

National Framework on the Transition to an Open Research¹ Environment

Preamble

The ‘National Framework on the Transition to an Open Research Environment’ has been developed as the first step in a process to create a National Action Plan for the transition to an Open Research environment in Ireland.

The ‘Framework’ is aligned with developing European Commission policy in this area and is structured accordingly. The European Commission Recommendation of 25 April 2018 on access to and preservation of scientific information asks Member States to ‘set and implement clear policies (as detailed in national action plans)’ covering: Open Access to Publications; Management of Research Data; Preservation and re-use of scientific information; Infrastructures for Open Research; Skills and Competencies; Incentives and Rewards.

The principles of this Framework support access to research funded by the Irish State. They support the free flow of information across national and international research communities, contributing to research-enabled teaching and learning, citizen science, open innovation, and greater transparency, accountability and public awareness of the results of publicly funded research. The transition to an Open Research environment has a key objective of enhancing and support of research excellence across all disciplines, research integrity, and public trust in research.

As a National Framework encompassing all publicly-funded research it is, of necessity, broad and allows for the fact that some funders and research performing institutions may have specific requirements relating to Open Research which should be additionally observed. These principles build upon and replace existing national and international Open Research policies, and, through a planning process to 2020, will move to alignment with developing European Commission policy² and the principles of ‘Plan S’ where appropriate³.

Implementation will be detailed in a **National Action Plan** which will be prepared with all relevant stakeholders in 2019 and reviewed annually. The national plan will cover concrete objectives and indicators to measure progress on the transition to Open Research for all disciplines, including scoping potential cost implications and the allocation of responsibilities.

¹ The term ‘Open Research’ is synonymous with the terms ‘Open Science’ and ‘Open Scholarship’ and is used in this context to ensure clarity that all disciplines are included in this Framework.

² <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0790&from=EN>

³ https://www.scienceeurope.org/wp-content/uploads/2018/09/Plan_S.pdf

Implementation

The next phase of activity, therefore, will be to agree an initial National Action Plan which will be reviewed annually in light of progress and developments. Following the Commission Recommendation, the Plan will provide for: ‘concrete objectives and indicators to measure progress; implementation plans, including the allocation of responsibilities; associated financial planning’.

This multi-annual planning process will be based upon consultation with, and the engagement of, all stakeholders – particularly with researchers at every research career stage and representing all disciplines. The process will be defined by a commitment to respect, engage with, and support the research community in its broadest sense, and to address disciplinary, professional, national and global concerns in this area. It will seek to achieve the goals of Open Research while benefiting researchers equally and avoiding unintended consequences which may disadvantage any group or individual. Special consideration will be given to areas upon which the impact of this transition remains, as yet, less well understood. In particular, the national process will attend to the particular issues associated with the transition as it affects, amongst others, the following groups:

- Arts and humanities researchers;
- Early career researchers;
- Researchers not in receipt of grant funding; publicly funded researchers with no formal institutional affiliation;
- Small, independent, non-profit journals and publishers (especially Irish journals and publishers);
- Learned societies (especially Irish learned societies);
- Researchers and citizens in the Global South;
- Citizen scientists.

The principles of Research Integrity and Responsible Research practice underpin this Framework and its associated national planning process, and will guide its actions.

Throughout the transition, researchers will be supported to maximise the impact of their work while ensuring that they are assisted, recognised and rewarded for practicing open research.

An underlying principle of the National Framework and associated National Action Plan is that all researchers will have access to the resources necessary to enable them to publish through Open Access, without prejudice.

The Stakeholders⁴

Stakeholders are invited to endorse this National Framework and to engage in the subsequent national planning process.



