

**The Policy for Open Science
at the National Institute for Research and Development in
Informatics – ICI Bucharest**

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Introduction

This Policy for Open Science was elaborated based on the document „**Model Policy on Open Science for Research Performing Organisations (RPOs)**”¹, proposed by OpenAIRE - a non-profit, community-driven initiative shaping the policies, infrastructures, and services for Open Science in Europe and beyond (<https://www.openaire.eu/>).

The main goal of OpenAIRE is to support the global research excellence through trusted infrastructure for open access, data sharing, and scholarly communication.

In this context, the *Model Policy* aims to assist research organisations in developing policies for Open Science/ Open Access, aligning them with the main Regulations and Decisions issued by the European Parliament and the European Council related to Open Science/ Open Access, as well as with important developments at EU-level related to this domain, such as the *ERA Policy Agenda 2022-2024*, the “*Plan S*” and “*cOAlition S*”, the *European Open Science Cloud (EOSC) Strategic Research and Innovation Agenda*, the action lines of the *European Open Science Policy Platform*, and the *Strategic Vision & OpenAIRE’s Role in empowering the CoARA Community*, published in December 2024, among the others.

The development of this Policy also took into account the impact at the institutional level of provisions of the „**White Paper on the Transition to Open Science 2023–2030**”².

The White Paper defines eight strategic objectives to ensure the transition to Open Science at the national level and provides details about the significance of each objective, its specific international and national contexts, and the actions proposed for its implementation.

¹ OpenAIRE. *Model Policy on Open Science for Research Performing Organisations (RPOs)*. October 13, 2025. <https://zenodo.org/records/17339709>

² UEFISCDI. *White Paper on the Transition to Open Science 2023–2030. Strategic document on the framework for Open Science development in Romania*. December 2022. <https://www.open-science.ro/resurse/cartea-alba-a-tranzitiei-catre-stiinta-deschisa-2023-2030>

Glossary of terms

AI system: A machine-based system designed to operate with varying levels of autonomy and adaptiveness. It processes inputs to generate outputs—such as predictions, content, recommendations, or decisions—that serve explicit or implicit objectives and can influence physical or virtual environments.

Citizen Science: the voluntary participation of citizens in research and innovation at various stages of the process and at different levels of engagement, ranging from the development of research agendas and policies to data collection, processing, and analysis, and the evaluation of research results. (Citizen Science – Elevating research and innovation through societal engagement, European Commission, 2020)

Data Management Plan (DMP): a document outlining the key aspects of the research data lifecycle from the very beginning of the project. It covers data provenance, organization, and curation, as well as conditions regarding access, archiving/preservation, sharing, and eventual deletion, both during and after the project's completion. The DMP is a dynamic document that should be updated in line with the project's progress.

Dedicated technical service/tool: a service utilized within the research process conducted at the institute that adheres to Open Science principles. These services facilitate open access, transparency, and collaboration in research, and may include tools such as repositories, Data Management Plan (DMP) platforms, electronic notebooks, electronic catalogues, and Diamond Open Access journals, among other.

Diamond Open Access: the immediate open access of a publication by the journal or book publisher without payment of a fee.

Gold Open Access: achieving open access through publication in an open access journal (open access publishing).

Green Open Access: providing open access through an open access repository (also known as “self-archiving”).

Machine-readable copy of a publication: a publication in a format that can be used and understood by a computer.

Metadata: the descriptors used for describing, tracing, use and management of the deposited item (indicatively: title of publication, author(s), institutional affiliation, name of journal where the publication has been accepted).

Open Access: the practice of providing online access to research results in an open, non-discriminatory manner and at no cost to the reader, allowing for reuse with as few restrictions as possible. (Recommendation (EU) 790/2018)

Open Educational Resources (OER): according to the OECD are “teaching, learning and research materials that make use of tools like open licenses that permit their free reuse, continuous improvement and repurposing by others for educational purposes”.

Open Peer Review: (a) a scholarly review mechanism where both the identities of the reviewer and the author are known to one another during the review and publication process, (b) systems where reviewer reports are published alongside the articles, (c) systems where not only “experts” can comment, (d) a variety of combinations of the above or other novel methods.

