

### THE CORE OF RESEARCH

Thessaloniki

### AGENDA

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OpenAIRE

http://bit.ly/2p4sONY

Time	Topic			
10:00	Welcome and Introduction			
10:10 11:00	Open Science practices Open Access Publishing What is Open Access and how to provide it How to implement Open Access and Open Science Open Access in Horizon 2020: how to comply with H2020 Open Science requirements			
11:00	Breakout groups discussions on Open Science practices			
11:30	Coffee break			
11:45 12:30	Managing and Sharing Research Data Open, closed and shared data Data Management Plans Open Data in Horizon 2020: how to comply with H2020 Open Science requirements European Open Science Cloud and OpenAIRE services			
12:30	Discussion			
13:00	Lunch			
14:00 15:00	National services and tools to support your research (Greek National Open Access Desk - OpenAIRE) Plenary discussion: how to implement Open Science principles in my research			





Fostering improved training tools for Responsible Research & Innovation

Open Science Infrastructure for Research in Europe

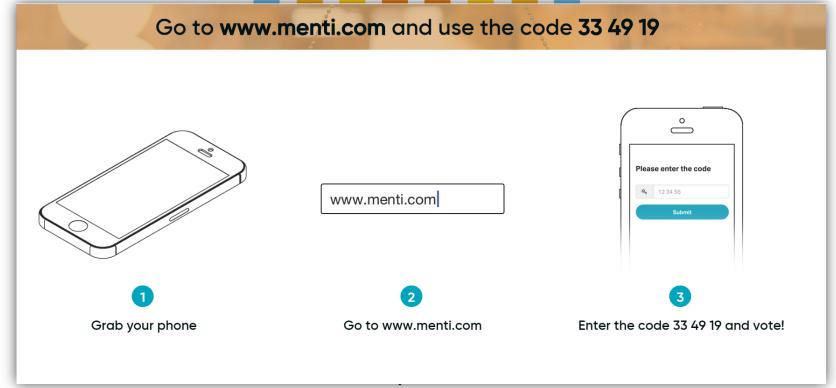
www.fit4rri.eu

www.openaire.eu





### THE CORE OF RESEARCH



### Open Science - Definition

Open Science is the practice of science in such a way that others can collaborate & contribute, where research data, lab notes & other research processes are freely available, under terms that enable reuse, redistribution & reproduction of the research & its U[FSFE, Sper Science Definition:

https://www.fosteropenscience.eu/foster-taxonomy/open-science-definition]

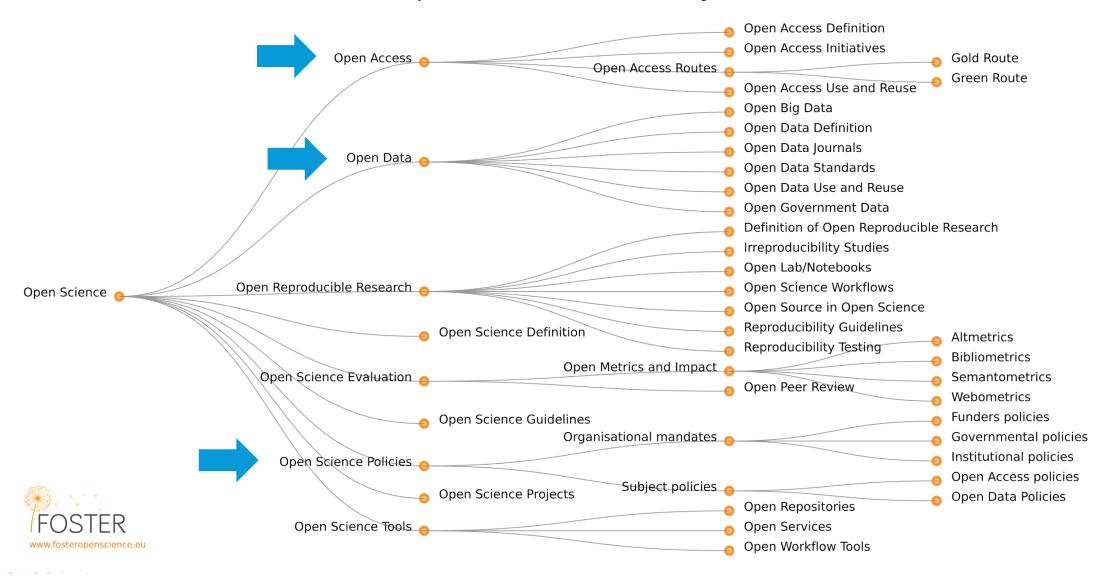
data & methods. The movement to make scientific research, data and dissemination accessible to all levels of an inquiring society.

