



Ethoscope

IFPMA Artificial Intelligence (AI) Ethics Principles

Supporting Toolkit



Overview



Artificial Intelligence (AI) is widely used in business...

Ethics principles on Artificial Intelligence (AI)

- Published on [IFPMA webpage](#)
- Seeks to inform and support pharma industry **leaders** in responsible and sustainable use of AI and data ethics
- **Baseline** for member companies to adapt and implement **AI ethics standards and policies** internally

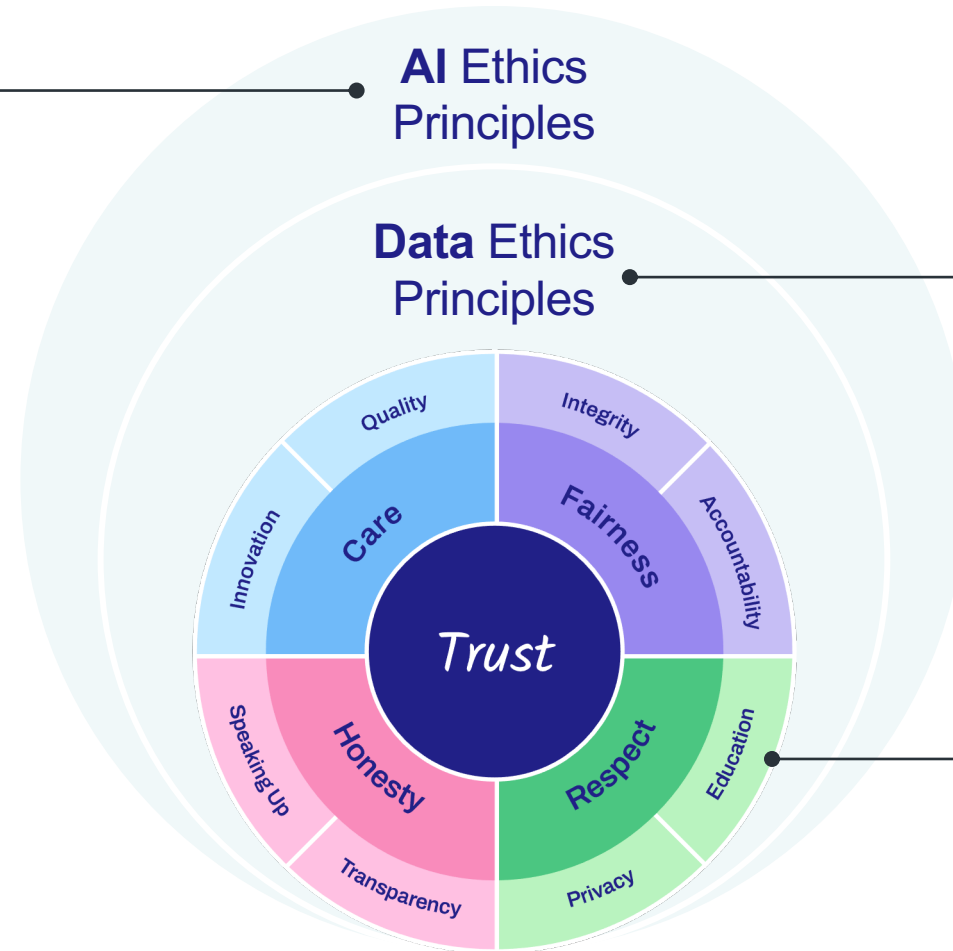
This toolkit supports such ethics principles

- Intended for **teams** implementing **AI and data ethics**
- Additional resources to help the **business** enable **AI ethics** within the **business initiatives**

The link between Data and AI Ethics

Ethically using data in AI initiatives is key for innovation, increasing the individual wellbeing and common good.

