

NTK

50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Library of Technology

Otevřený přístup v programu EXCELES = Open Science in the Programme EXCELES

Informační seminář MŠMT pro koordinátory a (spolu)řešitele

22. září 2022, NTK v Praze



Národní
plán
obnovy



Financováno
Evropskou unií
NextGenerationEU

The aim of the seminar

To present the **requirements for openness of results and data in EXCELES programme** and methodological support for projects in cooperation with NTK

Target group: Coordinators

- **Coordinators**
- **Consortium members**

Programme

- **Introduction to Open Science**

- Why Open Science, International context, publications, data
- reusability - licences, FAIR, EOSC, Horizont Europe, requirements in EXCELES programme

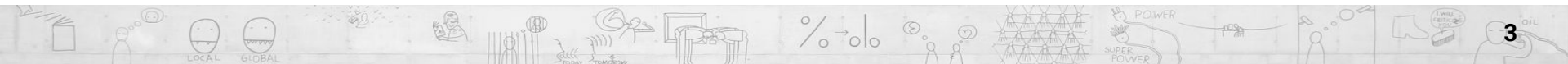
- **Open Access to scientific publications**

- Publication fees - APC, Transformative agreements
- Repositories, long preservation, metadata, persistent identifiers

- **Management of research data according the FAIR principles**

- Data, planning, data management, DMP, template, tools
- Data Stewardship Wizard - tool for DMP

- **Open discussion, questions & answers**



About us



Eva Hnátková

- Open Science coordinator at NTK and UCT Prague
- NCIP VaVal: Implementation of European standards in the national R&D&I environment
- Member of the Expert Advisory Body of the Funder for the EXCELES programme
- National Contact for Scientific Information

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Petra Černohlávková



- Head of the Repository and Persistent Identifiers Centre, NTK
- Repository curator
- Guarantor of methodological support for use of metadata related to research data, and use of persistent identifiers (project CARDS)
- Head of the Czech working group focused on metadata related to research data

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About us



Martin Schätz

- Data Stewardship Wizard institutional instance administrator
- BiImage Analyst in open access core facility
- Lector of Data Stewardship Course

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Introduction to Open Science



Science in the time of COVID-19



TACKLING CORONAVIRUS (COVID-19)
 CONTRIBUTING TO A GLOBAL EFFORT



OECD Policy Responses to Coronavirus (COVID-19)

Why open science is critical to combatting COVID-19

Updated 12 May 2020

Open PDF

Disclaimer

Key messages

Achievements of open science initiatives

Key messages

- In global emergencies like the coronavirus (COVID-19) pandemic, open science policies can remove obstacles to the free flow of research data and ideas, and thus accelerate the pace of research critical to combating the disease.
- While global sharing and collaboration of research data has reached unprecedented levels, challenges remain. Trust in at least some of the data is relatively low, and

Science in the time of COVID-19

MANIFESTO FOR EU COVID-19 RESEARCH
 July 2020

MAXIMISING THE ACCESSIBILITY OF RESEARCH RESULTS IN THE FIGHT AGAINST COVID-19

- Considering the unprecedented, extraordinary challenges posed by the outbreak of the COVID-19 pandemic;
- Encouraged by the broad public recognition of the important role of research and innovation in containing the COVID-19 pandemic;
- Recalling the World Health Assembly resolution on COVID-19¹ and EU Strategy for COVID-19 vaccines² supporting the voluntary pooling and licensing of intellectual property related to COVID-19 therapeutics and vaccines, to promote equitable global access as well as a fair return on investments;
- Fully aware of our responsibility as researchers and innovators to find innovative solutions;
- Bearing in mind the urgent need to valorise research results for the benefit of all;

¹ <https://apps.who.int/iris/bitstream/handle/item/1136337/1/19101.pdf>
² https://ec.europa.eu/info/sites/default/files/communication-eu-strategy-vaccines-covid19_en.pdf

Research and Innovation

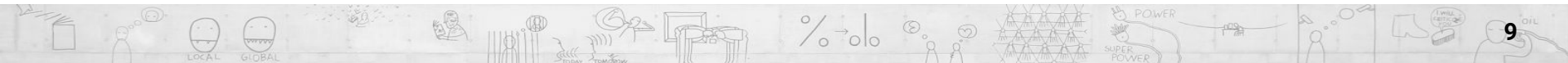
By endorsing the manifesto you commit to

Make the generated results, whether tangible or intangible, public and accessible without delay, for instance on the [Horizon Results Platform](#), on an existing IP sharing platform, or through an existing patent pool.

Make scientific papers and research data available in open access without delay and following the FAIR principles [↗](#) via preprint servers or public repositories, with rights for others to build upon the publications and data and with access to the tools needed for their validation. In particular, make COVID-19 research data available through the [European COVID-19 Data Platform](#) [↗](#)

Where possible, grant for a limited time, non-exclusive royalty free licences on the intellectual property resulting from EU-funded research. These non-exclusive royalty free licenses shall be given in exchange for the licensees' commitment to rapidly and broadly distribute the resulting products and services under fair and reasonable conditions to prevent, diagnose, treat and contain COVID-19.

[Manifesto for EU COVID-19 Research \(EC, July 2020\)](#)



Science in the time of COVID-19

COVID-19
linked data

DEPOSIT LINK SEARCH ABOUT SIGN IN

Corona Virus Disease

COVID-19

Research outcomes Search by title, author, abstract, DOI, orcid... SEARCH

| SUMMARY | PUBLICATIONS | RESEARCH DATA | SOFTWARE | OTHER RESEARCH |
|---------|----------------|---------------|------------|----------------|
| | 238,391 | 8,551 | 857 | 11,019 |

This portal provides access to publications, research data, projects and software that may be relevant to the Corona Virus Disease (COVID-19). The OpenAIRE COVID-19 Gateway aggregates COVID-19 related records, links them and provides a single access point for discovery and navigation. We tag content from the OpenAIRE Research Graph (10,000+ data sources) and additional sources. All COVID-19 related research results are linked to people, organizations and projects, providing a contextualized navigation.

Curated by: [Alessia Bardi](#), [Iryna Kuchma](#), [Evgeny Bobrov](#), [Ivana Truccolo](#), [Elizabete Monteiro](#) ... [View all 10 curators](#)

Created: 16-Mar-2020 Members: 50
 Projects: 130 Content Providers: 15
 Linked to 7 Zenodo Communities

Subjects
[COVID19](#), [SARS-CoV](#), [HCoV-19](#), [mesh:C000657245](#), [MERS-CoV](#), [Síndrome Respiratorio Agudo Severo](#), [mesh:COVID-19](#), [COVID2019](#), [COVID-19](#), [SARS-CoV-2](#), [2019 novel coronavirus](#), [severe acute respiratory syndrome coronavirus 2](#), [Orthocoronavirinae](#), [Coronaviridae](#), [mesh:D045169](#), [coronavirus](#), [SARS](#), [coronaviruses](#), [coronavirus disease-19](#), [sars cov 2](#)

[View all](#)

Science in the time of COVID-19

COVID-19 Data Portal

About ▼ Partners Related resources Bulk downloads Submit data

[Viral Sequences](#) [Host Sequences](#) [Expression](#) [Proteins](#) [Biochemistry](#) [Imaging](#) [Literature](#)

Accelerating research through data sharing

[Read and sign our letter in support of open COVID-19 data >](#)

Viral sequences →

Raw and assembled sequence and analysis of SARS-CoV-2 and other coronaviruses.

[391,141 records >](#)

Expression →

Gene and protein expression data of human genes implicated in the virus

Host sequences →

Raw and assembled sequence and analysis of human and other hosts.

[11,654 records >](#)

Proteins →

Curated functional and classification data on the SARS-CoV-2 protein entries and

Our letter in support of open COVID-19 data



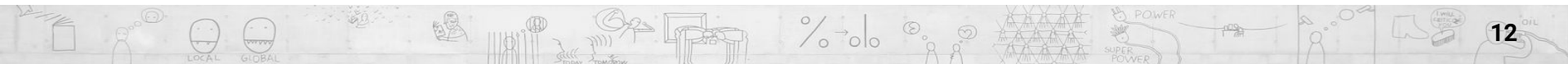
We need to support the submission of open data, especially SARS-CoV-2

What about the other global challenges?



