

**Jornadas sobre la carrera investigadora**  
Módulo 2: Publicaciones científicas y comunicación de la ciencia

# CIENCIA ABIERTA, ACCESO ABIERTO Y GESTIÓN DE DATOS DE INVESTIGACIÓN

<http://doi.org/10.5281/zenodo.4499357>

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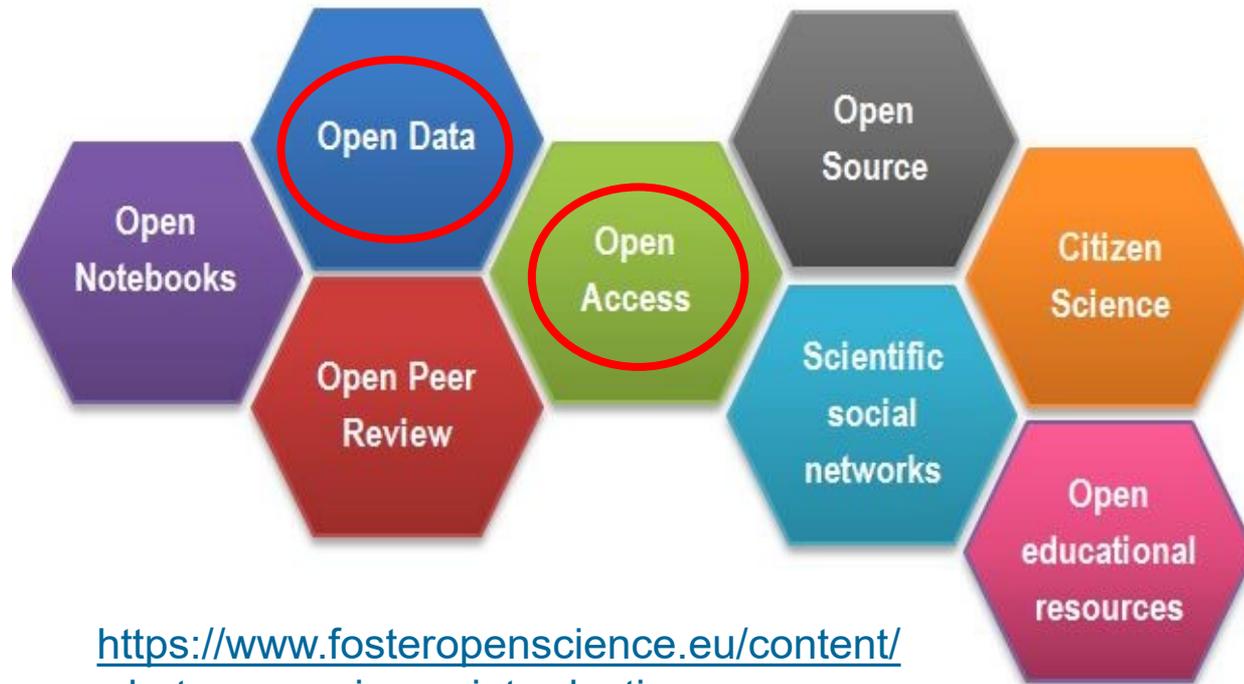
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4 de febrero de 2021

# Algunas ideas principales



# ¿Qué es la ciencia abierta?



<https://www.fosteropenscience.eu/content/what-open-science-introduction>

La ciencia abierta incluye la **apertura del proceso completo de investigación**

# Ventajas de la ciencia abierta

- Para la **ciencia**: mayor transparencia, ciencia más eficiente, evita duplicidad de trabajo y recursos
- Para la **sociedad**: más responsable, más accesible, mejora la innovación y recupera el papel de los ciudadanos
- Para los **investigadores**: ¡mayor impacto y mayor visibilidad de sus trabajos!



