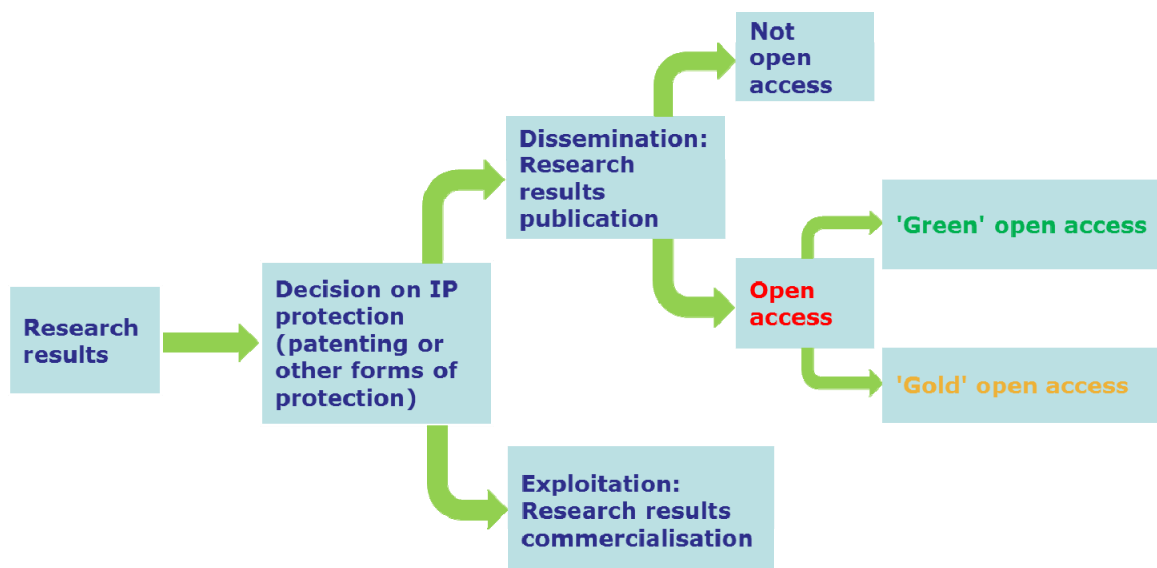


9 December 2013

Fact sheet: Open Access in Horizon 2020

What is open access?

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 is not a requirement to publish, as researchers are free to publish or not, nor does it interfere with the decision to exploit research results commercially e.g. through patenting. Indeed, the decision on whether to publish open access documents must come after the more general decision on whether to go for a publication directly or to seek first protection using Intellectual Property Rights¹. This is illustrated by the graphic below.



Two main and non-mutually exclusive routes towards open access to publications exist:

- **Self-archiving** (also called '**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 before, after or alongside its publication. Access to the article is often – but not necessarily – delayed ('embargo period') as some scientific publishers may wish to recoup their investment by selling subscriptions and charging pay-per-download:view fees during an exclusivity period.

¹ More information on this issue is available in the European IPR Helpdesk fact sheet "[Publishing vs. patenting](#)".

- **Open access publishing** (also called '**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.

What are the potential benefits of open access?

All research builds on previous work and depends on scientists' ability to access and share scientific information. The advent of the Internet and electronic publishing has resulted in unprecedented possibilities for the dissemination and exchange of information. In today's 'information economy' where knowledge is a source of competitive advantage, open access can potentially realise a variety of benefits, including:

- acceleration of the research and discovery process, leading to increased returns on R&D investment;
- avoidance of the duplication of research efforts, leading to savings in R&D expenditure;
- enhanced opportunities for multi-disciplinary research, as well as inter-institutional and inter-sectorial collaborations;
- broader and faster opportunities for the adoption and commercialisation of research findings, generating increased returns on public investment in R&D and the potential for the emergence of new industries based on scientific information.

Open access can also increase openness and transparency and thereby contribute to better policy making and ultimately benefit society and citizens.

What is the Commission's policy on open access and how will it be implemented in Horizon 2020?

The European Commission sees open access not as an end in itself but as a tool to facilitate and improve the circulation of information in the European Research Area (ERA) and beyond. Since 2008 the European Commission has been running the Open Access Pilot in FP7. The Commission recognises that there are several ways of arriving at open access, since different Member States and stakeholders are in different situations and have different needs. It therefore supports both the 'Green' and the 'Gold' approach.

Open access to peer reviewed scientific publications

Open access to scientific peer reviewed publications has been anchored as an underlying principle in the Horizon 2020 Regulation and the Rules of Participation and will consequently be implemented through the relevant provisions in the grant agreement.

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 publications² and (ii) ensure open access as follows:

- For **open access publishing**, 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. 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.
- For **self-archiving**, researchers can deposit the final peer-reviewed manuscript in a repository of their choice. In this case, they must ensure open access to the publication or within the limits specified above. In the case of 'Green' open access, open access must be granted within six months of publication³.

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. Beneficiaries must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications, ideally into a data repository, and aim to make open access to this data. But there is no obligation to do so (This is not the Open Research Data Pilot).

In all cases, the Commission would like to **encourage authors to retain their copyright and grant adequate licences to publishers.**⁴

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:

² A repository for scientific publications is an online archive. Institutional, subject-based and centralised repositories are all acceptable choices.

³ Twelve months for publications in the social sciences and humanities

⁴ Creative Commons offers useful licensing solutions in this regard (e.g. CC-BY or CC-0 licences, see <http://creativecommons.org/licenses/>).

- 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 plan⁵ (DMPs).

Projects participating in the Pilot will be (i) required to **deposit** the research data described above, preferably in a research data repository 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 specialised 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 jeopardised 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

Further Information

The Commission provides updated information and background documentation on its website.⁶

⁵ A data management plan is a document outlining how research data will be handled during a research project, and after it is completed, describing what data will be collected / generated and following what methodology and standards, whether and how this data will be shared and/or made open, and how it will be curated and preserved.

⁶ http://ec.europa.eu/research/science-society/open_access and <http://ec.europa.eu/digital-agenda/en/open-access-scientific-knowledge-0>