Access to scientific information is considered important to help solving these challenges

[Sustainable Development Goals for 2015-2030 \(United Nations\)](#)



Definition of Open Science

UNESCO defines **Open Science** as an inclusive construct that **combines various movements and practices** aiming:

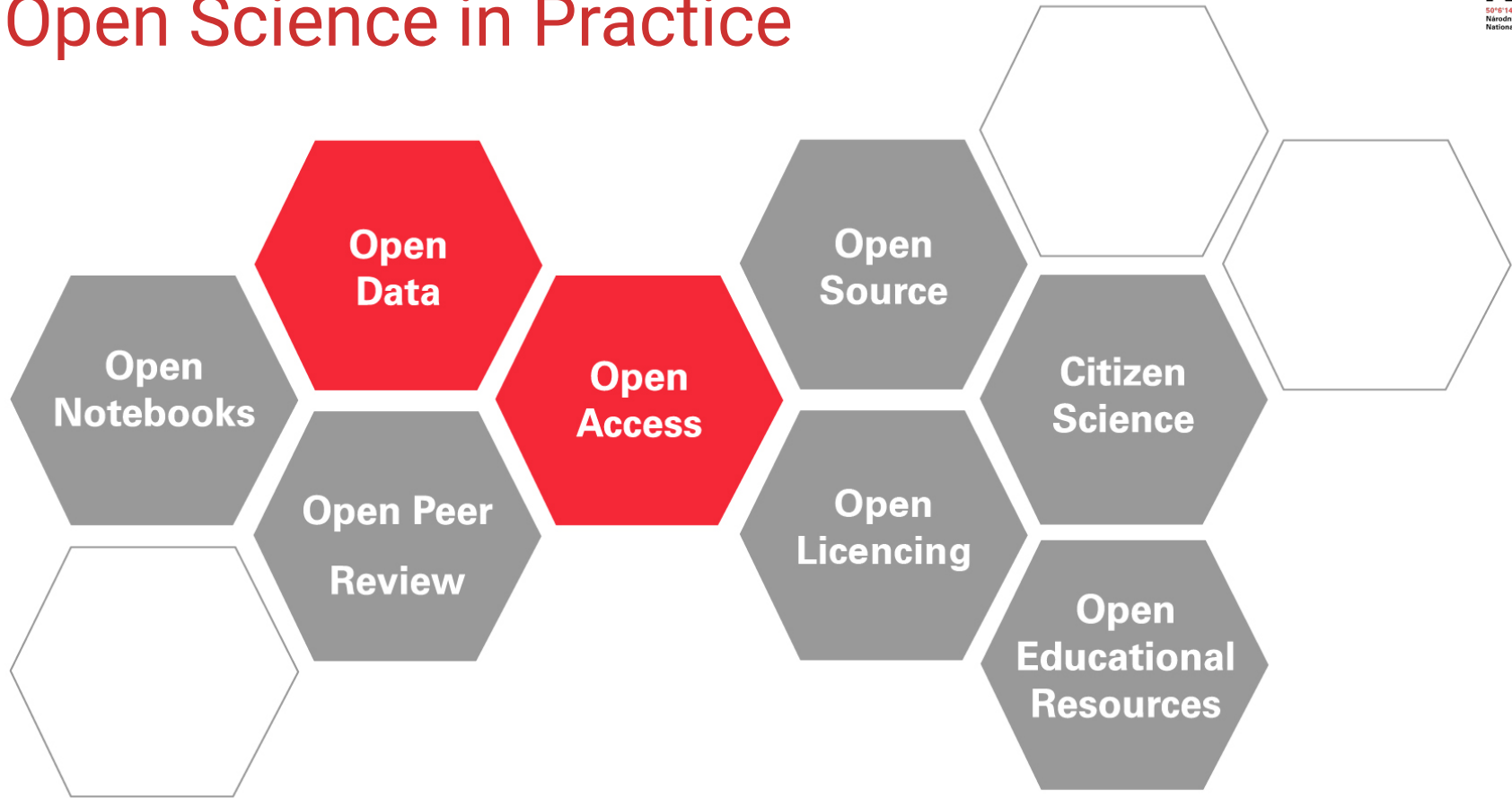
- to **make** multilingual **scientific knowledge** openly available, **accessible** and **reusable** for everyone;
- to **increase** scientific **collaborations** and **sharing of information** for the benefits of science and society;
- and to **open the processes** of scientific knowledge creation, evaluation, and communication to societal actors beyond the traditional scientific community.





[UNESCO, Nov 2021](#)



Open Science in Practice



Closed versus Open Access publishing

| Traditional model = pay to read | Open Access |
|--|---|
| <ul style="list-style-type: none"> ● closed access only for institutions (library/consortium) which pay subscriptions to journals ● paid access for all others | <ul style="list-style-type: none"> ● free access for all to read ● AAM version in repository (🔓) ● VoR version in the journal (🔒) |
|  |  |



The origins of Open Access

- 1970 - anonymous ftp archives, "bulletin boards", USENET
- 1991 - arXiv.org - first preprint server
- 2002 - **Budapest OA Initiative** – George Soros - **altruistic**
- 2003 - **Bethesda Statement on Open Access Publishing** – US NIH – **pragmatic**
- 2003 - **Berlin Declaration on OA** to Knowledge in the Sciences and Humanities
- 2012 - Dame Finch Report – make all publicly-funded UK research OA from 2014
- 2013 - SCOAP³/CERN signed a 3y „**cost-neutral**“ OA contract for particle physicists
- 2015 - MPDL „**there is enough money in the system for a transition to OA**“
- 2016 - Europe Competitiveness Council: „**OA by 2020**“
- 2018 - **Plan S** (cOAlition S) ...



European legislation on open data

The Directive on open data and the re-use of public sector information, also known as the 'Open Data Directive' ([Directive \(EU\) 2019/1024](#)) entered into force on 16 July 2019.

Article 10

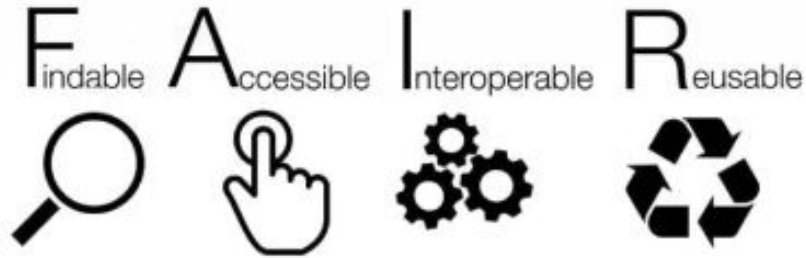
Research data

1. Member States shall support the availability of research data by adopting national policies and relevant actions aiming at making publicly funded research data openly available ('open access policies'), following the principle of 'open by default' and compatible with the FAIR principles. In that context, concerns relating to intellectual property rights, personal data protection and confidentiality, security and legitimate commercial interests, shall be taken into account in accordance with the principle of 'as open as possible, as closed as necessary'. Those open access policies shall be addressed to research performing organisations and research funding organisations.

2. Without prejudice to point (c) of Article 1(2), research data shall be re-usable for commercial or non-commercial purposes in accordance with Chapters III and IV, insofar as they are publicly funded and researchers, research performing organisations or research funding organisations have already made them publicly available through an institutional or subject-based repository. In that context, legitimate commercial interests, knowledge transfer activities and pre-existing intellectual property rights shall be taken into account.



Open versus FAIR Data



OPEN
DATA

FAIR principles

- **Findable** - persistent URI (PIDs), metadata, indexed
- **Accessible** - data in trusted repositories
- **Interoperable** - widely used formats, references
- **Re-usable** - licenses, community standards, provenance information

[Go FAIR](#) | [Hansen & al \(2018\)](#)



FAIR principles

Findable

- F1.** (meta)data are assigned a globally unique and eternally persistent identifier.
- F2.** data are described with rich metadata.
- F3.** (meta)data are registered or indexed in a searchable resource.
- F4.** metadata specify the data identifier.

