



Open Access in a European Policy Context and its implementation in Horizon 2020

Meet & Exchange Workshop on OA as part of NCP Academy project

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Open Access

- Online access at no charge to the *user*
 - to peer-reviewed scientific publications
 - to research data

Open Science

- A systemic change in the modus operandi of science and research
- Affecting the whole research cycle and its stakeholders



Priorities of Commissioner Moedas

- **Open Innovation**
- **Open Science**
- **Open to the world**



The Commission objective

Optimise the impact of publicly-funded scientific research

- At European level (FP7 & Horizon 2020)
- At Member State level

One way to get there: open access

Expected benefits:

- Better and more efficient science
- Economic growth
- Broader, faster, more transparent and equal access for the benefit of researchers, industry and citizens

... in the European Research Area and beyond

Three key documents (16.07.2012)

Communication 'A reinforced European Research Area partnership for excellence and growth'

Communication 'Towards better access to scientific information: boosting the benefits of public investments in research'

Recommendation on access to and preservation of scientific information

Competitiveness Council 29 May 2015

Member States have expressed their wish for the development of a European Open Science Agenda

The Council Conclusion calls for action to:

- **remove obstacles to wide access to publicly funded research publications and underlying data**
- address better data management and welcome the Open Research Data Pilot in Horizon 2020
- develop action plans or strategies for open science in the context of ERA



Open access policies across the EU

'NPR report' Access to and Preservation of Scientific Information in Europe (based on self-reporting of MS) – new – **out in January 2016**

open access to scientific peer-reviewed publications

most EU Member States reported a national preference for one of the two types of open access,

Preference for the Green model: Belgium, Cyprus, Denmark, Estonia, Greece, Ireland, Lithuania, Malta, Norway, Portugal, Slovakia and Spain.

Preference for the Gold model: Hungary, the Netherlands, Romania, Sweden and the United Kingdom.

Other Member States support both models equally, such as Germany, France, Croatia, Italy, Luxembourg, Poland and Finland.

However, there is generally a system of predominance of one model with the possibility of using the other model, so a mixture of both routes results.

In most cases based on soft-law, not national legislation

Open access policies across the EU (II)

open access to research data

policies less developed across EU countries than for OA to publications. However, general acknowledgement of the importance of open research data

(i) little or no open access to research data policies in place and no plan for a more developed policy in the near future:

Cyprus, Latvia, Luxembourg, Malta, Poland.

(ii) little or no open access to research data policies in place, but some plans in place or under development:

Austria, Belgium, Croatia, Czech Republic, Estonia, Hungary, Italy, Portugal, Romania, Slovakia, Sweden, Turkey.

(iii) open access policies/institutional strategies or subject-based initiatives for research data already in place:

Denmark, Finland, France, Germany, Ireland, Lithuania, the Netherlands, Norway, Slovenia, the United Kingdom.

The international landscape

Robust open access policies around the world – not invented in Europe

- Strong US OA mandate for federally funded research (agencies with budget of over 100 million €), most notably NIH
- Strong Green OA mandate in Latin America (SCIELO)
- Strong OA policies also in Canada, Australia, Japan...
- Developing policies in other countries, e.g. China, Russia...
- Key non-state funders also have robust mandates (Wellcome Trust, Gates Foundation...)

Open Access in Horizon 2020



Open access in Horizon 2020

Regulation establishing Horizon 2020

- "To increase the circulation and exploitation of knowledge, open access to scientific publications should be ensured. Furthermore, open access to research data resulting from publicly funded research under Horizon 2020 should be promoted, taking into account constraints pertaining to privacy, national security and intellectual property rights
- Open access to scientific publications resulting from publicly funded research under Horizon 2020 shall be **ensured** [...]. Article 29.2 MGA
- Open access to research data resulting from publicly funded research under Horizon 2020 shall be **promoted**. [...]." Article 29.3 MGA

OA to publications in H2020 (I)

What?

Beneficiaries must ensure **open, free-of-charge access** to the end-user to **peer-reviewed scientific publications** relating to their results.

- 'Peer-reviewed publications' = publications that have been evaluated by other scholars (*e.g. articles in scientific journals*).
- Others (non-peer-reviewed articles, monographs, books, conference proceedings and 'grey literature') not covered but highly recommended (ERC covers monographs)
- Open access means ensuring that, at the very least, such publications can be read online, downloaded and printed — via a repository for scientific publications.
- Beneficiaries are encouraged to provide additional rights such as the right to copy, distribute, search, link, crawl and mine).
- Beneficiaries are free to choose the repository; it can be institutional, subject-based or centralised.

