



Open Science: The European Landscape

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What is Open Science?

“Open Science” means an approach to the scientific process based on open cooperative work, tools and diffusing knowledge

(Horizon Europe Regulation and Model Grant Agreement)

- Open Science has the potential to increase
 - **Quality & efficiency of R&I**, if all the produced results are shared, made reusable, and if their reproducibility is improved
 - **Creativity**, through collective intelligence and cross-disciplinary research that does not require laborious data wrangling
 - **Trust** in the science system, by engaging both researchers & citizens

Main challenges and priorities for Open Science

Improve *the practice* of R&I

- Openly accessible scholarly publications
- Early sharing of all research outputs
- All data FAIR, RDM
- Reproducible results
- Societal engagement and responsibility

Develop proper *enablers*

- Rewards and incentives to adopt Open Science practices, with appropriate metrics
- Appropriate skills and education, including for research integrity
- Open Research Infrastructures including the European Open Science Cloud (EOSC)
- Legal & regulatory environment for data and copyright

Involving all the actors

Engaging internationally

Changing research culture

The European Commission in the R&I context

Policy maker

- It proposes EU legislation and monitors its implementation
- It works with the two co-legislators (European Parliament and Council)
- It invites Member States to act

Funder

- It sets its own rules for scientific research and innovation funded by the European Commission

Capacity builder

- It has research facilities (Joint Research Centre) and funds infrastructure that support EC/EU policy

Open Science: a crucial part of the European Research Area

Open Science in the European Research Area: the recent ERA Communication

Deepening the ERA (Action 9)

- Launch, via the Horizon Europe Programme, a **platform of peer-reviewed open access publishing**;
- **Analyse authors' rights** to enable sharing of publicly funded peer-reviewed articles without restriction;
- Ensure a **European Open Science Cloud** that is offering findable, accessible, interoperable and reusable research data and services (Web of FAIR); and
- Incentivise open science practices by improving the **research assessment system**.

Citizen Engagement (Action 13)

- Organise with Member States and stakeholders Europe-wide participatory **citizen science campaigns** to raise awareness and networking, crowdsourcing platforms and pan-European hackathons, in particular in the context of Horizon Europe Missions. The Commission will develop with Member States best practices to open up science and innovation to citizens and youth.

Copyright and Open Science

Copyright is a bundle of rights that protect authors on their creations + allow copyright holders to determine who, when and how will access and reuse works

Protects and **sets the conditions for “dissemination”**

An adequate copyright legislative framework and copyright management are key for Open Science

- **The transposition of the Copyright in the Digital Single Market Directive was due on 7 June 2021** (articles 3 & 4 on Text and Data Mining)
- **The review of the Database Directive** will be part of the upcoming «Data Act »
- **Under the ERA**, the Commission will “analyse authors’ rights to enable sharing of publicly funded peer-reviewed articles without restriction” but also data legislative/regulatory frameworks and their implications for research

Improving the research assessment system

The Commission **is currently consulting** research funders, research performers, policy makers, and other stakeholders, **on how to advance with reforming the research assessment system.**

- A proposed way forward is to **reach an agreement by 2022** (such as a Memorandum of Understanding) **between those willing to reform the current research assessment system**, which would be signed by an increasing number of funders and research performing organisations.
 - Agreement setting commonly agreed objectives, principles and actions, and engaging signatories to translate commitments into effective changes;
 - For a more qualitative assessment of research, researchers and institutions, that considers the value and impact of a diversity of outputs and research cultures, and that incentivizes open collaboration and knowledge and data sharing.

Open Research Europe

<https://open-research-europe.ec.europa.eu/>



Why Open Research Europe?

- Support our **open access policy** and beneficiary capacity to adhere to it and also enables publishing post-grant
- Leading by example in operationalising **open science principles** within scientific publishing and **enabling the European Research Area**
- Contribute to **transparency** and **cost-effectiveness** and explore **sustainable** open access publishing business models

