



European IPR Helpdesk

Fact Sheet

Open access to publications and data in Horizon 2020: Frequently Asked Questions (FAQ)

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Introduction

All research builds on former work and depends on the possibilities for scientists to access and share scientific information. The Internet has fundamentally changed the world and we have also witnessed its impact on the scientific system, which is currently undergoing significant changes ("Science 2.0"/"Digital Science"). In particular, fuller and wider access to scientific publications and data can help to:

- Accelerate innovation (faster to market = faster growth);
- Foster collaboration and avoid duplication of efforts (greater efficiency);
- Build on previous research results (improved quality of results);
- Involve citizens and society (improved transparency of the scientific process).

What is at stake is the speed of scientific progress and the return on R&D investment, and in particular publicly-funded investment, which has enormous potential for boosting productivity, competitiveness and growth. **Affordable and easy access to scientific information is very important for the scientific community itself, but also increasingly important for innovative small businesses.** Improving access to scientific information is also about **increasing openness and transparency**, which are essential features of **Responsible Research and Innovation** and contributes to better policy-making.

Therefore, all projects receiving Horizon 2020 funding will have the obligation to make sure any peer-reviewed journal article which they publish is openly accessible, free of charge.

This fact sheet is written as a frequently asked questions (FAQ) document, in order to answer queries received from Horizon 2020 applicants. This FAQ should be read in parallel with the "Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020"¹.

1. General Questions

1.1 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 reader**². In the context of R&D, open access typically focuses on access to 'scientific information', which refers to two main categories:

- Peer-reviewed scientific research articles (published in academic journals);
- Scientific research data (data underlying publications and/or raw data).

It is important to note that:

- Open access publications go through the same peer review process as non-open access publications;
- It is only after an author has decided to publish, that the question of open access arises. Open access does not entail an obligation to publish: it is up to researchers whether they want to publish some results or not.

1.2 What are 'Green' and 'Gold' open access?

Two main routes exist for open access to scientific peer-reviewed publications:

- **Self-archiving (also called 'Green' open access)** means that the published article or the final peer-reviewed manuscript is archived by the

¹ http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf

² Costs may be incurred by the provider e.g. article-processing charges, maintenance of electronic archives (repositories) etc.

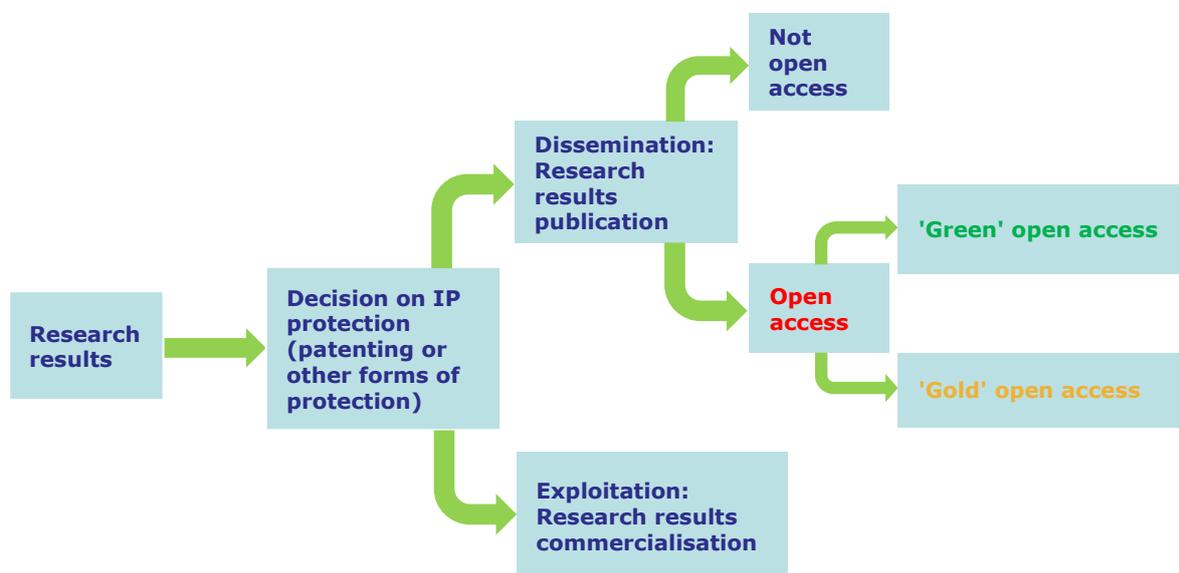
researcher – or a representative - in an online repository before, after or alongside its publication. Access to the article is often – but not necessarily - delayed ('embargo period') as some scientific publishers may wish to recoup their investment by selling subscriptions and charging pay-per-download view fees during an exclusivity period;

