AI & Partners

Implementing the OECD AI Principles

European AI Scanner and the Trustworthy AI Principles

AI & Partners

Implementing the OECD AI Principles

AI & Partners

Table of Contents

EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/

Implementing the OECD AI Principles

AI & Partners

Introduction

Developing trustworthy AI systems.

With the expected growth of tools to ensure the safe development of artificial intelligence ("AI") systems in the coming years, organisations needs a solid framework and database is to ensure that they effective use of an important resource and guidance for best practice. In the same way that the successful adoption of new technologies depends on several technical, social and organizational factors, the successful adoption of tools for the development of trustworthy AI requires attention to multi-faceted issues. Sharing and learning from best practices can significantly increase the successful implementation of trustworthy AI – thereby ensuring the overall adoption of safe and responsible AI.

At AI & Partners, we support the development of a reference framework and database for tools required for strengthening trustworthy AI. To this end, our leading compliance software product for the proposed European Artificial Intelligence Act (the "EU AI Act"), European AI Scanner, represents a solid business case that can help companies implement one or more specific Organisation for Economic Cooperation and Development ("OECD") AI Principles. The OECD AI Principles have been chosen given their status as reference material for the EU AI Act. In this paper we map the European AI Scanner to one of the OECD's AI Principles and briefly assess what impact a specific AI-related practice might have on the end operational implementation.

The European AI Scanner tackles a wide range of AI related challenges, which organizations are facing when developing, deploying, and using AI in a responsible way. It ensures that AI ultimately creates value for business and society, whilst managing the risks that may result from their development and deployment.

European AI Scanner

- **Transparency and explainability**
- **Robustness, safety and security**
- **Accountability**

EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/

Implementing the OECD AI Principles

AI & Partners

What is the European AI Scanner?

The European AI Scanner is a governance, risk, and compliance ("GRC") tool designed to assist companies in complying with the EU AI Act. The primary objective of this tool is to identify and risk classify AI systems used by organizations, enabling them to develop, deploy, and use AI in a responsible and compliant manner. The tool aims to address a wide range of AI-related challenges faced by organizations, ensuring that they adhere to the regulatory requirements set forth by the EU AI Act.

What does it aim to achieve?

It aims to provide firms with a comprehensive understanding of their AI landscape, helping them identify AI systems in use, assess their risk level, and ensure compliance with the EU AI Act. By doing so, it assists companies in aligning their AI practices with ethical and legal standards, promoting responsible AI development and deployment.

Why was it developed?

What were the motivating forces?

The development of the European AI Scanner was driven by the growing need for a robust solution to address the complex challenges surrounding AI governance, risk management, and compliance. The rapid proliferation of AI technologies in various industries posed significant ethical and regulatory concerns, making it crucial for organizations to implement responsible AI practices.

What are the business implications?

The implications of developing the European AI Scanner are multifaceted. By providing organizations with a tool that streamlines AI governance and compliance processes, businesses can enhance their reputation as responsible AI adopters, instilling trust among customers, investors, and stakeholders. Additionally, compliance with the EU AI Act may result in reduced legal risks and potential financial penalties, safeguarding companies from adverse legal consequences.

*"By providing organizations with a tool that **streamlines** AI **governance** and **compliance** processes, businesses can enhance their reputation as responsible AI adopters, instilling trust among customers, investors, and stakeholders."*

EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/

Implementing the OECD AI Principles

AI & Partners

How does the European AI Scanner work?

At what point in the AI lifecycle should it be used?

The European AI Scanner is designed to be utilised throughout the AI lifecycle, starting from the early stages of AI product development, all the way to deployment and continuous monitoring during the product's operational phase.

