



Fit for Purpose! Shaping Open Access and Open Science Policies for Horizon Europe

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Who are we?

A policy maker

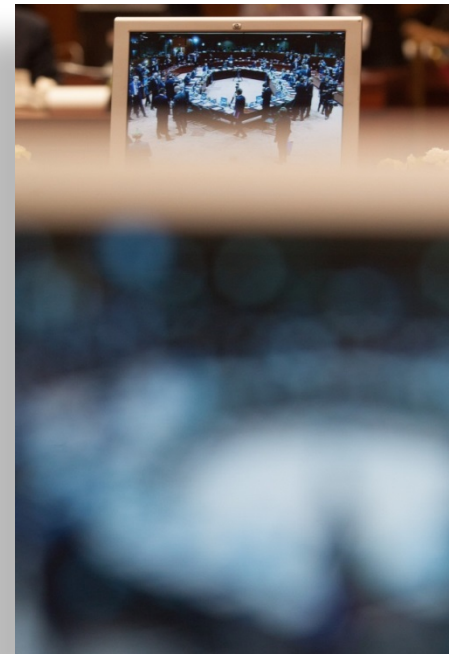
- We propose EU legislation
- We legislate with other Community institutions (European Parliament, Council...)
- We invite Member States to act

A funding agency

- We set our own rules for EC-funded scientific research and innovation

A capacity builder

- We fund projects that support our policy



How to describe Open Science?

There are many definitions

- 'Open science refers to a new approach to the scientific process based on cooperative work and new ways of disseminating knowledge, improving accessibility to and re-usability of research outputs by using digital technologies and new collaborative tools.' ([source](#))

Or maybe it is... *Just science done right!*



[Source](#): Melanie Himming



Why is Open Science so important?

It's good for science: efficiency, verifiability, transparency, interdisciplinarity, trust in science

It's good for the economy: access to and re-use of scientific information by industry, innovation

It's good for society: broader, faster, transparent & equal access for and possibility for participation by citizens, increased societal impact of science and research

****International collaboration necessary**



Open Science in the EU legislation

Revision of the Recommendation on access to and preservation of scientific information (2018)

- Setting the landscape for OS with a view to tackle disparities
- Also covers infrastructure, metrics, rewards, skills...

Revision of the EU Copyright Directive (2018)

- Provides for an exception for research organisations to carry out Text and Data Mining (data analytics)

Revision of the Open data and the re-use of public sector information Directive (2018)

- Applies to publicly funded research data that are publicly available through repositories
- 'As open as possible, as closed as necessary'

European Cloud Initiative (2016) Communication

- Tapping into the wealth of data in Europe
- European Open Science Cloud (EOSC)



