



OPEN SCIENCE FOR FUNDING YOUR RESEARCH PROPOSAL



Michalis Tzatzanis | European and International Programmes, FFG
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- FFG - Austrian Research Promotion Agency is the national funding agency for industrial research and development in Austria
- The Division “European and International Programmes”, hosts all National Contact Points (NCPs) for Horizon Europe
- NCP-IP:
 - a programme set up in Austria, on the EU IP Recommendation in 2010 to professionalise knowledge transfer
 - supported in its operational implementation activities by Austria Wirtschaftsservice (aws) and FFG
 - successful cooperation among 3 federal ministries (economics, education and research, innovation and technology)

QUOTE



The days of keeping our research results to ourselves are over. There is far more to gain from sharing data and letting others access and analyse that data.

[then] Commissioner Carlos Moedas

Lund, December 2015

OPEN SCIENCE IN HORIZON EUROPE



WHY do we need Open Science?



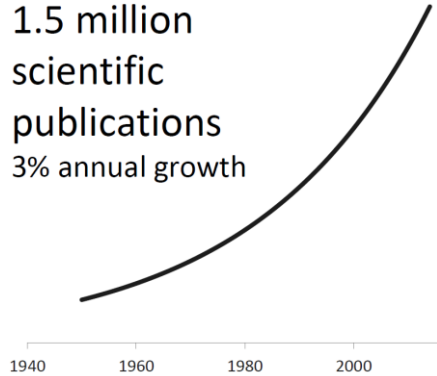
HOW is Open Science embedded in Horizon Europe?



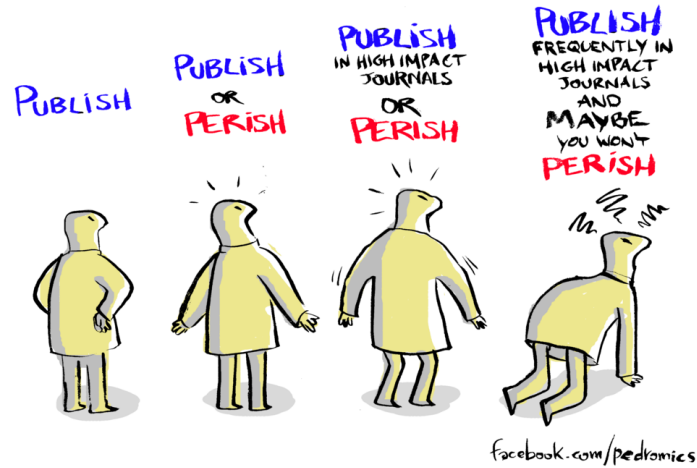
WHAT do Open Science practices address?

WHY DO WE NEED OPEN SCIENCE?

Today, annually ≈
 1.5 million
 scientific
 publications
 3% annual growth

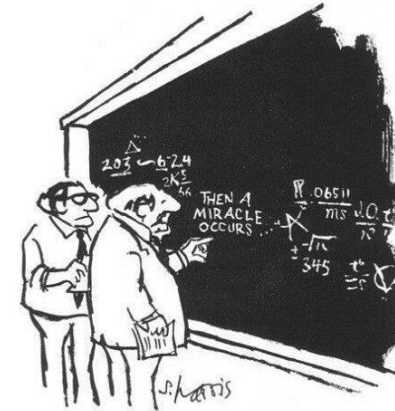


THE EVOLUTION OF ACADEMIA



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Replication crisis



"I THINK YOU SHOULD BE MORE EXPLICIT HERE IN STEP TWO."

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WHY DO WE NEED OPEN SCIENCE?

Open Science is based on open cooperation and systematic sharing of knowledge and tools and grounded in the principles of **inclusion, fairness, equity, and sharing**. It contributes to

- increase the quality and efficiency of research
- accelerate the advancement of knowledge and innovation
- improve reproducibility and reuse of results
- involve relevant knowledge actors



WHY DO WE NEED OPEN SCIENCE?

The EU's Open Science policy

Open science is a policy priority for the European Commission based on **eight ambitions of the EU's Open Science policy**:

- 1. Open Data:** FAIR and open data sharing should become the default for the results of EU-funded scientific research.
- 2. European Open Science Cloud (EOSC)** to store, share, process and reuse research digital objects, such as publications, data, and software
- 3. New generation metrics** to complement the conventional indicators for research quality and impact, so as to do justice to open science practices
- 4. Future of scholarly communication** for peer-reviewed scientific publications to be freely accessible (OA), and the early sharing of scientific research data to be encouraged

Related links



FAIR principles
(Findable, Accessible,
Interoperable and
Re-usable)

<https://www.go-fair.org/fair-principles/>



European Open Science
Cloud

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

WHY DO WE NEED OPEN SCIENCE?

The EU's Open Science policy

Open science is a policy priority for the European Commission based on **eight ambitions of the EU's Open Science policy**:

- 5. Rewards, incentives and recognition for researchers practicing Open Science** supporting research career evaluation systems to fully acknowledge open science activities
- 6. Research integrity & reproducibility of scientific results** for publicly funded research in the EU to adhere to commonly agreed standards of research integrity
- 7. Education and skills for** all scientists in Europe to have the necessary skills and support to apply open science research
- 8. Citizen science** to enable the general public to make significant contributions and be recognised as valid European science knowledge producers

Related links



Rewards, incentives and Open Science recognition

<https://op.europa.eu/s/u4zd>



Reproducibility of scientific results in the EU

<https://op.europa.eu/s/u4zf>

HOW IS OPEN SCIENCE EMBEDDED IN HORIZON EUROPE?