OPEN SCIENCE:  
JUST SCIENCE  
DONE RIGHT

*Melanie Imming & Jon Tennant.*  
DOI: 10.5281/zenodo.1285575

# Implicaciones de la ciencia abierta

## Cambio de paradigma

Ciencia Cerrada	Ciencia Abierta
<ul style="list-style-type: none"><li>• Basada en <b>publicar artículos</b> científicos</li></ul>	<ul style="list-style-type: none"><li>• Basada en <b>publicar cualquier resultado de investigación</b></li></ul>
<ul style="list-style-type: none"><li>• Ciencia <b>individualista</b></li></ul>	<ul style="list-style-type: none"><li>• Ciencia <b>colaborativa</b></li></ul>
<ul style="list-style-type: none"><li>• Solo unos <b>pocos tienen acceso</b> a los resultados de investigación</li></ul>	<ul style="list-style-type: none"><li>• <b>Toda la sociedad</b> tiene acceso a los resultados de investigación</li></ul>
<ul style="list-style-type: none"><li>• Ciencia <b>vertical / especializada</b></li></ul>	<ul style="list-style-type: none"><li>• Ciencia horizontal, <b>interdisciplinar</b></li></ul>
<ul style="list-style-type: none"><li>• <b>Sin participación</b> ciudadana</li></ul>	<ul style="list-style-type: none"><li>• Ciencia Ciudadana <b>con y para la sociedad</b></li></ul>
<ul style="list-style-type: none"><li>• Sistema de crédito basado en el <b>impacto de las publicaciones</b></li></ul>	<ul style="list-style-type: none"><li>• Sistema de crédito basado en el <b>impacto del investigador</b></li></ul>
<ul style="list-style-type: none"><li>• <b>Factor de Impacto</b> (FI – JCR)</li></ul>	<ul style="list-style-type: none"><li>• <b>Nuevas métricas</b> (Next Generation Metrics). Nuevos indicadores</li></ul>

(Adaptado de Méndez, 2019)

Alonso-Arévalo, J. (2019) El conocimiento es de todos y para todos ¿Qué es y qué implica la Ciencia Abierta? Universo Abierto. <https://universoabierto.org/2019/09/30/el-conocimiento-es-de-todos-y-para-todos-que-es-y-que-implica-la-ciencia-abierta/>

# Desmontando algunos mitos

# El acceso abierto es caro...

CURRENT FEES		
<b>PLOS ONE</b> Registered Report Protocol \$1,300 USD Registered Report Article \$750 USD* <b>All other articles \$1,695 USD</b>	<b>PLOS Computational Biology</b> All primary research articles <b>\$2,500 USD</b>	<b>PLOS Genetics</b> All primary research articles <b>\$2,500 USD</b>
<b>PLOS Neglected Tropical Diseases</b> All primary research articles <b>\$2,350 USD</b>	<b>PLOS Pathogens</b> All primary research articles <b>\$2,500 USD</b>	
<b>PLOS Biology</b> Discovery Report \$3,350 USD Update Articles \$2,350 All other primary research articles \$4,000	<b>PLOS Medicine</b> All primary research articles <b>\$4,000 USD</b>	

\*The APC for Registered Reports Articles will be waived for submissions associated with Registered Report Protocols submitted before July 31, 2020 at midnight Pacific Time.

**PLOS Community Action Publishing** took effect January 1, 2021 for *PLOS Biology* and *PLOS Medicine*. Authors will only incur fees if their institutions are **not** members of the journal's collective action community. For work submitted in 2021 these non-member fees are as below:

## Nature journals reveal terms of landmark open-access option

The journals will charge authors up to €9,500 to make research papers free to read, in a long-awaited alternative to subscription-only publishing.

Holly Elze



Nature and 32 other subscription titles in the Nature family will offer open-access publishing from 2021. Credit: Nature

Publisher Springer Nature has announced how scientists can make their papers in its most selective titles free to read as soon as they are published – part of a long-awaited move to offer open-access publishing in the Nature family of journals.

From 2021, the publisher will charge €9,500, US\$11,390 or £8,290 to make a paper open access (OA) in *Nature* and 32 other journals that currently keep most of their articles behind paywalls and are financed by subscriptions. It is also trialling a scheme that would halve that price for some journals, under a common-review system that might guide papers to a number of titles.

OA advocates are pleased that the publisher has found ways to offer open access to all authors, which it first committed to in April. But they are concerned about the price. The development is a “very significant” moment in the movement to make scientific articles free for all to read, but “it looks very expensive”, says Stephen Curry, a structural biologist at Imperial College London.

