experimenting with AI struggle to innovate responsibly and worry about associated risks. Our white paper explores how ADC ensures responsible AI integration in our solutions.

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**Together we create real impact with Data & AI**



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## Introduction

Are you already harnessing the power of AI or considering its implementation soon? Perhaps you are concerned about the potential impact that AI applications could have on your company, your customers, or society. Many organisations experimenting with AI struggle with innovating responsibly and might have apprehensions surrounding the risks associated with AI technologies.

**In this white paper, we explore the topic of Responsible AI and how ADC ensures its integration in our solutions.**

## AI's Pitfalls: Biases and Systemic Concerns

In recent years, notable instances have underscored the potential pitfalls of AI implementation. One such case involves Amazon's recruitment process, where biased algorithms resulted in the disproportionate disqualification of female candidates for technical roles. Similarly, the Dutch student finance agency, DUO, faced criticism for indirect discrimination in its verification process for student allowances. In this case, students with a migration background were more likely to be subjected to checks, and subsequently wrongly assessed, highlighting systemic biases within the system.

**These examples illustrate the urgent need for rigorous oversight and ethical considerations in AI development and deployment. By addressing these concerns head-on, we can effectively mitigate the risks of bias and discrimination in AI technologies.**

## ADC's Integrated Approach: A Responsible AI Compass to Set Key Requirements

**At ADC, we take a comprehensive approach to Responsible AI from both a legal and a moral standpoint.**

While the recently enacted EU AI Act sets legal requirements (mainly) for "high-risk" AI use-cases, we recognise that organisations also carry moral responsibilities to ensure their AI aligns with their mission, vision, and values.

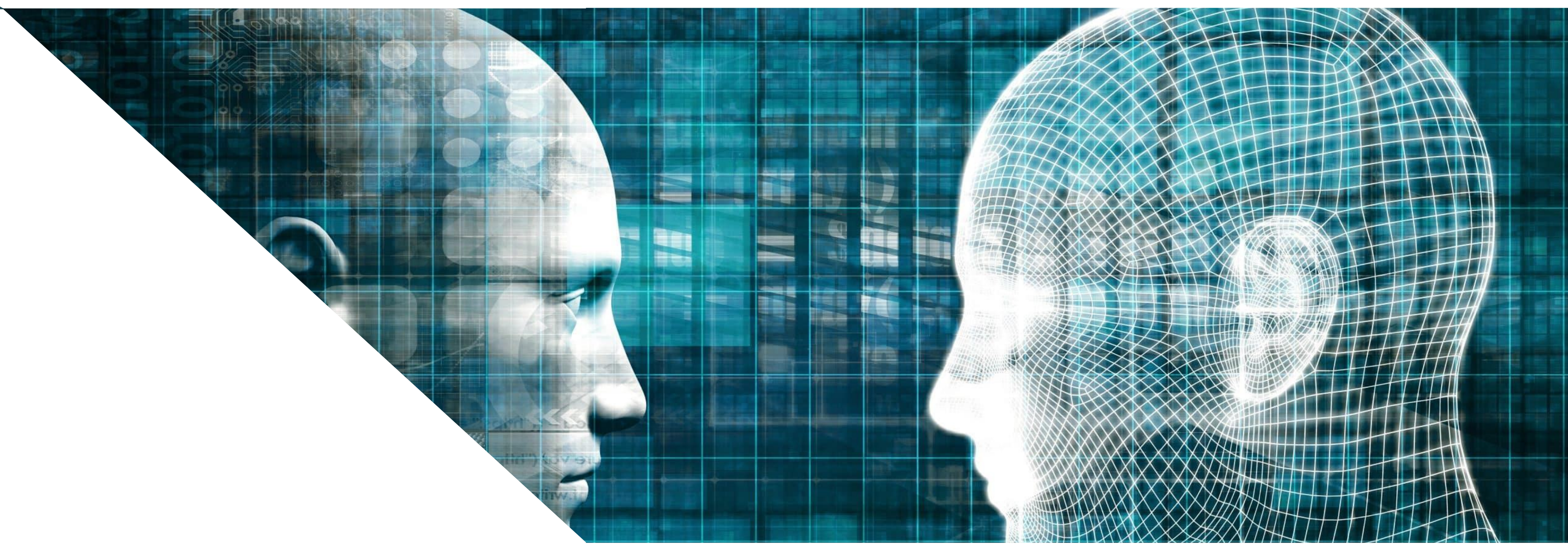
Using our Responsible AI compass, we seamlessly integrate both legal mandates and moral considerations. This is achieved by adhering to the seven key requirements outlined in the European Commission's [Ethics Guidelines for Trustworthy AI](#). While the AI Act establishes legal requirements for AI use-cases across varying risk levels, the framework elevates the standard by incorporating broader ethical commitments that resonate with an organisation's values. This ensures that not only compliance is achieved, but that your organisation also upholds its ethical principles and fosters trust and integrity in its AI initiatives.