- **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 charged to (for example) the university or research institute to which the researcher is affiliated, or to the funding agency³ supporting the research.

These routes are not mutually exclusive and in an EU-funded project each beneficiary in a consortium can choose the most suitable approach for each publication concerned. More detailed information about the implementation of open access in Horizon 2020 is provided in section 2 below.

1.3 Do open access models have an impact on intellectual property rights?

It should be noted that open access will not affect the intellectual property generated by research results, because the decision on whether to publish open access documents comes **after** the more general decision on whether to first seek protection for intellectual property rights⁴. This is illustrated by the graphic below.



³ Such as but not limited to the European Commission. There are also many other funding agencies supporting open access around the globe.

⁴ More information on this issue is available in the European IPR Helpdesk fact sheet "Publishing vs. Patenting", available in the [library](#).

Accordingly, research results can be published only after a patent application has been filed. In the same vein, the author will certainly retain copyright on its publication, despite its work is made available in open access. It should be noted, however, that patent publications are by no means considered as open access dissemination.

Therefore open access does not interfere with the protection of research results such as, but not limited to, patenting, and therefore with their commercial exploitation. It should be noted, however, that patent publications are not considered open access dissemination, since the latter only refers to publication in peer-reviewed scientific journals.

1.4 What has the Commission done about open access up to now?

The Commission is concerned with open access in its capacities as a policy maker (proposing legislation), a funding agency (the FP7 and Horizon 2020 framework programmes for research and innovation) and a capacity builder (through funding of specific projects for open access infrastructure and policy support actions).

The European Commission sees open access not as an end in itself but as a tool to facilitate and improve the circulation of information and transfer of knowledge in the European Research Area (ERA) and beyond.

The Commission has met with and listened to all the main stakeholders and communities interested in open access. As a culmination of these efforts, it published **three major policy documents** on July 17 2012:

- Firstly, the Commission adopted the ERA Communication entitled "*A Reinforced European Research Area Partnership for Excellence and Growth*".⁵ The ERA is a unified research area open to the world based on the Internal Market, in which researchers, scientific knowledge and technology circulate freely. One of the key actions foreseen to achieve this goal is **to optimise the circulation, access to and transfer of scientific knowledge**. On the same day as the Commission adopted the ERA Communication, the DG Research Commissioner also signed Memoranda of Understanding with key stakeholder organisations;
- The second policy document, a Communication entitled "*Towards better access to scientific information*"⁶, set out the state of play in 2012, identified barriers and provided a number of measures to ensure that the

⁵ http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-partnership-excellence-growth_en.pdf

⁶ http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-towards-better-access-to-scientific-information_en.pdf

results of Europe's publicly-funded research are fully accessible to researchers, businesses and the general public;

- The third policy document published by the Commission is a "*Recommendation to the Member States on access to and preservation of scientific information*".⁷ This Recommendation covers improving policies and practices on open access to scientific publications and research data, as well as the preservation and use of scientific information. The aim is not to harmonise national policies, but to co-ordinate them, in order to make sure that Member States are all pointing in the same direction.

