



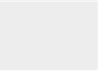
A First *Introduction* to Open Science

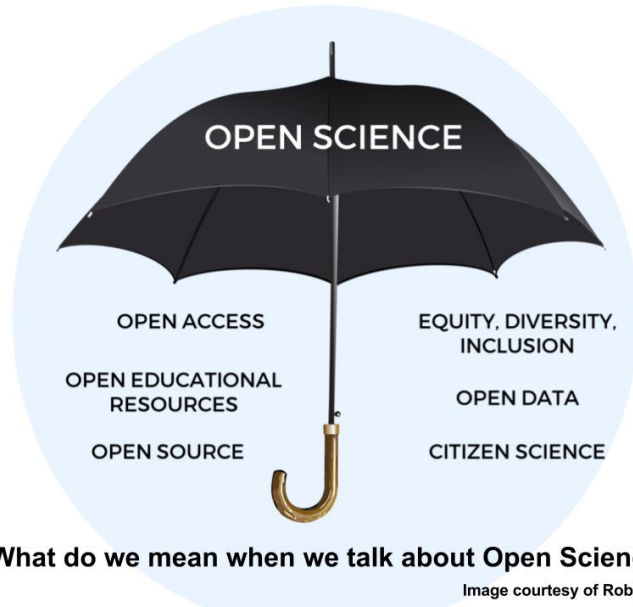
Melanie Imming, May 2021, TWAS UNESCO webinar

<https://doi.org/10.5281/zenodo.4883033>



'Open Science' stands for the transition to a new, more open and participatory way of conducting, publishing and evaluating scholarly research.





In order to get to a global understanding of the meaning, opportunities and challenges of Open Science, the 193 Member States tasked UNESCO with the development of an international standard-setting instrument on Open Science in the form of a [UNESCO Recommendation on Open Science](#).



Why?

UNESCO: Open Science is aiming to make scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society.

- more robust scientific results
- more efficient research
- (faster) access to scientific results for everyone



**OPEN SCIENCE:
JUST
SCIENCE
DONE RIGHT**

↻ You Retweeted



Lenny Teytelman

@lteytelman



2015: Immediate open access is critical for Ebola.

2016: For Zika

2019: For opioids

2020: for [#nCov2019](#)

...

2025: Let's stop this nonsense. It's critical for for HIV, cancer, malaria, and literally ALL RESEARCH.

7:30 AM · Feb 3, 2020 · [Twitter Web App](#)

144 Retweets **312** Likes



Open science is about taking different steps towards openness



Open Science is about sharing research data, publications, software and other results as early and open as possible.

Open Science is not about being a 100% open or closed, it is about taking the steps towards openness that you are comfortable with. The specific step(s) can vary depending on your particular domain and project.



*Open Science does not mean
everything has to be open*

There may be legitimate reasons to shield outputs and data and services such as personal privacy, national security, and competitiveness.

Therefore the saying goes **'as open as possible, as closed as necessary'**





What can I do to open up my research?

- Publish in an open access journal
- Share preprints or pre register studies
- Join an interdisciplinary research project/ reach out to others in the OS community





What can I do to open up my research?

- Start involving citizens (or ‘informal researchers’) in your research like patients, farmers, community archeologists etc.
- Share your research data
- Share reproducible analyses
- Reward when you see others doing transparent work!



Benefits of going open

- Open access publications and shared data get more citations and media coverage
- Get access to data, eg. about your area or history, that is collected by others
- Preprints can establish scientific priority in a field
- Publish for low-cost or no-cost (depending on the OA journal)
- Reproducibility can also benefit you (prestige)
- Easier to find collaborators, funding and job opportunities
- Sharing data sets means you don't have to redo certain studies- reducing costs, or for instance reducing the amount of lab animals that are used

“There are a number of practices and resolutions that researchers can adopt with very little effort that can help advance the overall open science cause while simultaneously benefiting the individual researcher.”

Erin C McKiernan et al. 2016, How open science helps researchers succeed
<https://doi.org/10.7554/eLife.16800.001>





A FIRST INTRO TO OPEN SCIENCE



You can find a lot of resources online!

Citizen Science Lab

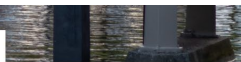
The Citizen Science Lab supports researchers, citizens and societal organizations to generate new knowledge together. Explore this website to learn more about the Citizen Science Lab and projects in which you can participate.



10 Dec. Webinar: Quality Factors of Citizen Science



Become a Plastic Spotter



Sign-up for our newsletter!

Citizen Science Lab

Contact >

News

Follow us on social media

Browse Registrations [See more](#)

Pragmatic adaptation: testing whether inference judgments are susceptible to bias over the course of an experiment

Stephen Polltzer-Ahles, Edward Matthew Husband

Open Access Button



Avoid Paywalls, Request Research.

Free, legal research articles delivered instantly or automatically requested from authors.

Enter an article URL, DOI, PMID, PMC ID, Title, or Citation



Try it now

How it works



You can find more Open Science resources in our info pack on the TWAS website

Recommended links

- ✓ [UNESCO recommendations](#)
- ✓ [Open Science MOOC](#)
- ✓ [Open Science Framework \(OSF\)](#)
- ✓ [Zenodo](#) (no cost generic data repository)
- ✓ [Directory of Open Access Journals](#)
- ✓ [Open Access Button](#)
- ✓ [FOSTER Open Science Training](#)
- ✓ [ReproHack](#)



This slide deck is based on the original slide deck of the Accelerate Open Science project, a project within the scope of the [National Programme Open Science](#). Aim of this project is to foster initiatives that promote Open Science in the Netherlands. DOI <https://doi.org/10.5281/zenodo.4529129>