

# OPEN ACCESS COURSE (EdD)

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# 1. What is open access (OA)?

## 1.1. OA definition and statements

The basic idea of OA is simple:



*"Make research literature available online without price barriers and without most permission barriers."*

(Suber, 2013)

### The BBK definition and OA statements:

Open access (OA) was defined in three influential public statements (the 3 Bs or BBB):

- The **Budapest Open Access Initiative** (February 2002),
- The **Bethesda Statement on Open Access Publishing** (June 2003),
- and the **Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities** (October 2003).



Source: Access URL

The Budapest definition of OA stated that:



*"By "open access" to this 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."*

(Budapest Open Access Initiative, 2002)

Bethesda and Berlin statements add that:



*"For a work to be OA, the copyright holder must consent in advance to let users "copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship."*

The BBB definitions therefore go beyond removing price barriers and refer to removing permission barriers while also allowing for at least one limit to user freedom: the obligation to attribute the work to the author.

Note that although any kind of digital content can be OA, since it can be put online without price or permission barriers, the term "open access" was coined by researchers trying to remove access barriers to research (Suber, 2013).

For more information about the OA statements check [this link](#).

Finally, please take a few minutes to watch these two **videos**:



Open Access Explained!



What is Open Access?

## What is toll access (TA)?

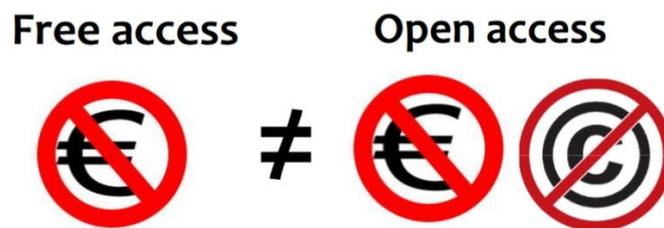
While open access generally refers to the outputs of research, such as journal articles, toll access (TA) is the traditional method of providing access to this kind of research

output; access can be by means of institutional or personal subscription to journals, aggregations of content or by paying publishers for access to individual articles.

## 1.2. Open and free access

When people think about open access, they immediately relate it to free access. However, although both concepts seem the same, free and open access have distinct meanings.

- **Free Access** = read without paying
- **Open Access** = read without paying + reuse rights



Source: Access URL

If in both cases anyone can read an article for free, does the distinction between free and open access really matter? Is open access just about making the literature available? "Free access" is certainly important as the starting point (access to the content) but "open access" is the potential for innovation (reuse of content).



The key difference is the *"Lego factor"*:

*"free access is like giving a child a Lego car and telling her that she can look at it, perhaps touch it, but certainly not take it apart and make an airplane from it. The full potential of the work cannot be realized."*

(MacCallum, 2007)

Transposing this clear example to the research field, open access is not as simple as "articles are free to all readers" as it encompasses a range of components such as readership, reuse, copyright, posting and machine readability. Moreover, as an author of an OA publication, you hold the copyright on it instead of transferring all the rights to the publisher.

### More about...

**A truly open access article is an immediately free, online article with reuse rights. However, a whole range of different degrees of openness exists in relation to open and closed access articles.**

If you want to know more, a good place to start is the guide [HowOpenIsIt?](#) (PLoS/SPARC, 2014)



## 1.3. *Gratis* versus *libre*

The English adjective "free" is used with one of two meanings: "for free" (*gratis*) and with "little or no restriction" (*libre*). This ambiguity can cause issues where the distinction is important, as it often is in dealing with laws concerning the use of information, such as copyright (Wikipedia, 2018).

The terms *gratis* and *libre* allow us to speak unambiguously about two types of free online access:

- **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.

### Tips



While "Gratis OA" refers just to the removal of price barriers,

"Libre OA" means the removal of price and at least some permission barriers

### Discussions on Open Access: Open Access Models and Experimentation



MIT Press Podcast (21 min) in which Amy Brand, director of the MIT Press, and Peter Suber of Harvard University's Berkman Klein Center for Internet and Society discuss open access models, experimentation and the future of scholarly communication.



Download audio

## 1.4. OA licences and intellectual property

Free content licences are licences that grant permission to access, reuse and redistribute material with few or no restrictions. Those licences range from very open to very restrictive.



*"A license is a legal document that grants specific rights to user to reuse and redistribute a material under some conditions. Any right that is not granted by default by the licensor through the license can be asked.*

*Licenses can be applied to any material (eg sound, text, image, multimedia, software) where some exploitation or usage rights exist."*

(FOSTER, 2018)

## 1.4.1. OA licences

The range of free content licences available include copyleft licences, which originated in the free software community and allow a broad reuse of materials under the condition that any new material built upon an existing one must be licensed under the same licence.

### Creative Commons (CC) licence

The most commonly used among open access dissemination licences are the Creative Commons (CC) licences, which allow changes to be made to the terms and conditions of use of a work to make it available to the public under a (more or less) open regime. It does not replace copyright but rather uses it as a legal starting point.

CC are useful for authors wishing to make their works or services available to the public in a (more or less) open system. They represent a mid-point between the "all rights reserved" of copyright and the "no rights reserved" of the public domain, as they entail "some rights reserved". All rights not expressly granted by the licence are reserved. Despite the extent of the terms of the licence, the licensor (who may be the author or a third-party rights holder) reserves the right to disseminate the work under conditions that are different to those of the general licence, or they may withdraw it at any time.

### CC licence types

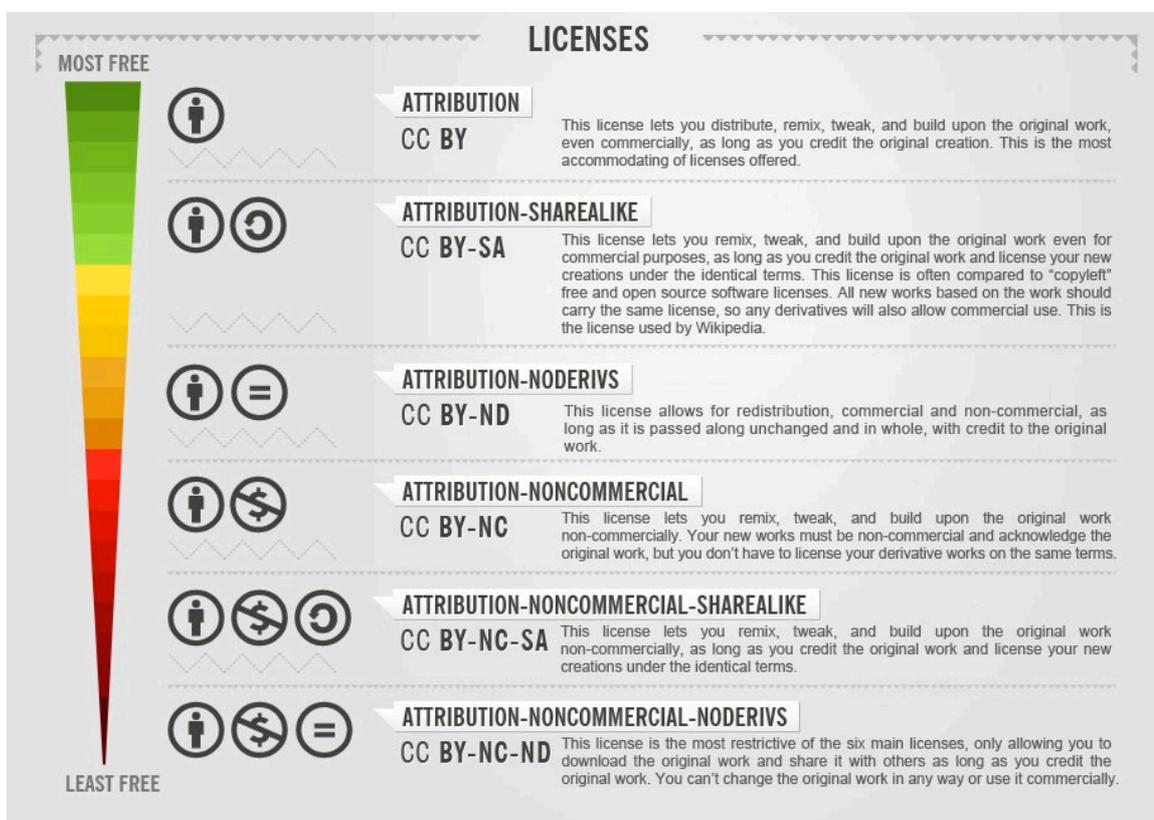
The details of each of these licences vary with each version and comprise a selection of four conditions (see below) that creators can choose to apply to their work.

Icon	Right	Description
	Attribution (BY)	Licensees may copy, distribute, display and perform the work and make derivative works and remixes based on it only if they give the author or licensor the credits ( <a href="#">attribution</a> ) in the manner specified by these.
	Share-alike (SA)	Licensees may distribute derivative works only under a license identical ("not more restrictive") to the license that governs the original work. (See also <a href="#">copyleft</a> .) Without share-alike, derivative works might be sublicensed with compatible but more restrictive license clauses, e.g. CC BY to CC BY-NC.)
	Non-commercial (NC)	Licensees may copy, distribute, display, and perform the work and make derivative works and remixes based on it only for <a href="#">non-commercial</a> purposes.
	No Derivative Works (ND)	Licensees may copy, distribute, display and perform only verbatim copies of the work, not <a href="#">derivative works</a> and <a href="#">remixes</a> based on it.

Source: Wikipedia

As a result of the combination of these four conditions, there are six CC licences that determine the terms of distribution; plus a seventh one for CC0 (zero) or Public Domain. For a better understanding of all of these licences, please go to the following links which provide examples of each licence and have a look at the two pictures below:

- Attribution CC BY
- Attribution ShareAlike CC BY-SA
- Attribution-NoDerivs CC BY-ND
- Attribution-NonCommercial CC BY-NC
- Attribution-NonCommercial-ShareAlike CC BY-NC-SA
- Attribution-NonCommercial-NoDerivs CC BY-NC-ND
- CC0 Public Domain



Source: Wikimedia Commons

In general, a CC BY licence (requiring only attribution) is a good option for works such as articles, books, working papers and reports while a dedication to the public domain using CC Zero (CC0) is recommended for datasets and databases (FOSTER, 2018).

On the other hand, Creative Commons licences should not be used for licensing software because they were not designed for that purpose, as the organization states in a specific [FAQ](#). Instead, software developers should use appropriate licences such as those collected by the [Open Source Initiative](#) or [Free Software Foundation](#).

## More about...



We recommend checking your options by referring to this resource: [Choosing an Open Source](#)

For more information about Creative Commons (CC) licences, you can:

- Read the CC FAQs website
- Watch the video "Wanna Work Together?"



## 1.4.2. Finding out about the copyright licence

As the author, it is important to know what type of copyright licence you are signing with the publisher. This is important because it affects any subsequent use of the article.

As authors, when a contract is signed with a publishing company, the work's exploitation rights (reproduction and distribution) are often assigned exclusively to the publisher. This is what is known as copyright transfer and implies that authors cannot disseminate the work on any other channel without the publisher's permission.

This information graphic shows the **main aspects to bear in mind**.



