

Responsible use of GenAI in the Graphene Flagship

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Generative Artificial Intelligence (GenAI) refers to AI systems capable of creating new content – text, images, code, music, or video – based on patterns learned from existing data. Tools such as ChatGPT or Microsoft Copilot can significantly enhance research and project management tasks by improving efficiency in writing, summarizing, editing, translating, or coding tasks. When used responsibly, they free time for complex activities and broaden access to expertise.

However, GenAl outputs can be difficult to distinguish from human-generated content and may contain errors or biases. Risks include perpetuating stereotypes, misuse for disinformation, and creation of manipulated content (e.g., deepfakes). Responsible use is essential to maintain research integrity and trust.

This document provides recommendations for the responsible integration of GenAl in Graphene Flagship activities, aligned with European Commission guidelines and Horizon Europe principles.

General Recommendations from the European Commission

The European Commission, countries and research and innovation stakeholders of the European Research Area have collaboratively developed a set of <u>recommendations</u> to support the responsible integration of generative AI in research.

The guidelines follow the principles of research integrity and address the main challenges researchers face when using generative Al. In a nutshell, they provide the following recommendations to **researchers**, **research organisations** and **funding organisations**:

RESEARCHERS should...

- Follow key principles of research integrity, use GenAl transparently and remain ultimately responsible for scientific output.
- Use GenAl preserving privacy, confidentiality, and intellectual property rights on both, inputs and outputs.
- Maintain a critical approach to using GenAl and continuously learn how to use it responsibly to gain and maintain Al literacy.
- Refrain from using GenAl tools in sensitive activities e.g. peer reviews or evaluations.

RESEARCH ORGANISATIONS should...

- Guide the responsible use of GenAl and actively monitor how they develop and use tools.
- Integrate and apply these guidelines, adapting or expanding them when needed.
- Deploy their own GenAl tools to ensure data protection and confidentiality.

FUNDING ORGANISATIONS should...

- Support the responsible use of GenAl in research.
- Use GenAl transparently, ensuring confidentiality and fairness.
- Facilitate the transparent use of GenAl by applicants.





Additional general recommendations

Following Graphene Flagship's workshop on the responsible use of GenAl in Horizon Europe **projects' administration** (September 2025), the Graphene Flagship projects have agreed on the following additional recommendations, which complement those already issued by the European Commission:

- Project Policy on GenAl Use

- Project partners should agree on a common policy on the use GenAl tools in aspects related to the technical and administrative execution of the project.
- Such policy should 1) be included in the Consortium Agreement, Data Management Plan¹ and Project Manager Handbook; 2) be reviewed or assessed periodically (e.g. on a yearly basis); and 3) include limitations on how much content generated by GenAl tools can be used in the project's results or documents.
- The Project Coordinator should use Al detection tools to monitor compliance (i.e. checking how much content is being generated by GenAl tools within their project).

- Quality Assurance of GenAl Outputs:

- GenAl tools users should provide clear prompts that 1) address the sources that need to be taken into account when generating the output (e.g. "according to the Annotated Grant Agreement, how is this done?"); and 2) include restrictions if necessary (e.g. "don't use social media sources").
- GenAl tools users should always 1) ask the tool about the sources and references
 of the generated output; 2) check the output compliance with <u>EC guidelines</u>; and 3)
 when possible, work in a team, asking experienced colleagues to check the output.

- General Data Protection Regulation - GDPR:

- GenAl tools users must always ensure full compliance with EU data protection regulations (GDPR).
- Users should always refrain from using sensitive information or personal data in GenAl tools and always anonymize all information before use.

Moreover, the following key principles should guide all GenAl tool usage:

- ⇒ **Transparency**: Declare GenAl use in reports and publications.
- ⇒ **Accountability**: Human oversight remains mandatory.
- ⇒ **Integrity**: Outputs must meet scientific and ethical standards.
- ⇒ **Security:** Protect confidential and personal data at all times.

¹ At this regard, the Graphene Flagship strongly recommends the EC to include such provisions in the DESCA or templates such as the Data Management Plan.





References

- Conclusions from <u>Graphene Flagship's workshop</u> on Responsible use of GenAl in EU Projects Management, 22 September 2025
- OECD AI Observatory
- OECD's blog: Unlocking productivity with generative AI: evidence from experimental studies
- Living Guidelines on Responsible use of Generative AI in Research

This document has been proofread and formatted with the assistance of generative Microsoft Co-Pilot. This tool was used to enhance clarity, consistency, and presentation, while ensuring that the content remains accurate and aligned with the original intent. Final responsibility for the content rests with the authors.

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