[FOSTER, Open Science Definition]

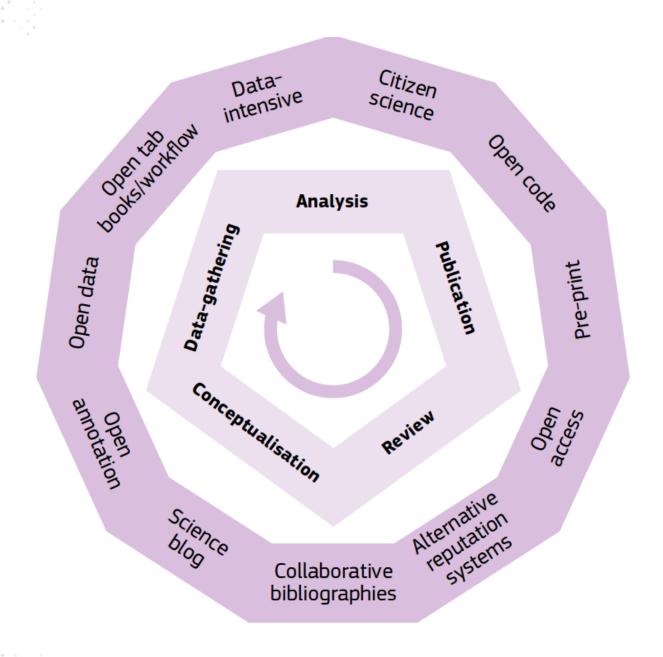
https://www.fosteropenscience.eu/taxonomy/term/7



#### Open Science Taxonomy







You can open up your research at every step of the research cycle



European Commission Public Consultation Science 2.0: Science in Transition

## Open Science along the research lifecycle

Journal article, dissertation, book, source code, etc.

Idea

Experiments, interviews, observations, etc.

**Publish** 

Methodology

Qualitative, quantitative, statistics, processes, documentation etc.

**Analysis** 

Data Collection

Numbers, code, text, images, sound records, etc.



## Opening up the research life cycle

Open Access,
Dissemination & Outreach
Publish research outputs
freely accessible, e.g. OA
journals, OA repositories
(also sharing posters &
presentations), Open Peer
Review, social media, public
debate

#### **Open Proposals**

E.g. wikis, blogs, social media

Idea

Maximize use, re-use,

collaboration & impact

Experimer intervie observation

Open Science Tools, e.g.
Notebooks,
Preregistration

Preregister research proposal, document & share experimental process of trial & error, e.g. workflow management systems

Publish

Methodology

#### Statistics,

Open Reproducible Research

Document research routines

freely accessible, e.g.

interactive computing

Analysis

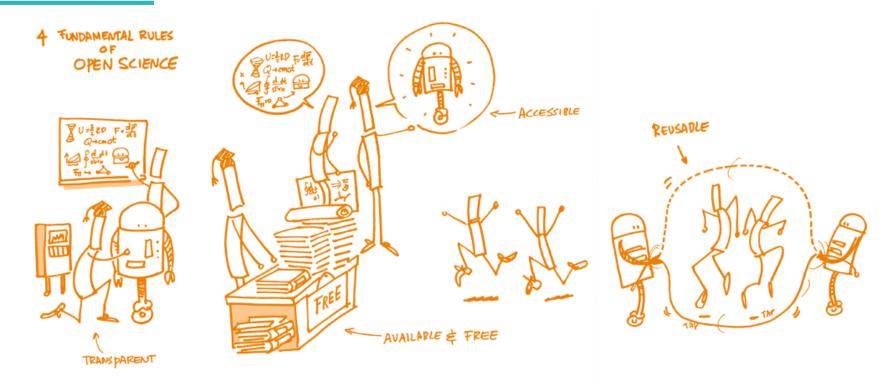
Data Collection

Numbers, code, text,

#### **Open Data**

Manage & share research data e.g. versioning control, storage management, meta data