The European Commission continues to work with all stakeholders to implement and promote open access.⁸ As concerns its own research framework programme, the Commission implemented a pilot for open access in the Seventh Framework Programme for Research and Innovation (FP7), which covered 20% of budget in seven research areas of FP7 and proved to be an effective tool to further the development of open access.⁹ The Commission also funds several projects to support and provide further insights into open access and related issues. Most notably, the OpenAIRE project supports the implementation of open access in Europe by providing an infrastructure and national helpdesks. The European Research Council has also published open access guidelines.¹⁰

2. How is open access being implemented in Horizon 2020?

2.1 How is open access to publications being implemented in Horizon 2020?

Open access to peer-reviewed scientific publications has been anchored as an underlying principle in the Horizon 2020 Regulation and its Rules of Participation, and it is implemented through relevant provisions in the Model Grant Agreement.

Beneficiaries will be asked to ensure open access as follows:

- For open access publishing ('Gold' open access), 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). In that case, publishers often charge so-called "article processing charges" (APC). These costs are eligible for reimbursement during the duration of the action as part of the Horizon 2020 grant. For APCs incurred after the end of the grant agreement, a mechanism for

⁷ http://ec.europa.eu/research/science-society/document_library/pdf_06/recommendation-access-and-preservation-scientific-information_en.pdf

⁸ See for instance the ERA progress report 2013 at http://ec.europa.eu/research/era/pdf/era_progress_report2013/era_progress_report2013.pdf

⁹ For an evaluation of the pilot in FP7 see http://ec.europa.eu/research/science-society/document_library/pdf_06/survey-on-open-access-in-fp7_en.pdf

¹⁰ http://erc.europa.eu/sites/default/files/document/file/ERC_Open_Access_Guidelines-revised_2013.pdf

paying some of these costs is being piloted.¹¹ In the case of 'Gold' open access, open access must be granted at the latest on the date of publication.

Note that in the case of gold open access, a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication must also be deposited in a repository as soon as possible and at the latest on publication.

- For self-archiving ('Green' open access), 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 within the embargo period of six months of publication - 12 months in case of the social sciences and humanities.

Additionally, beneficiaries must ensure open access through the repository to the bibliographic metadata that identify the deposited publication and which must include:

- i. The terms ["European Union (EU)" and "Horizon 2020"] ["Euratom" and Euratom research and training programme 2014-2018"];
- ii. The name of the action, acronym and grant number;
- iii. The publication date, and length of embargo period (in the case of green open access), and
- iv. A persistent identifier.

Moreover, beneficiaries "must aim to" deposit the research data needed to validate the results presented in the deposited scientific publications, ideally via a data repository. The reason for this obligation relates to the fact that 'publication' increasingly includes the data underpinning the results presented in the publication, also referred to as 'underlying' data. This data is needed to validate the results presented in the deposited scientific publication and is therefore seen as a crucial part of the publication and an important ingredient enabling scientific best practice. Beneficiaries may also aim to grant open access to this data, but there is no obligation to do so. Rather, this provision in the Model Grant Agreement refers to the need to ensure sound management of the data generated in a project. In this sense, it is different from the open access to data pilot elaborated below.

In all cases, the Commission would like to encourage authors to retain their copyright and grant adequate licences to publishers.¹²

¹¹ This action is part of a call contained in the eInfrastructure work programme for 2014 and a winning proposal will be selected by independent experts later in 2014.

¹² Creative Commons offer useful licensing solutions in this regard (e.g. CC-BY or CC-0 licences, see <http://creativecommons.org/licenses/>).

2.1.1. What are open access repositories and where can you find them?

Open Access archives, so called repositories, may be institution-based or subject-based collections like the economics repository [RePEc](#) (Research Papers in Economics) or the physics repository, [arXiv](#). The Registry of Open Access Repositories ([ROAR](#)) and the Directory of Open Access Repositories ([OpenDOAR](#)) provide more in-depth information about the number and location of thematic and institutional repositories. Repositories adhere to internationally-agreed sets of technical standards.