⁴ https://ec.europa.eu/research/openscience/pdf/integrated_advice_opspp_recommendations.pdf

Open Access to research publications

1. All Irish scholarly publications resulting from publicly-funded⁵ research will be openly available by default from 2020 onwards and will be accessible on an ongoing basis. It is recognised that the timeline to achieve Open Access for publications other than journal articles and conference proceedings, e.g. for monographs and book chapters, may take longer.
2. Where publication is in accordance with these principles, researchers may publish where they feel is most appropriate. Individual researchers, research performing organisations and research funders have a collective duty of care for the research system as a whole (including those who work within it) and for ensuring the widest possible dissemination of research.
3. Every researcher in Ireland shall have the rights and the facility to deposit/publish via a suitable Open Access journal, platform or repository. All researchers should be able to publish their work on Open Access even when their institutions or disciplines have limited means or if they are researchers not in receipt of a research grant.
4. In supporting research excellence across all disciplines, the National Action Plan will consider the variation in publishing practices: e.g. the differential rates of journal-article publishing across disciplines.
5. New and innovative models for Open Access publishing are encouraged, including high quality Open Access publishers who do not charge Open Access publication fees. In the event of publication fees being charged, their funding will be standardised and capped in line with European and/or international agreements, and associated journals should be managed according to ethical and economically inclusive principles. The payment of Open Access fees to hybrid journals will not be supported⁶.
6. The final published version of a publication or the peer-reviewed Author's Accepted Manuscript (AAM) should be made Open Access.
7. Open Access should be immediate upon publication without any embargo period⁷.
8. Open Access publications must be accompanied by an open licence, preferably the Creative Commons Attribution Licence CC BY or, as appropriate, another CC licence such as CC BY-SA or CC0. Licensing terms should not unduly restrict text and data mining, in accordance with and without prejudice to applicable copyright legislation. The license applied should fulfil the requirements defined by the Berlin Declaration on Open Access.⁸

⁵ Publicly-funded research is research undertaken in whole or in part via publicly-funded resourcing/remuneration e.g. salaries, grants, contracts etc.

⁶ Stakeholders may choose their preferred route(s) to publication and adopt their preferred route(s) to Open Access to publications, as long as it is in accordance with the principles stated herein.

⁷ Throughout the transition, some stakeholders may permit embargos of no longer than six months after the date of publication (up to twelve months for Arts, Humanities and Social Sciences). In some instances it is recognised that a longer embargo period of up to 18 months for Arts and Humanities may be necessary.

⁸ <https://openaccess.mpg.de/Berlin-Declaration>

9. Authors/ institutions are encouraged to retain copyright of their publications.
10. In the interest of public transparency and fair competition and without prejudice to the protection of business information, information will be published, as a standard practice, about agreements between public institutions and publishers, including information on any ‘big deal’ arrangements, ‘off-setting’ agreements and processing charge payments.
11. Initiatives will be explored to enhance Open Access research papers with formats, supplementary content and technologies to assist people with disabilities, to support citizen science, public patient involvement, policy-making, enterprise use and re-use, and to generally increase the public accessibility and impact of the content. A key to accessibility is the availability of machine-readable structured content for all elements of a paper – a prerequisite for assistive technology that empowers people with disabilities to participate in the scientific and research process.
12. Open Access publications should be easily identifiable by appropriate technical means, defined through the National Action Plan. This will include the availability of specific metadata, interoperability standards and persistent identifiers. Such metadata should be available for re-use under a suitable open license. Data on citations (references from one publication to another) should be made available as openly licensed, structured metadata.
13. Through the National Action Plan, robust criteria for compliant Open Access journals, platforms, and repositories will be defined and a list of such journals, platforms and repositories will be published, as will agreed methodologies and processes for ongoing monitoring and reporting on Open Access publications.
14. The importance of open archives and repositories for hosting research outputs is acknowledged due to their sustained role in enabling Open Access over many years, their archiving and long-term preservation function and their potential for editorial innovation. In line with the Berlin Declaration on Open Access⁹, and via the National Action Plan, Irish stakeholders will ensure that a complete final version of each publication is made accessible and preserved via an online repository maintained by an academic institution, scholarly society, government agency, or other well-established organisation that seeks to enable Open Access, unrestricted distribution, interoperability, fault tolerance, immutability and long-term archiving.

Enabling FAIR research data

15. The following research data management principles are confirmed and supported:
 - i) Findable, Accessible, Interoperable, and Reusable (FAIR)¹⁰ data contribute to research integrity and reproducibility.
 - ii) Those involved in each stage of the research process should have the capacity and skills necessary to enable FAIR data.