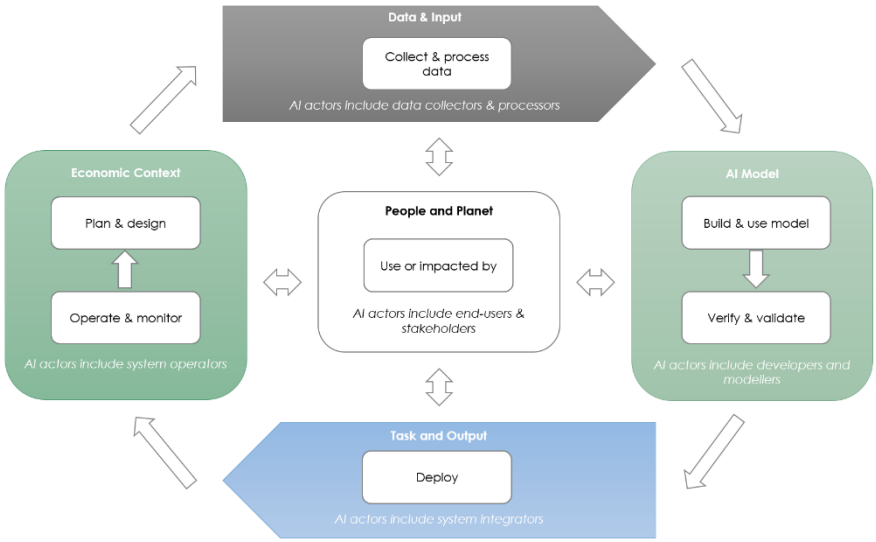
How is it embedded or integrated in the AI product development processes?

The tool is integrated into the AI product development processes as a proactive compliance and risk assessment mechanism. It assists and informs users by conducting thorough scans of AI systems, identifying potential risks and areas of non-compliance, and providing actionable recommendations to rectify the identified issues.

How does it support the continuous monitoring an AI product while in use?

The tool facilitates continuous monitoring by providing real-time updates and assessments of AI systems during their operational phase. It employs advanced monitoring mechanisms to detect any changes in risk factors, ensuring that the AI product remains compliant with the EU AI Act throughout its lifecycle (see **Figure 1**).

Figure 1: The AI System lifecycle



EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/

Implementing the OECD AI Principles

AI & Partners

Who is using it during the development of AI products?

What are their roles and responsibilities?

Various stakeholders within organizations are involved in using the European AI Scanner during AI product development. These stakeholders include AI developers, data scientists, compliance officers, legal teams, and senior management responsible for overseeing AI initiatives.

Does it require specific skills or training to use?

While the tool is designed to be user-friendly, some users, such as compliance officers and legal teams, may benefit from specific training to interpret the tool's output effectively and implement appropriate compliance measures. Training sessions, webinars, or comprehensive documentation are provided to equip users with the necessary skills and knowledge.

Does its implementation and use need the support of specialists, or can it be used by all once developed?

The tool caters to a broad audience, allowing various users to access and utilize it effectively once developed. However, for in-depth analysis and interpretation, collaboration with specialists, such as legal experts, data privacy consultants, and AI ethics advisors, may be beneficial.

Is the tool business-facing or customers-facing?

The tool is primarily business-facing, intended to be used by organizations to ensure internal compliance and adherence to the EU AI Act. However, its insights into an organization's responsible AI practices can indirectly impact customer trust and confidence.

Is it usable by other companies or sectors?

Yes, the European AI Scanner is designed to be adaptable and scalable, making it usable across different companies and sectors. Organizations operating within the EU and subject to the EU AI Act's regulations can integrate this tool into their AI governance practices.