The primary type of content in OA repositories is the peer-reviewed journal literature. The majority of journals permit authors to archive their post-prints in an institutional or disciplinary repository. These include major commercial publishers, such as Elsevier, and many of the large scholarly society publishers. The SHERPA-ROMEO service provides more detailed information. Studies have shown that articles available in a repository are cited more often than those available only in subscription-based journals.

Increasingly, repositories are also developing methods for storing the datasets underlying scientific publications. A growing number of repositories also contain books or book chapters.

In the European context the OpenAIRE project supports the implementation of open access in Europe:

- OpenAIRE provides a repository facility for researchers who do not have access to an institutional or discipline-specific repository.
- At the OpenAIRE portal and e-Infrastructure you can find the repository networks and explore scientific data management services together with five disciplinary communities.
- The project also provides an extensive European helpdesk system, based on a distributed network of national and regional liaison offices in 28 countries, to ensure localised help to researchers within their own context.

2.1.2. Does the open access requirement in Horizon 2020 mean that researchers cannot publish in the journals that they consider most appropriate?

The overwhelming majority of academic journals support either the gold, the green or a hybrid¹³ open access route. By supporting all these complementary approaches to open access, the Commission feels that it provides the maximum freedom for researchers to publish where they feel it is the most appropriate. At the same time, open access publishing makes visible the costs of publishing in specific journals, which should be one factor to be taken into account by researchers when deciding where to publish.

¹³ Hybrid open access journals refer to journals where not all articles are fully open access but that allow some articles to be open access (usually charging APCs).

Beneficiaries are encouraged to be wary of so-called “predatory publishers”, which do not follow the scientific requirements of academic publications (open access or not). Beneficiaries may find it useful to consult a 'white list' such as the Directory of Open Access Journals ([DOAJ](#)) to avoid such malpractices.

2.1.3. For gold open access what is the maximum amount that can be reimbursed in Horizon 2020?

The Commission does not currently stipulate a price-cap for claiming article processing charges or a maximum number of articles to be published during the duration of the grant. That said, general rules of project management – in particular the principle that all costs must be proportionate – apply. Note that costs for gold open access should be included in the budget planning process for the whole project.

2.1.4. For green open access, why have embargo periods of six months (twelve months for social sciences and humanities) been chosen?

The Commission already announced embargo periods of six months (for STEM research) and twelve months (for non-STEM research) in July 2012, in the Communication *"Towards better access to scientific information: Boosting the benefits of public investments in research"*¹⁴.

The Commission has implemented these embargo periods since it is convinced that in today's world time is more and more a crucial factor to bear in mind, taking into account the fact that the volume of research text and data (published and not published) is growing every year exponentially. Staying "on top of the game" as concerns the availability of research is therefore crucial for Europe's competitiveness, innovative capacity and growth, as well as for addressing the societal challenges of the 21st century. The embargo periods chosen are based on previous experience with the FP7 pilot as well as international best practices.

2.1.5. What about open access to monographs and other types of publications?

In the Model Grant Agreement, “scientific publications” mean primarily journal articles. In addition, however, beneficiaries are strongly encouraged to provide open access to other types of scientific publications, including monographs, books, conference proceedings and grey literature (informally published written material not controlled by scientific publishers, e.g. reports).

¹⁴ (Com (2012) 401 final, page 9.

2.2 How is open access to data being implemented in Horizon 2020?

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. The legal requirements for projects participating in this pilot are contained in the optional article 29.3 of the Model Grant Agreement.¹⁵ Other relevant information, such as the scope of the Pilot, is provided in the introduction to the Horizon 2020 Work Programme. The Pilot on Open Research Data will be monitored throughout Horizon 2020 with a view to further developing EC policy on open research.

2.2.1. What thematic areas of Horizon 2020 will this pilot cover?

For the 2014-2015 Work Programme, the areas of Horizon 2020 that participate 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.

Note that individual projects funded under Horizon 2020 and not covered by the scope of the Pilot may participate on a voluntary case-by-case basis ('opt in').