In Horizon Europe Open Science is to be implemented from the proposal stage to project reporting. Distinguishable are

- **Mandatory Open Science practices**, and
- **Recommended Open Science practices**

Open Science practices are considered in the evaluation of proposals under

- **Excellence**, and
- **Quality and efficiency of implementation**



HOW IS OPEN SCIENCE EMBEDDED IN HORIZON EUROPE?

Mandatory Open Science practices for all beneficiaries per the Grant Agreement (GA)

- **Open Access to scientific publications** (required by the GA)
- **FAIR principles applied in responsible management of research data** and open access to research data under the **principle of “as open as possible, as closed as necessary”**. Data Management Plans compulsory for all grants, by M6
- **Information about research outputs, tools and instruments** needed to validate conclusions of scientific publications or to validate and re-use research data
- **Digital or physical access to results** needed to validate conclusions of scientific publications (unless exceptions apply)
- **Public emergency** requires immediate open access to all research outputs under open licenses if requested by the granting authority, or, if exceptions apply, access under fair and reasonable conditions to legal entities needing research outputs to address public emergency

Related references



Mandatory Open Science practices:

[Detailed guidelines in the Annotated Grant Agreement Article 17](#)



Recommended Open Science practices:

[Guidance in the Horizon Europe Programme Guide](#)

HOW IS OPEN SCIENCE EMBEDDED IN HORIZON EUROPE?

Recommended Open Science practices (non exhaustive list)

- Involvement of all **relevant knowledge actors**, incl. citizens
- **Citizen science**, involving citizens, civil society and end-users in the co-creation of R&I agendas, contents, etc.
- **Early and open sharing** of research, e.g. preregistration, registered reports, preprints, crowdsourcing, etc.
- **Research output management** beyond research data
- Measures to ensure **reproducibility of research outputs**
- **Open access to research outputs**, such as publications, data, software, models, algorithms, workflows, etc.
- **Open peer-review** participation
- Publish also e.g. negative results on **Open Research Europe**

Related references



Open Research Europe
the open access publishing platform of the European Commission for all disciplines, for research stemming from Horizon Europe

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

WHAT DO OPEN SCIENCE PRACTICES ADDRESS?

Open Science addresses

- Early and **open sharing** (e.g. preprints, preregistration, registered reports, platforms)
- Research **data management** (RDM)
- **Reproducibility** of research outputs
- **Open Access**
- Open peer review
- **Citizen**, civil society and end-user **engagement**



HOW IS OPEN SCIENCE EVALUATED IN HORIZON EUROPE?

Evaluation of Open Science practices under Horizon Europe

- ✓ Under ***Excellence*** explain **HOW** are **Open Science practices implemented** as an integral part of the proposed methodology?
 - ✓ “If you believe that none of these practices are appropriate, [...] **provide a justification**”
- ✓ Under ***Quality and efficiency of implementation*** describe **HOW** does **Open Science** accelerate the advancement of knowledge and innovation?
- ✓ Under ***Capacity of participants and consortium as a whole*** describe **HOW** does **the consortium** bring together necessary disciplinary and interdisciplinary knowledge, including **expertise in Open Science practices**?
- ✓ In **Part A** list up to five relevant OA publications, widely used datasets or other achievements of consortium members

Proposals under Horizon Europe need to explain:



HOW are **mandatory Open Science practices** ensured?



HOW are **recommended Open Science practices** integrated?



Justify why no Open Science practices are considered appropriate.

HOW CAN OPEN SCIENCE BE USED TO GENERATE IMPACT?

- ✓ Open Science is **your springboard to exploiting Open Innovation pathways** to impact from your research results
 - ✓ making sure **that scientific work corresponds to the needs of the users** and that knowledge is findable, accessible, interpretable and re-usable (FAIR)
- ✓ **Two main elements underpin** the most recent conceptions of **Open Innovation**:
 - **the users are in the spotlight**: ‘user innovation’ emphasises the role of citizens and users in the innovation processes as ‘distributed’ sources of knowledge
 - **creating a well-functioning eco-system that allows co-creation**: where relevant stakeholders are collaborating along and across industry and sector-specific value chains to co-create solutions to socio-economic and business challenges

Useful information:



NCP-IP Open Innovation Toolbox

<https://www.fair-open-innovation.at/>



Creative Commons Licenses

<https://creativecommons.org/share-your-work/>



Austria Open Innovation Strategy

<https://openinnovation.gv.at>

Austrian Science Fund (FWF) Open Science Policy

- Mandatory [Open Access Policy to Peer-Reviewed Publications](#) since 2009
 - In line with [Plan S of cOAlition S](#)
 - Immediate OA with CC BY licence
 - Financial support through the programmes [Peer-Reviewed Publications](#) (articles, book chapters etc.) and [Stand-Alone Publications](#) (book publications)
- Mandatory [Open Access Policy to Research Data](#) since 2019
 - “OA is mandatory for research data on which the research publications of the project are based. (...) If, for legal, ethical or other reasons, open access to these data is not or only partially possible, this must be explained in the Data Management Plan (DMP)”
- Mandatory [Research Data Management Plan](#) for all approved FWF projects since 2019

QUOTE



Nothing in life is to be feared,
it is only to be understood.
Now is the time to understand more,
so that we may fear less.

Marie Skłodowska-Curie

THANK YOU FOR YOUR ATTENTION!

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