> *"Yes, the European AI Scanner is designed to be **adaptable** and **scalable**, making it usable across different companies and sectors."*

EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/

Implementing the OECD AI Principles

AI & Partners

Examples of its potential use to implement AI principles

The European AI Scanner, a powerful governance, risk, and compliance tool, plays a vital role in assisting companies to align with the OECD AI Principles of Transparency and explainability, Robustness, safety, and security, as well as Accountability. Let's explore how the tool facilitates compliance with each of these principles through practical examples:

Transparency and explainability

The OECD AI Principle of Transparency states that:

Actors should commit to transparency and responsible disclosure regarding AI systems. To this end, they should provide meaningful information, appropriate to the context, and consistent with the state of art:

- *to foster a general understanding of AI systems,*
- *to make stakeholders aware of their interactions with AI systems, including in the workplace,*
- *to enable those affected by an AI system to understand the outcome, and,*
- *to enable those adversely affected by an AI system to challenge its outcome based on plain and easy-to-understand information on the factors, and the logic that served as the basis for the prediction, recommendation or decision.*

The European AI Scanner supports this principle by offering clear and comprehensive reports on the AI systems it assesses. It enables companies to gain a better understanding of the underlying algorithms and decision-making processes.

Example: A pharmaceutical company is developing an AI-driven drug discovery system using complex machine learning algorithms. With the European AI Scanner, the company can conduct an in-depth analysis of the AI system's inner workings, identifying the key features and data points influencing the drug candidates' selection. The tool can generate detailed explanations of the AI model's decision-making, allowing the company's researchers and regulatory teams to comprehend and validate the AI's recommendations effectively. This transparency empowers the company to confidently present the AI-based drug discovery system to regulatory authorities, promoting ethical and responsible AI deployment.

Implementing the OECD AI Principles

AI & Partners

Robustness, safety and security

The OECD AI Principle of Robustness, safety, and security states that:

- *AI systems should be robust, secure and safe throughout their entire lifecycle so that, in conditions of normal use, foreseeable use or misuse, or other adverse conditions, they function appropriately and do not pose unreasonable safety risk.*
- *To this end, AI actors should ensure traceability, including in relation to datasets, processes and decisions made during the AI system lifecycle, to enable analysis of the AI system's outcomes and responses to inquiry, appropriate to the context and consistent with the state of art.*
- *AI actors should, based on their roles, the context, and their ability to act, apply a systematic risk management approach to each phase of the AI system lifecycle on a continuous basis to address risks related to AI systems, including privacy, digital security, safety and bias.*

The European AI Scanner assists companies in identifying potential vulnerabilities, enhancing AI system robustness, and safeguarding against security risks.

Example: An autonomous vehicle manufacturer is deploying AI algorithms to control their self-driving cars. Before releasing the vehicles on the roads, the company can employ the European AI Scanner to evaluate the robustness, safety, and security of the AI driving system.

The tool will conduct extensive stress-testing and simulates various driving scenarios, including adverse weather conditions and potential cyber-attacks. By leveraging the European AI Scanner's risk classification capabilities, the company can identify potential weaknesses and promptly address them, thus ensuring that the autonomous vehicles meet the highest safety and security standards.

> *"By leveraging the European AI Scanner's risk classification capabilities, the company can **identify** potential weaknesses and promptly **address** them, thus ensuring that the autonomous vehicles meet the highest safety and security standards."*

EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/

Implementing the OECD AI Principles

AI & Partners

Accountability

The OECD AI Principle of Accountability states that

AI actors should be accountable for the proper functioning of AI systems and for the respect of the above principles, based on their roles, the context, and consistent with the state of art.

The European AI Scanner aids companies in establishing a framework for accountability by providing clear risk assessments and compliance reports.

Example: A financial institution is integrating AI algorithms to automate their credit approval process. The European AI Scanner can conduct a thorough analysis of the AI system's decision-making criteria, assessing it against the requirements outlined in the EU AI Act.

The tool is capable of flagging potential instances of bias or discrimination in the credit approval process, enabling the institution to implement appropriate mitigation strategies. By using the European AI Scanner's accountability features, the company can demonstrate due diligence and adherence to ethical practices, reinforcing public trust and regulatory compliance.

In conclusion, the European AI Scanner plays a crucial role in assisting companies in implementing key OECD AI Principles. Through transparency and explainability, it empowers organizations to comprehend their AI systems fully. With its focus on robustness, safety, and security, the tool helps organizations identify and address vulnerabilities, ensuring the safe and reliable deployment of AI technologies.