### Phased implementation of the AI Act: why you need to act now!

The EU AI Act will be implemented in phases, gradually introducing requirements to allow organisations to adapt and comply over time. The phased approach means that certain provisions will take effect sooner, particularly for high-risk AI systems, while other requirements will be enforced later. The first regulatory requirements will come into force within about 6 months, meaning it is important to act as soon as possible! For more information on this, please reach out to us.



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## Implementing Responsible AI Starts by Understanding the Purpose of the AI

**Implementing Responsible AI begins with defining the purpose of an AI system: is it a General Purpose AI (GPAI) such as the foundational model GPT-4, or does it serve a specific use-case?**

Unlike specific AI applications, GPAI systems can be adapted for a wide range of tasks and are not limited to a single use-case. This flexibility presents unique challenges and risks, as these systems must be robust enough to handle various applications without compromising on safety, transparency, or fairness. The AI Act sets specific requirements for GPAI to ensure these versatile systems are developed and deployed responsibly, considering their broad applicability and potential impacts across different sectors.

Next, it is important to understand your organisation's role in relation to the AI use-case: is your organisation a Provider or a Deployer of AI? Providers are entities that develop AI systems and make them available on the market, while deployers are those that integrate and use these systems within their own operations. This distinction is important because it assigns different responsibilities and regulatory requirements to each role.

