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OUTCOME OF PROCEEDINGS

From:	General Secretariat of the Council
On:	23 May 2025
To:	Delegations
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Subject:	Towards an EU Strategy on Artificial Intelligence in Science - Council conclusions approved on 23 May 2025

Delegations will find in the annex the Council conclusions on "Towards an EU Strategy on Artificial Intelligence in Science", approved by the Council at its 4097th meeting held on 23 May 2025.

ANNEX

COUNCIL CONCLUSIONS

TOWARDS THE EU STRATEGY ON ARTIFICIAL INTELLIGENCE IN SCIENCE

THE COUNCIL OF THE EUROPEAN UNION

RECALLING:

– its conclusions of 26 November 2021[1] on the Future Governance of the European Research Area (ERA);

– its conclusions of 2 December 2022[2] on the New European Innovation Agenda;

– its conclusions of 5 November 2024[3] on the European Court of Auditors' Special Report No. 08/2024 entitled 'EU Artificial Intelligence ambition – Stronger governance and increased, more focused investment essential going forward', stressing the need for coordinated efforts, scaled up investments and improved access to digital infrastructure for AI development;

TAKING NOTE OF:

– the Commission's communication on the Coordinated Plan on Artificial Intelligence (AI)[4], providing a framework for aligning Member States' strategies with EU priorities;

– the evidence review report of the Scientific Advice Mechanism to the European Commission entitled "Successful and timely uptake of artificial intelligence in science in the EU" published in April 2024;

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1 14308/21.
2 14705/22.
3 14849/24.
4 COM(2018) 795

– the Commission's guidelines on prohibited artificial intelligence practices established by the AI Act, notably the clarifications regarding the research exemption from the AI Act[5].

– the "Statement on inclusive and sustainable artificial intelligence for people and the planet" signed on 11 February 2025 at the AI Action Summit.

1. RECOGNISES the rapid development of AI and AI technologies dedicated for science, which is transforming science practice and has led to groundbreaking achievements and applications in science.

2. RECALLS that AI has many different applications in science, including use as a versatile tool for data analysis and simulation leading to new discoveries and large language models used as a supporting tool.

3. ACKNOWLEDGES the excellence of European Research and Innovation (R&I) in AI and its critical role in enabling cutting-edge science, both in basic and applied research, addressing global challenges, enhancing competitiveness, meeting societal needs, and driving digital transition in Europe in an efficient and inclusive manner.

4. RECOGNISES the importance of AI collaboration in science, in particular international collaboration, EMPHASISING that the EU should build on reciprocal and non-discriminatory partnerships to enhance scientific exchange, interoperability, and the responsible and ethical development taking into account research and economic security.

5. STRESSES the transformative potential of AI and the need for responsible, sustainable, ethical and inclusive use of AI in science, to stimulate groundbreaking knowledge and drive innovation deployment, accelerate time to market, to strengthen R&I performance of the entire Union and boost its capacity to compete globally, thus leading to significant social and economic benefits and improved Member States' ability to grow, innovate, build strategic leadership in high-impact sectors, reinforce economic security, and tackle challenges.

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[5] C(2025) 884 final.

6. CONSIDERING that AI systems and models specifically developed and put into service for the sole purpose of scientific research and development as well as research, testing and development activity regarding AI systems or models prior to their being placed on the market or put into service are exempt from the AI Act[6].

7. NOTES that the EU currently has no dedicated and systemic policy to facilitate the uptake of AI in science; such a policy should connect and complement existing and upcoming AI initiatives and instruments, to boost the uptake of AI in science and provide for new, better targeted actions regarding its application.

8. ACKNOWLEDGES the Commission's work on a forthcoming European strategy of AI in science, and CALLS for the strategy to be based on the best available knowledge and practice and developed in close cooperation with the Member States and the R&I community. TAKES NOTE of current activities of the Commission, such as the mutual learning exercise on national policies for AI in science

9. HIGHLIGHTS that this strategy should in particular:

   – support the development of interdisciplinary and where beneficial transdisciplinary research ecosystems around AI in science;

   – enhance coordinated policy developments at the EU level and between EU and national levels, for an increased responsible, ethical and inclusive use of AI in science;

   – provide for an efficient way of monitoring the impact of AI on the scientific process;

   – work on upskilling and reskilling researchers and research professionals to benefit from AI-based solutions;

   – promote responsible, ethical, sustainable and inclusive use of AI-based systems, solutions and tools applicable in R&I;

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6 OJ L, 2024/1689, 12.7.2024, p.1.

– support open access to reliable data based on FAIR principles (findability, accessibility, interoperability, reusability) while ensuring proportionate, precise and effective security measures to protect sensitive information and uphold data integrity;

– enhance interconnectivity and interoperability between relevant strategic research, technological and digital infrastructure and resources.

Coordinated policy and support for AI in science

10. STRESSES the importance of a common European agenda for AI in science, and INVITES the Commission to support the development of interdisciplinary research communities around AI in science, bringing together AI scientists, other domain scientists including from the social and human sciences with data and computing experts and HPC specialists.

11. NOTES the importance of funding, data, computational power, scientific talent and skills for EU competitiveness in AI and INVITES the Commission to propose innovative ways to support access to these resources by the R&I community across the whole European Research Area.

12. TAKES NOTE of the idea of the creation of the European AI Research Council, as announced by the President of the Commission, and CALLS on the Commission to work with Member States on the details of this initiative, in particular its mission and governance to make the best use of existing initiatives and structures.