## Know your Author Rights

### What you should know when publishing your intellectual property

- NEGOTIATE**

You have the right to change  
your publication agreement!
- NATIONAL GRANTS**

If you have conducted your research  
using a national grant, you may be  
**REQUIRED** to make it publicly accessible.
- LOCAL REPOSITORIES**

**FAIR USE** allows you to place your  
work in a library repository under  
certain restrictions.
- ADDENDUM**

The easiest way to alter an agreement  
is by attaching a standardized addendum  
like the one from SPARC
- CHOOSE WISELY**

You can choose to publish in a journal that  
supports **OPEN ACCESS** or **SELF ARCHIVING**

**For More Information:**

<p>SHERPA/ROMEO <a href="http://www.sherpa.ac.uk/romeo">www.sherpa.ac.uk/romeo</a></p>	<p>PLOS <a href="http://www.plos.org/about/open-access">www.plos.org/about/open-access</a></p>	<p>SPARC <a href="http://www.arl.org/sparc">www.arl.org/sparc</a></p>
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Source: Indiana University of Pennsylvania Library

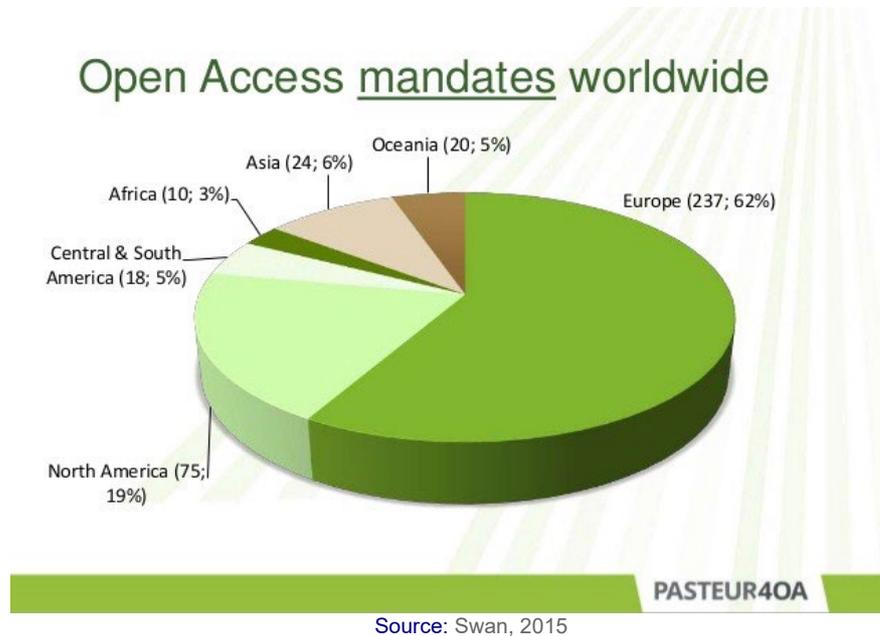
## 1.5. OA mandates and policies

An open access mandate refers to a policy adopted by a funder, institution or the government which requires researchers to make their research articles open access. This can be done via two routes: by archiving in a repository – green OA – or by publishing in OA journals – gold OA – (both will be fully explained in chapter 3 and 4).

Some universities have adopted OA mandates in order to implement an open access policy for their faculty. The aim of these measures is to ensure that scientific work receiving public funding can be accessed openly via the institutions' research repositories.

January 2008 was the top trending month for institutional OA policies, since the two biggest policy breakthroughs came from the European Research Council and the U.S.

National Institutes of Health, which released their OA mandates (Suber, 2007). Since then and thus far, according to the *Registry of Open Access Repository Mandates and Policies* (ROARMAP), more than 700 universities and research institutions have adopted open access mandates globally.



Mandate literally means to "authorise" or "oblige". However, OA mandates and policies have taken various forms and have been interpreted in different ways since the OA policies of some institutions simply "encourage" submission to open access and authors can often choose not to comply by submitting a reason. This complexity in terms of policy type and implementation makes the discussion of OA mandates multifaceted (Xia et al., 2012).

However, the European Commission has taken a very proactive role in ensuring open access. Throughout Horizon 2020 – the Framework Programme for Research and Innovation – the EC has stated that all peer-reviewed publications based on research project funding should be made open access.

In Spain, MELIBEA is a directory of institutional open access policies and estimators of OA policies regarding scientific and academic output. Its aim is to identify and analyse the existing policies that encourage, request or require open access to scholarly output that arises from projects, in whole or in part, supported by public funds.

#### Do you know?

The UOC also has an OA mandate that was approved on 6 October 2010. The institutional open access policy requires that all publications by the academic and research community be deposited in the institutional repository, while respecting the contractual conditions signed by authors with publishers. With the establishment of this mandate, the UOC follows the agreements reached by the Catalan Inter-university Council (CIC) Subcommittee to promote measures encouraging open access.

## 1.6. Why does open access matter? Main arguments and benefits

An important principle is that the public should have open access to the research that it has funded. In addition, duplicative research should be avoided as a result of the same research being funded again and again. Finally, requiring the public to pay twice – first to fund the research itself and then again to gain access to the research results – is considered unfair (Pappalardo et al., 2008).

Although many researchers can access the journals they need via their institutions and think that access is free, in reality it is not. The institutions contract licences and subscriptions to journals and academic databases in order to let their users access them. The reuse of this content is limited, since anyone who wants to use the articles in any way must obtain permission from the publisher and is often required to pay an additional fee (PLoS, 2018).

With these underlying principles governing access, how can OA be beneficial and what are the main arguments in support of it?

### Main arguments for OA

#### The "value of the researcher" argument

One argument for open access is based on the inherent value of researchers as content providers, since they should not have to pay to access and use the content that they have provided, reviewed and edited for free. Providing open access to research not only allows others to access and use a researcher's work, but also allows a researcher to access and use their own work. Open access also gives authors certain control over their work by allowing them to decide what uses can be made of the work for free.

#### Public benefit

A primary incentive for funding bodies to fund research and for researchers to conduct research is the hope that research results will benefit the public. According to Peter Suber (2008), "Essentially, knowledge is a public good, not a commodity. But today we are treating it as a commodity, not a public good."

#### Ethical and moral arguments

There is also a convincing moral argument for providing open access to those who cannot afford to pay and for distributing the public good of knowledge equitably among all who can make use of it. In this sense, the ethical duty focuses on developing countries that are most in need of timely and free access to information (Suber, 2008).

## OA benefits: what is in it for you?

- OA makes research results **freely available to anyone** with an internet connection rather than keeping those results hidden behind a subscription paywall.
- OA exposes your research to a **worldwide audience**, larger than that of any subscription-based journal, and makes it easier for other researchers to find and cite it.
- OA demonstrably **increases the visibility and impact** of your work; according to The Open Citation (OpCit) Project.



CC-BY Danny Kingsley & Sarah Brown

Source: Access URL

## 2. Current research framework

### 2.1. ERA and Horizon 2020

All research activities conducted within European institutions or research centres are also part of the European Research Area (ERA). This area provides policy initiatives and practices of a unified common European research area as well as partnership details and progress reports. The ERA enables free circulation of researchers, scientific knowledge and technology.

#### 5 priorities of the ERA



1. More effective national research systems.
2. Optimal transnational cooperation and competition, including optimal transnational cooperation and competition and research infrastructures.
3. An open labour market for researchers.
4. Gender equality and gender mainstreaming in research.
5. Optimal circulation, access to and transfer of scientific knowledge including knowledge circulation and open access.

The ERA has a programme for research and innovation called Horizon 2020. This framework is designed to achieve smart, sustainable and inclusive economic growth. Its goal is to ensure that Europe produces world-class science and technology, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering solutions to the major challenges facing our society.

The priorities of the H2020 research framework are:

- Excellent science
- Industrial leadership
- Societal challenges

The most important part of the guidelines promoted by H2020 to be aware of concerns the provisions regarding open access to scientific publications and open access to Horizon 2020 research data (published in March 2017), available here:  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/oa\\_pilot/h2020-hi-oa-pilot-guide\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf)

Chapter 3 of this guide, "Mandate on open access to publications", states the following requirement for Horizon 2020 research:



*"Article 29.2 of the Model Grant Agreement sets out detailed legal requirements on open access to scientific publications: under Horizon 2020, each beneficiary must ensure open access to all peer-reviewed scientific publications relating to its results."*

To meet this requirement, beneficiaries must, at the very least, ensure that any scientific peer-reviewed publications can be read online, downloaded and printed.

Since any further rights – such as the right to copy, distribute, search, link, crawl and mine – make publications more useful, beneficiaries should make every effort to provide as many of these options as possible. Peer-reviewed publications are those assessed by other scholars.

**Peer review** is typically, though not exclusively, organized by the journal or publisher to which an article or manuscript is submitted. However, new approaches are expected to become more prevalent in the years to come.

The most common type of **scientific publication** is the journal article. Grant beneficiaries are also strongly encouraged to provide open access to other types of scientific publications including:

- monographs,
- books,
- conference proceedings, and
- grey literature (informally published written material not controlled by scientific publishers, eg reports).

### The open access mandate comprises 2 steps



1. Depositing publications in repositories.
2. Providing open access to them.

### More about...



In this online resource provided by FOSTER, you will learn how to make your publications openly accessible in line with funding requirements and in the wider context of open science.

<https://www.fosteropenscience.eu/learning/open-access-publishing/#/id/5a326071c2af651d1e3b1c14>

This subject will be dealt with in greater depth in upcoming modules.

## 2.2. Responsible research and innovation (RRI)

Responsible research and innovation (RRI) is a key action of the "Science with and for Society" programme of Horizon 2020 (H2020).



*The European Commission defines RRI (2018) as: "an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation".*

RRI is a "cross-cutting issue", which involves societal actors (researchers, citizens, policy makers, businesses, third-sector organizations, etc) working together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of society. Implementing RRI is being promoted via:

- actions on thematic elements of RRI ( public engagement, open access, gender, ethics and science education), and
- via integrated actions that, for example, promote institutional change to foster the uptake of the RRI approach by stakeholders and institutions.

Open access has a central influence within the RRI framework since opening up research and innovation activities enables all societal actors to work together during the whole research process in order to better align both the process and its outcomes with the values of European society (European Commission, 2013).

In addition, open access is one of the six key areas of the RRI framework, which is gradually moving into the broader picture of "open science". This is seen as a transition within the sciences towards OA for publications and data and the online sharing of data, research findings and scientific outcomes by researchers and research communities prior to publication. Therefore, as RRI is becoming an integral part of research practices and open access is now identified as a core element of its approach, both research funders and research-performing organizations are facing increasing pressure to open up their research findings in a responsible manner (Angelaki, 2016).

## The six key policies within RRI

The European Commission has identified six key components in Research and Innovation processes that have a strong potential to take RRI into action:



### ETHICS

Integrity and ethics in research are required from institutions and individuals alike



### GENDER EQUALITY

Considering the gender dimension in research content, human resources and decision-making fosters excellence



### GOVERNANCE

Science is such an important enterprise that it needs all actors to share responsibility for it



### OPEN ACCESS

Unrestricted access to research results allows broader and deeper impact and is a key dimension of Science 2.0 and Open Science



### PUBLIC ENGAGEMENT

Involve an enhancing diversity of actors, depending on the stage, nature and process of your research



### SCIENCE EDUCATION

A critical, science-literate society and engaged new generations are essential to support the science of tomorrow

Source: Access URL

The research and innovation (R&I) cycle is undergoing a series of changes that affect it right from the inception of research to its publication and also impact the ways in which innovation is organized. In the scientific domain, this change has resulted in the

emergence of new scientific disciplines, innovative pathways in publishing (including a substantial increase in open access journals), new scientific reputation systems, citizen science and changes to the way that the quality and impact of research are evaluated.

Some specific challenges in the context of open science and RRT supported by the European Commission (2018) are:

- Achieving optimal open access to and reuse of research data (eg robust opt-outs) As a concrete action, the EC has extended the Open Research Data Pilot to cover all areas of Horizon 2020.
- Open science in line with the Innovative Doctoral Training Principles (IDTP).
- The Euroscience Open Forum (ESOF), a general science conference dedicated to scientific research and innovation, which will raise awareness among a very wide public on the further integration of responsible research and innovation (RRI) and citizen science as a way of contributing to the goal of open science.

Open access, gender equality and an open labour market for researchers are defined as key priorities in the ERA Communication of 2012.

### More about...

For more information, we recommend you:

- Check the UOC RRI dossier (and more specifically the resources about OA),
- Watch the video What does Open Access in RRI mean?



## 2.3. Spanish Science Act 14/2011

In addition to the European Framework, it is also important to learn about the Spanish Science Act 14/2011 and how open access is considered and required. Although this act is not available in English, we have listed below the key issues, most of which can be found in Article 37 on dissemination in open access:

- open access repositories for depositing publications;
- in the case of any research activity financed with public funds, at least one digital version of the final report or article must be deposited in open access as soon as possible or no later than twelve months after the official publication date;
- the electronic version will be made public in open access repositories recognised within the field of knowledge in which the research has been conducted or in open access institutional repositories;
- the public electronic version may be used by public administrations in their evaluation processes;
- the government will facilitate centralised access to repositories as well as their connection with similar national and international initiatives.

However, this article also remarks that the above-mentioned requirements are requested without prejudice to any copyright agreements between authors and publishers that may differ from the ones suggested by open access policies. These requirements will not be applicable when the rights to the results of the research, development and innovation activity are otherwise protected.

## 2.4. Plan S. Making full and immediate open access a reality

Plan S is an initiative for open access publishing that was launched in September 2018. The plan is supported by cOAlition S, an international consortium of research funders. Plan S requires that, from 2020, scientific publications that result from research funded by public grants must be published in compliant open access journals or platforms.