## 4 fundamental rules of Open Science





Open Science Training Handbook. https://book.fosteropenscience.eu/

#### **Basic tools**

- Digital Object Identifiers (DOIs)
- Rich meta data
- Long-term archiving e-infrastructure

# Definition of Open Access

- > "By 'open access' to [research] 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 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]
- Helpful resources
  - > PASTEUR40A Briefing Paper: Open Access
  - Definitions of Terms Used in Open Science and Open Access



## Why Open Access?

> "OA articles receive 18% more citations than average"

Piwowar et al. 2018, doi: 10.7717/peerj.4375

- OA is increasing visibility, usage and impact of research
  - ▶ allows the professional, practitioner, business communities, and the interested public, to benefit from research.

➤OA is improving the speed, efficiency and efficacy of research, reproducibility and collaborations.



# Find OA content - free tools

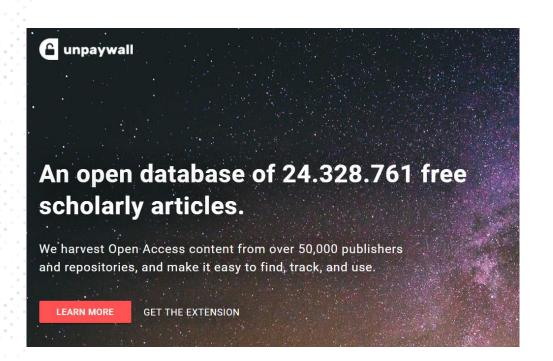
OA Button - access a free copy of pay-walled





# Find OA content - free tools

Unpaywall - access a free copy of pay-walled papers







## Realising OA - 2 strategies

>Provide tools and assistance to scholars to deposit their refereed journal articles in open electronic repositories.

**Green Open Access** (self-archiving)

New generation of journals using copyright and other tools to ensure permanent open access to all the articles they publish.

Gold Open Access
(Open Access publishing)



# Green & Gold Open Access

- > Video: difference between Gold & Green OA
- https://www.youtube.com/watch?v=gzRgknylTEM







# How to implement Open Access

## Green Open Access: selfarchiving

>Published work/final peer-reviewed manuscript is made freely & openly accessible by author or representative, in an online repository.

>With some publishers: Deposting OA only after an embargo period (between several months and several years) possible



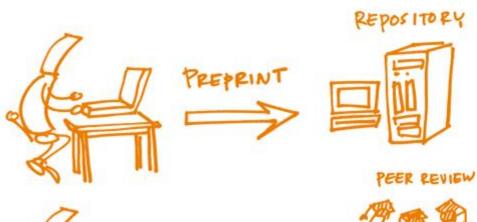
## Does your publisher allow self-archiving?

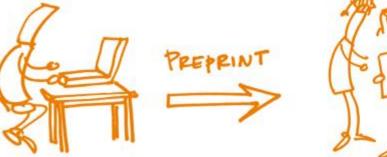
- Journals often require that authors transfer full copyright.
  - authors must ask for permission to reuse their own work

- >Which version of the paper can be deposited?
- >When it can be publicly available?

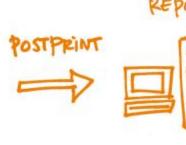


#### MODES OF SELF-ARCHIVING



























# Does your publisher allow self-archiving?

- > Check journal self-archiving policy on
  - 1. Publisher's web-site
  - 2. SHERPA RoMEO (UK based service, but covers self-archiving & copyright policies of international journals)
  - 3. DULCINEA (Spanish journals SHERPA/RoMEO)
  - 4. Háloïca (Franch journals)







## Find a suitable repository

Check with your library if your organization has an institutional repository.





Check out <u>OA</u>
<u>Directory</u> to find a discipline-specific repository.



ROAR -

Registry of Open Access Repositories, provides information about growth and status of international repositories. Registry of Open Access Repositories

Search in OpenDOAR: an authoritative directory of academic OA repositories.