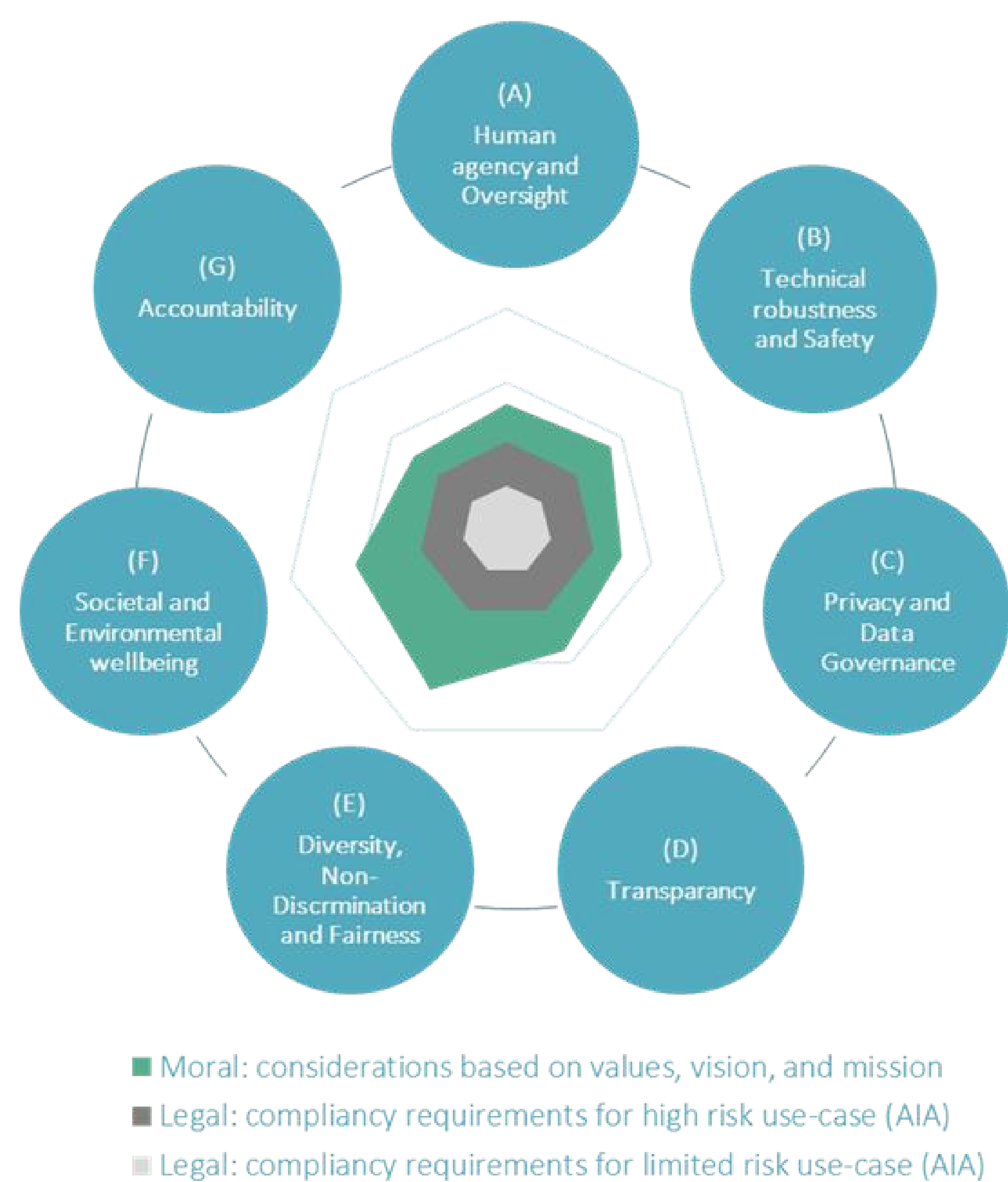


Figure 1: ADC's responsible AI compass

Ethical principles	What?
<b>A. Human Agency and Oversight</b>	AI should enhance human decision-making and respect user freedom. It should be designed to protect users from manipulation and allow for human supervision.
<b>B. Technical Robustness and Safety</b>	AI should be safe, reliable, and secure. They should be designed to prevent harm, perform accurately, and be resilient to attacks.
<b>C. Privacy and Data Governance</b>	AI should protect user privacy and ensure secure handling of data. The quality and integrity of data should be maintained and access to data should be strictly controlled.
<b>D. Transparency</b>	AI should be clear in how they work. They should provide traceable and understandable explanations of their decisions and clearly communicate their capabilities and limitations.
<b>E. Diversity, Non-discrimination, and Fairness</b>	AI should be fair and avoid bias. They should be accessible to all users and include diverse perspectives in their development and use.
<b>F. Societal and Environmental Well-being</b>	AI should benefit society and the environment. They should be designed to have positive social impact, be environmentally friendly, and consider their effect on institutions and democracy.
<b>G. Accountability</b>	AI should be accountable for their outcomes. They should be auditable, minimise negative impacts, handle trade-offs ethically, and provide means for redress.

Figure 2: definitions of 7 ethical principles

## Navigating the Intersection of Ethical and Legal Landscapes in Responsible AI Implementation

**To draft an understanding of the ethical and legal requirements, we first need to clarify the purpose of the AI and the role your organisation plays in deploying or providing it.**

First, the legal requirements (refer to the grey area in Figure 1) are determined based on the AI Act. While the AI Act provides general standards, it is crucial to translate these high-level requirements into specific ones tailored to each use-case. For example, when developing an AI that determines whether a company gets a loan or not, the need for “explainable” predictions may arise to comply with the AI Act’s mandate for transparency and human autonomy. In this context, it is important for the stakeholders to understand how decisions are made, ensuring fairness and accountability, and fostering trust in the AI system.



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Simultaneously, ethical aspirations are set to establish moral requirements (refer to the green area in Figure 1) for each key requirement. Setting these aspirations requires the involvement of all relevant stakeholders through a Guidance Ethics Workshop, including a wide range of participants, from executives to developers to impacted users and humans. Once the ethical aspirations are defined, they can be translated into concrete requirements. For instance, an organisation developing a fraud monitoring system might want to focus on “(E) Diversity, Non-Discrimination and Fairness” because it aligns with their mission. In that case, they may set additional requirements that their AI system should adhere to beyond those mandated by the AI Act.

## Ensuring Contextualised Requirements for Ethical and Legal Compliance

**Both legal and moral requirements must be concrete and applicable to the use-case. This necessitates a deep understanding of not only the use-case and business context but also of the underlying AI technology.**

Following the establishment of all requirements, the process continues with the design and development phases, wherein defined requirements are translated into the design and development of the AI system. Finally, in the adoption phase, secure deployment and monitoring systems are implemented to ensure ongoing compliance and ethical integrity.

## A Holistic Approach to Responsible AI

**ADC’s methodology underscores a comprehensive and dynamic approach to Responsible AI.**

Our approach emphasises not only the definition but also the active application and reassessment of legal and moral requirements throughout the lifecycle of AI systems. This commitment ensures that AI technologies developed and deployed by ADC uphold ethical standards and are socially responsible.

Are you interested in implementing Responsible AI within your organisation? Our team has extensive experience in developing solutions that help streamline data & AI management processes and create robust strategies. To learn more, please contact [Lars.H@adc-consulting.com](mailto:Lars.H@adc-consulting.com)

**Lars Heldens (Manager, Strategy)**

Let’s connect on [LinkedIn](#) 