*"After 1 January 2020 scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms."*

### 2.4.1. The 10 principles of Plan S

In addition to this, there are 10 principles that it is important to know:

1. **Authors retain copyright** of their publication with no restrictions. All publications must be published under an open licence, preferably the **Creative Commons**

**Attribution Licence CC BY.** In all cases, the licence applied should fulfil the requirements defined by the [Berlin Declaration](#).

2. The Funders will ensure jointly the establishment of robust criteria and requirements for the services that compliant high quality open access journals and open access platforms must provide.
3. In the event that such high quality open access journals or platforms do not yet exist, the Funders will, in a coordinated way, provide incentives to establish and support them where appropriate; support will also be provided for open access infrastructures where necessary.
4. Where applicable, open access publication fees are covered by the Funders or universities, not by individual researchers; it is acknowledged that all scientists should be able to publish their work in open access even if their institutions have limited means.
5. When open access publication fees are applied, their funding is standardized and capped (across Europe).
6. The Funders will ask universities, research organisations and libraries to align their policies and strategies, notably to ensure transparency.
7. The above principles shall apply to all types of scholarly publications, but it is understood that the timeline to achieve open access for monographs and books may go beyond the date of 1 January 2020.
8. The importance of open archives and repositories for hosting research outputs is acknowledged because of their long-term archiving function and their potential for editorial innovation.
9. **The "hybrid" model of publishing is not compliant with the above-mentioned principles.**
10. The Funders will monitor compliance and sanction non-compliance.

### More about...

Information graphic available: [https://www.coalition-s.org/wp-content/uploads/Plan\\_S.pdf](https://www.coalition-s.org/wp-content/uploads/Plan_S.pdf)

If you are interested in knowing how to implement Plan S, please continue reading about the subject here: <https://www.coalition-s.org/implementation/>



## 2.4.2. Debate around Plan S principles

Since the publication of Plan S some of the main research communities around the world have published their opinions and positioned themselves as counterparts and made some interesting considerations. For example, the following document:

- "Plan S Open Letter. Reaction of Researchers to Plan S: Too Far, Too Risky", by Linn Kamerlin and signed by more than 1,500 researchers from all over the world. <https://sites.google.com/view/plansopenletter/open-letter?authuser=0>:

With regard to the implementation guide provided by Plan S, COAR and MIT Libraries have published two alternatives:

- COAR response to the Plan S implementation guidelines (2019) based on 7 principles:
  1. Good governance
  2. Open standards
  3. FAIR data collection
  4. Transparent pricing and contracts
  5. Easy migration
  6. Succession planning
  7. Open content

## Good Practice Principles for Scholarly Communication Services

COAR and SPARC have developed seven good practice principles to ensure that scholarly communication services are transparent, open, and support the aims of scholarship. These principles can be used by users to make decisions about which services they will contract with, and by service providers to improve their practices and governance

### GOOD GOVERNANCE

The service has strategic governance that allows community input on the direction of the service and operational governance with community representation and decision making power.

### OPEN STANDARDS

The service uses open APIs to enable interoperability, and adheres to open standards. Ideally, the platform is based on open-source software, but in cases where it is not, user-owned content is managed according to well-established, international standards.

### FAIR DATA COLLECTION

Only data necessary for the service's provision are collected from users and the type of the data collected and how they are used is clearly and publicly articulated.

These principles are informed by Principles for Open Scholarly Infrastructure-v1 by Bilder G, Lin J, Neylon C (2015) © 2019 COAR and SPARC, subject to a Creative Commons Attribution 4.0 International License

### TRANSPARENT PRICING AND CONTRACTS

The service's contract conditions and pricing are transparent and equitable, with no non-disclosure agreements included.

### EASY MIGRATION

User-owned or generated content can be easily migrated to another platform or service upon termination of contract, without any additional fee from the service provider.

### SUCCESSION PLANNING

If the service is a nonprofit, the organization's bylaws state the conditions and terms governing how the organization may be transferred or wound down. If the service is provided by a for-profit entity, the contract/agreement should not be assignable to another entity without the client's express permission.

### OPEN CONTENT

Content, metadata and usage data are immediately, openly and freely available in machine-readable format via open standards, and using licenses (like CC0 or similar) which facilitate reuse.



Source: Access URL

## More about...

More information is available here:

<https://www.coar-repositories.org/files/COAR-SPARC-Good-Practice-Principles.pdf>

Harvard Library and MIT Libraries provide recommendations for Plan S implementation, 2019, aligned to COAR's response to Plan S.

<https://libraries.mit.edu/news/harvard-library/29052/>



## 3. Open access publishing

### 3.1. What and how to publish in OA: OA routes

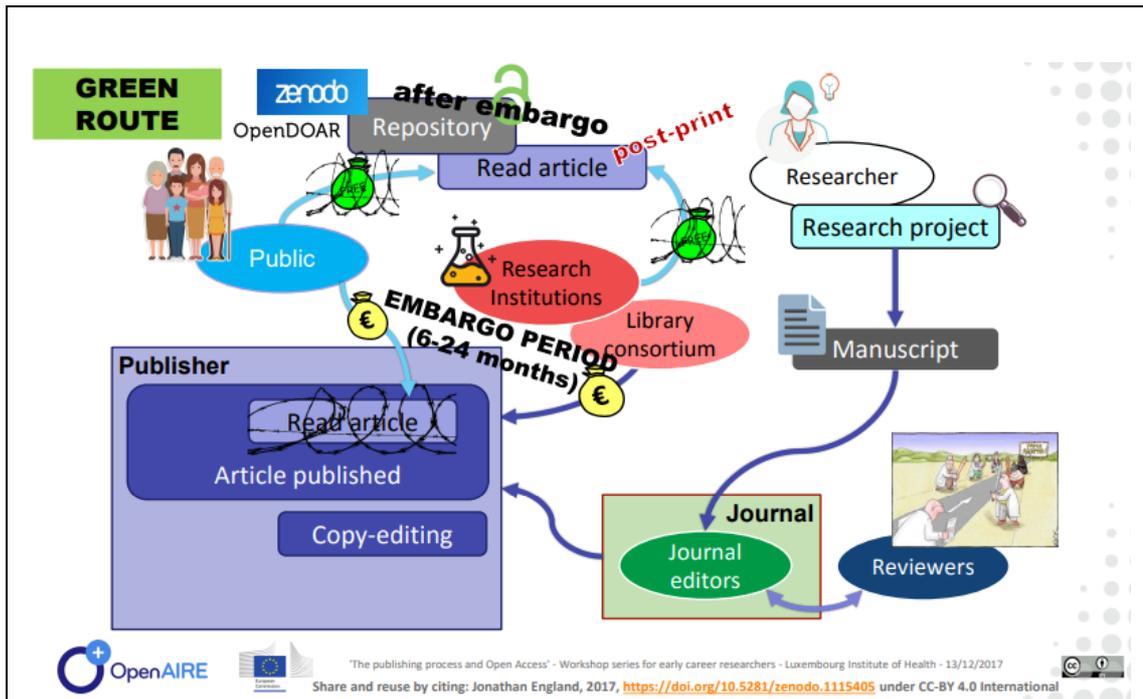
There are two main non-exclusive routes to OA publication (Bezjak et al., 2018; Steel & Kernohan, 2017) and a third one called "hybrid" (Björk, 2017):

#### Green open access (self-archiving)

The published work or the final peer-reviewed manuscript that has been accepted for publication is made freely and openly accessible by the author in an online repository. Some publishers request that open access be granted only after an "embargo" period, which must have elapsed before a copy of the article is shared, and this can be anywhere between several months and several years. For publications that have been deposited in a repository but are under embargo, usually at least the metadata are openly accessible. Some journals do not permit green OA, others permit only the sharing of a "pre-publication" version that does not include the final edits made before publication.

Ball (2016) gives more details this route:

- 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.
- Deposited articles will often, however, have been peer-reviewed for publication in traditional toll access journals.
- Is compatible with subscription journal publishing: scholars can publish in TA journals and through self-archiving but still make their articles OA (after checking the editorial policies).
- The embargo period is typically imposed by publishers and generally lasts 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 preprints, theses and research datasets.



**Gold open access (open access publishing)**

The published work is made available in open access mode by the publisher immediately upon publication. The most common business model is based on one-off payments by authors (commonly called APCs – article processing charges – or BPCs – book processing charges).

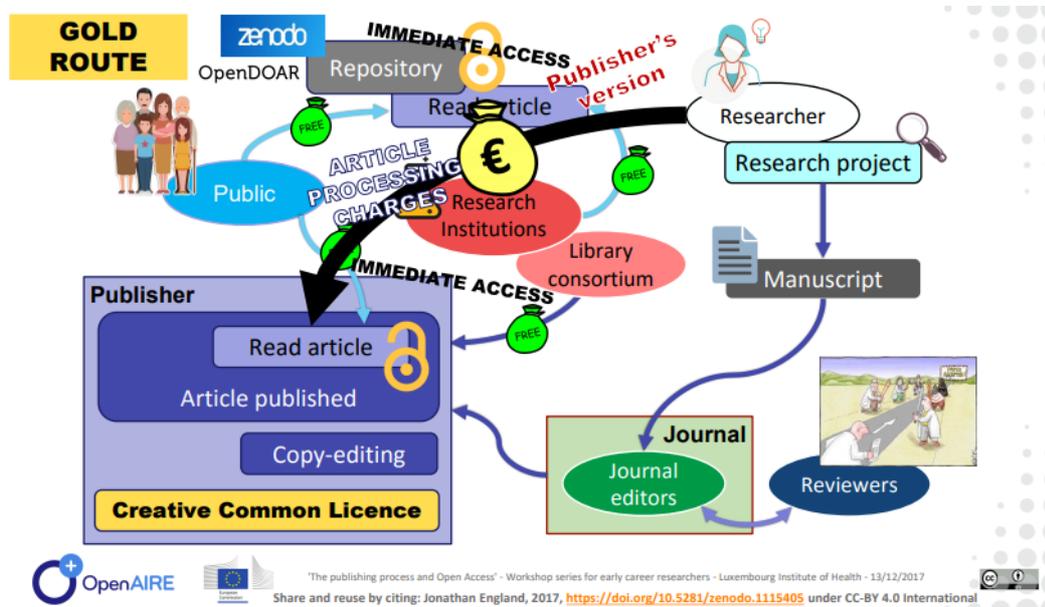


Source: England, J. Access URL.

*In the jargon, OA delivered by journals is called gold OA, and OA delivered by repositories is called green OA. Work that is not open access, or that is available only for a price, is called toll access (TA) (Suber, 2013)*

Ball (2016) gives more details this route:

- Offers articles that are paid for by the authors or their institutions or funders.
- These 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.
- 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 directly 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;



### Hybrid open access

Used in those cases where open access content is combined with content that requires a subscription or pay-per-view. In particular, it occurs when authors pay scholarly publishers to make articles freely accessible within journals or when readers pay to view individual articles. Major scholarly publishers have started, in recent years, providing the hybrid option for the vast majority of their journals; but it is also used in the context of conference proceedings and edited volumes (Björk, 2017).

Finally, we recommend you watch this video by the Samenwerkingsverband Hogeschoolbibliotheken (SHB Library) in order to find out the differences between gold and green OA, what the APCs are and what kind of licence you can use.



What is Open Access?

## 3.2. OA journals for publishing (gold route)

As you have previously seen, you can contribute to open scholarly communication through OA journals (gold route) and OA repositories (green route). We will focus first on what an OA journal is and where you can find it. We will then explain the most widely-used method for financing OA publishing: the APCs.

### 3.2.1. What is an OA journal?

An open access journal is defined as one which publishes articles "using a funding model that does not charge readers or their institutions for access" (DOAJ, 2019) and is related to "the right of users to 'read, download, copy, distribute, print, search or link to the full texts of these articles... or use them for any other lawful purpose'" (Budapest Open Access Initiative, 2002).