2.2.2. Are there valid reasons for not participating in the pilot?

The Commission acknowledges that there are valid reasons for not making data openly available. Projects may therefore, at any stage¹⁶, opt out of the Pilot for a variety of reasons, namely:

- If participation in the Pilot on Open Research Data is incompatible with the Horizon 2020 obligation to protect results, if they can reasonably be expected to be commercially or industrially exploited;
- If participation in the Pilot on Open Research Data is incompatible with the need for confidentiality in connection with security issues;
- If participation in the Pilot on Open Research Data is incompatible with existing rules concerning the protection of personal data;

¹⁵ The Model Grant Agreement is available in the Participant Portal at: http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-mga

¹⁶ During the proposal phase projects can decide to opt out as part of the electronic submission process. Should they decide to opt out later, once the project has started, they can stipulate this in their Data Management Plan for specific datasets.

- If participation in the Pilot on Open Research Data would jeopardise the achievement of the main aim of the action;
- If the project will not generate or collect any research data;
- If there is any other legitimate reason to not take part in the Pilot (information to be provided at proposal stage).

At the proposal submission stage, this information provided by the project is **not** part of the evaluation. In other words, proposals will not be evaluated more favourably because they are part of the Pilot and will not be penalised for opting out of the Pilot. During the lifetime of a project an opt out option remains possible for any of the reasons above and needs to be described in the project's Data Management Plan (DMP, see below).

2.2.3. What kind of data does the pilot cover?

The Commission acknowledges that "data" generated by EU funded projects is extremely diverse. 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;
- Other data, including associated metadata, as specified and within the deadlines laid down in a data management plan, to be developed by the projects. In other words, beneficiaries will be able to choose which data, additionally to the data underlying publications, they make available in open access mode.

2.2.4. What is meant by a Data Management Plan (DMP)? Will a DMP be part of the evaluation of projects in Horizon 2020?

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

The use of a data management plan covering individual datasets is required for funded projects participating in the Open Research Data Pilot. Other funded projects that do not participate in the Pilot are also invited to submit a Data Management Plan if relevant for their planned research, but this is not compulsory.

Contrary to other funders, the Commission does NOT require applicants to submit a DMP at the proposal stage. A DMP is therefore NOT part of the evaluation.

However, note that all project proposals submitted to "Research and Innovation actions", as well as "Innovation actions", include a section on research data

management which is evaluated under the criterion 'Impact'.¹⁷ Where relevant, applicants must provide a short, general outline of their policy for data management.

A first version of the data management plan must be provided as an early deliverable within six months of the project and should be updated during the project as appropriate (at least for mid-term and final reporting but in any case whenever important changes to the project occur due to inclusion of new data sets, changes in consortium policies or external factors).

3. Where can I find more information?

- Horizon 2020: <http://ec.europa.eu/programmes/horizon2020/>
- Participant Portal: <http://ec.europa.eu/research/participants/portal/>
- Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020:
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf
- Guidelines on Data Management in Horizon 2020:
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf
- Open access (Science in Society site):
http://ec.europa.eu/research/science-society/open_access
- Open access (Digital Agenda site): <http://ec.europa.eu/digital-agenda/en/open-access-scientific-knowledge-0>
- OpenAIRE: <http://www.openaire.eu/>

You can also contact the European Commission's Open Access team at RTD-OPEN-ACCESS@ec.europa.eu

¹⁷ For general information on how Horizon 2020 proposals are being evaluated please consult the Participant Portal: <http://ec.europa.eu/research/participants/portal/desktop/en/funding/index.html>

GET IN TOUCH

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The European IPR Helpdesk aims at raising awareness of Intellectual Property (IP) and Intellectual Property Rights (IPR) by providing information, direct advice and training on IP and IPR matters to current and potential participants of EU funded projects focusing on RTD and CIP. In addition, the European IPR Helpdesk provides IP support to EU SMEs negotiating or concluding transnational partnership agreements, especially through the Enterprise Europe Network. All services provided are free of charge.

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