Interoperable

- I1.** (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
- I2.** (meta)data use vocabularies that follow FAIR principles.
- I3.** (meta)data include qualified references to other (meta)data.

Accessible

- A1.** (meta)data are retrievable by their identifier using a standardized communications protocol.
- A1.1** the protocol is open, free, and universally implementable.
- A1.2** the protocol allows for an authentication and authorization procedure, where necessary.
- A2.** metadata are accessible, even when the data are no longer available.

Reusable

- R1.** meta(data) have a plurality of accurate and relevant attributes.
- R1.1.** (meta)data are released with a clear and accessible data usage license.
- R1.2.** (meta)data are associated with their provenance.
- R1.3.** (meta)data meet domain-relevant community standards.

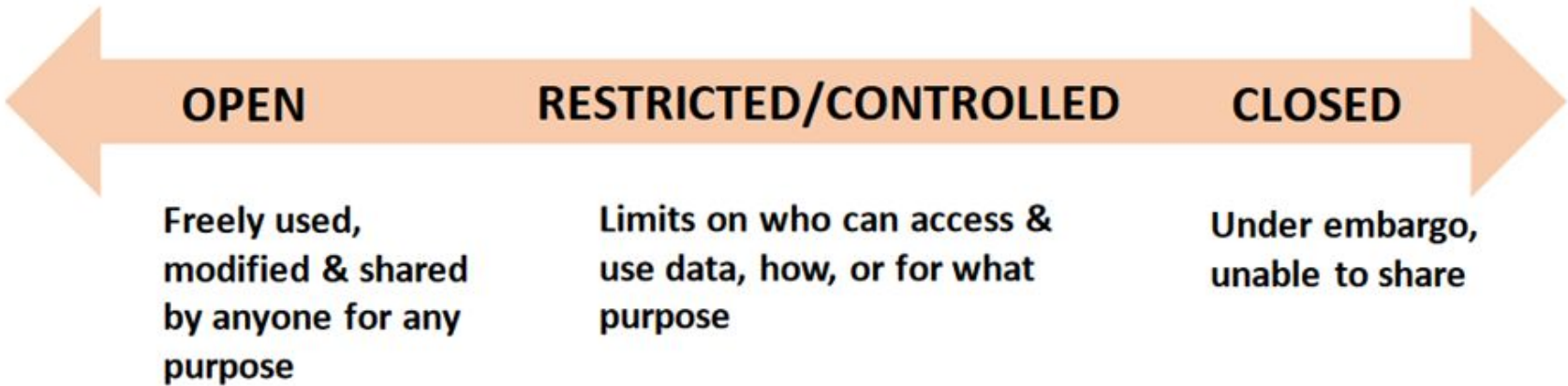
**FAIR applies to data
and metadata!**



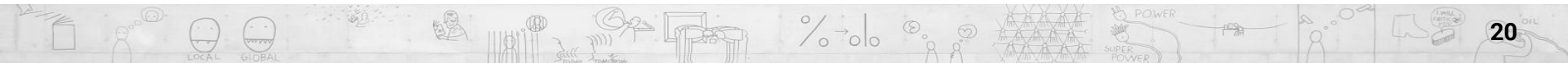
<https://www.go-fair.org/fair-principles/>

FAIR Data – open by default

FAIR data: “As open as possible, as closed as necessary”



Opening up your data does not mean you are losing control!



European Open Science Cloud (EOSC)

EOSC - a virtual research environment for all researchers



- Researchers at the core
- Store/share own data
- Find/re-use other data
- Combine different data
- Deploy AI tools on data
- Go beyond current science
- Engage in developing EOSC

<https://eosc-portal.eu/>

EOSC Portal Catalogue & Marketplace

Scientific Domains

Categories



Access physical & eInfrastructures



Aggregators & Integrators



Process & Analysis



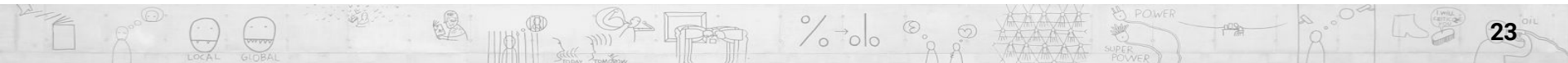
Security & Operations



Sharing & Discovery



Training & Support





Plan S

Making full & immediate
Open Access a reality

Did you know that
when you write a paper,
you automatically hold
the copyright on it?
Why would you sign it away?

Publish with Power.

Protect your Rights.



#RetainYourRights

The spectrum of rights, Licences



Copyright

All Rights Reserved

- Re-use requires the permission from the copyright owner.

Creative Commons

Some Rights Reserved

- Re-use is permitted without permission under the specifications shared in the license.

Public Domain

No Rights Reserved

- May be used without permission.

What is copyright?

Copyright means the person who created the work does not allow anyone to use it – or, they get to choose how it is used. **Everything that is published online is protected by copyright by default.** That includes images, writing, music, podcasts, videos,

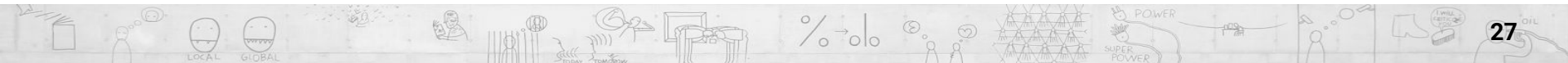
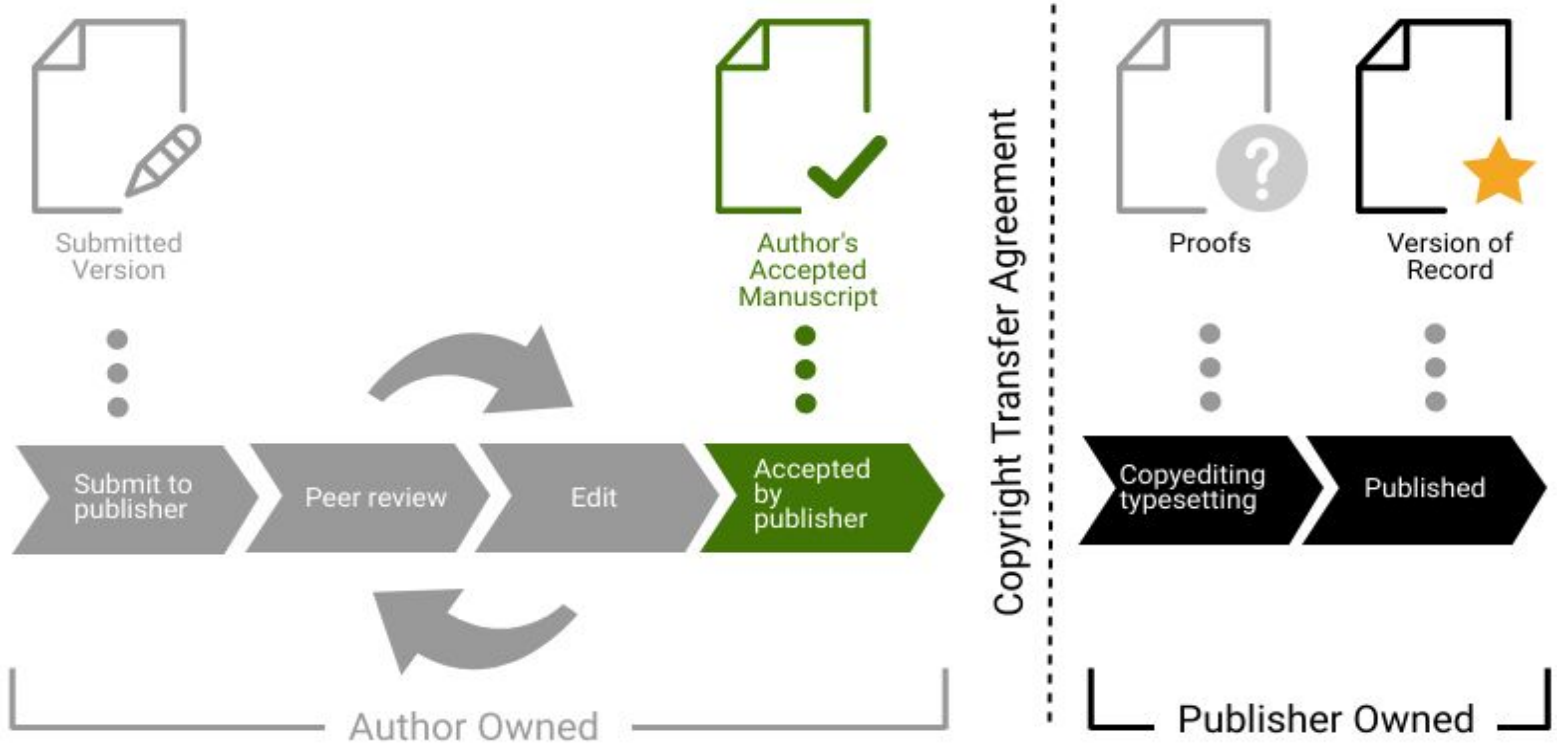
Copyright automatically applies to everyone. You don't have to do anything to copyright your own work although you can display a copyright symbol © and the year.