Open access journals are one of the essential building blocks for the expansion of a new scientific communication model, and they currently face three major challenges: (a) increasing their number and proportion to achieve hegemony within the system; (b) overcoming debates concerning their quality (and avoiding "contamination" by so-called "predatory" journals); and (c) consolidating sources of financing to ensure their economic sustainability. (Abadal, 2017)

### 3.2.2. Where can you find OA journals?

You can find a suitable OA journal for your discipline by searching in open access directories and publishers and also by applying a filter in bibliometric databases:

<p><b>Directory of Open Access Journals (DOAJ)</b></p>	<div style="text-align: center;">  <p>Source: Access URL</p> </div> <p>A DOAJ is a community-curated online directory that indexes and provides access to more than 12,000 high quality, open access, peer-reviewed journals</p> <p>The DOAJ seal is a mark of certification for open access journals, awarded by DOAJ to journals that achieve a high level of openness, adhere to best practice and high publishing standards. There is an orange circle symbol next to some journals that indicates that they are awarded a DOAJ seal. You can have a look at these here <a href="#">DOAJ seal journals</a>.</p> <div style="background-color: #00AEEF; color: white; padding: 10px; margin: 10px 0;"> <p><b>Tip!</b> Many DOAJ journals do not <i>charge</i> article processing charges (APCs). Have a look at this <a href="#">complete list of OA journals without APCs</a></p> </div> <p>Regarding how a DOAJ assesses the quality of journals, in addition to the peer-review process, it also includes practices such as the checking of editorial board competence, content comparison of published articles, plagiarism checking and best practice and transparency standards. In this sense, the <a href="#">DOAJ Best Practice Guide</a> is a web resource that provides selection criteria, resources and tools for identifying reputable open access journals to support researchers, publishers and librarians.</p>
<p><b>Open Library of Humanities</b></p>	<div style="text-align: center;">  <p>Open Library of Humanities</p> <p>Source: Access URL</p> </div> <p>It is a nonprofit OA publisher for the humanities, funded by an international consortium of libraries and dedicated to publishing open access scholarship with no article processing charges (APCs) made to authors. The OLH publishing platform supports academic journals from across the humanities disciplines and hosts its own multidisciplinary journals, all of which are subject to rigorous peer review.</p> <p>This initiative arose because the current level of APCs makes gold OA publishing unaffordable for the majority of unfunded humanities scholars. A need was therefore detected to implement a collaborative funding model for gold open access in the humanities. The idea of this model is to spread costs across institutions so that individual institutions do not have to pay the entire APC cost of their researchers. It is made possible by a Library Partnership Subsidies initiative to collectively fund the institution and its array of journals. A large number of libraries and institutions worldwide already support this OA initiative.</p> <p>For more information, you can visit the <a href="#">OLH website</a> and read this <a href="#">brochure</a>. You can also have a look at the <a href="#">academic journals participating in OHL</a>.</p>

<p><b>Public Library of Science (PLOS)</b></p>	<div style="text-align: center;">  <p>Source: <a href="#">Access URL</a></p> </div> <p>PLOS is a nonprofit organisation created to serve the interests of scientists and the public good. It publishes a range of open access journals across all areas of science and medicine. The articles published are rigorously reported, peer reviewed and immediately available without any restrictions, thereby promoting the widest readership and impact possible.</p>
<p><b>Open Access publishers</b></p>	<p>Some publishers offer an optional OA hybrid model or have fully OA journals in diverse academic disciplines. These journals include:</p> <ul style="list-style-type: none"> <li>• Elsevier Open Access Journals</li> <li>• Oxford Open</li> <li>• Springer Open</li> <li>• Taylor &amp; Francis Open and Routledge Open</li> <li>• Wiley Open Access</li> </ul>
<p><b>Bibliometric database - OA filter</b></p>	<p>You can also display only open access journals by applying an OA filter in the main international bibliometric indexes: the Journal Citation Reports (JCR) and SCImago databases. When you do this, an image of an open padlock appears next to the journal's names indicating that they are open access journals.</p> <p>Please check the OA filtering options available by visiting the <a href="#">SCImago help website</a> and <a href="#">InCites JCR Reports Help</a> within InCites Journal Citation Reports.</p>
<p><b>UOC open Access journals</b></p>	<p>The UOC also has 10 OA academic journals promoted by the university departments: 7 are scientific and 3 are related to knowledge dissemination. Each of the journals focuses on a different knowledge area such as art and new media, sociology, history and culture, library and information science, e-learning, internet, law and politics, internet regulation, new economy, design and multimedia and communications, digital culture and journalism.</p> <p>The university is proud to coedit most of the scientific journals with other institutions that contribute expertise and global impact. We are currently in partnership with the University of Barcelona, University of the Andes (Colombia), University of Antioquia (Colombia), Dublin City University (Ireland), Vytautas Magnus University (Lithuania), Fundació Carles Pi i Sunyer and Alexander Von Humboldt Institute for Internet and Society (HIIG).</p> <p>With regard to open access commitment, our journals can be labelled diamond open access journals because there are no payment walls for readers or authors. Our journals do not ask for any article processing charges for authors or fees for readers. Besides, all contents are published under the Creative Commons BY licences 3.0 and all are moving towards the 4.0 international version of these licences.</p> <div style="background-color: #e0f0ff; padding: 10px; margin-top: 20px;"> <p>You can access <a href="#">the directory of open access scientific and academic journals of the UOC</a> and you can also see the impact and visibility of these UOC OA journals through <a href="#">this information graphic</a>.</p> </div>

### 3.2.3. Financing OA publishing: APCs and BPCs

Article processing charges (APCs) and book processing charges (BPCs) are the fees that some scholarly publishers charge authors of academic papers to publish their papers or books in open access journals (Guy & Holl, 2016). This is the most common way of financing OA publishing, although there are other models, which include advertising, donations, sponsorships and subsidies (FOSTER).

The APCs are levied in two ways (also in line with some of the OA routes seen previously):

- **OA journals:** authors are charged to publish their work in a fully open access journal (gold route).
- **Subscription-based journals:** authors are charged to make their individual publications OA in an otherwise subscription-based collection (hybrid route).

Researchers can choose to publish in either OA or hybrid journals.

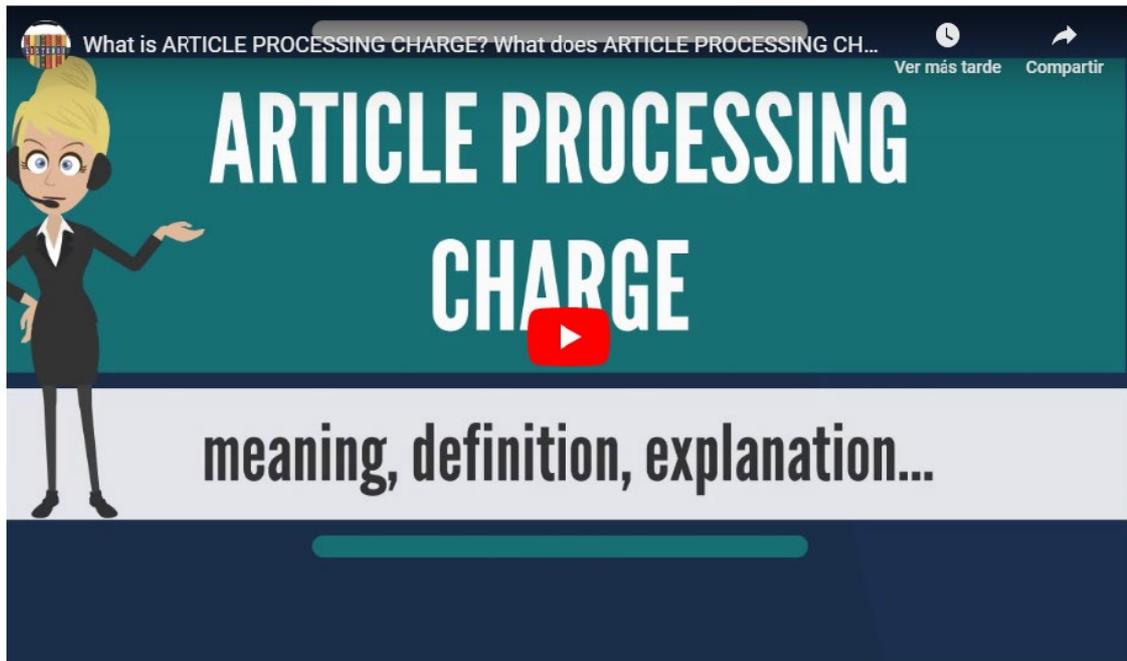
APCs support the publisher's business model whereby the cost of publication is shifted from the reader (via subscriptions) to the author (via the APC). APCs vary from publisher to publisher. One major area for concern is the lack of transparency in the process for deciding on an APC fee, since many publishers have fixed prices but others charge different fees for different types of article (Guy & Holl, 2016).

Generally, APCs are paid by the author's sponsor (funding agency or employer) and waived in cases of economic hardship. For instance, APCs are supported by organisations or funding bodies, such as PLoS, and, for some time, they have even been paid as part of Horizon 2020 grant applications. However, since the end of 2018 the European Commission has taken an important turn in its policy to now favour journals that are entirely open access and repositories (preprints).

Plan S has ignited a discussion about APCs. Specifically, the EU will not cover the publication cost of articles to be published in hybrid open access journals (because of the exorbitant prices of the publication fees and the subscriptions) unless they are under a "transformative agreement". This means that in order to achieve compliance with Plan S, the hybrid OA should have a clear and time-specific commitment to becoming a full open access journal (cOAlition S, 2018). The open access APC model is part of the wider and increasing global open access ethics debate. The controversial Plan S has led some researchers to react against it (Plan S Open Letter).

Related to this, some criticisms and concerns have also pointed out that if a publisher makes a profit from accepting papers, it has an incentive to accept anything submitted rather than selecting and rejecting articles based on quality. The issue therefore seems to depend on budgets and funding, since a lack of sufficient funds or provision of a discount can lead to some research not becoming open and to excluding authors from developing countries or less well-funded research fields from publishing in open access journals (Socha, 2017).

We recommend you watch this video to get a better idea of the concept of APCs:



APCs

## 3.3. OA books

### 3.3.1. Publishing your monograph in OA

For many disciplines, books are equally important as a source of published information when conducting research. This is especially relevant in the arts, humanities and social sciences, in which researchers often publish their findings in books rather than in journal articles.

#### More about...

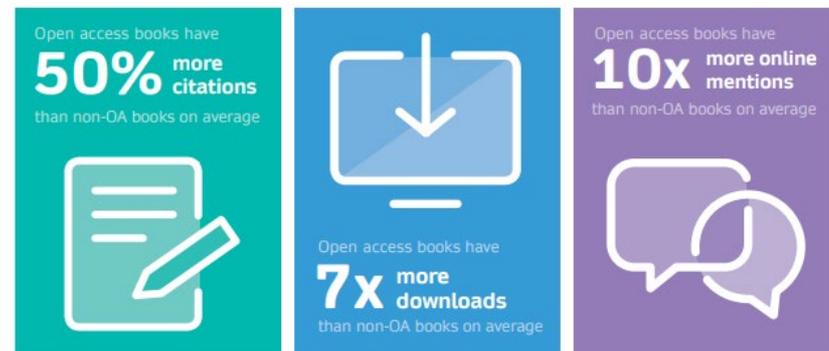
A good incentive for authors is that books published as OA tend to have a larger readership than traditional books. A Springer Nature report from 2017 found that OA books receive on average seven times more downloads than non-OA books.



**SPRINGER NATURE**
**DISCOVERY**

## The OA effect

How does open access affect the usage of scholarly books?



Source: Springer Nature, 2017. Information graphic on the OA Effect

The practice of publishing academic monographs in open access is becoming more frequent. A study carried out by Knowledge Exchange (KE), a consortium of six state-level European research support and higher education bodies, shows that there is no standard route for publishing monographs in OA but it does indicate the different paths that can be taken and which depend on the type of editor (traditional, digital, etc.) and the editorial policies and particularities of each country (Ferwerda, Pinter & Stern, 2017). It also makes it clear that open access is a model that is gaining ground and getting the support of the main commercial publishers (as in the case of Springer Nature) (Emery et al., 2017; Abadal, 2018).

## The basics of OA book publishing: what you need to know

- If you want to publish an OA book, you need to know that:
- There are a number of options available for publishing books openly, including:
  - University OA presses; such as two of the largest traditions in OA: Athabasca University Press and Amsterdam University Press.
  - OA monograph publishers; such as Open Book Publishers and Ubiquity Press.
  - Commercial publishers; such as Palgrave Macmillan, SpringerOpen and De Gruyter's Open Access Book Library. You can see a complete list on Wikipedia
- A basic requirement to know is that all books published via the gold route will be made freely available to the reader immediately upon publication.
- Another alternative is green open access, wherein an author would place a version of the chapter in an open access repository.