AI Ethics principles should be considered together with the [Data Ethics principles](#)

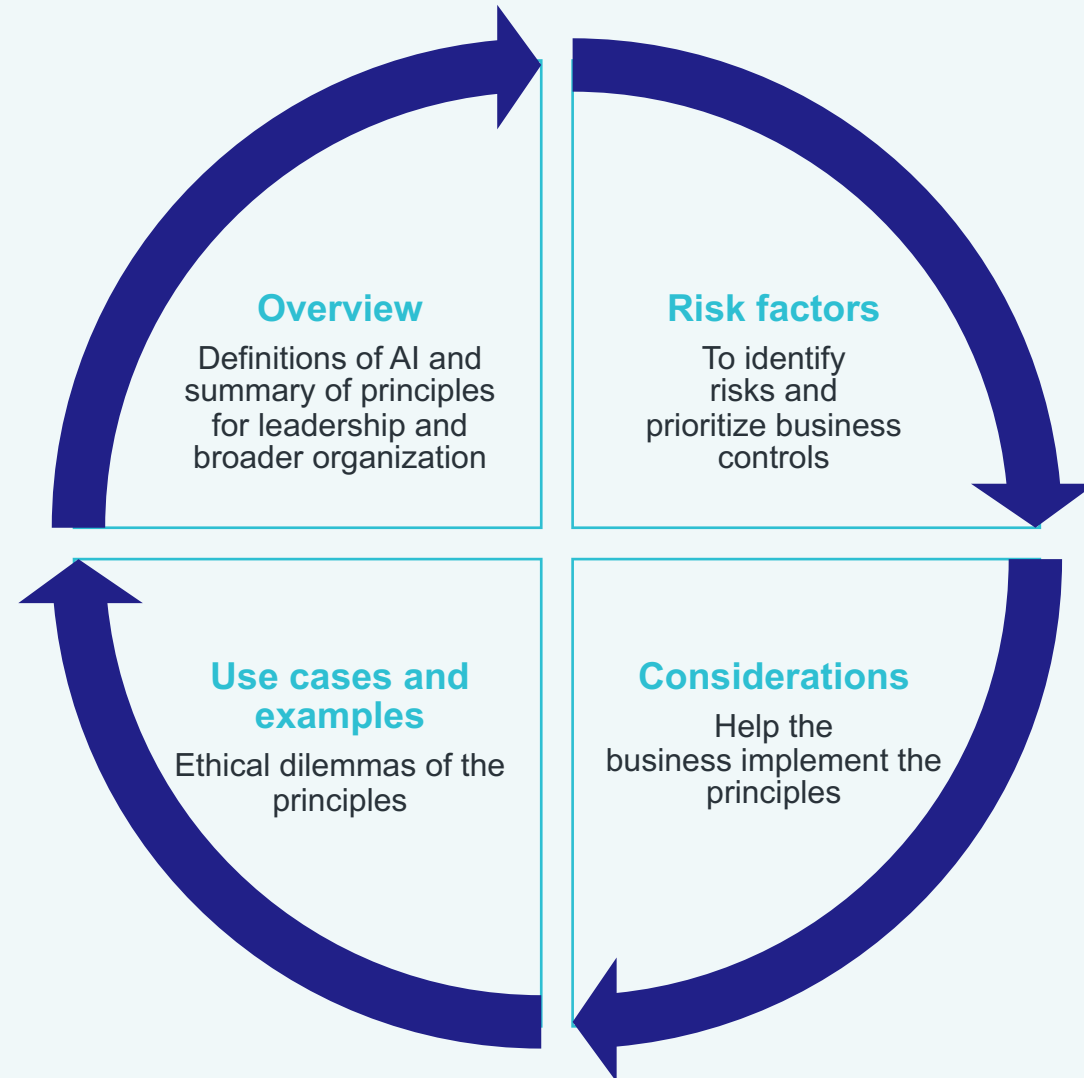


Ethical data use helps build a culture of trust with our stakeholders.

IFPMA Ethos is the baseline where **Data** and **AI ethics** principles stand upon

What will you find in this **toolkit**?