Copyright owners have certain rights:

- make copies of their work (print/digital etc.)
- give out copies of their work
- publish their work or display it publicly
- adapt their work and make derivatives
- perform the work in public (if it's music, a dance, or a play, etc.)



Publishing process → transfer of copyright



What is Creative Commons licence?

The CC licences = legal tool to support reusability

- provide a simple **standardised way** for individual creators, companies and institutions to share their work with others on flexible terms without infringing copyright.
- The CC licences **allow users to reuse, remix and share the content legally.**
- Offering your work under a CC licence **does not mean giving up your copyright.** It means **permitting users to make use of your material** in various ways, but only on certain conditions.



Understanding Licenses

Rights



Share



Remix

Obligations



BY - Attribution to the creator



SA - Share Alike



NC - Non Commercial



ND - No Derivatives



Know your rights: understanding CC Licences

CREATIVE COMMONS LICENSES

OVERVIEW FOR STUDENTS AND TEACHERS



ATTRIBUTION REQUIRED



BY
You can use the work and do whatever you like with it as long as you give attribution.



BY-SA
If you add to or change the work, you must share it with the same BY-SA license.



BY-ND
You can use the work as long as you don't change it in any way.



BY-NC
You can use the work and add to it or change it but you can't make money from it.



BY-NC-SA
If you change the work, you must share it with the same license and you can't make money from it.



BY-NC-ND
You can use and share the work but you can't change it or sell it.

Least restrictive

Most restrictive

ATTRIBUTION FREE OPTIONS



PUBLIC DOMAIN

You can use the work however you like without permission or attribution; the copyright has expired.

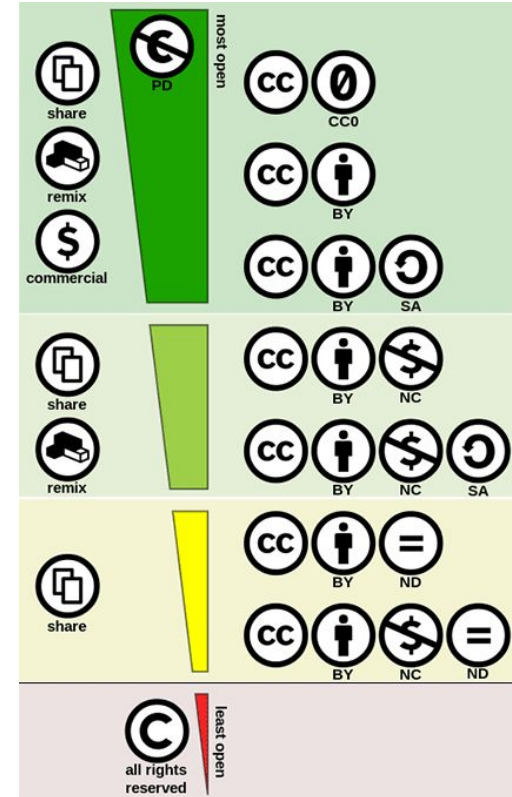


CREATIVE COMMONS ZERO

You can use the work however you like without permission or attribution; the creator has released it to the public.

@kathleen_morris

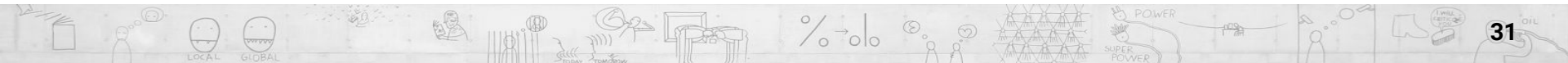
www.kathleenamorris.com



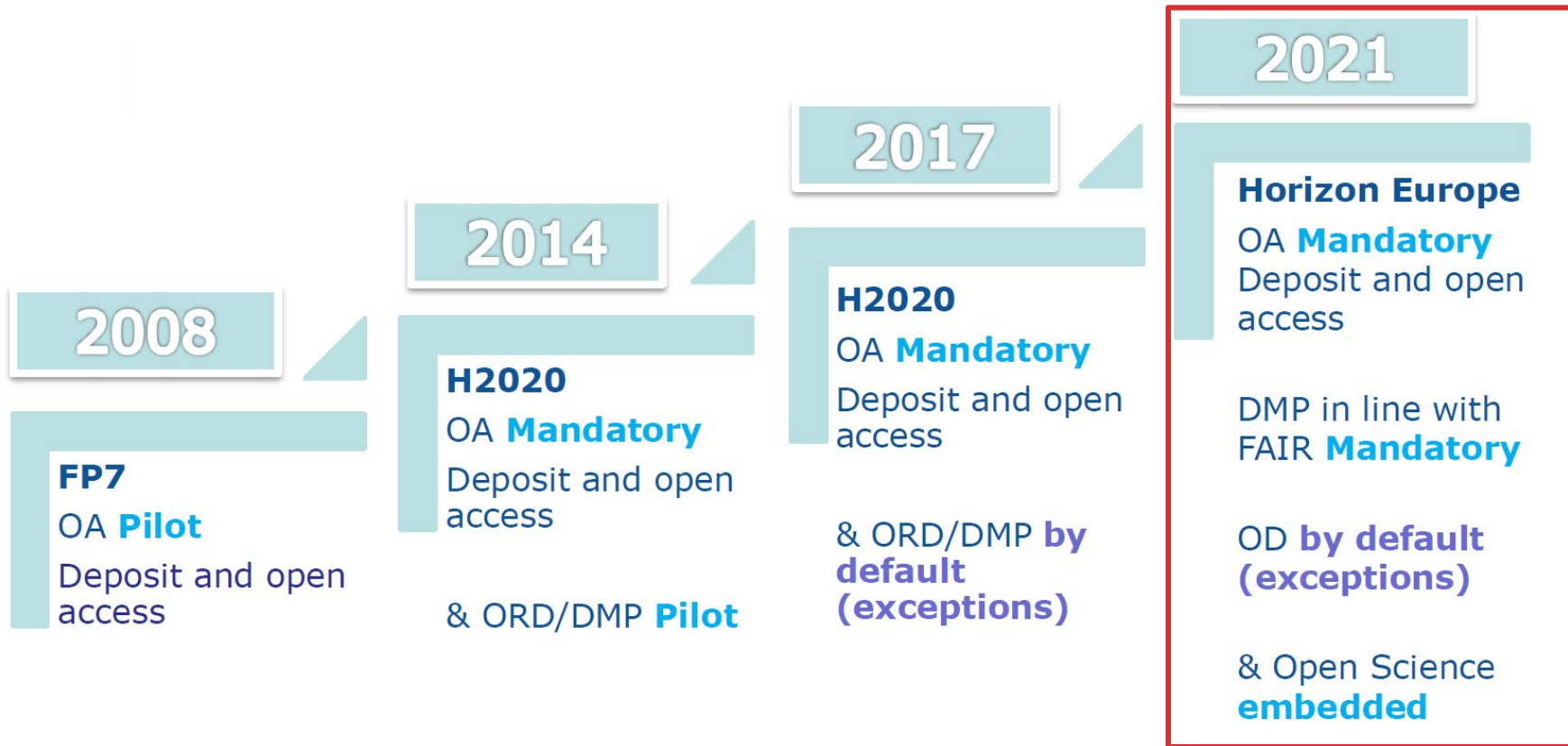
Open Science - “modus operandi”