13. HIGHLIGHTS the need to align or, where appropriate, create dedicated national or regional strategies for AI in science, leveraging synergies with broader AI initiatives both at regional, national and European levels. NOTES the potential of mapping and monitoring of upcoming initiatives for avoiding duplication and fragmentation, and providing for efficient and streamlined reporting.

14. CALLS for improved coordination and exchange between AI resources and broader AI-based methodologies developed for science at the Member State level and those initiated by the Commission to maximise impact and ensure their complementarity.

Upskilling and reskilling of the R&I community

15. CALLS on the Commission, Member States, and the European R&I communities at large to support the development of trustworthy "made in Europe' AI solutions and increased, and responsible use of AI in science. STRESSES the need to work further on developing existing and new policies and schemes for, attracting, retaining, and bringing back AI research and innovation talent to Europe, including through the development of networks and exchange programmes and the ERA Talent Platform.

16. EMPHASISES the need for broader access of researchers and innovators, research managers and support professionals to adequate AI resources, including through comprehensive upskilling and reskilling programmes in AI, in order to increase their capacity to benefit from AI opportunities, secure their fair access to new knowledge and new technologies, and enable the transition of working methods in R&I, as appropriate, that leaves no one behind.

17. ENCOURAGES Member States, in accordance with their national competencies, to support secondary and higher education, vocational training and lifelong learning initiatives with specific measures to bridge the digital skills gap in order to meet the growing demand for AI expertise in science, including relevant labour market needs.

18. STRESSES that developments in AI technologies should avoid bias, gender prejudice, or other forms of discrimination. CALLS for support to underrepresented groups in STEM and AI research through, for example, mentorship and other opportunities towards inclusiveness and gender balance.

Ethical, sustainable, inclusive and human-centric approach

19. ACKNOWLEDGES that the AI uptake in science carries risks stemming from the technological limitations, possible intentional or unintentional misuse, irresponsible use of AI in science, including unethical use of algorithms and models design , data manipulation, generation of factual errors, and automation bias. MARKS that this could lead to misinformation, biased decision-making, and unforeseen societal disruptions. NOTES also that concerns related to explainability, data protection and intellectual property, and other issues might erode the reliability, fairness, reproducibility and integrity of research practices.

20. URGES the Commission to provide quality benchmarks for AI in science in close cooperation with the scientific community and, monitoring the effects of AI uptake in R&I, counteract malicious uses and alert on inappropriate practices and other misuses, in close cooperation with Member States and based on a human-centric approach and the principles of digital humanism. STRESSES the need to develop and frequently update guidelines, benchmarks and best practice for the use of AI in science to ensure the integrity and transparency, and enhance reliability, and validity of R&I outputs, while also promoting technical standardisation to enhance interoperability and reproducibility and fostering the environmental performance of AI. WELCOMES, in this light, the ERA Forum Stakeholders' document: 'Living Guidelines on the Responsible Use of Generative AI in research'.

Open and reliable data to feed AI for science

21. TAKES NOTE of the Lund Declaration on maximising the benefits of FAIR and open research data in Europe, taking into account economic and research security. HIGHLIGHTS the need to stimulate and reward researchers for making their curated data and models available according to ethical and FAIR principles, and also for making data suitable for AI processing, fostering harmonised data sharing and interoperability and ensuring coherence with the EOSC's federated data-sharing model.

22. INVITES Member States to contribute actively to the implementation of existing common European Data Spaces, such as the European Open Science Cloud (EOSC), and new data spaces where necessary to support AI-driven research and training of AI models.

23. ENCOURAGES the adoption of open science practices in data collection, and data sharing, and the building of AI tools for science, including the use of open models and algorithms, to increase the efficiency, transparency, and reproducibility of AI-powered science.

24. EMPHASISES the need to develop guidelines and support technical solutions for the responsible use of AI in scientific publishing. CONSIDERS that these should address issues of intellectual property rights, transparency, integrity and ethical practices.

Fair access to AI solutions and interlinked infrastructure

25. CALLS on the Commission and the Member States for increased efforts to better connect AI-enabling infrastructure and resources across the whole Union, support equitable access to high performance computing and advanced software for researchers and innovators, and foster cross-border and, where appropriate, international collaboration among researchers and relevant stakeholders (e.g. startups and scaleups, industry, social organisations and policymakers).

26. RECALLS the importance of developing dedicated AI technologies for application in science. TAKES NOTE of EU and Member States' efforts to enhance computing capacity and INVITES them to strengthen stakeholders' involvement, notably from the private sector, investment and collaboration to achieve further improvements.

27. STRESSES the need for better involvement of the R&I community with the ecosystem built around European High-Performance Computers (HPCs) and AI Factories. CALLS on Member States and the Commission to improve infrastructure interoperability, to further enhance and facilitate fair access for researchers and innovators to computational capacity and software for advancing research on AI and for its uptake in science, while considering energy efficiency and the environmental dimension of AI infrastructures.

28. NOTES the potential of EU companies, SMEs, startups and scaleups in supporting researchers and innovators to develop, and benefit from trustworthy AI-based technologies for R&I, and CALLS on the Commission and Member States to stimulate and support work on systems, applications or tools for the targeted use of AI in R&I, considering IPR and copyright.

29. CALLS for leveraging public procurement and R&I funding, to foster the adoption of AI technologies in, for example, higher education institutions, research funding and performing organisations, technology transfer offices and accelerators, promoting the integration of AI into scientific processes, university spin-offs, innovative startups and scaleups.