## Elsevier Expands Open Access Options for Cell Press Journals from January 2021

December 18, 2020



Elsevier, a global leader in research publishing and information analytics, today announced that the Cell Press portfolio of journals will be expanding open access publishing options for authors from 1 January 2021.

Open access is an integral part of Elsevier's commitment to a more collaborative, inclusive, and transparent world of research where authors, researchers, and academic institutions can share knowledge and build on each other's work to advance outcomes. We recognise that authors around the world have diverse needs and preferences, so we have been working collaboratively with the communities that we serve to test and learn from different ways of accelerating open access. As one of the fastest-growing open access publishers in the world, nearly all of Elsevier's 2,600 journals now enable open access publishing, including 500 fully open access journals.

From January 2021, all authors will have the option to publish open access across the entire range of the highly regarded and influential Cell Press family of journals. This publishing route means all Cell Press authors can choose to make their research article available for everyone to read immediately following publication.

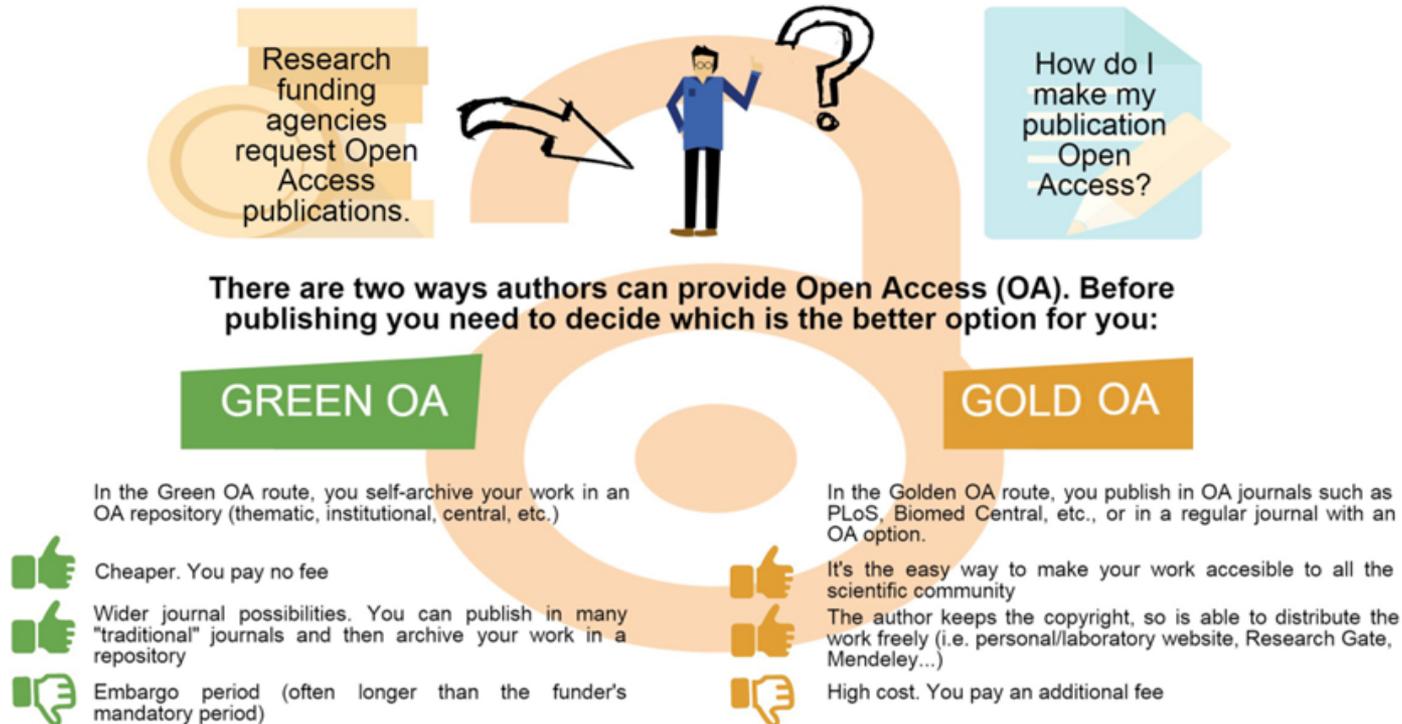
In enabling more open access, our principle is always to offer substantial value to the scientific community relative to the quality and rigour of the editorial and publishing services we provide. As a result, for those titles that do not currently offer an open access publishing option, the article publishing charges (APCs) will be €7,000/ €7,600 /\$8,900 for the majority of journals, and £7,800/€8,500/\$9,900 for our flagship title, Cell. We will align our existing Cell Press APCs for hybrid journals with these new publishing charges.