Horizon Europe

THE NEXT EU RESEARCH & INNOVATION
PROGRAMME (2021 – 2027)



The Evolution of OS policies across FPs



Evaluation of proposals and Open Science

“Excellence” criterion (methodology)

- Evaluation of the quality of open science practices
- Up to 1 page to describe OS practices + up to 1 page to describe research data/output management

“Quality and efficiency of implementation” criterion

(capacity of participants and consortium as a whole + list of achievements)

- Explain expertise on OS
- List publications, software, data, etc, relevant to the project with qualitative assessment and, where available, persistent identifiers

Publications are expected to be open access; datasets are expected to be FAIR and ‘as open as possible, as closed as necessary’. **Significance of publications to be evaluated on the basis of proposers’ qualitative assessment** and not per Journal Impact Factor

Exceptions: ERC + some EIC programmes for now evaluate OS practices under impact

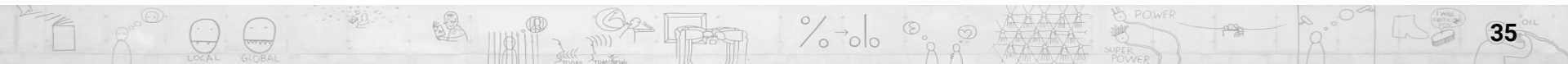


Otevřený přístup v programu EXCELES

8. Příjemce a další účastníci projektu jsou povinni zajistit otevřený přístup k recenzovaným publikacím o výsledcích výzkumu. Zejména musí zajistit:
- uložení strojově čitelné elektronické verze zveřejněné publikace nebo konečné verze recenzovaného rukopisu přijatého ke zveřejnění (tj. ve verzi po zapracování připomínek vzešlých z recenzního řízení), do důvěryhodného repozitáře pro vědecké publikace, a to nejpozději v den vydání publikace;
 - okamžitý otevřený přístup k uložené publikaci za podmínek poslední dostupné verze veřejné licence Creative Commons Attribution International (CC BY); pro monografie a jiné dlouhé textové formáty může publikaci zpřístupnit za podmínek veřejné licence vylučující úpravu publikace či její komerční užití (např. CC BY-NC, CC BY-ND, CC BY-NC-ND).
9. Příjemci (nebo autoři) jsou povinni uchovat si k publikaci autorská majetková práva v takovém rozsahu, aby bylo možné stanoveným povinnostem vyhovět.

Otevřený přístup v programu EXCELES

10. Metadata uložených publikací v repozitáři musí být v souladu se zásadami FAIR²⁰ veřejně dostupná a strojově čitelná, a musí obsahovat **minimálně tyto údaje**: název publikace, celá jména tvůrců a přispěvatelů, datum zveřejnění, typ publikace (např. článek, kniha atd.) a jazyk publikace. Dále se doporučuje uvádět i další údaje jako jsou: **trvalé identifikátory publikace**, informace o financování (poskytovatel podpory a číslo projektu), **licenční podmínky**, **trvalé identifikátory osob**, organizací a grantů. Metadata by měla obsahovat i trvalé identifikátory k dalším výstupům (např. **výzkumná data**) nebo trvalý odkaz na jakékoli jiné nástroje potřebné k ověření závěrů publikace.



Otevřený přístup v programu EXCELES

11. Příjemce je povinen spravovat výzkumná data shromážděná či vytvořená v průběhu projektu odpovědně v souladu s principy FAIR. Především je povinen:
- Vypracovat plán správy výzkumných dat („data management plan“) v souladu s FAIR principy a pravidelně ho aktualizovat. Aktuální plán správy výzkumných dat verzi předložit poskytovateli jako součást průběžné a závěrečné zprávy.
 - Uložit výzkumná data do důvěryhodného repozitáře dle plánu pro správu výzkumných dat.



Otevřený přístup v programu EXCELES

- c) V souladu s plánem pro správu dat zajistit co nejdříve otevřený přístup k výzkumným datům uložených v repozitáři podle FAIR principů a podle jejich charakteru, stavu zpracování metadat a zabezpečení, tam, kde je to možné, nejlépe za podmínek některé z existujících veřejných licencí. Otevřený přístup k výzkumným datům se řídí zásadou „as open as possible as closed as necessary“ s ohledem na soukromí, ochranu osobních údajů, důvěrnost, oprávněné obchodní zájmy a práva duševního vlastnictví třetích stran nebo pokud by to bylo v rozporu s jinými omezeními. Pokud není poskytnut otevřený přístup (k některým nebo všem výzkumným datům), musí to být odůvodněno v plánu pro správu výzkumných dat a zajištěn pravidelný přezkum těchto důvodů.
- d) Poskytnout prostřednictvím repozitáře dostatečné informace o všech dalších výsledcích výzkumu nebo nástrojích a instrumentů potřebných k opětovnému využití výzkumných dat nebo k jejich validaci.



Otevřený přístup v programu EXCELES

e) Spravovat metadata uložených výzkumných dat v souladu se zásadami FAIR tak, aby byla veřejně dostupná v rozsahu, v jakém jsou chráněny legitimní zájmy jejich tvůrců, strojově čitelná a aby obsahovala minimálně tyto údaje: název datové sady, datum uložení, celá jména tvůrců, popis datové sady, případně časové embargo a licenci. Dále se doporučuje uvádět i další údaje jako jsou: trvalé identifikátory datové sady, informace o financování (poskytovatel podpory a číslo projektu), trvalé identifikátory osob, organizací a grantů. Metadata by měla případně zahrnovat i trvalé identifikátory pro související publikace a další na ně navázané výzkumné výstupy.

12. Příjemce a další účastníci projektu nejsou povinni zpřístupnit výzkumná data, pokud by jejich zpřístupněním došlo k nepřiměřenému zásahu do práva na ochranu duševního vlastnictví, práva na ochranu soukromí a osobních údajů, práva na ochranu obchodního tajemství, bezpečnosti státu nebo jiných oprávněných zájmů příjemce (např. v případě možnosti obchodního využití).



Open Access to scientific publications



Open Access – two routes



GOLD

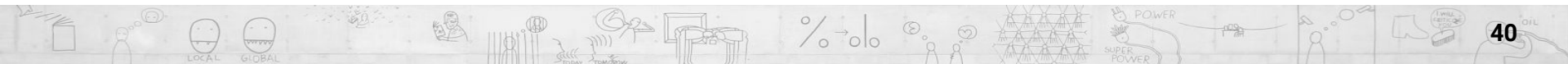


Gold OA journals/platforms - publisher makes the papers openly available that may or may not charge publishing fee.

GREEN



Self Archiving - author publishes in a journal and **archives** a freely available version of the manuscript in the repository (institutional, national, ...)



Open Access - variations of Gold

Gold

- published in a fully-OA journal
- author/institution pays for publishing => **immediate open access** on the publisher's site

Hybrid

- published in a toll-access journal, available on the publisher site, with an OA license
- double dipping => up to 70% price increase! APC - Article Processing Charge: 0 – 7000 €

Bronze

- published in a toll-access journal, available on the publisher site, **without an OA license**

Delayed Bronze

- published and available as Bronze OA but after an embargo period

Diamond/Platinum OA

- no payment, **immediate open access** => institutional publishers, learned societies, ...



Directory of Open Access Journals (DOAJ)

The screenshot shows the DOAJ website interface. At the top left is the DOAJ logo. To the right are links for 'SUPPORT' and 'APPLY'. Below the header is the text 'DIRECTORY OF OPEN ACCESS JOURNALS' and a large heading 'Find open access journals & articles.'. There are radio buttons for 'Journals' (selected) and 'Articles'. A search bar contains the text 'In all fields' and a yellow 'SEARCH' button. A red box highlights the search bar and a callout box containing the text '69 % of fully OA journals no APCs'. Below the search bar are five statistics: 80 LANGUAGES, 130 COUNTRIES REPRESENTED, 12,451 JOURNALS WITHOUT APCs, 17,922 JOURNALS, and 7,698,245 ARTICLE RECORDS. A red box highlights the '12,451 JOURNALS WITHOUT APCs' and '17,922 JOURNALS' statistics.

