# Transparency for what and whom: open access, open source, OpenAI?

AI in Science, 18 March 2026

Ine van Zeeland, senior reseacher Imec-SMIT, VUB

Responsible Research and Innovation

## OPEN SCIENCE

- UNESCO: Open scientific knowledge refers to open
  - access to scientific publications,
  - research data,
  - metadata,
  - educational resources,
  - software, source code and hardware available in the public domain or licensed.
- **FAIR Principles for data management**: **F**indable, **A**ccessible, **I**nteroperable and **R**eusable.

Responsible Research and Innovation

## USE OF AI IN RESEARCH

EU DG R&I: Living guidelines on the responsible use of generative AI in research;

key principles:

- **Reliability** in ensuring research quality, reflected in methodology, analysis and use of resources.
- **Honesty** in (a.o.) communicating on research transparently, fairly, thoroughly and impartially.
- **Respect** for colleagues, participants, subjects, society, ecosystems, cultural heritage and the environment.
- **Accountability** for the research from idea to publication and for its wider societal impacts.

# USE OF AI IN RESEARCH

**Recommendation 1: remain responsible for scientific output**

- Researchers are accountable for the integrity of the content generated with AI tools.
- Researchers maintain a critical approach to using the output produced by generative AI and are aware of the tools' limitations, such as bias, hallucinations and inaccuracies.

**Recommendation 2: Use generative AI transparently**

- Researchers detail which generative AI tools have been used substantially in their practices.
- Researchers disclose or discuss the limitations of genAI tools used.

Explaining data processing

GENERAL DATA PROTECTION REGULATION (GDPR)

## Transparent information and communication (art. 12)

Provide information about processing to the data subject in a concise, transparent, intelligible and easily accessible form, using clear and plain language.

## Information to be provided 3 (art. 13-14)

- The data subject must also be informed of any further processing (reuse) of the data, especially if there was no information beforehand and if it is for different purposes than originally.
- Most of this information must also be provided if the data were not obtained directly from the data subject, e.g. if you are re-using data obtained by others.

## USE OF AI IN RESEARCH

- The opacity of many AI systems and algorithms poses challenges to **reproducibility** and **scientific integrity**: it is difficult to verify the accuracy and validity of research findings.
- Tech giants' **monopoly of AI capabilities** raises concerns about their control over the development and application of AI tools, which may limit scientific progress.
- Both the opacity and the monopolisation of AI systems raise **ethical and legal concerns** over discrimination, IP rights, and privacy and personal data protection.

## STUDY: AI USE IN THE BELGIAN PUBLIC SECTOR

- Overview of AI use is needed for oversight and supervision, and democratic legitimacy.
- There is no formal registry of the use of AI in public administrations in Belgium.
- Registries are not ideal:
  - Definition issues: what is AI?
  - Registries are often voluntary, incomplete, unverified.
  - Few visitors, but **useful for supervision and scrutiny.**

## EXAMPLE CASE: VISA DENIED

- A Moroccan woman's visa request to visit her husband in NL is denied, based on deficiencies in her application.
- She files a complaint, stating there were no deficiencies. The dispute ends up in court.
- **The Dutch Algorithm Registry shows an algorithm called *Information Supported Decision-Making* (IOB) is used in the decision-making procedure.**
- The state defense provides no information on it.
- The judge finds the visa decision does not mention the IOB algorithm was used and therefore decides that the motivation for denying the visa is insufficient.

## WHO NEEDS TRANSPARENCY?

Transparency is not a simple concept. For open science and transparent decision-making we need specific kinds of transparency.

- Rather than responsibilising individuals, we need to ask 'for what' and 'for whom'.
    - Those who handle data need to be able to provide information on data use.
    - Oversight bodies need to be able to understand how decisions come about.
    - Everybody needs an understandable explanation ***of risks***.

# Thank you for your attention

Questions, comments? ine.van.zeeland@vub.be