- You should check what your publisher allows and where OA books can be made available to maximise visibility.
- You should take into account that in some cases a BPC (book processing charge) is applied to cover the editorial, production and digital publication costs.

Have a look at this [information graphic](#) from the OAPEN-UK to also see publishers' guidelines for publishing OA books.

### 3.3.2. Finding OA books

You can find OA in some international directories (such as DOAB) and some publishers also host OA books for free on Google and Amazon. Efforts have also been made by Wellcome to work with publishers to increase the visibility and discoverability of OA books, through Europe PubMed Central, NCBI Bookshelf and OAPEN.

DOAB	OAPEN
<p>The Directory of Open Access Books (DOAB) is a service provided by the OAPEN Foundation, an international initiative dedicated to open access monograph publishing, based at the National Library in The Hague. The main aim of DOAB is to increase the discoverability of open access books, which have to be available under an open access licence (such as a Creative Commons licence) and have been subject to independent and external peer review prior to publication.</p>	<p>The Open Access Publishing in European Networks (OAPEN) Library is also a service provided by the OAPEN Foundation. It contains freely accessible academic books, mainly in the area of humanities and social sciences. OAPEN works with publishers to build a quality, controlled collection of open access books and provides services for publishers, libraries and research funders in the areas of deposit, quality assurance, dissemination and digital preservation.</p>

#### Do you know?

While the **OAPEN Library** contains **full-text OA books**, the **DOAB** is a **discovery service that points to OA books** that can be found elsewhere.

# 4. Open access repositories for publishing

## 4.1. What is an OA repository?

An OA repository is a digital platform or virtual archive established to collect, disseminate and preserve scientific output such as scientific articles and datasets and make them freely available. It conforms to the standards of the Open Archives Initiative (OAI) and enables readers to freely access and fully reuse the article text. The action of depositing material in a repository is (self) archiving. Depending on personal preferences or a publisher's policies, the author can make his/her work available in open access or (temporarily) restrict access to it (OpenAIRE, 2018; Abadal, 2012).

**Repositories**  
Critical Infrastructure for Open Science and Innovation

$E = mc^2$

**What are repositories?**

Repositories are digital platforms that provide free access to valuable public-interest research from across Europe, so that the work of academic experts has the maximum benefit for research, industry and society.

Repositories are the backbone of Europe's Open Science Policies. They ensure that access to scientific progress is not limited to members of more wealthy institutions.

Access to research should be a right, not a privilege

**Who uses repositories? EVERYONE**

Testimonials of repository users

**POLICY MAKER**  
"Open Access repositories allow my organization to better understand our research productivity and how our research outputs are being used beyond the academy"

**STUDENT**  
"I'm really glad that [the repository] allowed me to do it legally and free of charge. It's really annoying when studying that some articles are just unreachable, mostly because they're too expensive to me"

**RESEARCHER**  
"Much of the literature on behavioural economics is relevant for the work I do now, so I'm super happy to be able to access papers this way."

**NOT-FOR-PROFIT**  
"I am the Director of a private foundation and access to research such as this is really helpful as we develop and adjust our own strategy."

Without repositories, millions will lose access to publicly-funded research

**Where are repositories? EVERYWHERE**

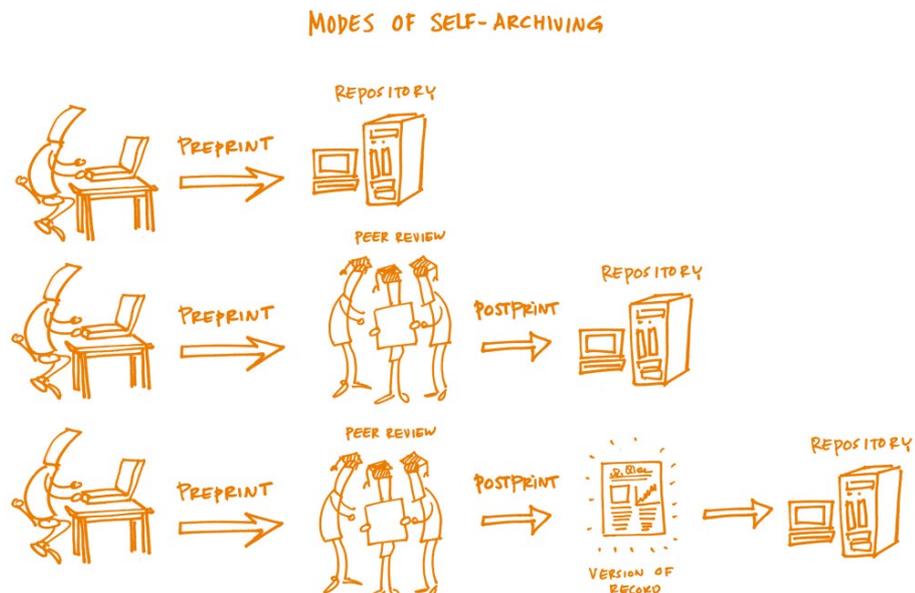
There are over 3000 repositories world-wide and 1500 repositories in Europe hosted by research centres, universities, not-for-profit organizations and government departments.

COAR SPARC Europe

Source: European repositories information graphic (COAR)

## 4.2. What can you explicitly publish in a repository?

- Some versions of your published article:
  - **Preprints:** all the versions of an academic article or other publication before it has been submitted for peer review. It includes the pre-publication drafts of journal articles (preprints) and working papers (other in-progress documents relaying research results).
  - **Postprint:** the form of the article after all the peer-review changes are in place.
  - **Published:** publisher's copy of your article (usually a PDF document).



Source: FOSTER, 2018

- Other research issues, such as:
  - **Research data.**
  - **Reports/working papers:** informally published material which has not gone through a standard publishing process.
  - **White papers:** informational brief offering an overview of a technology, product, issue, standard, policy or solution.
  - **Conference proceedings, communications and posters:** documents shared with the research community in congresses, seminars and workshops.

Other types of scientific publications, such as non-peer-reviewed articles as well as monographs, books, conference proceedings and "grey literature" (ie informally published material which has not gone through a standard publishing process, eg reports), are not covered by the OA obligation. However, where possible and to ensure wider access and dissemination, a good practice is to also provide OA to these other types of scientific publications.

## 4.3. What are the advantages of publishing in a repository?

The main reason for publishing your research in a repository is that you can make your publications **more accessible and visible** and raise their impact and ensure that they are **preserved over time**.

You can also get valuable feedback to improve your paper prior to the actual peer-review process. It may also be useful to attract media attention and establish priorities if it takes a long time for your paper to get published. Publishing preprints (working papers or other research issues) in a repository can even provide access to scholarly content that would otherwise be lost (Bourne et al., 2017).

Finally, there is an increasing number of funding bodies that require the outcomes of their projects to be made available in a repository.

### More about...



You should read "Ten simple rules to consider regarding preprint submission" to discover the further benefits of preprints.

Have a look at this [information graphic](#) about how open your preprint is.

## 4.4. What kinds of repositories are suitable for your research?

There are different kinds of repositories that may be suitable for your publications. For instance, you can use your institutional repository or a discipline-specific repository – or subject repository – linked to a particular research field or subject (Santos-Hermosa, Ferran-Ferrer & Abadal, 2017). There are also some specific research data repositories and general-purpose academic repositories, which are not limited to a particular scope. Finally, you can find repositories and OA research outputs through directories of academic repositories and repository aggregators.

### Institutional repositories (IRs)

Many universities and research organizations have set up their own institutional repositories to allow their academic communities to deposit their publications. In this way, the scholarly outputs of the university are made available and their long-term preservation is ensured. These kinds of repositories are maintained and curated by institutions – very often the library – and, as a rule, deposit is only possible for researchers affiliated with the institution.

In the case of the UOC, you have the UOC repository, O2 available.

- **O2, the UOC repository**

The UOC's institutional repository is the portal for collecting, disseminating and preserving the open access digital publications produced by members of the UOC as part of their research, teaching and management work. It includes articles, papers, teaching materials, final degree projects, doctoral theses, etc. for the purpose of collecting, preserving and organizing the UOC's scientific output and its institutional memory and, in particular, disseminating it, thus making it more visible and increasing its impact. Is delivered through self-archiving: authors deposit manuscripts in institutional or disciplinary repositories.

### Discipline or subject-based repositories

These kinds of repositories collect publications in a particular discipline, or a range of disciplines, so that authors in a field can share their research with colleagues in that field. If you are interested in depositing your work with a discipline-specific repository, you can check the following resources:

- **The Open Access Directory (OAD) – Disciplinary repositories**

OAD is a compendium of simple lists about open access to science and scholarship, maintained by the OA community. It provides a specific list of OA disciplinary repositories where you can find repositories specialized in more than 40 disciplines.

- **Social Science Open Access Repository (SSOAR)**

This is an open access repository aimed at researchers from the social sciences. It is maintained at the GESIS Leibniz Institute for the Social Sciences.

In order to cover the discipline as broadly as possible, the SSOAR pursues a number of different content-acquisition strategies. Full texts are deposited, and thus published, either by scientists themselves or by social science research institutions, university faculties and discipline-specific infrastructure providers via bulk imports or individual imports in collaboration with the repository.

Full texts are indexed using controlled social science vocabulary (Thesaurus, Classification) and are assigned rich metadata.

SSOAR has been certified by the German Initiative for Network Information (DINI). The DINI certificate ensures the standardization and quality of OA repositories.

### General-purpose academic repository

- **ZENODO**

This is a general repository commissioned by the European Commission and launched in May 2013 via the OpenAIRE project and CERN. Some of its main features are the following:

- Accepts any kind of research output from across all disciplines.
- Uploads are assigned a digital object identifier (DOI) to make them easily discoverable and uniquely citable.
- Users can create and curate their own community OA repository for a workshop, project, department or journal.
- Research outputs are stored safely for the future in the same cloud infrastructure as CERN's own LHC research data.

Interestingly, its name comes from *Zenodotus*, the first librarian of the Ancient Library of Alexandria and father of the first recorded use of metadata, a landmark in library history.

For more information, have a look at this [poster of Zenodo](#).

### Data repositories

More information about this kind of repository can be found in chapter 4, which is entirely dedicated to open data.

## Directories and aggregators of repositories

You can find repositories through global directories of academic repositories, such as the following:

<p><b>OpenDOAR</b></p>	<p><b>OpenDOAR</b></p> <p>This is an authoritative and global directory of academic OA repositories. It enables the identification, browsing and search for repositories, based on a range of features, such as location, software or type of material held. Typically OpenDOAR lists publication repositories, as this is the basis for most repositories. However, OpenDOAR also lists other types, for example of images or datasets, particularly where these have metadata or documentation sufficient to make the material reusable.</p>
<p><b>The Registry of Open Access Repositories (ROAR)</b></p>	<p><b>The Registry of Open Access Repositories (ROAR)</b></p> <p>This is another global directory which provides timely information about the growth and status of repositories throughout the world. Like OpenDOAR, ROAR has an option to search for a particular repository or for open access content.</p>
<p><b>CORE</b></p>	<p><b>CORE</b></p> <p>Based in the UK, it is an engine designed to aggregate all open access research outputs from institutional repositories, subject repositories and journal systems worldwide and make them available to the public.</p>
<p><b>The Digital Commons Network</b></p>	<p><b>The Digital Commons Network</b></p> <p>This is not a repository but rather a network portal, curated by university librarians and their supporting institutions, which brings together free, full-text scholarly articles from hundreds of universities and colleges worldwide. The network includes a growing collection of peer-reviewed journal articles, book chapters, dissertations, working papers, conference proceedings and other original scholarly work. Clicking "Explore" anywhere on the multi-coloured Discipline Wheel opens a Commons page for a particular academic discipline. From here, you may browse popular and recently added articles, search all content or "Follow" authors and publications to receive monthly email updates on new work in that field.</p>

### Social networking sites are not repositories?

ResearchGate and Academia.edu are commercial sites, whereas most open access repositories are nonprofits. The former are social media sites that are independent for-profit companies that could theoretically close up shop at any time, while the latter are usually created by universities, government agencies, or nonprofit associations in order to ensure long-term archiving and preservation and to meet the requirements of open access policies. It must also be taken into consideration that the terms of service of ResearchGate and Academia.edu do not permit their users to take their own data and reuse it elsewhere, nor the libraries to extract that data on the authors' behalf. However, repositories are committed to complete openness and reuse of data by providing interoperable metadata and using standards such as OAI-PMH in order to let other repositories collect and spread their research items (Fortney & Gonder, 2015).