Open Science: a new approach to the scientific process based on cooperation and new ways of disseminating knowledge, improving the accessibility and reusability of research results through digital technologies and new open collaboration tools. (Recommendation (EU) 790/2018)

Personal data: any information relating to an identified or identifiable natural person („data subject”); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

Repository: an online archive where researchers can deposit digital research outputs and provide (open) access to them. Digital repositories facilitate the management of and access to scientific outputs, such as publications, data, and software, among others. They also contribute to the long-term preservation of digital assets. (Annotated Model Grant Agreement EU Funding Programmes 2021-2027)

Research: any creative and systematically performed work with the goal of furthering knowledge.

Research data or data resulting from research: documents in digital format—other than scientific publications—that are collected or produced during scientific research activities and are used as evidence in the research process, or are commonly accepted in the research community as necessary to validate research findings and results. Data resulting from research include statistics, experimental results, measurements, observations from fieldwork, survey results, interview recordings, and images. Metadata, specifications, and other digital objects are also included. (DIRECTIVE (EU) 2019/1024)

Research Data Management (RDM): the process within the research lifecycle that includes data collection, organization, curation, storage, preservation (long-term), security, quality assurance, the assignment of persistent identifiers (PIDs), the provision of metadata in accordance with discipline-specific requirements, licensing, and sharing rules and procedures. RDM is an essential element of any project that generates, collects, or reuses data. (Horizon Europe Programme Guide)

Research Outputs: any results generated through research and innovation activities funded by the program, which encompass a wide range of deliverables, including scientific publications (such as articles, books, and conference papers), datasets, software, algorithms, protocols, models, workflows, and laboratory electronic notebooks, patents, intellectual property, prototypes, technologies, and process innovations. Research outputs also include technical reports, briefs and other contributions that inform public policy.

Researcher: any member of the research staff of the ICI Bucharest, of all levels and irrespective of their employment status including doctoral students.

Scientific publication: the peer-reviewed published (or under publication) work of researchers based in the institution. Scientific publications include scientific articles and long-form texts such as monographs, other types of books, and book chapters.

Suitable Repository: is one that meets quality standards, for example FAIR Principles, OpenAIRE compatibility, CoreTrust Seal.

1. Preamble

ICI Bucharest commits to the advancement of science and the wide dissemination of knowledge to the benefit of society by adopting practices on open, reproducible and responsible research. It endorses the national Open Science policy.

ICI Bucharest recognizes “openness” as the norm for the research information that is used and produced in the research context. In this context, it commits to promoting it by – among others – encouraging and supporting research processes and tools that encourage collaboration and cross-disciplinarity, enabling new working models and new social relationships, stimulating the dissemination of knowledge and the accessibility and re-usability of research activities and outputs, encouraging open access to publications, data and research information in general, while building the necessary infrastructure, skills, rewards and incentives to support open science.

2. Jurisdiction Effect and implementation of Policy

The policy applies to personnel and collaborators officially involved in research activities at ICI Bucharest, within the scope of the legal relationship and the responsibilities established by contract, job description, or project decision; this includes full-time staff, postdoctoral researchers, visiting researchers, contract staff, data managers, and research assistants officially involved in research activities.

In cases where research is funded by a third party, any agreement with that party concerning access rights, deposit and storage takes precedence over this Policy.

The application of Open Science principles will not affect intellectual property protection, technology transfer, confidentiality, information security, or the legitimate interests of ICI Bucharest and its partners.

This document enters into force on the date of its approval.

Within 45 days of approval, an action plan for implementing the provisions of this Policy will be developed for a 24-month period, outlining strategic priorities, implementation stages, necessary internal procedures, responsibilities, timelines, and monitoring mechanisms. A new version of the plan will be developed at the end of the 24-month period.