Zenodo is a general repository, accepting all kinds of materials from all disciplines.

## Social networking site vs. repositories

	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

Social networking sites:

→ for boosting visibility

OA repositories:

→ For preservation & harvesting

Self-archive in repository & link to it



# How to find an Open Access journal

Use the <u>Directory of Open Access Journals</u>

The Directory of Open Access Journals is a community-curated online directory that indexes over 11,000 high quality, open access, peer-reviewed journals.

You can search DOAJ content by ISSN, subject, license, publisher, full text language, date added, DOI, author, title, keywords, and country.

- Analyze the jornal's policies
  - Versions you can make available
  - Embargo periods





# How to check if a <u>publi</u>sher is reputable?

- Analyze article processing charges (APCs)
  - Open Access Journals (may or not charge)
  - ➤ Hybrid journals (usually more expensive than full OA)
- Use <u>Think.Check.Submit</u> to see if the publisher is reputable



Choose the right journal for your research

Home Think Check Submit Languages About



#### Reference this list for your chosen journal to check if it is trusted.

- Do you or your colleagues know the journal?
- Have you read any articles in the journal before?
- Is it easy to discover the latest papers in the journal?
- · Can you easily identify and contact the publisher?
- Is the publisher name clearly displayed on the journal website?
- Can you contact the publisher by telephone, email, and post?
- Is the journal clear about the type of peer review it uses?
- Are articles indexed in services that you use?
- Is it clear what fees will be charged?
- Does the journal site explain what these fees are for and when they will be charged?



## Licenses

## Take some time to consider: who owns the IPR?

As a researcher carrying out your work, you may be the owner of the related IPR for the outputs, but this is not guaranteed.



#### **Open Licensing**

Licensing your research outputs is an important part of practicing Open Science. In this course, you will:

 know what licenses are, how they work, and how to apply them&nbs...

- Check your employment contract and/or Intellectual Property policies at your institution;
- Your funding body's directives

Your **journal publisher** may also have specific requirements relating to licenses

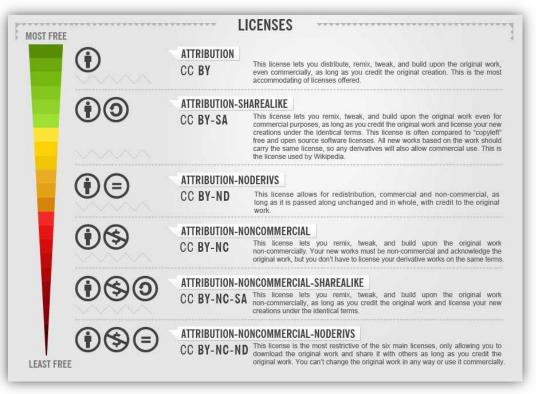


## Licenses

Choosealicense.com



Creative commons



https://www.dontwasteyourtime.co.uk/elearning/creativecommons-infographic-licenses-explained/



# Sharing preprints



#### **Sharing preprints**

This course shows you how sharing preprints can improve your research and support Open Science. By the end of the course, you will:

- · know what preprints are
- be able t...

## https://www.fosteropenscience.eu/learning/sharing-preprints

#### Pros

Click the plus sign to expand the text box.

- + Faster dissemination of results
- + Establishing primacy
- + Preprint publishing fosters open science
- + Evidence of productivity and accomplishment
- Increased visibility of your
   emerging research increases potential dissemination channels
- Feedback on your work andpotential for improvements, enhanced quality
- + Establishing priority of discoveries and ideas
- + Potential for developing new collaborations earlier
- + OA to your work across the globe

#### Cons

Click the plus sign to expand the text box.