OA to publications in H2020 (II)

How?

a) **open-access publishing** (also called **gold open access**)

open access is provided immediately via the publisher when an article is published in open access journals or in 'hybrid' journals combining subscription access and open access to individual articles.

publication costs ('article processing charges') are eligible for reimbursement (*Article 6.2.D.3*) — if incurred before the end of the action.

After the end of the project: pilot action for reimbursement run by OpenAIRE

Deposit in repository (→ green open access)



OA to publications in H2020 (III)

b) **self-archiving** (also called **green open access**).

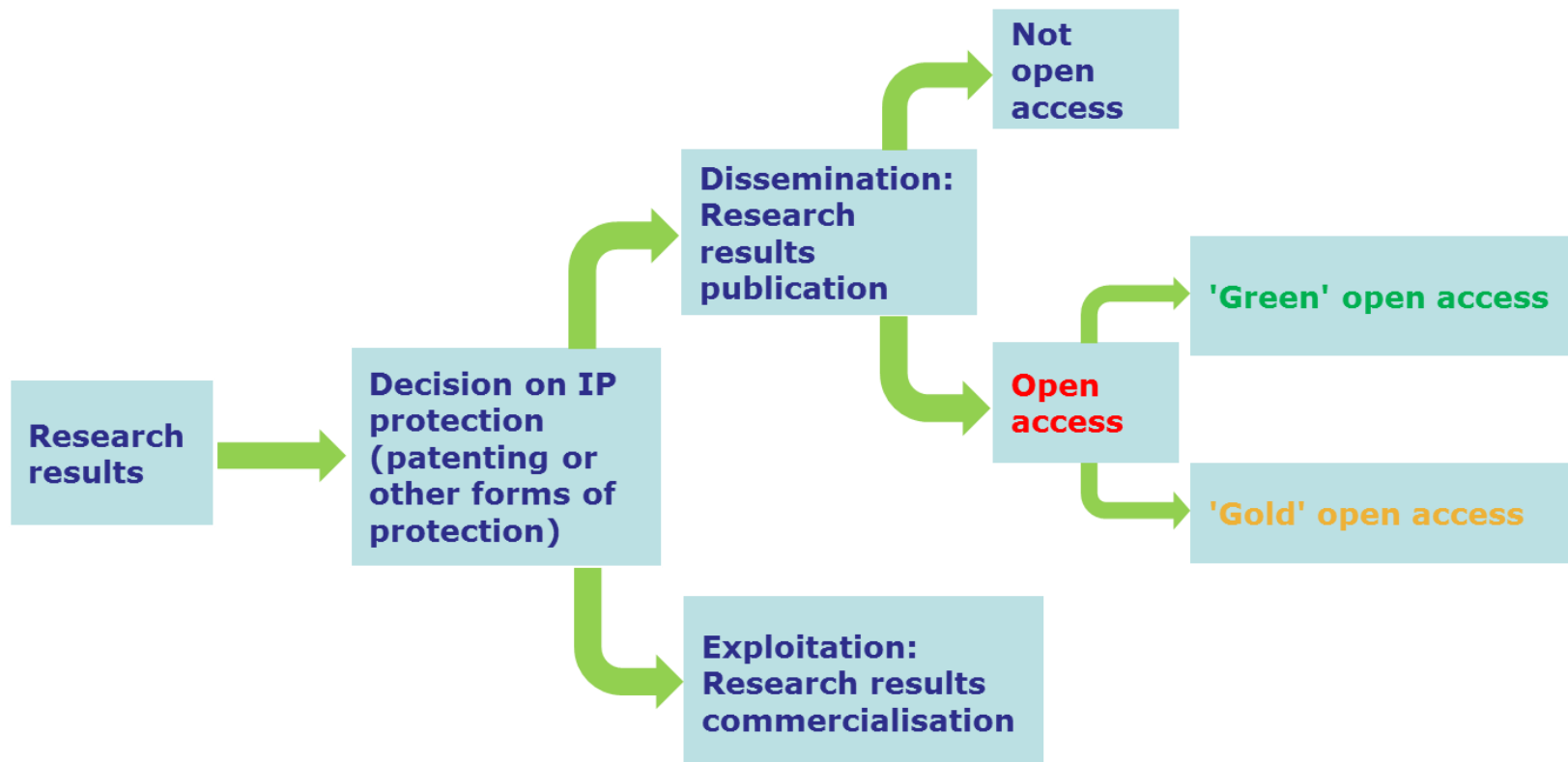
'Green open access' means that the published article or the final peer-reviewed manuscript is archived by the researcher (or a representative) in an online repository.

Access to the article is often — but not necessarily — delayed (H2020 'embargo period' between 6 and 12 months) as some scientific publishers may wish to recoup their investment by selling subscriptions and charging pay-per-download view fees during an exclusivity period.

Authors are encouraged to retain their copyright and grant appropriate licences to publishers.