These journals will also continue to offer authors the option to publish through the subscription model. Since 2004, we have made all the subscription articles published in Cell Press research journals free for everyone to read from 12 months after publication in our Open Archive.

The APCs will remain unchanged for most of our existing gold open access journals, including the growing Cell Reports family, iScience and Heliyon. Overall, the Cell Press journals will offer open access publishing at APCs starting from £1,400/€1,500/\$1,750.

**Las APCs de algunas revistas son caras**

# ... ¡publicuemos en repositorios!



Gómez-Sánchez, AF, Maseda, I. [Open Access for researchers: mandates, recommendations, strengths... What should you know?](#), 2014 . In CNIC Scientific Retreat 2014, Madrid (Spain), 17-18 October 2014.



# Revisemos embargos y requisitos de las revistas

The image shows two overlapping screenshots of the Sherpa Romeo website. The left screenshot displays the main search interface with fields for 'Journal Title or ISSN' and 'Publisher Name', and buttons for 'Search', 'Browse by Country', and 'Browse by Publisher'. The right screenshot shows the search results for 'Agricultural Sciences', including publication information and a table of open access pathways.

**Publication Information**

Title	Agricultural Sciences (English)
ISSNs	Print: 2156-8553 Electronic: 2156-8561
URL	http://www.scrip.org/journal/as
Publishers	Scientific Research Publishing [Commercial Publisher]

**Publisher Policy**

Open Access pathways permitted by this journal's policy are listed below by article version. Click on a pathway for a more detailed view.

Published Version	Open Access Pathways
[pathway a]	None, CC BY, Journal Website
[pathway b]	None, CC BY-NC, Any Website, Journal Website, +1
Accepted Version [pathway a]	None, CC BY, Any Website, +1
Accepted Version [pathway b]	None, CC BY-NC, Any Website, +1
Submitted Version [pathway a]	None, CC BY, Any Website, +1
Submitted Version [pathway b]	None, CC BY-NC, Any Website, +1

For more information, please see the following links:

- Open Access
- For Authors

<http://sherpa.ac.uk/romeo/search.php>

# Negociamos embargos con las editoriales

## OpenAIRE H2020 OA Guide Model for Publishing

## Open Access addendum to the Publication Agreement

[https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020-oa-guide-model-for-publishing-a\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020-oa-guide-model-for-publishing-a_en.pdf)

PP templates: Open Access Publishing Agreement: V1.0 – 20.03.2017

**OPEN ACCESS PUBLISHING AGREEMENT**

> Instructions and footnotes in blue should be deleted.  
> For options [in square brackets]: choose the applicable option. Options not chosen should be deleted.  
> For fields in [grey in square brackets]: enter the appropriate data.

**ADDENDUM**

*(To be filled out by the beneficiary/author and the publisher. This model is not mandatory but reflects the obligations for the beneficiary under the H2020 grant agreements. It can be supplemented by further provisions agreed between the parties, provided they are compatible with the Grant Agreement. The Commission/Agency takes no responsibility for the use of this model.)*

This 'Addendum' is **between** the following parties:

**on the one part,**

1. the publisher

[full official name (short name)], established in [official address in full], represented by [...].

**and**

**on the other part,**

1. "the corresponding author":

[full name], [official address in full], represented by [...]

and the following **other authors**

2. [full name], [official address in full], represented by [...]

3. [full name], [official address in full], represented by [...]

[same for each author].