- Not all journals accept papers that
   have been submitted to a preprint server
- + Risk of 'preprint wars'
- + Risk of embargo violations
- Poor quality and irreproducibledata will be posted in preprint form
- Scientists will rush out data pre maturely to claim priority and get credit
- + Scientists will try to "scoop my work" if I post as a preprint

## Preprint repositories

## Want to give it a try? Here are some links to discipline-specific and general preprint repositories that you can use.

- arXiv (physics, mathematics, computer science, quantitative biology, statistics, engineering, and economics)
- AgriXiv (agriculture)
- bioRXiv (biology)
- BITSS (research methodology)
- EarthArXiv (Earth sciences)
- <u>engrXiv</u> (Engineering),
- LawArXiv (law)
- LISSA (library and information science)
- MarXiv (ocean and marine-climate sciences)
- Mathematics Preprint Servers (mathematics)
- MindRxiv (research on mind and contemplative practices)
- NutriXiv (nutritional sciences)
- paleorXiv (palaeontology)
- <u>PsyArXiv</u> (psychology)
- RAAG (algebra and analytic geometry)
- SocArXiv (social sciences)
- SportRxiv (sport and exercise-related research)
- <u>Figshare</u> (general)
- OSF Preprints (general)
- Peer J (general)
- Zenodo (general)

Joseph McArthur, Co-founder of the Open Access Button maintains a list of preprint repositories.

Bear in mind that some Open Access publications repositories allow you to upload preprints as well, for example the Social Science Open Access Repository (SSOAR) run by Germany's Leibniz Association.



## How it works

- ✓ articles are not peer-reviewed, edited, or typeset before being posted online.
- ✓ articles undergo a basic screening process for offensive and/or non-scientific content and for material that might pose a health or biosecurity risk and are checked for plagiarism.
- ✓ an article should not be posted if it has already been accepted for publication by a journal.
- ✓ once posted, articles are citable and therefore cannot be removed.



## How it works

- ✓ authors retain copyright and choose from distribution/reuse options under which to make the article available (CC-BY, CC-BY-NC, CC-BY-ND, CC-BY-NC-ND, CCO, or no reuse).
- ✓ authors explicitly consent to text mining of their work (e.g., by search engines or researchers).
- ✓ To check if a journal allows preprints, the best source of information is always the journal website. But you can also search SHERPA/RoMEO, a crowd-sourced list of journal policies on preprints on Wikipedia.



## Levels of openess

Access	Reader Rights	Reuse Rights	Copyrights	Author Posting Rights	Automatic Posting	Machine Readability	Access
OPEN ACCESS	Free readership rights to all articles immediately upon publication	Generous reuse & remixing rights (e.g., CC BY license)	Author holds copyright with no restrictions	Author may post any version to any repository or website	Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) immediately upon publication	Article full text, metadata, citations, & data, including supplementary data, provided in community machine-readable standard formats through a community standard API or protocol	OPEN ACCESS
	Free readership rights to all articles after an embargo of no more than 6 months	Reuse, remixing, & further building upon the work subject to certain restrictions & conditions (e.g., CC BY-NC & CC BY-SA licenses)	Author holds copyright, with some restrictions on author reuse of published version	Author may post final version of the peer-reviewed manuscript ("postprint") to any repository or website	Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) within 6 months	Article full text, metadata, citations, & data, including supplementary data, may be crawled or accessed through a community standard API or protocol	
	Free readership rights to all articles after an embargo greater than 6 months	Reuse (no remixing or further building upon the work) subject to certain restrictions and conditions (e.g., CC BY-ND license)	Publisher holds copyright, with some allowances for author and reader reuse of published version	Author may post final version of the peer-reviewed manuscript ("postprint") to certain repositories or websites	Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) within 12 months	Article full text, metadata, & citations may be crawled or accessed without special permission or registration	
	Free and immediate readership rights to some, but not all, articles (including "hybrid" models)		Publisher holds copyright, with some allowances for author reuse of published version	Author may post submitted version/draft of final work ("preprint") to certain repositories or websites		Article full text, metadata, & citations may be crawled or accessed with permission	
CLOSED ACCESS	Subscription, membership, pay-per-view, or other fees required to read all articles	No reuse rights beyond fair use/ limitations & exceptions to copyright (all rights reserved copyright) to read	Publisher holds copyright, with no author reuse of published version beyond fair use	Author may not deposit any versions to repositories or websites	No automatic posting in third-party repositories	Article full text & metadata not available in machine-readable format	CLOSED



## You have a say!

✓ Instead of transferring copyright, use a License to publish

(agreement that does not transfer the author's copyright to the

publisher; several publishers allow it)

- ✓ Negotiate with the publisher
- Rights
- Sharing policy
- Embargo periods



#### Example

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



#### License to Publish

#### I. Requirement of Acceptance:

The following Grant of License ("License") must be signed and returned to the American Association for the Advancement of Science ("AAAS") before a manuscript can be accepted for publication in the online, Open Access journal Science Advances.