What OA is NOT

- Not an obligation to publish
- Not at odds with patenting (see graph)
- OA publications go the same peer review process



Open Research Data Pilot in H2020

Key questions:

Which thematic areas are covered?

What data is covered?

What are the requirements?

What about data management?

Open Research Data Pilot in H2020 (I)

Areas of the **2016-2017** Work Programme participating in the Open Research Data Pilot ('core areas') are:

- Future and Emerging Technologies
- Research infrastructures – (**new**: coverage of the whole area)
- Leadership in enabling and industrial technologies – Information and Communication Technologies
- Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology: 'nanosafety' and 'modelling' topics (**new**)
- Societal Challenge: Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy - selected topics as specified in the work programme (**new**)

Open Research Data Pilot in H2020 (II)

Cont'

- Societal Challenge: Climate Action, Environment, Resource Efficiency and Raw materials – except raw materials
- Societal Challenge: Europe in a changing world – inclusive, innovative and reflective Societies
- Science with and for Society
- Cross-cutting activities - focus areas – part Smart and Sustainable Cities (**moved from Energy WP**)

Voluntary participation in the Pilot on Open Research Data (opt-in)

Individual projects funded under Horizon 2020 and not covered by the scope of the Open Research Data Pilot as outlined above are encouraged to participate in the Pilot on a voluntary basis (by including article 29.3)

All of Horizon 2020 is therefore potentially covered by the ORD Pilot, either through the core areas or by the individual opt-in approach. The only exceptions to this are:

- the "cofund" and "prizes" instruments

- "ERC proof of concept" grants"

- "ERA-Nets" that do not produce data (the opt-in option does apply to ERA-Nets that do produce data).

Opting out partially or entirely from the Pilot on Open Research Data

Projects can opt out at any stage if:

participation is incompatible with the Horizon 2020 obligation to protect results that can reasonably be expected to be commercially or industrially exploited

participation is incompatible with the need for confidentiality in connection with security issues

participation is incompatible with rules on protecting personal data

participation would mean that the project's main aim might not be achieved

the project will not generate / collect any research data, or there are other legitimate reasons not to take part in the Pilot (at proposal stage – free text box provided).



Opting out partially or entirely from the Pilot on Open Research Data

Important: Participation in the pilot is not part of the project evaluation.

During the lifetime of a project, a complete opt-out via project amendment is possible for any of the reasons above.

Alternatively, during the lifetime of a project, a partial (e.g. for selected datasets) or even complete (i.e. for all datasets) opt out remains possible for any of the reasons above via the Data Management Plan (DMP).

For projects taking part in the Pilot, the review of Data Management Plans is part of the electronic reporting process.

Approach: as open as possible, as closed as necessary

ORD Pilot: take-up in first calls of H2020

Basis: 3699 Horizon 2020 **signed grant agreements**

Calls in core-areas: opt out 34,6% (149/431)

- In other words 65,4% of projects in the core areas participate in the ORD pilot.

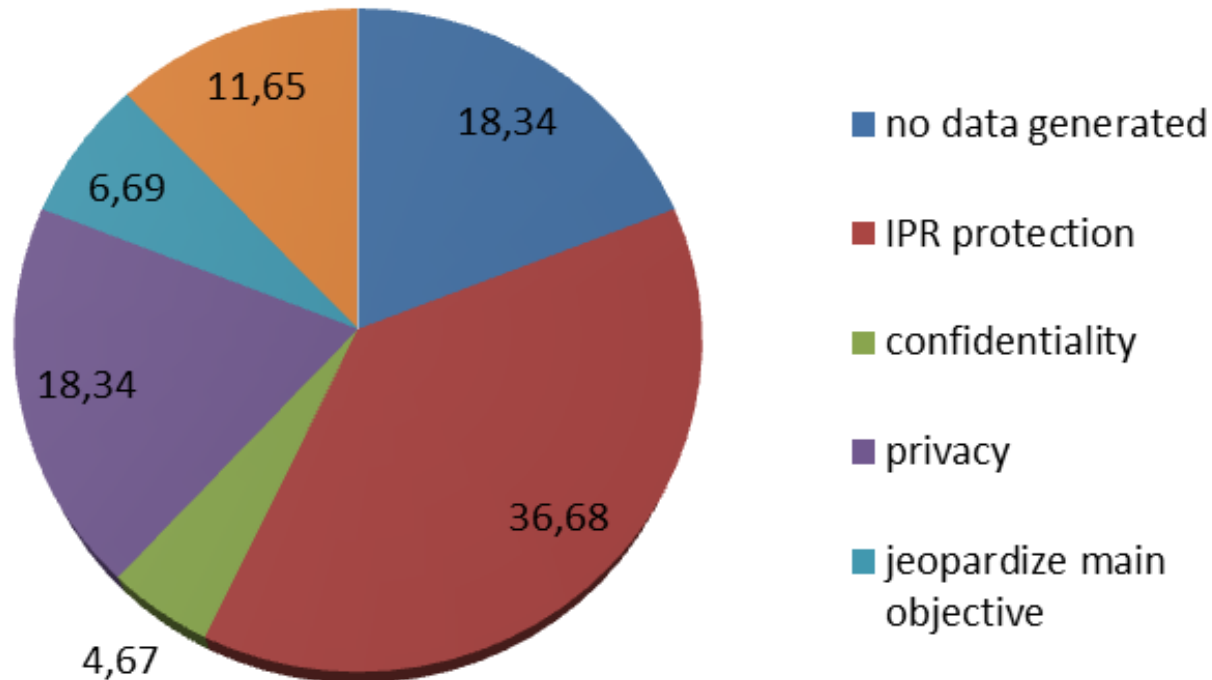
Other areas: voluntary opt in 11,9% (409/3268)