With this Addendum, the **parties agree to complement and amend** the attached Publication Agreement concerning the publication [insert name of publication] in the Journal [insert name of journal] with the following open access clause:

**Open access**

The author(s) retain(s) the right to:

1

#### ADDENDUM TO PUBLICATION AGREEMENT

1. THIS ADDENDUM hereby modifies and supplements the attached Publication Agreement concerning the following Article:

(manuscript title) \_\_\_\_\_

(journal name) \_\_\_\_\_

2. The parties to the Publication Agreement as modified and supplemented by this Addendum are:

\_\_\_\_\_  
(corresponding author)

\_\_\_\_\_  
\_\_\_\_\_

(Individually or, if one than more author, collectively, Author)

\_\_\_\_\_  
\_\_\_\_\_

(Publisher)

3. This Addendum and the Publication Agreement, taken together, allocate all rights under copyright with respect to all versions of the Article. The parties agree that wherever there is any conflict between this Addendum and the Publication Agreement, the provisions of this Addendum are paramount and the Publication Agreement shall be construed accordingly.

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7. For record keeping purposes, Author requests that Publisher sign a copy of this Addendum and return it to Author. However, if Publisher publishes the Article in the journal or in any other form without signing a copy of this Addendum, such publication manifests Publisher's assent to the terms of this Addendum.

AUTHOR \_\_\_\_\_  
(corresponding author on behalf of all authors)

PUBLISHER \_\_\_\_\_

(Date)

(Date)

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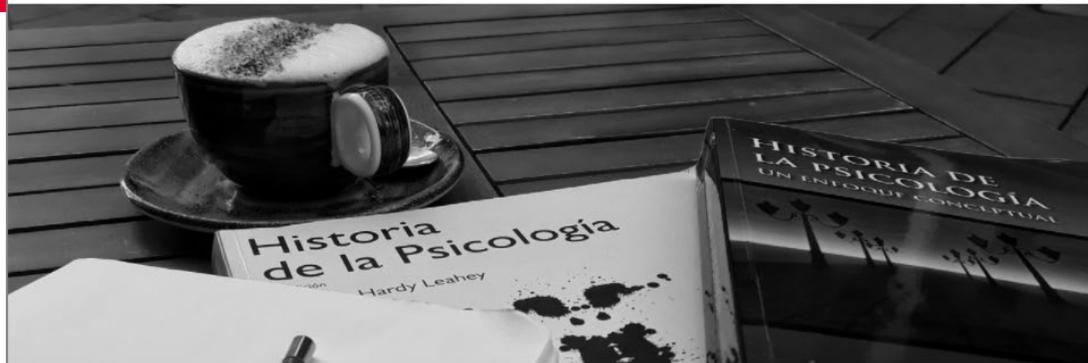
Access-Reuse 1.0  
[www.sciencecommons.org](http://www.sciencecommons.org)



SPARC Author Addendum 3.0  
[www.arl.org/sparc/](http://www.arl.org/sparc/)

# SPARC Addendum to the publication agreement

<https://sparcopen.org/wp-content/uploads/2016/01/Access-Reuse-Addendum.pdf>



How to negotiate with publishers: an example of immediate self-archiving despite publisher's embargo policy

In this post I share a recent experience as an example of how to negotiate with a publisher your right to make your research freely available... any money. Hope it proves useful to more researchers in a... offer my personal opinion on how researchers can change t... and unethical system of scholarly communication by gradua... alternative model that will foster collaboration instead of co...

Search

A few days ago one of my co-authors happily announced via email that her article had been accepted by a Springer journal. Knowing that I am deeply involved in the Open Access movement she asked me whether we should consider paying 2000€ to Springer in order to order the Open Choice and publish the article as open access. I

Dear Pandelis,

Please use this email confirmation that you can self-archive the post-reviewed author's copy (but not the published PDF) on your project website and the [zenodo.org](https://zenodo.org) archive.