	Open access repositories	Academia.edu	ResearchGate
Supports export or harvesting	Yes	No	No
Long-term preservation	Yes	No	No
Business model	Nonprofit (usually)	Commercial. Sells job posting services, hopes to sell data	Commercial. Sells ads, job posting services
Sends you lots of emails (by default)	No	Yes	Yes
Wants your address book	No	Yes	Yes
Fulfills requirements of UC's OA policies	Yes	No	No

<http://creativecommons.org/licenses/by/4.0/> University of California OSC

Source: Fortney & Gonder, 2015

Have a look at the this table to see how social networking sites, such as Academia.edu and ResearchGate, differ from OA repositories.

## 4.5. Publishing policies: how to be aware of them?

Authors (or their institutions) own the original copyright to their research, but when a contract is signed with a publishing company the work's exploitation rights (reproduction

and distribution) are often assigned exclusively to the publisher. This is what is known as copyright transfer and implies that authors cannot disseminate the work on any other channel without the publisher's permission.

We encourage you, as researchers, to choose publishers who let you retain your author's rights so that immediate access can be provided. If an open licence is applied to the work, you can use and exploit your publications and copy them, distribute them and make derivative works. Creative Commons (such as CC BY 4.0 for publications and CC0 for data) or GNU (for software and code) are very suitable for this purpose.

To preserve your rights, if the publisher does not standardly allow you to retain your rights, please consider negotiating this through an addendum to the publication agreement or contract templates, such as those listed below:

- H2020 OA Guide Model for Publishing
- Scholar's Copyright Addendum Engine from Science Commons
- Copyright Toolbox from the JISC and the SURF Foundation
- SPARC Author Addendum

## Publisher copyright policies and self-archiving sources

Discover the editorial policies of the journals in which you want to publish as well as information about copyright assignment contracts and how they affect the dissemination of your research.

- **Sherpa-ROMEo**: international publishers' database from JISC UK, which offers a journal-by-journal overview of publisher self-archiving policies from around the world. It also provides summaries of self-archiving permissions and conditions of rights given to authors on a journal-by-journal basis. It also analyses the self-archiving terms of most international journals.
- **DULCINEA**: national publishers' database created as part of the objectives of a Spanish national project entitled "Open access to scientific outputs in Spain". This resource identifies the policies of publishers and Spanish journals towards open access archiving and analyses how these policies can affect the reuse of papers and their deposit in subject or institutional repositories.
- A publisher's own editorial journal website.
- Others:
  - Wikipedia list of academic journals by preprint policy: it lists academic journals by their submission policies regarding the use of preprints prior to publication,
  - Retraction/removal policies from several preprint servers. For instance:
  - ArXiv <https://arxiv.org/help/withdraw>
  - BiorXiv <http://www.biorxiv.org/about/FAQ>
  - PeerJ Preprints <https://peerj.com/about/preprints/policies-and-procedures/#retractionpolicy>
  - Preprints.org [https://www.preprints.org/instructions\\_for\\_authors#withdrawal](https://www.preprints.org/instructions_for_authors#withdrawal)

## Other guides and tools

Other authors' rights resources and guides available to help you understand copyright agreements are:

- [An Introduction to Copyright Resources for Authors: practical guidance when submitting journal articles.](#)
- [Reserving Rights of Use in Works Submitted for Publication: Practical guidance on managing your copyright from the Copyright Management Center of Indiana University-Purdue University Indianapolis.](#)

Finally, we have recommended some useful tools below in case you are not sure whether your previous research publications are accessible or not.

Dissem.in
Web platform gathering metadata from many sources and analysing the full-text availability of publications by researchers. It has been designed to foster the use of the repositories in which the full texts deposited are stored. It searches for copies of your papers in a large range of OA repositories and lets you know which ones cannot be accessed.
Unpaywall
Free tool where everybody can access a free copy of your pay-walled paper with just one click. It harvests content directly from a large quantity of journals and open access repositories from all over the world.
OA Button
Open source tool built not for profit but for change. It finds free, legal and full-text articles through the inclusion of aggregated repositories from all over the world. The project started when students got tired of hitting paywalls. Instead of accepting their frustration, they became inspired and took an idea to track the impact of paywalls to a hackday.

### UOC's case

#### **Can I publish an article in the UOC's repository, O2, that I have already published in a scientific journal?**

Yes, as long as you produced the document in the framework of your activity at the Universitat Oberta de Catalunya (Open University of Catalonia, UOC), and as long as this is permitted by the contract you signed with the publisher of the scientific journal.

To find out what is permitted or not by the publisher, if you do not have a copy of the signed contract, you can view it through the international publishers' databases.

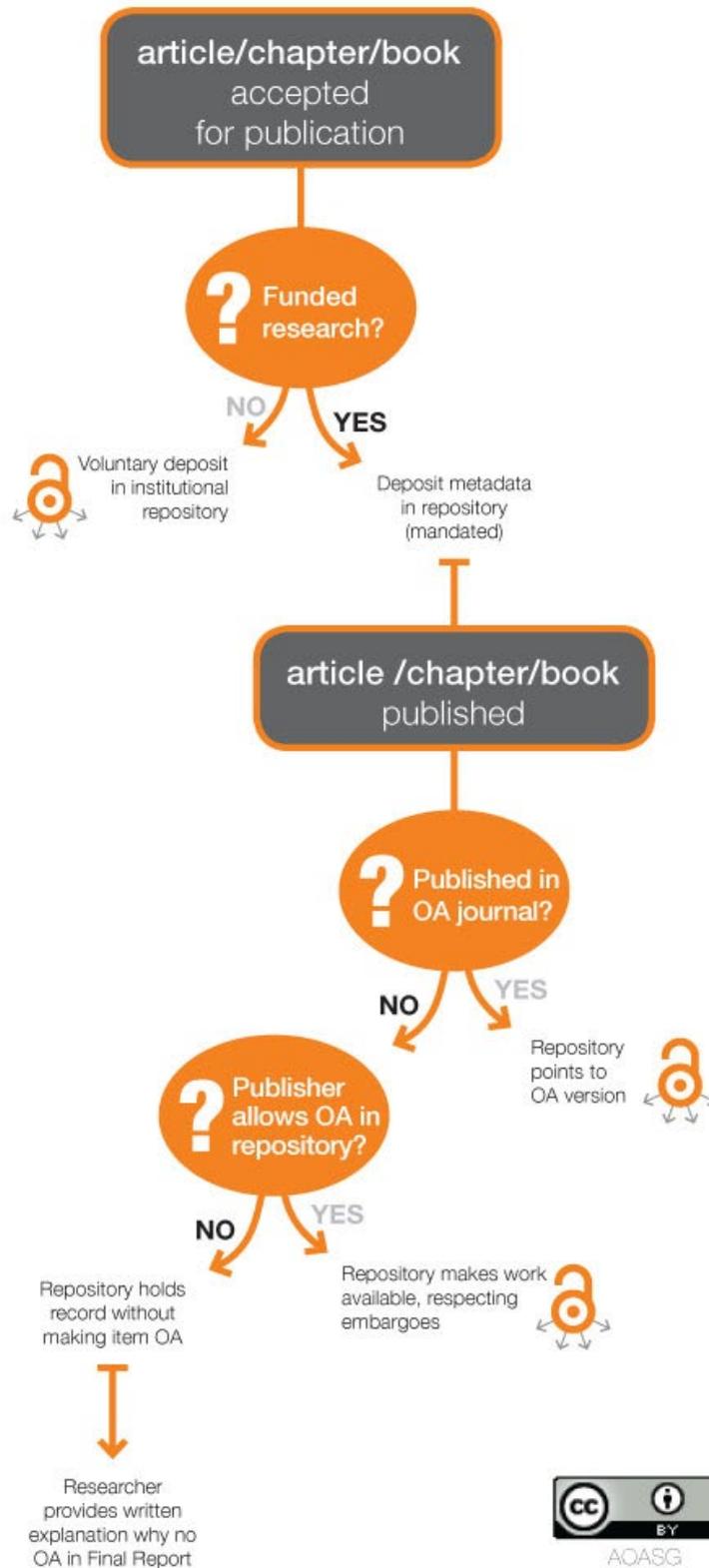
## Tip

You should watch the video "What is Open Access? with a summary of everything that has been explained in this chapter: gold and green routes, APCs, open licences, etc.



What is Open Access?

## To sum up: The Policy Compliance decision tree



Source: Australian Open Access Strategy Group (AOASG)

# 5. Open data

## 5.1. Definition and context

According to the European Commission (EC), research data refer to information, in particular facts or numbers, collected to be examined and considered as a basis for reasoning, discussion or calculation. Data includes:

- research data,
- statistics,
- results of experiments,
- measurements,
- observations resulting from fieldwork,
- survey outcomes,
- interview recordings,
- images

There are different types of research data:

<b>Observational</b>	Data captured in real time, for instance, neuroimages, sample data, sensor data and questionnaire data.
<b>Experimental</b>	Data captured on laboratory equipment, for instance, gene sequences, chromatograms and magnetic field data.
<b>Simulation</b>	Data generated based on test models, for example, climatological, mathematical and economic models.
<b>Derived or compiled</b>	Difficult-to-reproduce data, for instance, text and data mining, 3D models and compiled databases.
<b>Reference</b>	Data conglomerate or dataset, for instance, databases of gene sequences, chemical structures and spatial data portals.

Now research data has been defined, let us talk about **open** research data. According to the FOSTER Handbook of Open Access, open research data is:

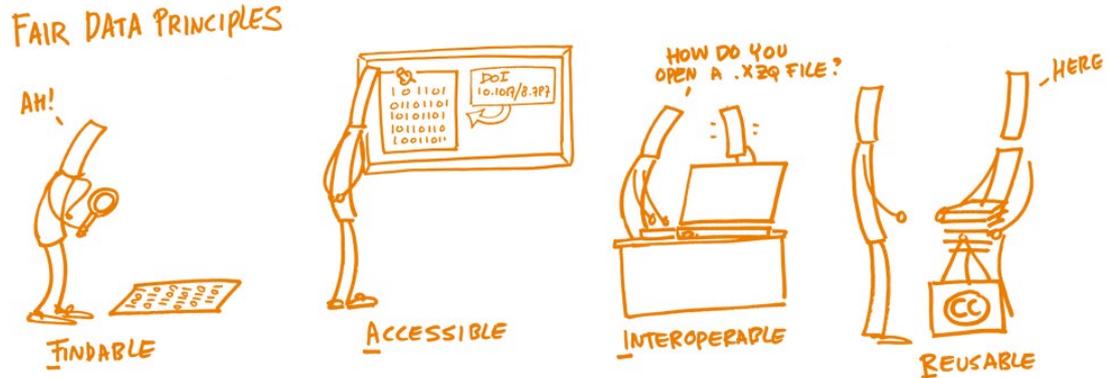


*"[...] Data that can be freely accessed, reused, remixed and redistributed, for academic research and teaching purposes and beyond."*

Thanks to the free access to research data, other researchers can reuse, reproduce or replicate the research findings, which is why the best practice recommendation for opening research data is to do so according to FAIR principles.

# What are FAIR DATA?

Let us introduce this concept with this drawing:



Source: Open Access Handbook (FOSTER)

In 2014, a core set of principles were drafted in order to optimise the reusability of research data, named the FAIR Data Principles. They represent a community-developed set of guidelines and best practices to ensure that data or any digital object are **findable, accessible, interoperable and reusable**.

Let's see what these principles mean:

The first requirement for making data reusable is ensuring that they can be found. It should be easy for both humans and computers to find the data and metadata. Automatic and reliable discovery of datasets and services depends on machine-readable persistent identifiers (PIDs) and metadata.

<b>Findable</b>	The first requirement for making data reusable is ensuring that they can be found. It should be easy for both humans and computers to find the data and metadata. Automatic and reliable discovery of datasets and services depends on machine-readable persistent identifiers (PIDs) and metadata.
<b>Accessible</b>	The (meta)data should be retrievable by their identifier using a standardised and open communications protocol, possibly including authentication and authorization. Also, metadata should be available even when the data are no longer available..
<b>Interoperable</b>	The data should be able to be combined with and used with other data or tools. The format of the data should therefore be open and interpretable for various tools, including other data records. The concept of interoperability applies both at the data and metadata level. For instance, the (meta)data should use vocabulary that follows FAIR principles.
<b>Reusable</b>	Ultimately, FAIR aims at optimising the reuse of data. To achieve this, metadata and data should be accurately described so that they can be replicated and/or combined in different settings. Also, the reuse of the (meta)data should be stated through (a) clear and accessible licence(s).