3. Rights, Responsibilities, and Duties

3.1. For ICI Bucharest

1. Supporting and empowering the transition to Open Science / Open Access through education, training and awareness-raising actions targeting researchers and other employees, along with the provision of the necessary infrastructure and funding to support this transition. The implementation of Open Science and the acquisition of related skills will need to be an integral part of professional training and career development offered to researchers.
2. Establishing (if one does not yet exist) an Institutional Open Access Repository or collaborating with a consortial or national repository according to international standards, containing digital content and providing advanced tools for search, navigation and Open Access to its content.
3. Mandating the use of recognized persistent identifiers, when available and appropriate for the type of output or project (like DOIs, ORCID or others).
4. Appointing a Data Officer responsible for methodological coordination and support regarding all data related matters, including – but not limited to – issues related to the development of Data Management Plans (DMPs) and compliance with national and European laws, data curation and stewardship.
5. Developing and providing mechanisms and services for the storage, safekeeping, registration, deposition and sharing of data and other research outputs such as software, models, according to the FAIR principles, as well as their long-term preservation, and providing appropriate guidance to researchers, including DMP templates.
6. Embedding Open Science practices in recruitment, research assessment and evaluation criteria beyond the provision of open access to publications and data, like participation in citizen science projects, experimentation with open peer review or the use of Open Educational Resources (OER).
7. Encouraging Open Science practices as early and widely as possible (for example through preregistration or pre-prints).
8. Specifying the roles, rights and responsibilities of each member/ department/ service within the institute with a role in the adoption and implementation of the policy.
9. Monitoring policy compliance by comparing the content of the repository with information gathered from indexing services and through data on the use (access and downloads) per publication/ department/ service/ institute.
10. Tracking the total cost of scholarly publication channels and individual publications . Engaging in discussions concerning agreements with publishers to include the right to publish all articles in Open Access or make them openly and immediately available via a repository link at the time of publishing. Encouraging and supporting new and innovative models for Open Access publishing, including Open Access publishers who do not charge Article Processing Charges (APCs).

11. Compiling and evaluating information about the Research Data Management costs.
12. Pursuing the objective of ensuring the compliance of the institution's repository and other research infrastructures with certification requirements in relation to FAIR data principles and EOSC technical specifications (in the case of EOSC-enrolled or interconnected infrastructures).
13. Having IPR and data protection policies in place to support Open Science and guide researchers about IP ownership issues.
14. Having an Open Licensing policy for the publication of research outputs, depending on their nature (publications, data, software, models, documentation, educational resources).
15. Developing a Research Integrity Promotion Plan (RIPP) that describes how the [Name of RPO] supports researchers in complying with research ethics requirements, including cases where researchers handle indigenous data.
16. Ensuring that researchers have access to adequate online information about research integrity and responsible research practices.
17. Promoting, guiding and supporting the responsible use of generative AI in research activities.
18. Developing, deploying and using AI systems in a way that adheres to the ethical principles of respect for human autonomy, prevention of harm, fairness and explicability. Adopting adequate measures to mitigate risks with negative impact resulting from the use of AI systems.
19. Providing incentives for the adoption of recommended Open Science practices beyond the mandatory ones, such as early and open sharing of research, output management beyond research data, open peer-review.
20. Encouraging the adoption of measures that ensure reproducibility of research outputs.
21. Promoting language diversity by offering infrastructure that enables equal access to research outputs provided in a variety of languages.

3.2. Researchers and all individuals involved in research are responsible for:

1. Managing publications, data and educational resources in adherence with the principles and requirements expressed in this Policy.
2. Registering new research projects at the proposal stage at the ICI Bucharest designate unit in order to ensure that they are provided with the appropriate institutional support.
3. Complying with organizational, regulatory, institutional, and other contractual and legal requirements related to the production, curation, deposit, management, and distribution of publications and data in case there is no other agreement with third parties taking precedence.

4. Ensuring that the principles governing the handling of data (in adherence with the present Policy and funders' mandates) are included in a Data Management Plan (DMP).
5. Compiling and updating a DMP for each project that generates, collects, processes, or reuses research data to a significant extent, or for which a DMP is required by the funder, contract, ethical review, or institutional procedure.
6. Choosing the appropriate type of licensing for their research outputs.
7. Ensuring compliance with the European Code of Conduct for Research Integrity.
8. Complying with security requirements when their project involves sensitive information.
9. Ensuring that Exploitation and Dissemination Plan is in place enabling the further use of their research outputs.
10. Ensuring content integrity when using AI systems.
11. Using generative AI in a transparent manner.
12. Paying particular attention to issues related to Intellectual Property, privacy and confidentiality when sharing sensitive or protected information with AI tools.
13. Ensuring that their research aligns with indigenous governance frameworks and seeking prior and informed consent before collecting or using indigenous data.
14. Considering the publication of research outputs in multiple languages whenever possible—including national languages— rather than solely in dominant academic languages like English. In the same context, researchers are strongly encouraged to recognize and cite scholarly work published in different languages.

