Fact sheet: Open Access in Horizon 2020

Open access can be defined as the practice of providing on-line access to scientific information that is free of charge to the end-user. In the context of R&D, 'scientific information' can refer to peer-reviewed scientific research articles (published in academic journals) and also to scientific research data (data underlying publications, curated data and/or raw data).

Open access to peer reviewed scientific publications

All projects receiving Horizon 2020 funding will have the obligation to make sure any peer reviewed journal article they publish is openly accessible, free of charge.
Beneficiaries will be asked to (i) deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications and (ii) ensure open access as follows:
Two main and non-mutually exclusive routes towards open access to publications exist:

▪ **Self-archiving** (**'Green'** open access) means that the published article or the final peer reviewed manuscript is archived by the researcher – or a representative - in an online repository of their choice before its publication (as ex. *Open Access Infrastructure for Research in Europe (OpenAIRE))*. Access to the article is often delayed ('embargo period': six month after publication, or 12 month in the social sciences) as some scientific publishers may wish to recoup their investment by selling subscriptions and charging pay-per-download.

▪ **Open access publishing** (**'Gold'** open access) means that an article is immediately provided in open access mode by the scientific publisher. The associated costs are shifted away from readers, and instead to (for example) the university or research Institute to which the researcher is affiliated, or to the funding agency supporting the research. Researchers can publish in open access journals, or in journals that sell subscriptions and also offer the possibility of making individual articles openly accessible (hybrid journals).
Where the case, the Author Processing Charges (APCs) incurred by beneficiaries are eligible for reimbursement during the duration of the action ("Springer Open Choice", "Wiley" or "Elsevier Journals support Open Access" and there fees could exceed 3,000 EURO depending on the research field). For APCs incurred after the end of their grant agreement, a mechanism for paying some of these costs will be piloted. In the case of 'Gold' open access, open access must be granted at the latest on publication.

Beneficiaries must also ensure open access to the **bibliographic metadata** that identify the deposited publication. In the context of the digital era, the notion of 'publication' increasingly includes the data underpinning the publication and results presented, also referred to as **'underlying' data**.

In all cases, the Commission would like to **encourage authors to retain their copyright and grant adequate licences to publishers** (Creative Commons offers useful licensing solutions in this regard (e.g. CC-BY or CC-0 licences, see http://creativecommons.org/licenses/).

Open access to research data

A novelty in Horizon 2020 is the **Open Research Data Pilot** which aims to improve and maximise access to and re-use of research data generated by projects. It will be monitored with a view to developing the European Commission policy on open research data in future Framework Programmes.

The core areas of Horizon 2020 participating in the Open Research Data Pilot are:
• Future and Emerging Technologies
• Research infrastructures – part e-Infrastructures
• Leadership in enabling and industrial technologies – Information and Communication Technologies
• Societal Challenge: Secure, Clean and Efficient Energy – part Smart cities and communities
• Societal Challenge: Climate Action, Environment, Resource Efficiency and Raw materials – with the exception of raw materials topics
• Societal Challenge: Europe in a changing world – inclusive, innovative and reflective Societies
• Science with and for Society

The Open Research Data Pilot applies to two types of data:
• The data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;
• Other data, including associated metadata, as specified and within the deadlines laid down in a data management plan (DMPs) (DMP University of Bielefeld, Guidelines on Data Management in Horizon 2020 on the Participant Portal).
Projects participating in the Pilot will be (i) required to **deposit** the research data described above, preferably in a research data repository (The DFG-supported registry re3data http://www.re3data.org lists those repositories.) and (ii), as far as possible, take measures to **enable** third parties to access, mine, exploit, reproduce and disseminate this research data. At the same time, projects should provide information about tools and instruments at the disposal of the beneficiaries and necessary for validating the results, for instance specialized software or software code.

Areas, or sub-areas of, or individual projects funded under Horizon 2020 and not covered by the scope of the Pilot may participate on a voluntary basis (**opt in**). The project consortia that decide to participate on a voluntary basis will be monitored along with and receive the same support as in-scope projects in the Pilot.
Projects may **opt out** of the Pilot on Open Research Data in Horizon 2020 in a series of cases that include conflict with obligation to protect results, with confidentiality obligations, with security obligations or with rules on protection of personal data. They may also opt out should the achievement of the action's main objective be jeopardized by making specific parts of the research data openly accessible.

Costs relating to the implementation of the pilot will be reimbursed. Specific technical and professional **support** services will also be provided by the Commission.