- Different resources to help you incorporate **AI ethics into internal business processes**
- **Use cases, dilemmas** to establish **ethical decision-making** processes within organizations



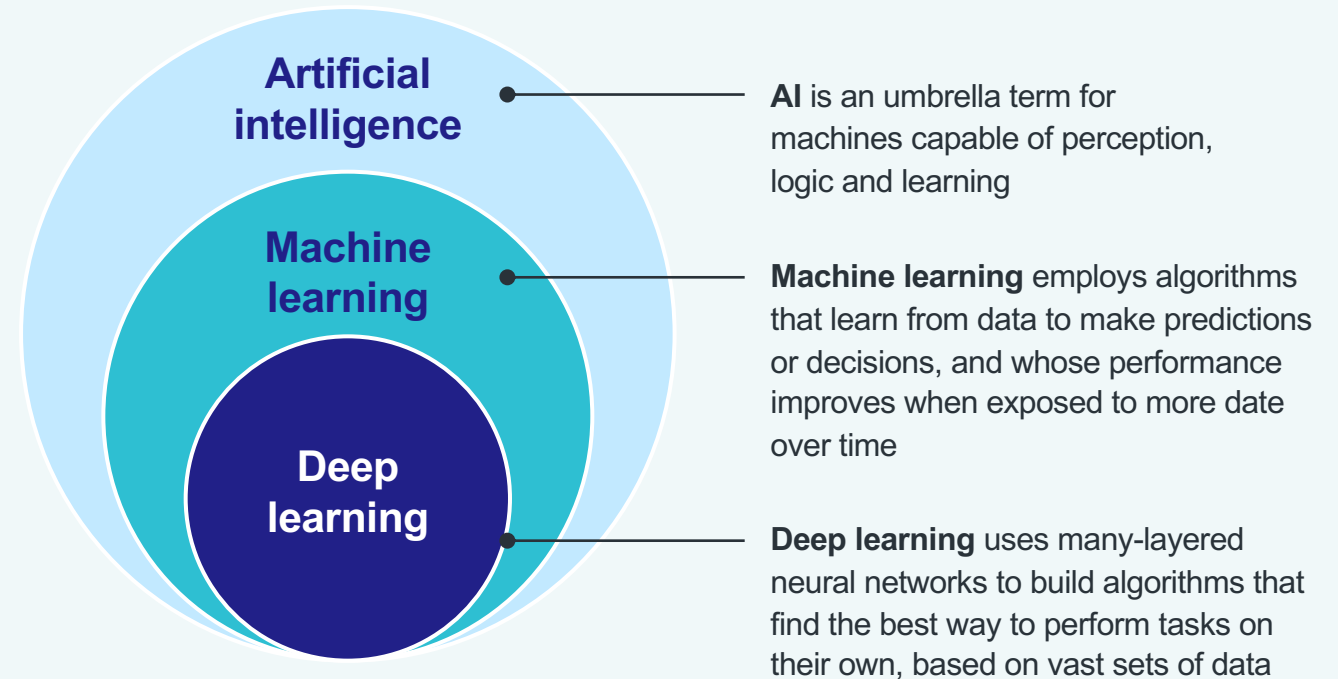
What is Artificial Intelligence (AI)?

AI Systems are the **simulation of human intelligence processes by computer systems**. Examples:

- Humanoid Robot (Sophia)¹
- Use of self learning computerized algorithms to detect potential cardiac arrest.
- Tracking cardiac health, fall detection, etc. via wearable health device

AI systems can generate **content, predictions, recommendations, or decisions influencing the environment they interact with**. Examples:

- Clinical judgement or diagnosis from Biomedical Imaging



Humanoid Robot (Sophia) - <https://www.hansonrobotics.com/sophia/>¹

"The many ways to define Artificial Intelligence" – News Byte May 21, 2018²

Why ethics in Artificial Intelligence?