Moreover, by promoting accountability, the European AI Scanner enables companies to take ownership of their AI systems and comply with the EU AI Act, fostering a responsible and ethical AI ecosystem across various sectors.

"*With its focus on robustness, safety, and security, the tool helps organizations **identify** and **address** vulnerabilities, ensuring the safe and reliable deployment of AI technologies.*"

EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/

Implementing the OECD AI Principles

AI & Partners

Challenges, limitations, and best practices to consider while developing or using it

The European AI Scanner presents a valuable opportunity for businesses to achieve compliance with the EU AI Act and promote responsible AI practices. However, like any sophisticated tool, there are challenges and limitations that organizations should be aware of. Here is an assessment of these aspects, along with best practices for businesses to consider while using the European AI Scanner:

Challenges:

Data Privacy and Security: To effectively identify and risk classify AI systems, the European AI Scanner requires access to substantial amounts of data. Businesses must ensure that the tool adheres to strict data privacy regulations and that the sensitive information remains secure during the assessment process.

Complexity of AI Systems: Some AI systems might be highly intricate, involving deep learning algorithms and black-box models that are challenging to interpret. The European AI Scanner may face limitations in providing fully transparent explanations for certain complex AI systems.

Adaptability to Emerging Technologies: As the field of AI evolves rapidly, new AI techniques and technologies may emerge. The European AI Scanner should continuously update and evolve to accommodate these advancements and accurately assess the latest AI models.

Limitations

Risk Classification Accuracy: While the European AI Scanner is designed to provide accurate risk classifications, there might be instances where certain risks are not identified due to the complexity of AI systems or the availability of data.

Scope of Assessment: The European AI Scanner focuses on compliance with the EU AI Act, but businesses must also consider other ethical and legal frameworks that might apply to their AI systems, as the tool may not cover all relevant regulations.

Implementing the OECD AI Principles

AI & Partners

Best Practices

Data Governance and Quality: Implement robust data governance practices to ensure that the data used by the European AI Scanner is accurate, relevant, and compliant with data privacy regulations. Regularly audit and update the data to maintain assessment accuracy.

Transparency and Explainability: While the European AI Scanner supports transparency, businesses should proactively design their AI systems with transparency and explainability in mind. Document AI development processes and provide clear explanations of AI model functionalities and decision-making criteria.

Human-AI Collaboration: Encourage collaboration between AI experts, data scientists, compliance officers, and legal teams to effectively use the European AI Scanner's outputs. The human element is crucial for interpreting results, making informed decisions, and implementing appropriate risk mitigation strategies.

Continuous Monitoring and Updates: Use the European AI Scanner not only during the initial development phase but also throughout the AI system's lifecycle. Continuously monitor AI systems in operation, conduct periodic assessments, and update the tool as needed to address emerging challenges and technological advancements.

Feedback and Improvement: Encourage users of the European AI Scanner to provide feedback on the tool's performance and usability. This feedback can be invaluable in identifying areas for improvement and ensuring the tool remains effective and user-friendly.

Holistic Compliance Approach: While the European AI Scanner helps with compliance under the EU AI Act, businesses should consider a broader approach to ethical and legal compliance. Incorporate the tool's insights into a comprehensive governance, risk, and compliance strategy that covers all relevant AI regulations and principles.

For more information

To learn more about the AI & Partners perspective and capabilities for EU AI Act readiness, visit us today at https://www.ai-and-partners.com/, or contact your AI & Partners representative.

EU AI Act - Audit | Advisory/Consultancy | Software Products
+31 6 57285579 and +44(0)75 35994 132
s.musch@ai-and-partners.com and m.borrelli@ai-and-partners.com
https://www.ai-and-partners.com/
https://twitter.com/AI_and_Partners @AI_and_Partners
https://www.linkedin.com/company/ai-&-partners/