DOAJ

SUPPORT

APPLY

DIRECTORY OF OPEN ACCESS JOURNALS

Find open access journals & articles.

Journals Articles

SEARCH

69 %
of fully OA
journals
no APCs

| | | | | |
|------------------------|--|---|---------------------------|--|
| 80 LANGUAGES | 130 COUNTRIES REPRESENTED | 12,451 JOURNALS WITHOUT APCs | 17,922 JOURNALS | 7,698,245 ARTICLE RECORDS |
|------------------------|--|---|---------------------------|--|

DOAJ - search journals by licences

LICENSES

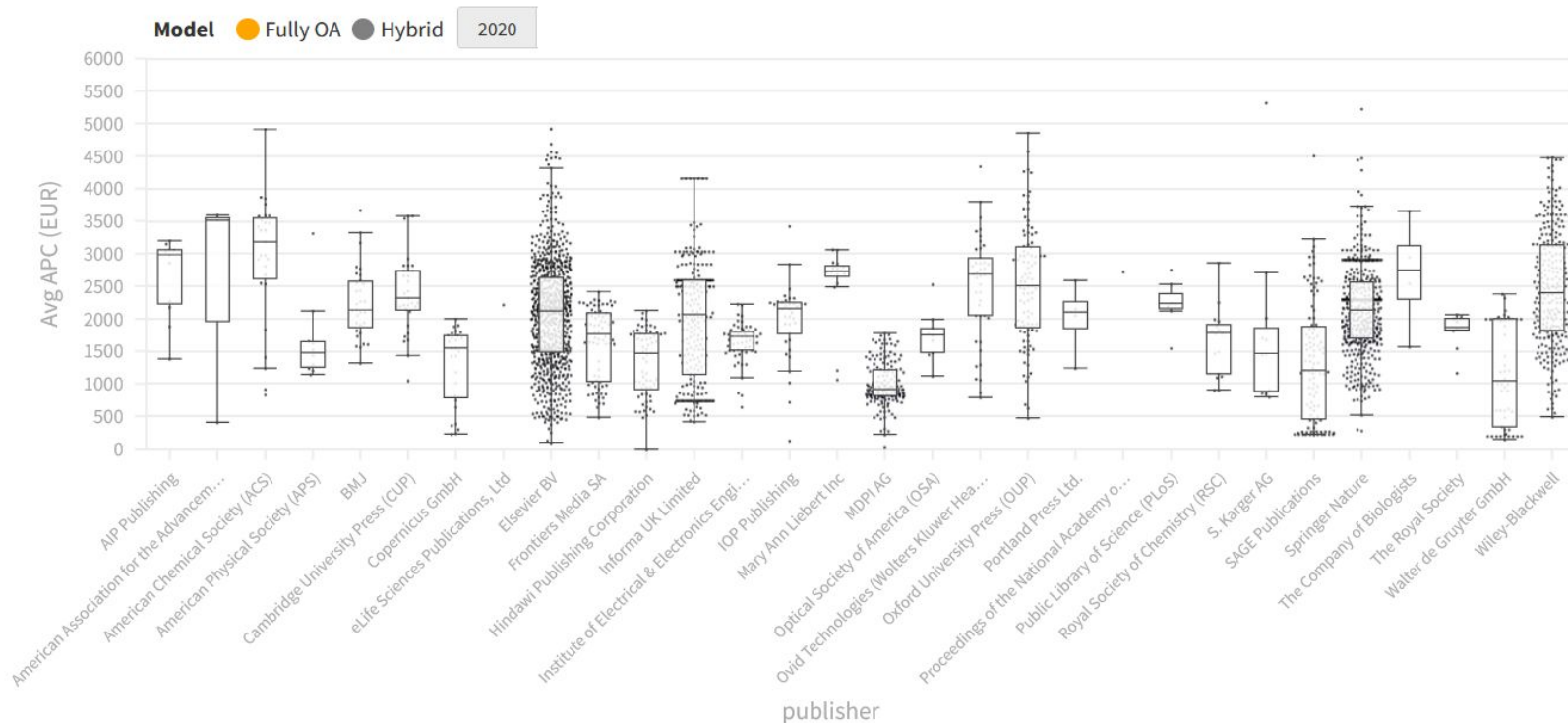
- CC BY (8919)
- CC BY-NC (3421)
- CC BY-NC-ND (3922)
- CC BY-NC-SA (1705)
- CC BY-ND (305)
- CC BY-SA (1299)
- CC0 (274)
- Public domain (2)

<https://doaj.org/>



APC - Article processing charge

APC refer to publishing fee in Gold Open Access



Source: ESAC (<https://esac-initiative.org/market-watch/>)

Transformative Agreements

A **contract negotiated between institutions** (libraries, national and regional consortia) **and publishers** that transform the business model from subscription (**pay to read**) to one (**pay to read & publish**) in which publishers are remunerated a fair price for their OA publishing services.

"the devil is in the details"

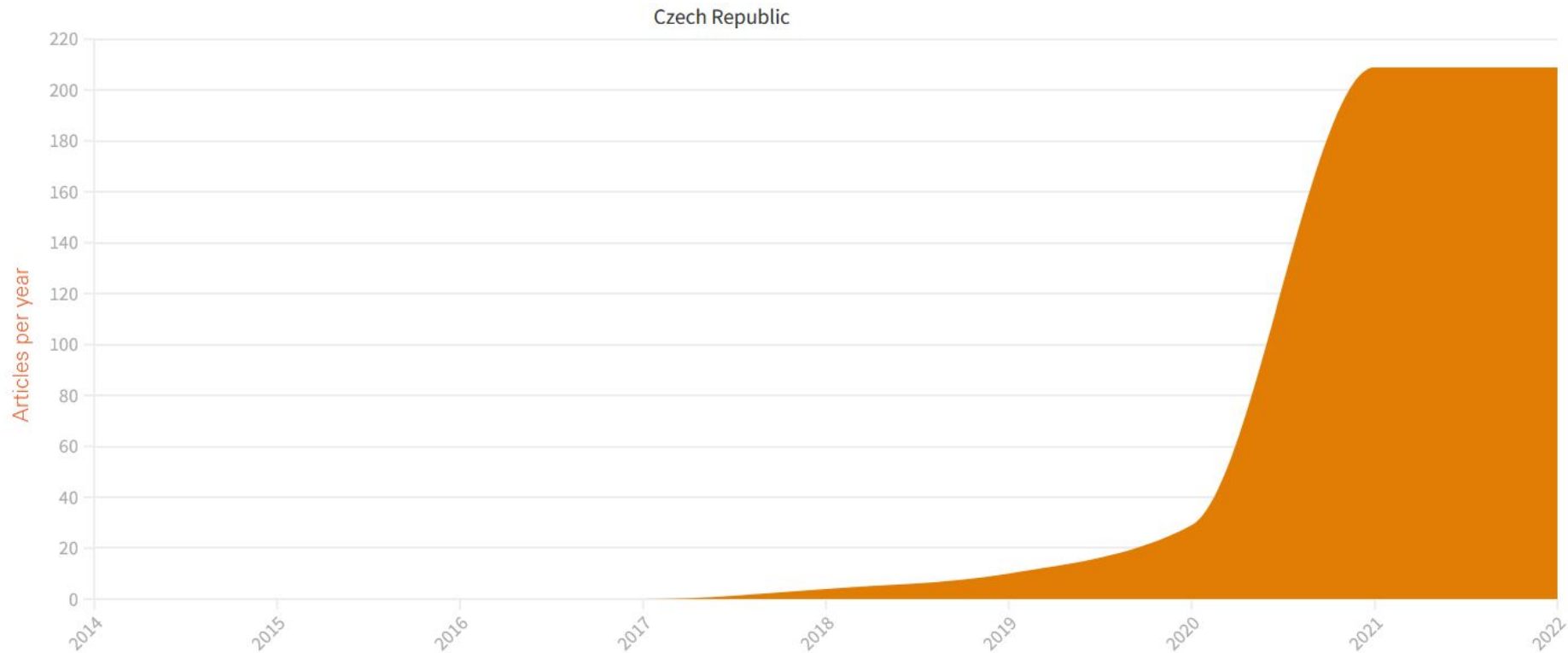
Ambition is the **transition from subscription to Gold OA** model