*"The FAIR principles are guiding principles, not standards."*



Source: A FAIRy Tale.

To sum up, it is important to clarify that the idea is to apply FAIR principles to any research data output, whether it will be openly shared, closed or available upon demand. So, we encourage you to apply these principles from the very beginning of your research lifecycle, regardless of whether you are going to openly share your data or not.

## 5.2. What is research data management

Research data management (RDM) is defined as the organization of data, from the beginning of the research process or activity up until the publication, dissemination, sharing and archiving of the files that contain the data.

It is therefore important to know that RDM is mandatory and a consequence of the research assessment processes. That is why it is highly recommendable to use a data management plan tool that helps researchers take key decisions affecting research data through the research cycle.



*"Research data management concerns the organization of data, from its entry to the research cycle through to the dissemination and archiving of valuable results. It aims to ensure reliable verification of results, and permits new and innovative research built on existing information."*

Whyte, A.; Tedds, J. (2011). "Making the Case for Research Data Management". DCC Briefing Papers. Edinburgh: Digital Curation Centre. Available online



The Digital Curation Centre (DCC) gives an insight into the importance of providing access to research data and the risks of not managing data effectively. (video)

## 5.2.1. What is a data management plan (DMP)?

According to Open Science Framework:



*"A data management plan is a living, written document explaining what you intend to do with your data during and following the conclusion of your research project. A data management plan is required by many funders. Even if it is not required a data management plan can save you time and effort during your research as it forces you to organise your data, prepare it for the next step in its lifecycle, and clarify who will have access to it, how and when.*

*If you plan on sharing your data, a data management plan can help you troubleshoot the issues that you should address to make sharing simple. Finally, a data management plan helps ensure that your data remains useable to you, your collaborators and other researchers beyond the end of your project."*

OSF Guides, <https://help.osf.io/hc/en-us/articles/360019931133-Creating-a-data-management-plan-DMP-document>

Generally, a DMP helps you to decide how you:

- Create data and plan for its use.
- Organise, structure and name data.
- Keep – make it secure, provide access, store and back it up.
- Find information resources and share with collaborators and, more broadly, publish and get cited.

More specifically, here is a list of some of the questions that need to be answered while defining a DMP:

- Which datasets will be generated in your research?
- How will your datasets be named and referenced?
- Which file formats will be used for each dataset?
- What data standards and metadata standards will each dataset follow?
- Who will have access to your datasets? How and when will you share your datasets, if applicable?
- How will you archive and preserve your datasets?
- How will you license your datasets?
- How will you deal with privacy or confidentiality, if applicable?

### More about...

You can obtain more information in the OSF Guide: <https://help.osf.io/hc/en-us/articles/360019931133-Creating-a-data-management-plan-DMP-document>

In addition to all the requirements mentioned above, the FAIR principles can be added to the DMP. To do so, a guide has been published by the European Commission, which is available here:

FAIR Data Management in Horizon 2020:

[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/oa\\_pilot/h2020-hi-oa-data-mgt\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf)

SCIENCE EUROPE (2018). *Practical guide to the international alignment of research data management*: [https://www.scienceeurope.org/wp-content/uploads/2018/12/SE\\_RDM\\_Practical\\_Guide\\_Final.pdf](https://www.scienceeurope.org/wp-content/uploads/2018/12/SE_RDM_Practical_Guide_Final.pdf)



## 5.2.2. DMP tools

Knowing that creating a DMP can be an overwhelming task, online tools are already available to guide you through the decision-making process.

Here we mention the most important and most commonly used tools:

- Research Data Management Plan by CSUC
- DMP Online
- H2020 Template for the Research Data
- Checklist for Data Management Plan

## 5.3. Open data citation

Citation is a fundamental part of research and academia in general. Just as articles are cited, data which has contributed to research should be cited. So, be aware and be sure that you cite your research data when publishing your research papers, books or other outputs.

The benefits of data citation are basically that it:

- Fairly acknowledges the author's sources
- Promotes reproduction of research findings
- Makes it easier to find data for others who are interested
- Allows the impact of data to be tracked
- Provides a structure that recognises and rewards data creators

To contribute to these benefits, there are some data citation conventions that you need to follow similarly as you would cite a book. In any citation style, you must at least mention:

- Author
- Year of publication
- Name of the research data file(s)
- Name of the source where it was published
- DOI (if any)
- Date of your retrieval

## 5.4. Open data advantages and challenges

### 5.4.1. Benefits

The benefits of good data management are considered to be:

- efficiency: makes your own research easier
- safety: protects valuable data
- quality: better research data leads to better research
- reputation: enhances research visibility
- compliance: with ethical codes, data protection laws, journal requirements and funding policies.

Openly sharing data exposes it to inspection, forming the basis for research verification and reproducibility, and opens up a pathway to wider collaboration.

Other benefits of data sharing are:

For researchers
<ul style="list-style-type: none"> <li>• Increases the visibility of scholarly work</li> <li>• May enhance the researchers' reputation</li> <li>• May increase citations</li> <li>• Archiving provides long-term safe storage for data</li> <li>• Assists in implementing publishers' data access policies</li> <li>• Enables collaborations on related themes and new topics</li> <li>• Establishes links to the next generation of researchers</li> </ul>
For funders
<ul style="list-style-type: none"> <li>• Makes optimal use of publicly-funded research</li> <li>• Avoids duplication of data collection</li> <li>• Maximises return on investment</li> </ul>

For the scholarly community
<ul style="list-style-type: none"> <li>• Maintains professional standards of open inquiry</li> <li>• Maximises transparency where appropriate</li> <li>• Quality improvement from verification, replication and trust</li> <li>• Documentation for research design and teaching</li> <li>• Promotes innovation through unintended, new uses of data</li> <li>• Develops long-time series of data</li> </ul>
For research participants
<ul style="list-style-type: none"> <li>• Allows maximum use of their contributed data/information</li> <li>• Minimises data collection on the hard-to-reach (eg ill, elites)</li> </ul>
For the general public
<ul style="list-style-type: none"> <li>• Production of high quality research with social value</li> <li>• Advances science for the benefit of society</li> <li>• Compliance with laws and regulations</li> <li>• Adoption of emerging norms – "open access" publishing</li> <li>• To be, and appear to be, open and accountable</li> </ul>

## 5.4.2. Challenges

According to the European Data Portal study, there are still some challenges that open data publishers and potential reusers have to deal with.



Source: Barriers encountered when working with open data (Berends et al., 2017)

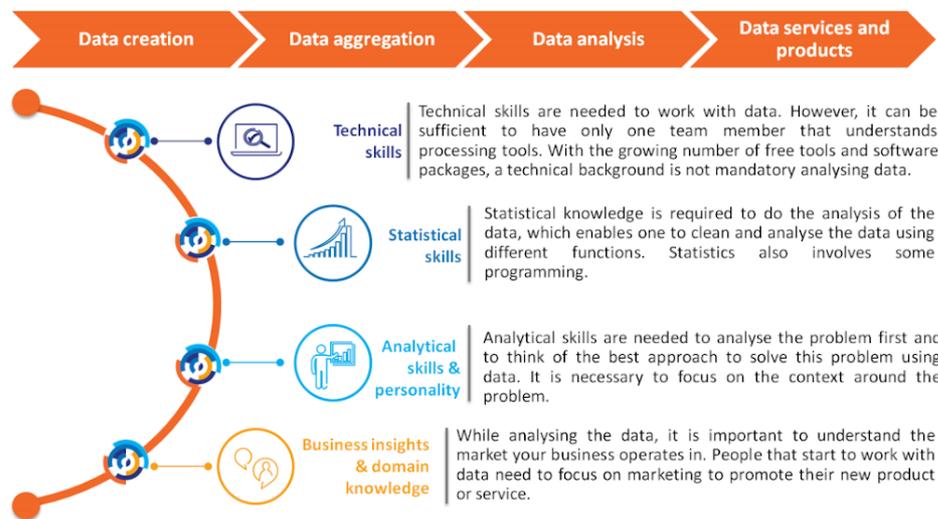
According to the research with both publishers and reusers, barriers to open data can be classified into six non-hierarchical categories:

1. **Political:** related to the lack of political will.



*"One of the main barriers to open data is the lack of awareness of the benefits of open data among politicians. A political decision is needed to grant government funding to the institutions that are now partially financed from selling data."*

2. **Organizational:** this type of barrier includes factors related to the internal and external organization of data publishers and data users that constrain the publication or adoption of open data. Some actions are needed:
  - a. Institutionalise open data in public bodies and companies
  - b. Skills for working with open data



Source: The skills needed to work with open data (Berends et al., 2017)

- c. Interaction between departments and open data stakeholders



*"A better coordination is needed between public sector bodies".*

3. **Legal:** The legal barrier focuses on challenges related to open data legislation, open data policies and open government directives and licences. The legal framework of datasets is still unclear, unspecific or not yet developed. Another challenge comes from the privacy constraints that prevent data publication. And finally, the third legal obstacle concerns the issue of ensuring that an appropriate licence is applied.



*"We have a strong privacy legal framework that makes the publication of some datasets difficult. Furthermore, we are a federal country, resulting in different governments, each with an open data policy and regulation."*

4. **Technical:** the most important barrier of this type is the quality and availability of open data. The plurality of open data, being available in different formats, with different licences in different languages is another restraining factor brought forward by companies reusing open data. This stark heterogeneity of the various characteristics of open data restricts the usability of open data. And a lack of standardization restricts the opportunity for users to develop permanent solutions to reuse open data in their processes.
5. **Financial:** The benefits of publishing open data for free are not always clearly documented, making it difficult for administrations to justify the loss of revenue, or more broadly, understand the benefit of publishing data in the first place.



*"Authorities, which are partly financed by the income of the sale of data, have to find other financing means when publishing data free of charge. Another financial barrier is that the cost of publishing data can be hard to justify."*

### Full report



Berends, Jorn; Carrara, Wendy; Vollers, Heleen (2017). Analytical Report 5: Barriers in working with Open Data. European Data Portal.

[https://www.europeandataportal.eu/sites/default/files/edp\\_analytical\\_report\\_n5\\_-\\_barriers\\_in\\_open\\_data.pdf](https://www.europeandataportal.eu/sites/default/files/edp_analytical_report_n5_-_barriers_in_open_data.pdf)

## 5.5. Where to share open research data

Research data can be shared in various ways.

### Discipline-specific repositories, data journals and data centres

Dedicated to archiving, preserving and disseminating discipline-specific digital data. Data journals are quite new but growing. The most prominent initiative is the Nature Scientific Data (<https://www.nature.com/sdata/>).

Here we provide a list of examples of data repositories:

- ReShare: UK Data Archive: <http://reshare.ukdataservice.ac.uk/>
- Environmental Information Data Centre: <http://eidc.ceh.ac.uk/>
- Visual Arts Data Service: <https://vads.ac.uk/>
- Endangered Language Archive: <https://www.soas.ac.uk/elar/>

In addition to these data repositories, there are also other infrastructures where you can publish or share your datasets, which are FAIR compliant. Here we suggest some more examples:

- **Zenodo:** multidisciplinary, open access repository developed by CERN.
- **EUDAT:** collaborative infrastructure that provides research data. management, training and consultancy services.
- **Dariah:** infrastructure for arts and humanities researchers working with digital research methods.
- **CLARIN:** European Research Infrastructure for Language Resources and Technology.
- **Figshare:** multidisciplinary, open access repository developed by Digital Science (limited free version admits up to 5 GB file storage).
- **re3data.org:** registry of research data repositories.