4. Open Access to Publications

ICI Bucharest:

1. Shall require researchers to deposit in the institutional repository, or any other suitable infrastructure a machine-readable electronic copy of the full text (peer-reviewed published article or final peer-reviewed manuscript), as well as the related metadata before, at the same time or after publication under the latest available version of the Creative Commons Attribution International Public (CC BY) licence or a licence with equivalent rights. CC BY-NC, CC BY-ND, CC BY-NC-ND or equivalent licenses could be applied to long-text formats. Researchers are held responsible for the timely deposit of their publications in the institutional repository. This step also applies in the case of open access publishing ("Gold Open Access").
2. In the case of "Green Open Access", the institute shall require the full text of all peer-reviewed publications referred to above to be made immediately and publicly available under the latest available version of the Creative Commons Attribution International Public (CC BY) licence or a licence with equivalent rights. CC BY-NC, CC BY-ND, CC BY-NC-ND or equivalent licenses could be applied to long-text formats.

3. Shall actively support the diamond open-access model, ensuring editors clearly communicate journal openness.
4. Shall require the use of recognized, validated and authoritative metadata schemas licensed under CC0 or equivalent, in line with FAIR principles (i.e. Findable, Accessible, Interoperable and Re-usable).
5. For the purpose of the individual or institutional evaluation of research outputs produced by the institution and its members, the institute will take into account compliance with the requirement to deposit publications (metadata, full texts) in the institutional repository, once it becomes operational, in accordance with the previously mentioned requirements.
6. Shall align with Rights Retention strategies and licence to publishers only those rights necessary for publication while safeguarding national copyright laws and secondary rights. Authors (or their organisations) must ensure Open Access to the Author Accepted Manuscripts (AAMs) or the Version of Record (VoR) of research articles, at the time of publication. All peer-reviewed research articles shall be made available under the latest available version of the CC BY licence or a licence with equivalent rights. CC BY-NC, CC BY-ND, CC BY-NC-ND or equivalent licenses could be applied to long-text formats.
7. Shall encourage researchers to use trustworthy, domain-appropriate repositories and, where relevant, services registered, interoperable, or federated through EOSC..
8. Shall adopt a consistent approach and shall mandate the aforementioned requirements for all types of publications, including but not limited to journal articles, conference papers, books, book chapters, and reports, across all research disciplines.

5. Open Access to Research Data

ICI Bucharest:

1. Shall require researchers to deposit, to the extent possible, the data needed to validate the results presented in scientific publications in a suitable repository. Data should be provided with persistent identifiers and must be linked with publications where possible.
2. Shall require that data and services are handled according to FAIR (i.e. Findable, Accessible, Interoperable and Re-usable) principles and made open to the extent permitted by legal conditions. Data should also be traceable and whenever possible available for subsequent use.
3. Shall follow the principle “*as open as possible as closed as necessary*”. If data cannot be open due to legal, privacy or other concerns (for example, sensitive or personal data, trade secrets, third-party rights, cybersecurity, dual-use characteristics) this should be clearly explained. Metadata ensuring that data are findable should be provided in all instances.
4. Shall require researchers to submit a DMP to the designate unit for every research

project they are involved in.

5. Shall require researchers to define usage rights through the assignment of appropriate licenses, preferably CC BY or CC0 (or their equivalents), depending on the rights associated with the database, the nature of the data, and the repository's conditions.
6. Shall require that data are stored for a certain period (e.g. as defined by the respective communities and/or policies). The default minimum archive duration for research data is 10 years after the assignment of a persistent identifier. In the event that these records need to be deleted or destroyed after the expiration of the required archived duration or for legal and ethical reasons, such actions need to consider all legal and ethical perspectives.

6. Open Access to Research Outputs

ICI Bucharest:

1. Shall require that other research outputs, such as workflows, protocols, and software, be managed in accordance with open and FAIR principles, taking into account the specific nature of the output type.. Research outputs should also be traceable and whenever possible available for subsequent use.
2. Shall follow the principle “*as open as possible as closed as necessary*”. If research outputs cannot be open due to legal, privacy, cybersecurity, potential dual-use or other concerns (for example sensitive data, or personal data) this should be clearly explained. Metadata ensuring that data are findable should be provided in all instances.
3. Shall require researchers to define usage rights through the assignment of appropriate licenses – CC BY or CC0 (or equivalent) license.

7. Open Science and Citizen Science

ICI Bucharest shall actively encourage the uptake of Open Science practices (beyond open access to publications and data) such as the involvement in citizen science projects, open peer review, the use and creation of open educational resources, the release of data and content under open and standard open licenses, etc.

8. Infrastructure

1. Shall ensure that the dedicated technical service (see the Glossary of terms) meet trusted quality standards (compatibility with OpenAIRE, adherence to FAIR principles, availability of a transparent repository policy, and support for Open Research information).

2. Shall ensure that the dedicated technical service is registered in appropriate registries and is interoperable through the OpenAIRE Guidelines.
3. ICI Bucharest shall ensure that any infrastructure they develop, fund, or participate in is governed transparently, with clear policies on decision-making, sustainability, and community involvement.
4. ICI Bucharest, based on an appropriate plan, shall commit to the long-term financial sustainability of scholarly infrastructure, including funding mechanisms that do not depend solely on volatile revenue streams.
5. ICI Bucharest shall ensure that infrastructure development follows open standards and allows for external auditing and community scrutiny.
6. The dedicated technical service shall allow users to export their data in standard formats to prevent vendor lock-in and ensure continued access to scholarly outputs.
7. If a repository or related services are provided by a third-party, ICI Bucharest shall ensure that the supplier complies with FAIR principles, POSI (Principles of Open Scholarly Infrastructure) principles and, where applicable, SLA requirements.
8. ICI Bucharest staff will be encouraged to utilize research data repositories from other organizations when they are better suited to a specific research project or scientific discipline.
9. Shall ensure that the dedicated technical service has an access policy that ensures equal opportunity, non-discrimination, and comprehensive user instruction. Any access restrictions shall be clearly communicated to all potential users in a transparent and timely manner.
10. Mechanisms for evaluating the quality of access to the dedicated technical service shall be available.

9. Research Assessment and Evaluation

ICI Bucharest commits to:

1. Ensuring a framework for research assessment and evaluation that incentivises research quality and Open Science behaviors and practices. Such systems will take into consideration the variety of research outputs and activities, and their impact on researchers at different career stages.
2. Setting up reward mechanisms for researchers using Open Science practices (e.g. sharing provisional results through open platforms, using open software and other tools, participation in open collaborative projects (citizen science), sharing data, open peer-review, measures to ensure reproducibility of research outputs etc.); adopt open science metrics and 'responsible metrics', along with ways of rewarding the full diversity of outputs and of recording the broader social impact of research ('next generation metrics').

3. Rewarding not only research outputs but also appropriate conduct of research including early sharing and open collaboration.
4. Using inclusive assessment criteria and processes that respect the variety of practices, activities and scientific disciplines including social sciences and humanities (SSH).
5. Sharing practices with other research institutions to enable mutual learning in assessment processes.
6. Review the criteria, tools and processes for research assessment and ensure that these are in line with the principles and commitments of the Agreement for Reforming Research Assessment (ARRA).
7. Setting up mechanisms for peer-reviewed qualitative evaluation supported by evidence-based indicators; to use responsibly quantitative indicators, including those based on publication prestige, which shall not substitute for the assessment of content and scientific contribution; avoid the use of rankings of research organizations.

10. Training

1. The designate units, in cooperation Open Science experts, will organize training sessions to facilitate the adoption of Open Science and equip researchers at all career stages, dissemination and other support staff with the necessary skills and expertise. Such training sessions shall cover skills necessary for open access publishing, FAIR and open data and data management, research integrity, reproducibility and Open Science as well as legal issues related to Open Science. Skills for open science will be required at all career levels.
2. ICI Bucharest shall take steps to raise awareness among researchers and support staff of the various types of IP, authorship issues, the role of AI in research and other topics of interest.
3. Appropriate funding for these activities should be ensured and to that end synergies with RFOs and other stakeholders should be sought.
4. Researchers and research support staff will regularly attend lectures, training sessions or seminars covering research ethics.
5. ICI Bucharest shall conduct on a regular basis data protection awareness training for researchers and research support staff.
6. ICI Bucharest shall conduct training sessions on how to use AI systems in a lawful manner.
7. Awareness-raising and training actions on gender equality and unconscious gender biases for researchers and other support staff will be carried out on a regular basis.
8. The ICI Bucharest shall exchange information with other institutions about assessment practices and makes use of information for mutual learning.

11. Monitoring Policy Compliance and Validity of the Policy

Institutional workflows shall be set up and responsibilities shall be defined at the institutional level for monitoring Policy compliance.

Monitor whether assessment practices achieve the desired goals, review and amend when necessary.

This Policy will be reviewed and updated every 24 months, concurrently with the development of a new version of the action plan mentioned in Chapter 2.