By signing this License, you represent and warrant that you have the authority and all necessary rights to execute this License. For example, if your institution places limitations on publishing agreements or asserts its own right to distribute or provide access to the works of its faculty, you must obtain a waiver from your institution that releases you from such restrictions so that you can sign this License. After publication of your manuscript by AAAS, your institution may exercise all rights to use the Work as are retained by Authors in section III of this License.

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#### II. Rights of Publication

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and authored by \_

\_ (the "Work")

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## How to publish Open Access without spending budget

#### Being open doesn't have to break the bank!

~70% of OA journals do not charge.

Many OA journals have low-cost fees.



Most OA journals have fee waivers.

Some institutions have OA publisher memberships.



Some institutions have OA publishing funds.

**welcome**trust

Some funders provide OA publishing fee support.

Self-archiving openly costs nothing.





# How to increase visibility

- Use a precise name and an identifyer (ORCID)
- Create and maintain your researcher profiles
- Send corrections to databases (like Web of Science and Scopus)
- Use the social web to disclose your publication
- Publish open access when possible and required





Open Access in Horizon 2020: how to comply with H2020 Open Science requirements

# 152 409 36 18

# Open Access Policies

Institutional and Funders policies

#### Africa Asia Central & South America Oceania Europe North America

#### **Open Access Policies by Continent**

















Annual Global Meeting

Berlin 27-29 May 2013





"The question is no longer, if" we should have open access. The question is about, how" we should develop it further and promote it."



Neelie Kroes

Comisaria Europea para a Agenda Digital, 2011



## Open Innovation,

Open Science,

## Open to the World

#### **Carlos Moedas**

Comisario Europeo para a Investigación, Ciencia e Innovación, 2015





## **Open Access in H2020**

#### WHY OPEN ACCESS TO SCIENTIFIC PEER-REVIEWED PUBLICATIONS?



#### **GOOD FOR SCIENCE**

allows scientists to build on previous research results and avoids unnecessary duplication of effort improved quality and greater efficiency







#### GOOD FOR THE ECONOMY

speeds up innovation faster progress to market

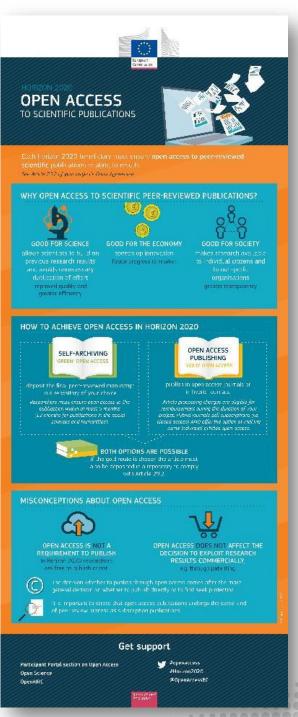


#### **GOOD FOR SOCIETY**

makes research available
to individual citizens and
to non-profit
organisations
greater transparency









# Open Access is the default for research results in H2020





## FP7 - Open Access Pilot

FP7 – Pilot for 7 areas (special clause 39)

Horizon2020 - Open Access by default

H2020 - Open Access by default





## Multi-beneficiary General Model Grant Agreement

29.2 Open access to scientific publications

29.3 Open access to research data

http://ec.europa.eu/research/participants/data/ref/h2020/grants\_manual/amga/h2020-amga\_en.pdf







"Ensure open access...
as soon as possible and at the latest on publication,
deposit a machine-readable electronic copy of the
published version or final peer-reviewed manuscript
accepted for publication in a repository for
scientific publications together with
bibliographic metadata providing the name of the
action, acronym & grant number"



## Authors are free to choose between the two main and non-exclusive routes toward Open Access

## Self-archiving (,green' open access)

The article is immediately in open access mode, through the publisher. The associated costs are covered by the author/institution/funder.