Individual wellbeing and common good



Greater opportunities and benefits, greater risks

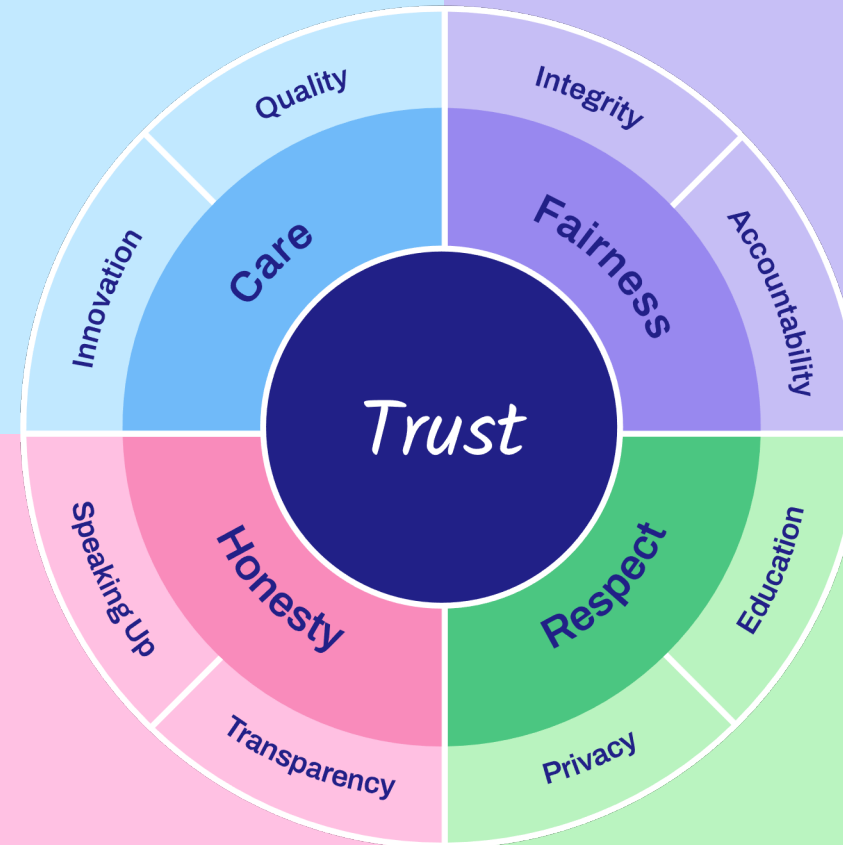


Successful only if used responsibly

Companies should ensure AI is implemented ethically and aligned with **IFPMA Ethos**:

High quality AI solutions can improve global health through innovative products and services, upholding the highest ethical, scientific and medical standards.

Develop AI solutions responsibly, ethically and professionally. Be accountable for AI actions and decisions



Transparent communication to those impacted the use of AI.

Respect privacy rights and educate our stakeholders about our commitment to AI evolution in an ethical way.



IFPMA

The 6 IFPMA AI Ethics principles



1. Empowering humans

Individuals impacted by AI should always **be allowed to control** the use of their personal information.



4. Accountability

Pharma companies have proper **governance, risk management** system, **regular monitoring** of AI systems in place.



2. Fairness and minimization of bias

Seek to **minimize bias and maximize fairness**. Continuous monitoring and understanding to adapt AI systems to correct for bias in all AI lifecycle.



5. Human control

AI should not be given **complete autonomy in decision making**. **Freedom of choice** of end users should always be considered and respected.



3. Privacy, security and safety by design

Data protection regulation, technical limitations on data re-use, **security and privacy preserving measures** (pseudonymization, anonymization, encryption).



6. Transparency, explainability and ethical use

Publicly describe when and how AI initiatives are used, its **goals, assumptions** that power an AI system, its **limitations**.

It doesn't end here...

- AI Ethics is an **ongoing journey**.
- Ensuring there are always ethical AI systems in an **inclusive exercise** that will involve different functions.
- **AI Ethics programs** need to be **continuously revisited** to consider evolving technologies and specific applications.
- **AI Ethics** is a process, it requires assessment of corporate **maturity, risks,** and customizing materials for each specific **audience**.
- Setting an **open and transparent culture** in the delivery models and **governance** will lead to optimal solutions.
- **Culture** of each organization in embracing **compliance** plays a significant role in **successful implementation** of **ethical** and **responsible AI**.