Thanks, and best wishes,

[Redacted signature]



<https://pandelisperakakis.wordpress.com/2015/09/09/how-to-negotiate-with-publishers-an-example-of-immediate-self-archiving-despite-publishers-embargo-policy/>

# Los datos de investigación tienen que estar en abierto

## POLÍTICA EUROPEA – HORIZONTE 2020 ACCESO ABIERTO A DATOS

### 29.3 Open access to research data

*[OPTION for actions participating in the open Research Data Pilot: Regarding the **digital research data** generated in the action ('data'), the beneficiaries must:*

a) *deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:*

- (i) the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;*
- (ii) other data, including associated metadata, as specified and within the deadlines laid down in the 'data management plan' (see Annex 1);*

b) *provide information* — via the repository — *about tools and instruments at the disposal of the beneficiaries and necessary for validating the results* (and — where possible — provide the tools and instruments themselves).

*This does **not change** the **obligation to protect results** in Article 27, the **confidentiality** obligations in Article 36, the **security** obligations in Article 37 or the **obligations to protect personal data** in Article 39, all of which still apply.*

***As an exception**, the beneficiaries do **not have to ensure open access to specific parts of their research data if the achievement of the action's main objective**, as described in Annex 1, **would be jeopardised** by making those specific parts of the research data openly accessible. In this case, the data management plan must contain the reasons for not giving access.]*

# Lo que requiere la normativa europea

Garantizar el acceso abierto a:

- ✓ Los **datos de investigación y los metadatos** necesarios para validar los resultados presentados en publicaciones científicas
- ✓ Otros datos y sus metadatos incluidos en el **Plan de gestión de datos** (PGD)

## EXCEPCIONES:

- Protección derechos de propiedad industrial
- Protección datos personales
- Confidencialidad en relación a asuntos de seguridad
- El objetivo principal del proyecto se vea comprometido
- No se generen datos en el proyecto
- Otras razones a justificar

# Y respecto a la normativa en España

## Plan Estatal de Investigación Científica y Técnica y de Innovación 2017-2020

<https://www.ciencia.gob.es/stfls/MICINN/Prensa/FICHEROS/2018/PlanEstatalIDI.pdf>

2. **TRANSPARENCIA Y RENDICIÓN DE CUENTAS** de las ayudas concedidas y del proceso de concesión de las mismas, incluyendo:

- LA EVALUACIÓN (ex ante y ex post) de las actuaciones amparada en principios de transparencia, publicidad y competencia y la aplicación de criterios claros, públicos y objetivos de carácter científico y técnico y, en su caso, de viabilidad tecnológica y empresarial, así como la incorporación de criterios de evaluación asociados al impacto científico, social y económico de las ayudas concedidas. En los procesos de evaluación por pares y en los comités se harán pública la composición de los mismos tras la resolución de las convocatorias y anualmente se publicará la relación de evaluadores externos participantes.
- ACCESO ABIERTO A RESULTADOS Y DATOS DE INVESTIGACIÓN de las actividades de investigación subvencionadas con recursos públicos. Los trabajos publicados en revistas científicas financiados a través del Plan Estatal se depositarán en repositorios, institucionales y/o internacionales, en abierto teniendo en cuenta las características específicas de las distintas materias, en cumplimiento de lo establecido en el Artículo 37 de la Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación y de las recomendaciones vinculadas a la agenda europea en materia de acceso abierto y ciencia en abierto<sup>19</sup>. Con el fin de impulsar el acceso a datos de investigación, los proyectos de I+D+i financiados podrán incluir, con carácter optativo, un plan de gestión de los datos de investigación que se depositarán en repositorios institucionales, nacionales y/o internacionales tras la finalización del proyecto y transcurrido el plazo establecido en las correspondientes convocatorias<sup>20</sup>. No obstante, se respetarán todas las situaciones en las

que los mismos han de protegerse por razones de confidencialidad, seguridad, protección, etc. o cuando los mismos sean necesarios para la explotación comercial de los resultados obtenidos. Finalmente, en la evaluación curricular de los investigadores así como en la evaluación ex post de las actuaciones financiadas se tendrán en cuenta los trabajos publicados en abierto en repositorios institucionales y temáticos, nacionales y/o internacionales, y la puesta de los datos

de su investigación en abierto, de modo que puedan ser utilizados para replicar y reproducir los análisis y resultados de investigación.