⁹ *ibid*

¹⁰ European Commission (2018) Turning FAIR into Reality: Final Report and Action Plan from the European Commission Expert Group on FAIR Data. Luxembourg: Publications Office of the European Union. <https://doi.org/10.2777/1524>

- iii) Prior planning is essential to ensure research data are managed effectively through all stages of the research cycle, from creation to long-term preservation.
 - iv) Research data should be interoperable across disciplinary boundaries to enable unrestricted sharing of reusable data between different systems and domains.
 - v) A robust citation mechanism for referencing data is necessary for research validation and to make data findable and accessible.
16. Data management planning is required as a standard practice from the earliest stage in the research process. Data management plans¹¹ required as part of that standard practice should address core requirements: data description and collection or re-use of existing data; documentation and data quality; storage and back-up during the research process; legal and ethical requirements; data sharing and long-term preservation; data management responsibilities and resources.
17. Datasets should be made easily identifiable through persistent identifiers, accompanied by standardised metadata, including funder names and grant numbers.
- i) Where appropriate, datasets should be linked to other datasets and publications through recognised mechanisms.
 - ii) Additional information should be provided to enable the proper evaluation and re-use of data.
 - iii) Interoperability standards should be applied to facilitate re-use of data within and across disciplines and support automated processes acting across large, heterogeneous datasets.
18. Research data should be ‘as open as possible, as closed as necessary’.
- i) Research will become and remain findable, accessible, interoperable and re-usable within a secure and trusted environment, through national and international digital infrastructures, including where appropriate, within the European Open Science Cloud (EOSC).
 - ii) Research data may be restricted for justifiable reasons, such as commercial exploitation, confidentiality, security, protection of personal data, the achievement of the project’s aim, and incompatibility with the further exploitation of the research results or other stated legitimate grounds. Shared metadata are especially important for restricted data and should be made accessible if possible.
 - iii) Taking into account technological developments (including of dynamic (real-time) data), licensing terms used should not unduly restrict text and data mining of research data resulting from publicly funded research, in accordance with and without prejudice to the applicable copyright legislation.
 - iv) Any data, know-how and/or information, whatever its form or nature, which is held by private parties in a joint public/private partnership prior to the research action will not be affected by this policy.

¹¹ See Science Europe (November 2018). Practical Guide to the International Alignment of Research Data Management: D/2018/13.324/4 https://www.scienceeurope.org/wp-content/uploads/2018/12/SE_RDM_Practical_Guide_Final.pdf.

19. Funders and institutions will include in grant conditions and other support for research, their requirements for data management plans and for data sharing, together with details of their mechanisms for monitoring compliance.

Infrastructures for access to and preservation of research

20. Researchers will need increased access to research resources and services for storing, managing, analysing, sharing, and re-using research information.
21. Synergies will be promoted via a coordinated approach among national infrastructures as well as with global and European initiatives, including the National Open Data Governance Board (ODGB), the European Open Science Cloud (EOSC), relevant European Strategy Forum on Research Infrastructures (ESFRI) and European Research Infrastructure (ERIC) programmes.
22. The quality and reliability of the infrastructure will be ensured, including through the use of internationally recognised certification mechanisms, specifications and standards and utilising open source systems and software whenever possible.
23. Through the use of additional indicators and metrics, infrastructures will be made fit to collect information that underpins the monitoring and assessment of openness and impact.

Skills and competences

24. Standardised and accredited skills for Open Research will be provided for researchers and required at all career levels, including research students and supervisors. Equality of opportunity and access to skills training will be available for researchers regardless of discipline or institution or funder.
25. Library professionals, data stewards and ICT personnel who provide support, training, advocacy and infrastructural development for Open Research will be included in the national planning and implementation process. Planning for the provision of advanced, specialist professional skills will be considered as part of that process.

Incentives and rewards

26. Information on Open Research and associated skills attainment will be included in research reporting and evaluation at the national level.
27. The academic career system will support and reward researchers who participate in a culture of sharing the results of their research.

28. Funders and institutions will adopt Open Research metrics and ‘responsible metrics’¹² along with ways of rewarding the full diversity of outputs and of recording the broader social impact of research (‘next generation metrics’).

¹² See San Francisco Declaration on Research Assessment (DORA) <https://sfedora.org/>; Leiden Manifesto <http://www.leidenmanifesto.org/>; EC ‘Rewards under Open Science’ WG report https://ec.europa.eu/research/openscience/pdf/os_rewards_wgreport_final.pdf