Risk factors, considerations and use cases



Ethical considerations for successful AI initiatives

Embedding AI ethics principles effectively requires a robust identification, prioritization and management of **AI risks** during the AI project life cycle.


AI brings greater opportunities and benefits coupled with greater and potentially new risks.

Examples of critical risks (not exhaustive):

- The AI output can have an error rate and therefore make an incorrect decision that can **harm the patient's health**
- Potential **cyberattacks and breaches** on AI solutions
- **Consent of the data use, protection** and the justification of **data retention** for a prolonged period
- **Misuse** of the AI solution leading to **loss of trust**
- Disproportionate AI controls **slowing innovation**

To proceed further in a both ethical and pragmatic manner there are several key ethics considerations and risks in addition to having organizational business processes, SOP, policies, guidelines (but not limited to) for you to know when working on any AI initiative.

These considerations ensure AI initiatives are aligned with the basic elements of **Corporate Compliance Programs**.



Use this document as a reference for consideration during an initial assessment of your AI initiative.

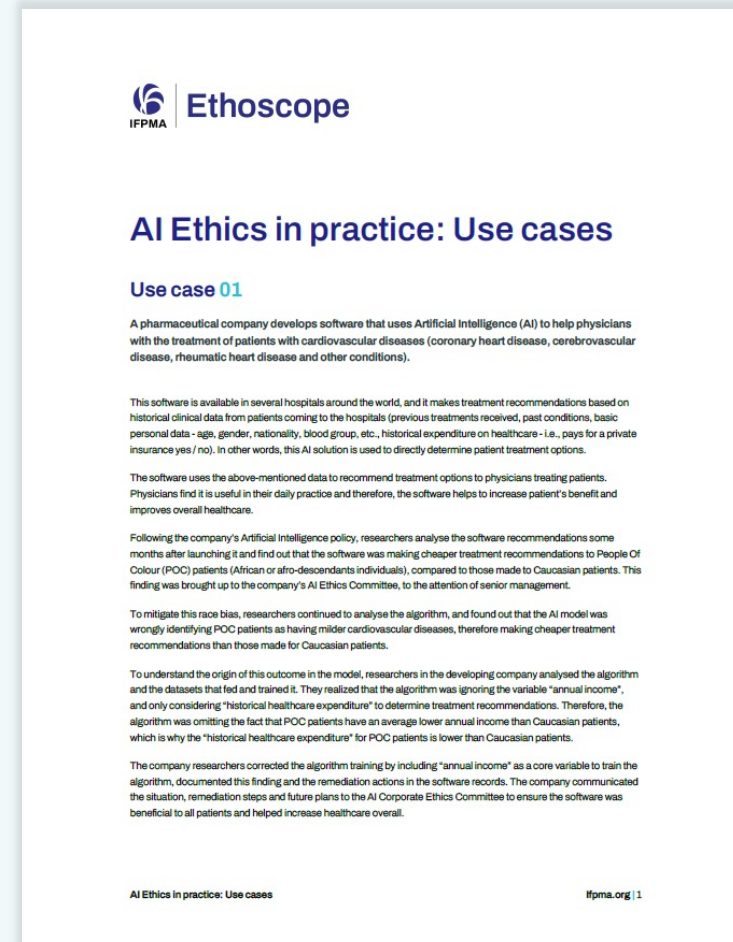
Find the full document [here](#).

AI Ethics in practice: Use cases

Here are a few use cases for you to help bring the AI Ethics principles and considerations to life. These use cases are examples of how the principles can be put in practice. Each use case addresses:

- **Possible situations** where AI could be applied in the Pharmaceutical Industry
- **Impact** of AI and the underlying ethical dilemmas

You can use this document as a reference for consideration when planning AI initiatives. Irrespective of the lifecycle stage where AI is used, the principles and robust risk management are equally relevant.



Find the full document [here](#).



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Thank You

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