# El Plan de Gestión de Datos (PGD) o Data Management Plan (DMP)

- Es un **entregable del proyecto**, en sí por lo general no forma parte de la propuesta (salvo excepciones).
- **Instrumento vivo**, primera versión en los 6 primeros meses del proyecto: no es un documento estático, debe evolucionar y ganar en precisión.
- Nueva versión cada vez que haya cambios importantes en el proyecto (al menos una revisión intermedia y otra final).
- **En el DMP se indica qué datos se general, su tipología, qué datos estarán en abierto y cuáles no, por qué y bajo qué licencias.**

# Entonces la obligación es:

**AS OPEN AS POSSIBLE, AS CLOSED AS NECESSARY**

Top three reasons for opt-out:

The diagram features a person wearing sunglasses sitting at a yellow desk. To the left is a box labeled 'privacy'. Above the person is a box labeled 'intellectual property rights'. To the right is a box labeled 'might jeopardise project's main objective'. In the background, there are books and a scale of justice.

Research and Innovation

A white sailboat is shown on a blue sea. The text 'DATA MANAGEMENT PLAN (DMP)' is written across the sail in orange and blue. A red arrow points from the sailboat towards the right.

H2020 templates: Data management plan v1.0 – 13.10.2016

**TEMPLATE HORIZON 2020 DATA MANAGEMENT PLAN (DMP)**

- > Instructions and footnotes in blue must not appear in the text.
- > For options [in square brackets]: the option that applies must be chosen.
- > For fields in [grey in square brackets] (even if they are part of an option as specified in the previous item): enter the appropriate data.

**Introduction**

This Horizon 2020 DMP template has been designed to be applicable to any Horizon 2020 project that produces, collects or processes research data. You should develop a single DMP for your project to cover its overall approach. However, where there are specific issues for individual datasets (e.g. regarding openness), you should clearly spell this out.

Guidelines on FAIR Data Management in Horizon 2020 are available in the Online Manual.

**FAIR data management**

In general terms, your research data should be 'FAIR', that is findable, accessible, interoperable and re-usable. These principles precede implementation choices and do not necessarily suggest any specific technology, standard, or implementation-solution.

This template is not intended as a strict technical implementation of the FAIR principles, it is rather inspired by FAIR as a general concept.

More information about FAIR:  
[FAIR data principles \(FORCE11 discussion forum\)](#)  
[FAIR principles \(article in Nature\)](#)

**Structure of the template**

The template is a set of questions that you should answer with a level of detail appropriate to the project.

It is not required to provide detailed answers to all the questions in the first version of the DMP that needs to be submitted by month 6 of the project. Rather, the DMP is intended to be a living document in which information can be made available on a finer level of granularity through updates as the implementation of the project progresses and when significant changes occur. Therefore, DMPs should have a clear version number and include a timetable for updates. As a minimum, the DMP should be updated in the context of the periodic evaluation/assessment of the project. If there are no other periodic reviews envisaged within the grant agreement, an update needs to be made in time for the final review at the latest.

In the following the main sections to be covered by the DMP are outlined. At the end of the document, Table 1 contains a summary of these elements in bullet form.

This template itself may be updated as the policy evolves.

# En definitiva:

- › El acceso abierto (OA) no es un objetivo final en sí mismo, sino el primer **paso para lograr una investigación académica transparente.**
- › El "conocimiento abierto" es cualquier contenido, información o datos que las personas son libres de **usar, reutilizar y redistribuir, sin ninguna restricción legal, tecnológica o social.**
- › **Los datos abiertos son los componentes básicos del conocimiento abierto.** El conocimiento abierto es en lo que se convierten los datos abiertos cuando son útiles, utilizables y utilizados.

Open Knowledge Foundation (OKF)

# Limitaciones

- ✓ Los investigadores reconocen los beneficios de publicar en abierto y compartir datos, pero las prácticas de intercambio de datos aún son limitadas.
- ✓ No existe un enfoque único, las prácticas varían según las áreas, zonas geográficas, etc.
- ✓ Se requieren infraestructuras y apoyo técnico



# ¡Gracias!

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in <http://es.linkedin.com/in/aliciafgomez>

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