8 policy priorities for Open Science

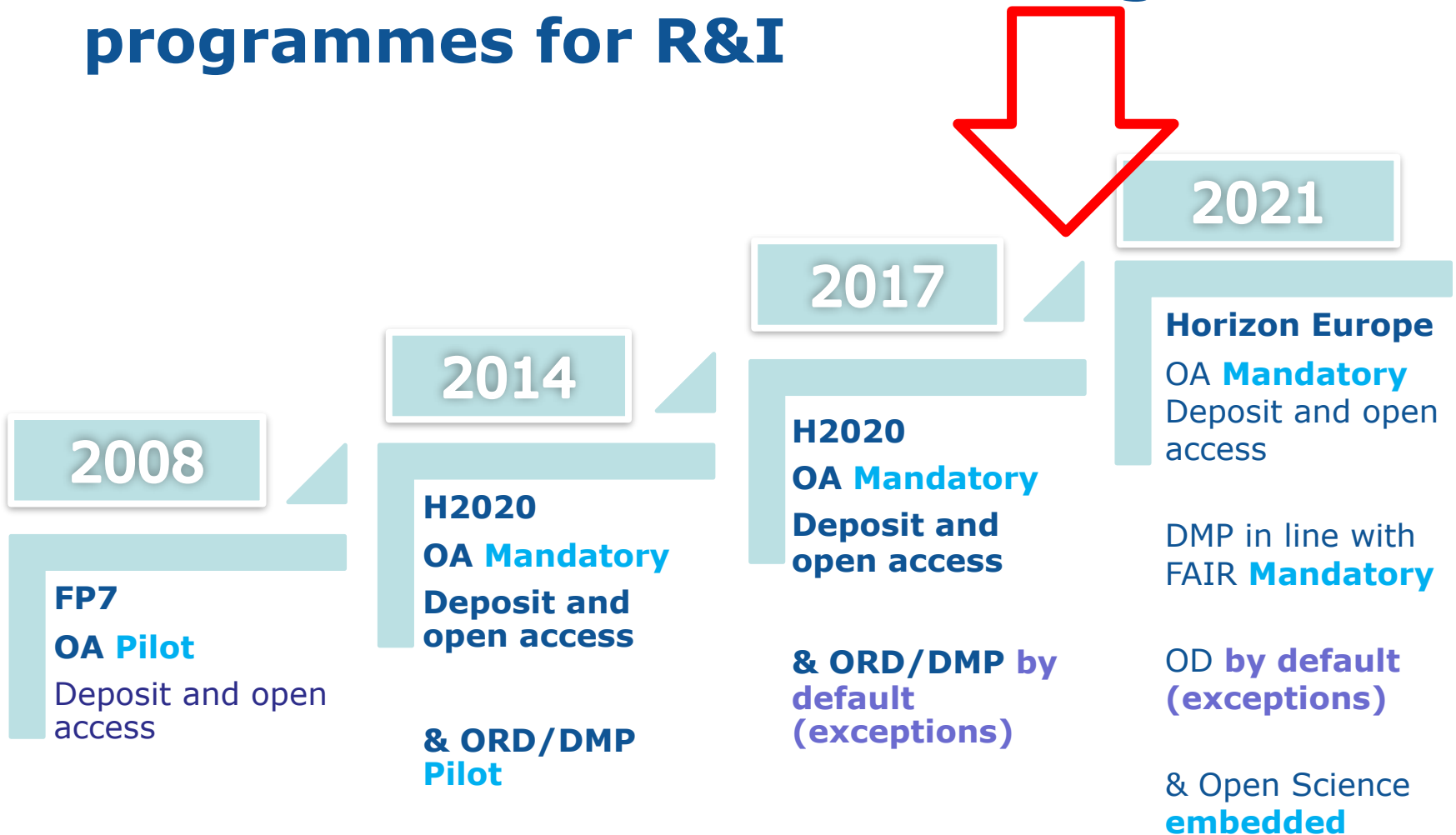
Use and management of research results

- 1. FAIR data:** FAIR data sharing is the default for funding scientific research
- 2. European Open Science Cloud:** all EU researchers are able to deposit, access and analyse European scientific data through EOSC, without leaving their desk
- 3. Indicators:** alternative metrics (next generation metrics) complement conventional indicators for research quality and impact (e.g. JIF and citations)
- 4. Future of scholarly communication:** all peer reviewed scientific publications are freely accessible and early sharing of different kinds of research outputs is encouraged

Alignment of research partners

- 5. Rewards and incentives:** the European research career evaluation system fully acknowledges Open Science activities
- 6. Research Integrity:** all publicly funded research in the EU adheres to commonly agreed Open Science standards of research integrity
- 7. Skills and education:** all scientists in Europe have the necessary skills and support to apply Open Science research routines and practices
- 8. Citizen Science:** citizens significantly contribute and are recognised as valid knowledge producers of science

The evolution of the EU funding programmes for R&I





Horizon Europe legal basis

Regulation of the European Parliament and the council establishing Horizon Europe

- To be finalized with financial agreement of HE (common understanding)
- Main legal basis. Articles 2, 10 and 35 define Open Science Requirements
- Agreed March 2019

Model Grant Agreement

- For funding through Horizon Europe
- Provisions on open science to be discussed with MS early 2020



Main elements of Open Science in Horizon Europe (per Regulation)

- Open access to publications ensured (=no way around this! 😊)
- Open access to research data, including those underlying publications ('as open as possible as closed as necessary')
- Responsible management of research data (Data Management Planning; FAIR data; long-term preservation of data)
- Reciprocity in open science to be promoted and encouraged (in agreements with third countries)
- Open science practices promoted and encouraged; may provide additional incentives or obligations to adhere to open science practices
- May require additional obligations to use EOSC for storing and giving access to research data
- Authors/beneficiaries must retain enough rights for open access
- Exceptions to open access for research data described



Model Grant Agreement

In progress...

At the moment an internal document

Continues, strengthens, clarifies and improves current policy

Some changes....



Plan S and Horizon Europe: oa to publications

The EC is a supporter of Plan S

It examines the possible implementation of main elements of Plan S in Horizon Europe MGA



Part I: The Plan S Principles

"With effect from 2021, all scholarly publications on the results from research funded by public or private grants provided by national, regional and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo."



Possible scenario for incorporating Plan S principles in Horizon Europe

Immediate open access required

- Through repositories or open access publishing and repositories
- Embargoes no longer accepted
- Most significant influence by Plan S

Publication in hybrid journals allowed

- However, costs not eligible
- Already in the EC's Impact Assessment proposal for HE
- Is actually beyond current Plan S requirements

Copyright retention and open license asked for

- Copyright retention already in the HE Regulation
- Open license to be required (in line with [new standard licence](#) adopted by the EC for its own information production)



Proposals for research data in Horizon Europe

Mainstream RDM with mandatory DMP

- For all projects that generate, collect, re-use research data
- No exceptions to DMP requirement for such projects

Open by default

- Unless exceptions apply- there is no 'opting-out' of anything any more, we are beyond the pilot phase!

FAIR research data

- Identifiers, trusted repositories, machine-readable licenses, among other requirements

Use of European Open Science Cloud required

- In some Work Programmes



Conclusion I/II: Open Science in Horizon Europe

Beyond open access to publications & data

- Clarifies and strengthens OA requirements, empowers authors
- Sets obligations towards responsible RDM with DMP, FAIR and open data sharing, while complying with IPR rules and exploitation obligations
- Encourages OA to other research output/products, e.g. software, algorithms, models etc.



Conclusion II/II: Open Science in Horizon Europe

Embracing and incentivizing Open Science as *modus operandi*

- Promote open science practices beyond open access, such as science communication and citizen science, among others, e.g. through a combination of obligations and incentives (most likely also in the evaluation of proposals)
- Sanctions for those grant *beneficiaries* (e.g. not necessarily the same as *researchers*) that repeatedly and consistently fail to provide the required OA (i.e. institutions to assume responsibility for their intellectual output)
- Appropriate metrics for better assessing the impact of research output and the engagement in open science



Other important activities:

European Open Science Cloud

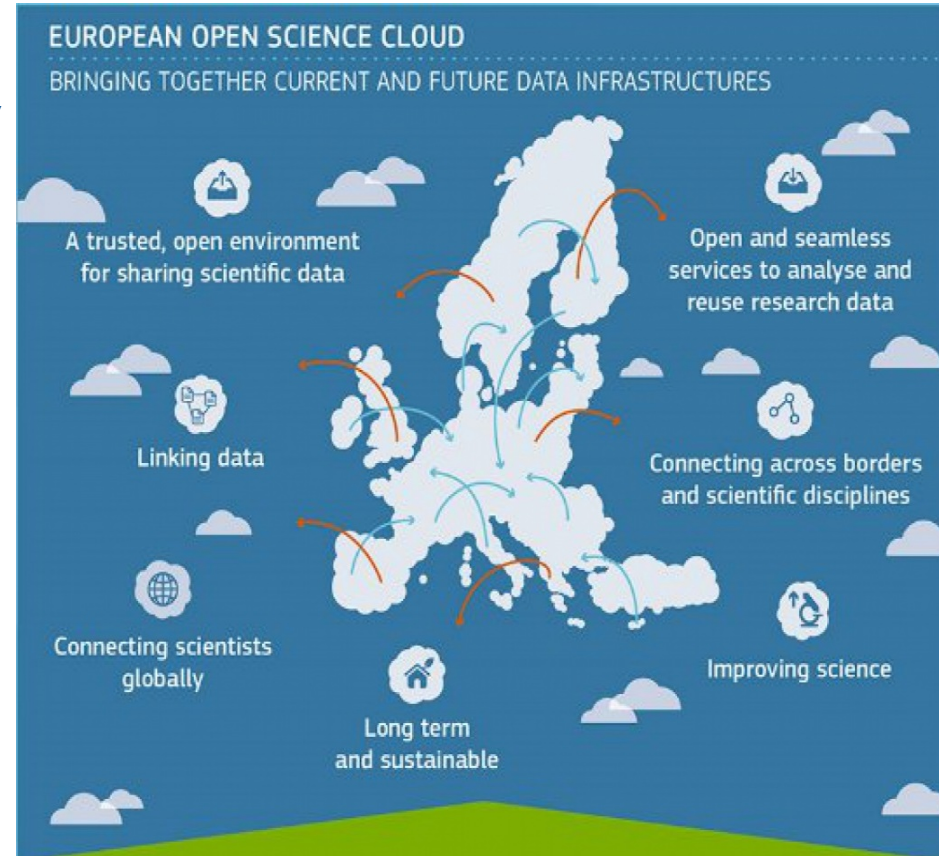
EC data package

Open research publishing platform

The Vision for EOSC



- **EOSC will provide 1.7m EU researchers an environment with free, open services for data storage, management, analysis and re-use across disciplines**
- **EOSC will join existing and emerging horizontal and thematic data infrastructures**, bridging today's fragmentation and ad-hoc solutions
- **EOSC will add value** (scale, data-driven science, inter-disciplinarity, faster innovation) and leverage past infrastructure investment (10b per year by MS, two decades EU investment)



<https://www.eosc-portal.eu>



Public sector and
publicly funded data



Private sector data



Research data

Proposal for a
revision of the
Directive on the
reuse of public
sector information

Draft Guidance on
private sector data
sharing in B2B and
B2G contexts

Update 2012
Recommendation
on access to and
preservation of
scientific
information

2018 DATA PACKAGE

Different policy instruments for different types of data



The Open Research Europe publishing platform

- Help H2020 beneficiaries and their researchers comply with the open access mandate without paying APCs during and after the grant
- Improve uptake of OA in H2020 and Horizon Europe
- Promote OA as THE mode for publishing from now on
- Support open science and lead by example
 - ✓ Early sharing of research (pre-prints + peer-reviewed articles)
 - ✓ Open peer-review+ post publication commenting
 - ✓ New generation metrics
- Explore business models in OA publishing and sustainability
- Deadline for submission of tender just last week. Anticipation.....



Thank you!

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