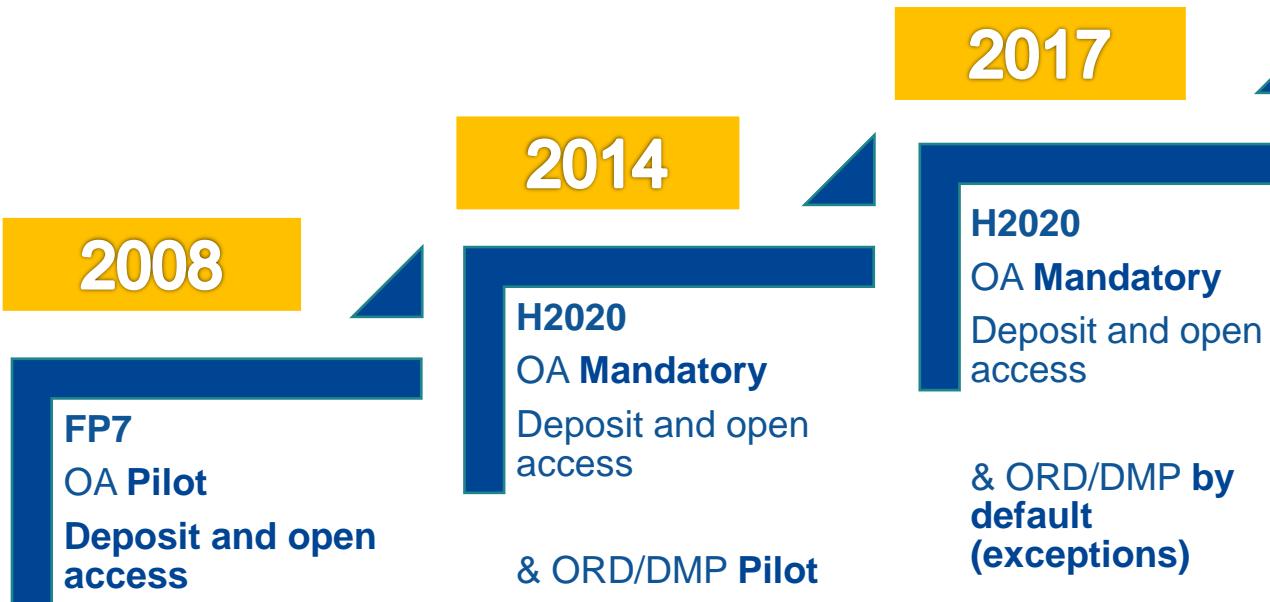
What is Open Research Europe?

- A **peer-reviewed** publishing platform. Not a repository. Post-publication peer-review model. Publication and review reports open access under CC BY licenses

Open Science in Horizon Europe

Open Science in Horizon Europe

Evolution of OS policies across FPs



Horizon Europe



Under Horizon Europe (2021)

- Open Science (OA, RDM, Citizen Engagement, etc.) embedded across the FP
 - **Evaluation** of proposals (excellence –methodology-, quality & efficiency of implementation)
 - **Grant Agreement, guidelines**
 - **Reporting**—during the project's lifetime
 - **Work programmes**
- Strengthening of the obligations with respect to open access and focus on responsible RDM in line with FAIR

Main novelties in Horizon Europe

- **Rationale and scope:** move from open access to open science with a broadened scope of policy; open science comprises open science practices
- **Evaluation:** open science under excellence (not impact); practices beyond mandatory incentivized through evaluation; publications evaluated on basis of qualitative assessment provided (not Journal Impact Factor)
- **Intellectual Property Rights:** requirement to maintain enough rights to meet open access requirements to publications
- **Publications:** Immediate open access (=no embargo); only publication fees in full open access venues are reimbursable (=no hybrids)
- **Research data:** research data management (including data management plans) mandatory for all projects generating and/or reusing data; open access ‘as open as possible as closed as necessary’
- **Qualified open access to research outputs:** specific licenses and technical standards for digital objects to enable FAIR; trusted repositories
- **Reproducibility of research:** information for validation of publications and for validation and reuse of data required; access for validation of publications must be provided (while legitimate interests safeguarded)
- **Open science and public emergencies:** immediate open access to all research outputs (non-exclusive licenses under fair and reasonable conditions to the relevant legal entities if open access not possible)

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Horizon Europe (HORIZON)

Programming period

2021-2027

Horizon Europe (HORIZON)

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Reference Documents

Grants

This page includes reference documents of the programmes managed on the EU Funding & Tenders portal starting specific actions.

Please select the programme to see the reference documents.

Procurement

Reference Documents related to tendering opportunities are published on TED eTendering in the calls for tenders.



Filter

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<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents;programCode=HORIZON>

Open Science in Horizon Europe explained

- Webinar: [How to prepare a successful proposal in Horizon Europe](#) (24 March 2021)
 - Open Science at 00:53:00
 - Q&A (including on Open Science) from 1:09:00
- Webinar: [A successful proposal for Horizon Europe: Scientific-technical excellence is key, but don't forget the other aspects](#) (21 April 2021)
 - Presentation: [Open Science](#)

Thank you



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