You can check two guides to decide which options best suit your interests:

- Comparative chart of multidisciplinary repositories for open access data
- OpenAire Guide to choose a data repository

### Institutional repository

Almost all universities now have an institutional repository where researchers can publish their outputs. They are generally designed for articles and publication, but increasingly provide datasets too. As researchers affiliated with the Universitat Oberta de Catalunya, you can publish and share your research data by depositing the file in the O2, the UOC's repository. Check the guide to depositing research in O2 devised by the Library: [http://biblioteca.uoc.edu/sites/default/files/Guia%20GIR-O2\\_eng.pdf](http://biblioteca.uoc.edu/sites/default/files/Guia%20GIR-O2_eng.pdf) or you can contact the of the Library's support service for help: <http://biblioteca.uoc.edu/en/services/publish-institutional-repository-o2>

### Self-preservation and dissemination

This can be via project websites or informal peer-to-peer sharing. Project websites can offer immediate storage and dissemination, but will offer less sustainability and long-term preservation. It can also be costly to manage and difficult to control who uses the data and how. Informal peer-to-peer sharing allows for quick sharing. However, it makes it difficult to know which data can be obtained where and who to contact: managing data access becomes a burden and it does not ensure availability of the data in the long term.

For this type of sharing you may consider:

- **Online file-sharing services**, including any cloud storage service or the university's own cloud service, which stores a copy of your files online and allows you to grant others access;
- **Secure file transfer** in which you post your data online for download by colleagues;
- **Using portable storage media** eg CDs, memory sticks, etc. (sent by post/courier, as required). Make sure you use encryption if you are posting sensitive data.

#### More about...

Publishing and citing research data, 2014, updated in 2016, UK Data Service, University of Essex

<https://www.ukdataservice.ac.uk/media/440282/publishingcitingdata.pdf>



## 5.6. Who owns the data?

According to Article 12 of the Law on Intellectual Property, the databases "that by selection or arrangement of their content constitute intellectual creations" are protected by copyright. However, the raw data included in a database have no authorship and, therefore, are not intellectual property.

- Law on Intellectual Property
- Law 5/1998 of 6 March, incorporating into Spanish law Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases

Given that most of the issues about data ownership and copyright are quite complex and can vary depending on various conditions or contextual matters, we recommend that if you have any doubts or questions about this part of research data management, it is best to contact the legal office of the university or research centre you are working at or the corresponding library service.

# 6. Researcher attitudes towards OA

## 6.1. Researcher attitudes towards OA

The most recent studies on researcher attitudes towards open access have unveiled some interesting results that are debated here:

### More about...

Rowley, J.; Johnson, F.; Saffi, L. et al. (2 more authors) (2017). "Academics' behaviors and attitudes towards open access publishing in scholarly journals". *Journal of the Association for Information Science and Technology*. ISSN 2330-1635 <https://doi.org/10.1002/asi.23710>



The key insights and findings of the research are summarized below:

- Researchers identify achieving a wider circulation than through publishing in a subscription journal as one of the possible advantages of open access.
- In terms of the service expected when researchers pay for open access publishing, rigorous peer review and rapid publication are key; consistent with this line of thought, the most popular peer review style is that which is most aligned with the traditional peer reviewing process.
- However, academics are strongly against their work being used for commercial gain without their prior knowledge or permission, even when they receive credit as the original author.

Another report published in 2017 focused on Spanish researchers' attitudes towards open access publishing:

### More about...

Ruiz-Pérez, Sergio; Delgado-López-Cózar, Emilio (2017). "Spanish researchers' opinions, attitudes and practices towards open access publishing". *El profesional de la información*, v. 26, no. 4, pp. 722-734. <https://doi.org/10.3145/epi.2017.jul.16>



According to this regional analysis, the main conclusions with regards to Spanish perception would be:

- Most researchers consider OA to be beneficial although there seems to be a growing tendency to agree less with this assertion.
- There seems to be two groups when it comes to publishing in OA, those that do not have to pay and those who pay amounts between €1,001 and €3,000.

- Publishers need to understand that the quality perception of OA outlets is still an issue for many researchers.

## 6.2. Reasons for supporting OA

<b>Better visibility and higher impact for your scholarship</b>	Studies have shown a significant increase in citations when articles are made openly available.
<b>Avoiding duplication</b>	No researcher wants to waste time and money conducting a study if he/she knows it has already been attempted elsewhere. But, duplication of effort is all too possible when researchers are unable to effectively communicate with one another and make their results known to others in the field and beyond.
<b>Research is useless if it is not shared</b>	Even the best research is ineffectual if others are unable able to read and build on it. When price barriers keep articles locked away, science cannot achieve its full potential.
<b>Text mining</b>	Today millions of articles are published every year; in fact, there are so many that a researcher could only hope to read a small subset of all articles in a given field. Text mining could be very beneficial as it would give researchers an over-arching view of a particular field and uncover trends and connections within their own field and between seemingly unrelated fields that no human researcher could discern. However, when many articles are inaccessible due to subscription barriers or being posted in non-computer-readable formats, these tools cannot reach their true potential.

### See also...

More reasons: <http://www.righttoresearch.org/learn/whyOA/index.shtml>



SHOULD I PUBLISH IN AN OPEN ACCESS JOURNAL? Meet Prof. John Bon in this video, in which details points to consider when making this decision in regard to scholarly publishing.



Should I Publish in an Open Access Journal?

## 6.3. A brief note on research reproducibility and transparency

Currently, there is a growing interest in ensuring the transparency and reproducibility of published scientific literature (eg data sharing). Transparent reporting also enables accurate and objective data interpretation and validation and advances scientific understanding. In addition, it makes research networked and interconnected. Transparency is therefore essential for establishing the credibility of research outcomes and the study sponsor (Wallach, 2018).

Specific guidelines exist to provide standards that reward researchers for engaging in open practices, describe what openness means across the scientific process so that research can be reproduced and evaluated and address the values of preregistration:

### More about...

Center for Open Science (COS). Transparency and Openness Promotion (TOP) Guidelines. [https://osf.io/ud578/?\\_ga=2.92627101.1228860248.1552325192-1424093199.1552325192](https://osf.io/ud578/?_ga=2.92627101.1228860248.1552325192-1424093199.1552325192)



These guidelines discuss eight categories of transparency standards:

- Citation standards
- Data transparency
- Analytical methods (code) transparency
- Research materials transparency
- Design and analysis transparency
- Preregistration of studies
- Preregistration of analysis plans
- Replication

In addition, as a researcher, you must be transparent towards and provide adequate information to the individuals involved in the research.

## 6.4. Practising what you preach: open access projects

If we try to have an initial overview of how much of OA research is actually openly available online, some studies (Auch Schultz, 2018) show that, in some respects, there is a robust participation by OA researchers in their field of study and, at the same time, that the researchers who would be expected to take part in OA are indeed those who

are researching the very topic. This is especially true for LIS (Library and Information Science) researchers, who are often some of the biggest advocates of OA.

However, we can find examples of OA practices and projects in diverse disciplines. Here we show you some real examples of researchers using openness in their work or research.

#### Why Open Research? (*Erin McKiernan*)

Since many researchers support the idea of increasing access to research but worry about the implications for their career of sharing their work, this is a site primarily for researchers where you will find a series of educational materials to promote the value of openness in conducting and communicating science. This resource is created in order to inform you about all the different ways you can be open and how sharing can be beneficial for your career. It also aims to provide information and resources for those of you working in open advocacy. An interesting example is a flow chart about the reasons for undertaking open research:

McKiernan, Erin (2015): How do I find a suitable open access journal? figshare. Paper.  
<https://doi.org/10.6084/m9.figshare.1619714.v1>

#### A FAIRy tale

This is a fictional story published in a trustworthy and easy guide to the FAIR principles for research data. Divided into 15 chapters, it tells a fictional story and gives an easily understandable explanation of each of the different properties that data, metadata and infrastructure must have in order to be searchable, accessible, interoperable and reusable (FAIR).

Since a well-told story can inspire action, we invite you to read it.

#### HackYourPhD

This is a project that brings together students, junior researchers, engaged citizens, hacktivists, tinkerers from all horizons, entrepreneurs and anyone who is interested in the production and sharing of knowledge in the wider sense. This collective aims to foster greater collaboration, transparency and openness in current research practices.

To have a quick look at HackYourPhD, go to this [poster](#). We also encourage you to participate in the initiative.

#### Open Access the Game

This is a video game developed by Fiocruz, a Brazilian research institution; the aim of the game is to promote the cause of open access to articles. The scenario is of a virus spreading and you need to find articles to help save the day. The game basically involves controlling an avatar and running to buildings representing research institutions and hoping that the article needed is open access.

We encourage you to try and participate!

#### Joint Roadmap for Open Science Tools

This is an informal group of like-minded organisations coming together around a common purpose: to develop a joint roadmap for open science tools based on the following objectives (JROST, 2018):

- A vision for the toolchain or dashboard of the researcher of the future.
- A mission for what we hope to achieve and how we can work together.
- A set of user stories that together describe the problems we want to solve.
- A preliminary roadmap for how the known existing projects can come together.

In 2018 ORCID became a collaborator in the development of the Joint Roadmap for Open Science Tools (JROST). If you are interested, you can join the Roadmap Community [here](#).

## Other OA projects and initiatives

These two information sources provide information about other open access projects and initiatives:

**Open access Initiatives:** <https://www.fosteropenscience.eu/foster-taxonomy/open-access-initiatives>

**RRI Tools:** <https://www.rri-tools.eu/search-engine#keywords=@filterOption=30919,40224@order=@page=1>

# Activities

## Show what you know

- 1. Which of the following statements about open access are true?**
  - a. "Gratis" open access means you can read without paying.
  - b. "Libre" open access means it is both free of charge and free from at least some legal and licencing restrictions.
  - c. Free access means access is free of charge but subject to the limits of fair dealing.
  - d. Open access has to do with making research available online without price barriers and without the majority of permission barriers. Which of the following statements about open access are true?
- 2. When is a DMP (data management plan) necessary?**
  - a. At the very beginning, when the research plan is defined.
  - b. There is no need to draw up a DMP at any point of the research cycle.
  - c. At the end of the research process, right after publishing the research results.
- 3. Which of the following routes would you choose if you had decided to make a manuscript that has been accepted for publication openly accessible, after checking that the journal allows this?**
  - a. Hybrid open access route.
  - b. Gold open access route.
  - c. It is not possible to do this.
  - d. Green open access route.
- 4. What does "FAIR" mean?**
  - a. **F**... Complete the word
  - b. **A**... Complete the word
  - c. **I**... Complete the word
  - d. **R**... Complete the word
- 5. Which two steps does the open access mandate cover?**
  - a. Depositing publications in repositories.
  - b. Providing open access to publications.
  - c. Disseminating the deposit on social media networks
- 6. Which of the following options would you choose if you had decided to make your published work openly accessible immediately upon publication?**
  - a. I could do this just by handling the APCs (article processing charges).

- b. I could do this by publishing in an open-access journal.
- c. I could do this by simply self-archiving in a repository.
- d. None of the above.

**7. Which of the following are true when you sign a contract with a publishing company with whom you will publish an article, also known as "copyright transfer"?**

- a. The editor owns the original copyright.
- b. Authors cannot disseminate the work on any other channel without the publisher's permission.
- c. The editor generally allows you to retain your author rights.
- d. You can preserve your rights through an addendum to the publication agreement.

**8. According to Spanish Law 14/2011 on science, when publishing research financed by public funds, is it mandatory to deposit at least an open-access digital version of the final report in a repository?**

- a. Yes, it is mandatory no matter what.
- b. Yes, it has to be deposited as soon as possible or no later than twelve months after the official publication date and after checking the copyright agreements between authors and publishers.
- c. No, no version of the publication needs to be deposited.

**9. Which Creative Commons licence lets you copy and redistribute material in any medium or format as well as remix, transform and build upon it for any purpose, even commercially, provided that you credit the authorship?  
Choose one:**

- a. CC BY-NC
- b. CC BY-SA
- c. CC BY-NC-SA
- d. CC BY
- e. CC BY-NC-ND
- f. CC BY-ND
- g. No, no version of the publication needs to be deposited.

**10. Which of the following options would you choose if you had decided to make your published work openly accessible immediately upon publication?**

- a. I could do this just by handling the APCs (article processing charges).
- b. I could do this by publishing in an open-access journal.
- c. I could do this by simply self-archiving in a repository.
- d. None of the above.

# Solutionary

1. b., d.
2. a.
3. d.
4. Findable, Accessible, Interoperable, Reusable
5. a., b.
6. b.
7. b., d.
8. b.
9. d.
10. b.

# Resources

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## Glossaries

Here you can find two glossaries, created by the University of Oxford and Canberra, with the descriptions of the main terms related with Open Access:

University of Oxford:

<http://openaccess.ox.ac.uk/glossary/http://openaccess.ox.ac.uk/glossary/>

University of Canberra: <https://canberra.libguides.com/c.php?g=599341&p=4148855>