Limited divergence from 2014 proposal figures but larger dataset used

Note: 100% participation is not feasible or even desirable (e.g. not all projects generate data)

ORD Pilot: opt-out reasons among proposals

Graphic 1: Data pilot opt-out reasons



Open Research Data Pilot in H2020

Types of data concerned:

- Data needed to validate the results presented in scientific publications ("underlying data")
- Other data as specified in Data Management Plan (=up to projects)

Beneficiaries participating in the Pilot will:

- Deposit this data in a research data repository of their choice
- Take measures to make it possible to access, mine, exploit, reproduce and disseminate free of charge
- Provide information about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (where possible, provide the tools and instruments themselves)

EC: Support & monitoring (Annotated MGA, guidance etc...)

Data management Plans in Horizon 2020

Data Management Plans (DMPs) mandatory for all projects participating in the Pilot, optional for others

DMPs are NOT part of the proposal evaluation, they need to be generated within the first 6 months of the project and updated as needed

- All proposers to submit general information on data management - evaluated under criterion 'Impact'

DMP questions:

- *What data will be collected / generated?*
- *What standards will be used / how will metadata be generated?*
- *What data will be exploited? What data will be shared/made open?*
- *How will data be curated and preserved?*

DMPs during the project cycle

Data Management Plan should be updated if appropriate during the project lifetime whenever significant changes arise in your project such as new data sets, changes in consortium policies, external factors.

as a minimum, update the DMP in time to be evaluated as part of the mid-term and final project reviews for projects that have planned reviews

DMP updates needed at least at the end of projects, for projects where reviews are not planned and at other moments if it is defined by project consortia.

DMP templates exist but their use is currently not obligatory

ORD Pilot: experiences (1)

- Explanation is paramount!
- Misperception that 'open' bias will be evaluated positively
- Confusion: DMP versus data management section at submission stage
- Emphasise flexibility (many opt-out / opt-in mechanisms)
- It helps to re-frame ORD Pilot as "Data Management Pilot"
- Need to state that not everything must be open. In theory, it is possible to be in the ORD Pilot and not open any data.

ORD Pilot: experiences (2)

- Stress the fact that researcher has freedom and responsibility via DMP. Excellent research must include excellent data management.
- Questions about eligibility of data management costs
- Tools and support needed for data management / DMPs
- Emphasise the importance of feedback for policy the next Framework Programme: being in the Pilot means co-shaping European policy on opening up research data (Midterm review)
- Underline overall aim: kick-starting a virtuous circle and change of culture



Ongoing coordination and support actions (FP7 funded)

PASTEUR4OA (Open Access Policy Alignment Strategies for European Union Research) Started 2014

FOSTER (Foster Open Science Training for European Research) Started 2014

RECODE - (Policy Recommendations for Open Access to Research Data in Europe) – 2013, finished

OpenAIRE supporting the implementation of Open Access in Europe (publications and data)

Infrastructure projects (with OA components), e.g. GEO/GEOSS, ELIXIR, EUDAT, CLARIN etc...

We welcome your input!



Contact us

Mail: RTD-open-access@ec.europa.eu

Web: <http://ec.europa.eu/research/openscience/index.cfm>

Twitter: [@OpenAccessEC](https://twitter.com/OpenAccessEC)

Ressources

OpenAIRE: <https://www.openaire.eu/>

EC Central Library: <http://www.netvibes.com/open-access>

Public consultation: <http://scienceintransition.eu>

Study to measure growth of OA: <http://science-metrix.com/en/publications/reports>

NEW NPR report

https://ec.europa.eu/research/openscience/pdf/openaccess/npr_report.pdf#view=fit&pagemode=none

NEW H2020 guidance updated on the portal:

http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm