



Open Science policy

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Open Science = Systemic transition of science system which affects the way

- research is performed
- knowledge is shared/diffused/preserved
- research projects/results are evaluated
- research is funded
- researchers are rewarded
- future researchers are trained

Affecting the whole research cycle and all its stakeholders



It offers great opportunities for science, scientists & society

- **Better Return of the R&I investments:** if all the results of our public research are made reusable, it will follow that better use is made
- **Faster circulation of new ideas:** we have 22 million EU SME's that will have access to top notch research without having to significantly pay for it!
- **More transparency of the science system**
- **Fit for 21st century science purpose:** all grand societal challenges NEED cross disciplinary research

Top level policy goals



*"As I see it, European success now lies in sharing as soon as possible, (...). The days of **open science** have arrived."*

Speech at "Presidency Conference Open Science", 04 of April, 2016, Amsterdam

Council conclusions in 2016 by Research Ministers supporting open science



European Open Science Agenda

- ✓ Broad consensus on five policy lines and 8 Actions
- ✓ Open Science Policy Platform
- ✓ Embedded in the Digital Single Market strategy

New initiatives

- ✓ Research data in the PSI directive
 - ✓ extended to include research data. Member States to adopt national policies. Publicly funded research data open in repositories should be reusable. The re-use shall be free.
- ✓ Open Science in Horizon Europe



2016 - Holistic Policy Agenda: scope & ambitions

... 4 with regard to the use & management of research results and data

- ✓ **Open Data:** FAIR data sharing is the default for funding scientific research
- ✓ **Science cloud:** All EU researchers are able to deposit, access and analyse European scientific data through the open science cloud, without leaving their desk
- ✓ **Altmetrics:** Alternative metrics (next generation metrics) to complement conventional indicators for research quality and impact (e.g. Journal Impact Factors and citations)
- ✓ **Future of scholarly communication:** All peer reviewed scientific publications are freely accessible



... 4 with regard to relations with research actors (researchers, institutions and funders)

- ✓ **Rewards:** The European research career evaluation system fully acknowledges Open Science activities
- ✓ **Research Integrity:** All publicly funded research in the EU adheres to commonly agreed Open Science Standards of Research Integrity
- ✓ **Education and skills:** All young scientists in Europe have the necessary skills and support to apply Open Science research routines and practices
- ✓ **Citizen Science:** CS significantly contribute and are recognised as valid knowledge producers of European science



Open access to publications

- Implement Plan S
- Increasing uptake to 100% in Horizon 2020 (incentives, 'sanctions')

Open access and research data

- Launch of EOSC in 2018, implementation the next two years
- The Data Management Plans
- Mainstreaming FAIR data across the FPs
- Stimulating a change in scientific culture

Citizen Science

- General agreement on uptake

Metrics and Incentives

- Next generation metrics



Recommendation on access to and preservation of scientific information

Copyright Directive

Directive on the reuse of Public Sector Information

Model Grant Agreement for Horizon 2020 article 29



Open science offers opportunities for citizens and scientists together to step up their contribution to science to a scale unthought-of of even a decade ago.

Barriers and challenges still prevent citizen science from living up to its full potential (OSPP).

Goal: Ensure maximum recognition and impact of citizen science:

- Laying out a long-term vision for citizen science in Europe as part and parcel of open science
- Development of guidelines, toolkit or protocol(s) that can be applied across scientific disciplines to ensure, in particular, maximum recognition and use of the data produced by citizen science.
- Have all funders, research performing organizations and universities to agree on it (in co-development)



Recommendation OSPP (based on Exp groups)

- **Quantitative and qualitative indicators** need to be identified and developed for research assessment that captures the full range of contributions to the knowledge system (e.g. context, discipline dependent)
- Display a broad range of indicators for **all research outputs**.
- Indicators have to **match Rewards** for Open Science
- Do **not use journal brand or IF** for individual researcher assessment as proxy for quality

Thank you!

More information at

<http://ec.europa.eu/research/openscience>

OS monitor

<http://ec.europa.eu/research/openscience/monitor/>