## Open access publishing (,gold' open access)

The published article or the final peer reviewed manuscript is uploaded in an online repository – access is often delayed (,embargo period')





The article must always be deposited in a repository, even if the gold route has been choosen.

## Where to deposit?



- Institutional repository (Repositorio de UJAUME1)
- Disciplinary (arXiv, Europe PubMed Central...)
- Or use Zenodo.org: EC-cofounded, multidisciplinary, free repository
  - The Directories of Open Access Repositories:
    - sV2.herpa.ac.uk/opendoar
    - roar.eprints.org
    - Explore.openaire.eu





## What to deposit?



- Final peer-reviewed manuscript
   OR
- Published version

+ metadata: funder, grant ID number, acronym, publication date....





## What can I deposit?

#### Check publishers policies



- SHERPA/ROMEO: www.sherpa.ac.uk/romeo
- Overview of copyright policies and self-archiving permissions





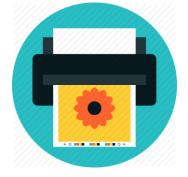
## What can I deposit?



Pre-print
Before peer review



Post- Print After peer review



Publisher's version With lay-out



Embargo
Period during which
access to the article
is limited

## When should I deposit?

→ As soon as possible, and at the latest on publication

## When should open access be provided?

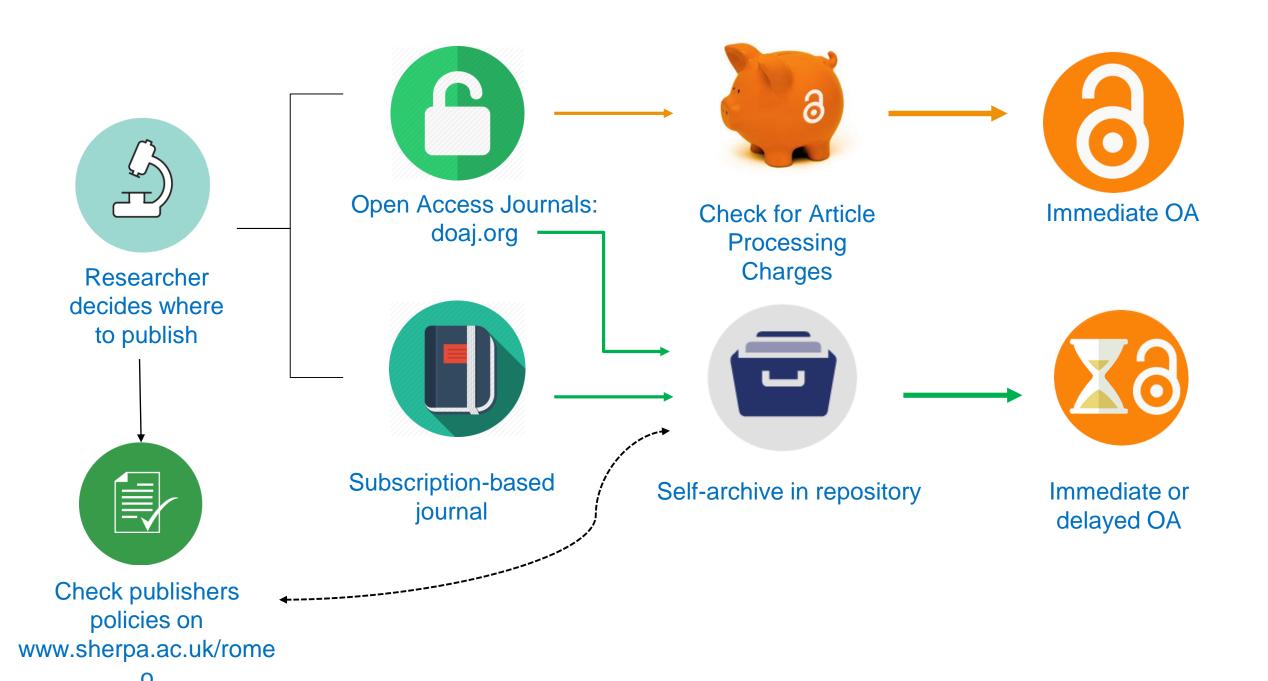
- Immediately or
- After embargo period:
  - at most 6 months (12 months for publications in the social sciences and humanities)\*

\*EC's model amendment to publishing agreements:

http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020-oa-guide-model-for-publishing-a\_en.pdf







## **Are Article Processing Charges (APCs) supported?**



#### Yes

 Both for OA journals AND subscriptions-based journals that offer the possibility of making individual articles openly accessible (hybrid journals)

#### but...

 Are eligible for reimbursement during the duration of the action.





