



Facilitate Open Science Training for European
Research



Open Science

- *Knowledge is open* if anyone is free to access, use, modify, and share it — subject, at most, to measures that preserve provenance and openness (Open Knowledge Foundation: <http://opendefinition.org/od/>);
- *Open Science* is the conduct of science in such a way that others can collaborate and contribute, where research data, laboratory notes and other research processes are freely available, with licence terms that allow re-use, redistribution and reproduction of the research (FOSTER: <https://www.fosteropenscience.eu/foster-taxonomy/open-science-definition>);
- *Open Science* is commonly held to encompass: Open Source Software, Open Data, Open Access, Open Notebooks.

Open Research Data

- *Research data* can be defined as whatever is either produced in the research process or evidences research outputs such as articles;
- The *European Commission's* definition is: “information, in particular facts or numbers, collected to be examined and considered and as a basis for reasoning, discussion, or calculation” (http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf);
- *Examples* include: statistics, results of experiments, measurements, observations resulting from fieldwork, survey results, interview recordings, images;
- *Open data* are deposited in institutional or specialist repositories and licensed appropriately so that prospective users know clearly any limitations on re-use.



Open and Toll Access (OA and TA)

- *Open Access* generally refers to the *outputs* of research, such as journal articles, as distinct from research data, which are produced as part of the research process;
- Open Access is differentiated from the traditional method of access to research outputs, known as *Toll Access*;
- *Toll Access* can be by means of institutional or personal subscription to journals, or to aggregations of content, or by means of paying publishers for access to individual articles;
- Toll Access payment is *reader-side*.

Open Access Definition - 1

Budapest Open Access Initiative (BOAI) 2002, reaffirmed in 2012:

- By "*open access*" to ... literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited. (

<http://www.budapestopenaccessinitiative.org/boai-10-recommendations>



Open Access Definition - 2

Peter Suber's Concise Definition:

- *Open Access* literature is “digital, online, free of charge, and free of most copyright and licensing restrictions” (Suber, P. *Open access*. MIT Press, 2012. Available at: https://mitpress.mit.edu/sites/default/files/9780262517638_Open_Access_PDF_Version.pdf)



Gratis and Libre OA

- *Context*: intellectual property laws generally offer limited “fair dealing” or “fair use” exemptions;
- *Gratis OA* is free of charge to access but subject to the limits of fair dealing; it removes toll barriers but not permission barriers;
- *Libre OA* is both free of charge and free of at least some legal and licensing restrictions; it removes toll barriers and at least some permission barriers;
- *The BOAI definition* is libre.



Green OA - 1

Green OA:

- Is delivered through *self-archiving*: authors deposit manuscripts in institutional or disciplinary repositories;
- *Relies on* a recent but well established infrastructure of repositories;
- *Is easy and cheap*: each article only incurs a very small portion of the overhead costs of setting up and running repositories;
- Does not incur the *overheads of peer-review*;
- However, deposited articles may be, most often have been, *peer-reviewed for publication* in traditional Toll Access journals.



Green OA - 2

Green OA:

- *Is compatible* with subscription journal publishing: scholars can publish in TA journals and, through self-archiving, still make their articles OA;
- Is often subject to an *embargo period* imposed by publishers, generally of between 6 and 12 months;
- Depends on *authors' obtaining rights* from publishers to deposit and make articles available;
- *Is hospitable to many other types of document*, notably pre-prints, theses, and reports.

Gold OA - 1

Gold OA:

- Offers articles that are *paid for by the authors* or their institutions or funders;
- Articles may be either in completely OA journals or in *hybrid journals*, containing both OA and TA articles;
- Articles are *peer-reviewed* for publication;
- Incurs much the *same costs* for the editorial and peer review process as TA journal publishing;
- Is always *immediate*, while Green OA is often subject to time embargoes imposed by subscription journal publishers.

Gold OA - 2

Gold OA:

- Provides access to the *published version* of an article, while Green OA generally provides access only to the author's final peer-reviewed manuscript, without the formatting or pagination of the published version;
- By its nature is confined to *post-prints*;
- Generally obtains rights and permissions direct from the *rights-holder* (usually the author);
- Is delivered through journals: these may be completely OA or hybrid, where some articles are OA and others toll access;
- Both Green and Gold OA are gratis. Green OA generally is only gratis; Gold OA may be libre.