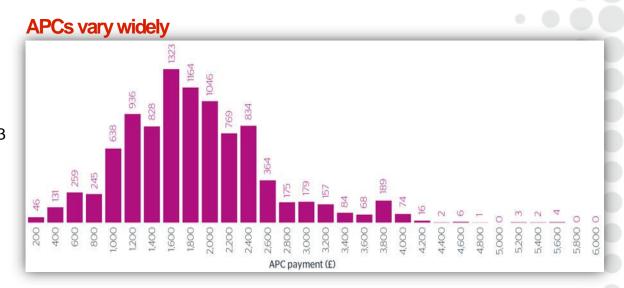
#### Average APCs

#### Average:

- 1378 €¹ 1 978 €²
- 1186 / 1 754 € (OA journal) 2 280 € (hybrid journal)<sup>3</sup>
- 1 479 € (OA journal) 2 493 € (hybrid journal)<sup>4</sup>

Information on APCs per publisher and journal

→ openAPC project



Both types of OA publication cost can be reimbursed in H2020 projects. Currently, there is no price-cap for APCs.

- 1. Open access central funds in UK universities. Learned Publishing, Jonline 25(2). Pinfield, S., and Middleton, C., 2012
- 2. Figure 1: APC pricing distribution. Article processing charges (APCs) and subscriptions. Shamash , K. , 2016
- 3. A study of open access journals using article processing charges. Journal of the American Society for Information Science and Technology, 63(8), pp.1485–1495. Solomon, D.J., and Björk, B.-C., 2012
- https://treemaps.intact-project.org/page/about.html





#### Some issues to consider

 Publishing all articles in APC based gold OA is not probably the right solution, as this can lead to a substantial amount of the overall project budget.

Therefore, a mixed strategy of GREEN/GOLD open access is highly recommended.



 Lots of new journals/publishers, some of questionable quality (,predatory journals', http://scholarlyoa.com/publishers/)



Some caution is needed when publishing, this holds for all journals. Consult ,white lists' such as DOAJ.







## What are projects expected to do?

#### Projects have to start planning early on

#### DURING PROPOSAL WRITING PHASE

- Outline of dissemination and exploitation strategy, including OA >> impact section of the proposal (how will results be shared, data be managed and shared?)
- Include resources for publication costs (what journals, how many publications, what does it cost on average?)
- Combine GREEN/GOLD strategies to achieve maximum of OA

#### **DURING THE PROJECT**

- Additional provisions in the Consortium Agreement where to deposit, who is responsible.
- Implementation of the dissemination strategy, report at reviews and update
- What issues occur and how can they be solved? (publisher embargos, repositories for specific material, etc.)

#### AFTER THE PROJECT END

- Are there publications foreseen after the ending of the project (ie which will not be covered by the budget) – for post-FP7 project publications there is a pilot.
- Who takes care of deposit in repositories after the project end?

# What are the consequences for non-compliance with OA requirements?

•If a beneficiary breaches any of its obligations, the grant may be reduced (Article 43) and it may also lead to any of the other measures described in <a href="#">Chapter 6</a> of the General Model Grant Agreement.



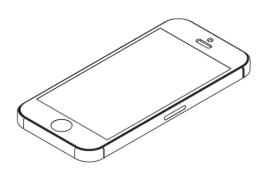
http://ec.europa.eu/research/participants/data/ref/h2020/mga/gga/h2020-mga-gga-multi\_en.pdf





## Group activity

#### Go to www.menti.com and use the code 33 49 19



www.menti.com



1

Grab your phone



Go to www.menti.com



Enter the code 33 49 19 and vote!







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