ESAC Transformative Agreement Registry

| Publisher | Country | Organization | Annual publications | Start date | End date | Details/ ID |
|----------------------------|----------------|--------------|---------------------|------------|------------|------------------|
| Cambridge University Press | Czech Republic | CzechELib | 20 | 01/01/2021 | 12/31/2022 | cam2021czelib |
| Emerald | Czech Republic | CzechELib | 10 | 01/01/2021 | 12/31/2022 | eme2021czelib |
| IEEE | Czech Republic | CzechELib | 4 | 01/01/2018 | 12/31/2022 | ieee2018czelib |
| Karger | Czech Republic | CzechELib | 14 | 01/01/2020 | 12/31/2022 | kar2020czelib |
| Taylor & Francis | Czech Republic | CzechELib | 150 | 01/01/2021 | 12/31/2022 | tf2021czelib |
| Walter de Gruyter | Czech Republic | CzechELib | 6 | 01/01/2019 | 12/31/2022 | degruy2019czelib |
| Wolters Kluwer Health | Czech Republic | CzechELib | 5 | 01/01/2020 | 12/31/2022 | lww2020czelib |

TAs enabling OA to research articles

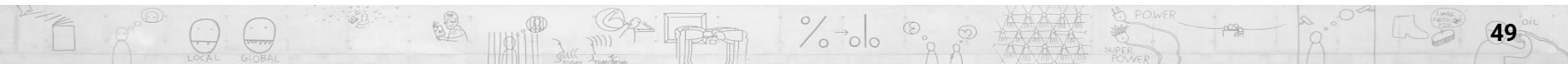


Source: ESAC (<https://esac-initiative.org/market-watch/>)

Possible new TAs from 2023

- Wiley
- Springer
- American Chemical Society
- Royal Society of Chemistry
- American Institute of Physics
- IOP
- Oxford UP
- ACM Bentham
- TF
- LWW
- Cambridge UP
- IEEE
- Emerald
- De Gruyter Karger (?)

.... (number of tokens and price) under negotiation



Who should the researchers contact ?

1. At **institutional library** or **OS/OA managers** (if the university/institution has for a concrete publisher has a token at disposition and what is the procedure to follow) - if YES, the researcher must be the **corresponding author** and use the **institutional email** when submitting the paper!
2. OS/OA managers can ask for more information about TAs at CzechELIB (openaccess@czechelib.cz)



Open Access – alternative to Gold

Green OA → via self-archiving

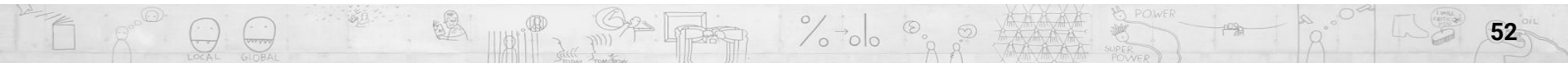
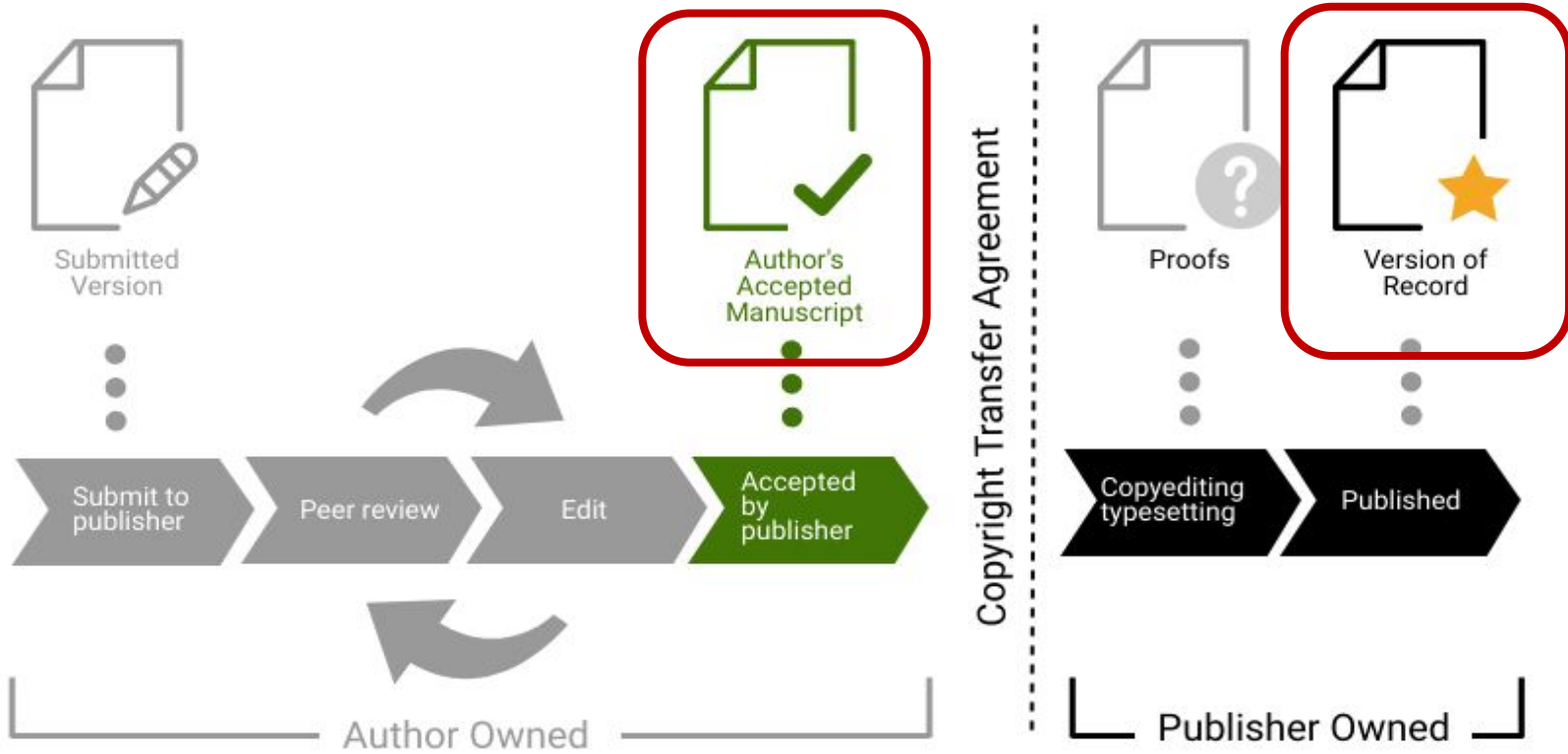
- published in a toll-access journal and a full-text copy is available in an OA repository
- no payment, licensed journals, self-archiving, institutional repositories

Disadvantages:

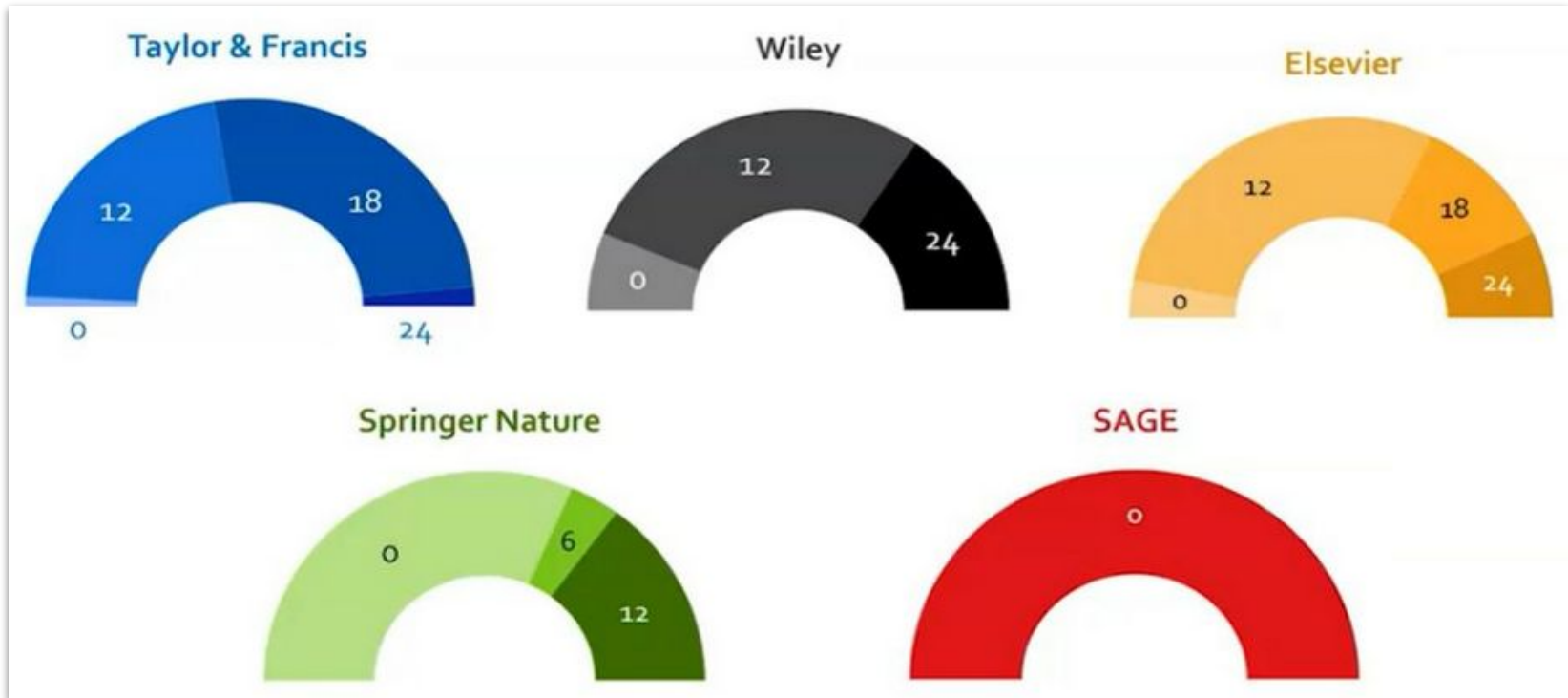
- continuing subscriptions => no change in money flow
- might be delayed access - embargo 6, 12, 24 months!
- might be unclear what is available in the repository: Author Original Manuscript (AOM)
 × Author Accepted Manuscript (AAM) × Version of Record (VoR)



Publishing process → transfer of copyright



Embargo periods by 5 Big publishers (months)



SHERPA/RoMEO – publisher and journal OA policies

Jisc Digital Resources > Open Access

Sherpa Romeo

About Search Statistics Help Support Us Contact Admin

Search Sherpa/RoMEO can help you find the self-archiving policies for many journals


Enter a journal title or issn, or a publisher name below:


Journal Title or ISSN


Publisher Name


Self-archiving and copyright policies: checklist


Self-Archive in 5 Easy Steps!




- 

1. Check the copyright and self-archiving policies of your publisher
Hint: SHERPA/RoMEO
- 

2. Check whether the publisher allows the self-archiving of accepted/preprint versions
- 

3. Check whether any embargo period is involved between publishing and self-archiving
- 

4. Check whether you can share the manuscript on personal websites, institutional/subject repositories, scholarly networks, etc.
- 

5. You are all set!

Visit enago.com/academy today to know more about open science!

@Enago enagoacademy enago.com/academy enago.com/app

[Example - the journal Nature](#)

Example - the journal Nature

Sherpa Romeo

About

Search

TJ List

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Admin

Nature

Publication Information

| | |
|------------|---|
| Title | Nature [English] |
| ISSNs | Print: 0028-0836 Electronic: 1476-4687 |
| URL | http://www.nature.com/nature/ |
| Publishers | Nature Research [Commercial Publisher] |
| TJ Status | Plan S Approved Jisc Approved |

Publisher Policy

[Example -
the journal Nature](#)



Example - the journal Nature



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 | None CC BY PMC | Any Website, Journal Website | + |
| Accepted Version [pathway a] | 6m Publisher's Bespoke License | Institutional Repository, PMC, Funder Designated Location, +2 | + |
| Accepted Version [pathway b] | None CC BY | Any Website, +2 | + |
| Submitted Version | None | Institutional Repository, Funder Designated Location, Preprint Repository, +1 | + |

For more information, please see the following links:

- Preprints and Conference Proceedings
- Self archiving and license to publish
- The fundamentals of open access and open research
- Plan S compliance for Springer Nature authors
- Accepted manuscript terms of use
- Open access policies for journals

[Example -
the journal Nature](#)



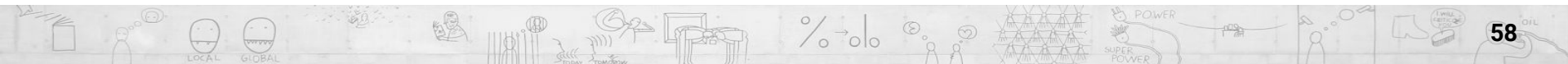
Example - the journal Nature

Record Information

| | |
|---------------|---|
| ID | 4008 |
| Policy IDs | 3286,4410,6046 |
| Date Created | 23 July 2010 16:09:54 UTC |
| Last Modified | 19 August 2022 08:28:55 UTC |
| URI | https://v2.sherpa.ac.uk/id/publication/4008 |

[Example - the journal Nature](#)

Sherpa Romeo information is accurate to the best of our knowledge but should not be relied upon for legal advice.



Trusted repositories

“A **trusted digital repository** is one whose mission is to provide **reliable, long-term access to managed digital resources** to its designated community, now and in the future. “

- European Framework for Audit and Certification:
 - DSA (Data Seal of Approval) → CoreTrustSeal
 - OAIS Model (ISO 14721)
 - Trustworthy Repositories Audit & Certification (TRAC; ISO 16363)
- Types:
 - General (like Zenodo)
 - Institutional
 - (multi)subject
 - National/governmental



A social networking site is NOT a repository

| | Open Access Repositories | Academia.edu | ResearchGate |
|--|--------------------------|--|--|
| Supports export or harvesting | Yes | No | No |
| Long-term preservation | Yes | No | No |
| Business model | Usually nonprofit | Commercial. Sells job posting services, hopes to sell data | Commercial. Sells ads, job posting service |
| Sends you tons of emails | No | Yes | Yes |
| Wants your address book | No | Yes | Yes |
| Fulfills requirements of your institute's OA policies | Yes | No | No |

- ResearchGate and Academia.edu are social networking platforms whose primary aim is to connect researchers with common interests.
- A Facebook or LinkedIn experience for the research community.
- Both services are commercial companies. Although Academia.edu has a “.edu” URL, it isn't run by a higher education institution. The domain name was registered before the rules that would now prohibit this use went into effect, and the address was grandfathered in and later sold to the company.

Source (text): [Cambridge university presentation](#)

Image adopted from twitter [@pcmasuzzo](#) (CC-BY-SA)

<https://osc.universityofcalifornia.edu/2015/12/a-social-networking-site-is-not-an-open-access-repository/>



Searching for repositories: registries

- [DOAR \(Directory of Open Access Repositories\)](#)
- [re3data.org](#)
- [FAIRsharing](#)

Repository details



Zenodo

General Institutions Terms Standards

Name of repository

Zenodo

Additional name(s)

Research. Shared

Repository URL

<https://zenodo.org/>

Subject(s)

Humanities and Social Sciences

Life Sciences

Natural Sciences

Engineering Sciences

Description

ZENODO builds and operates a simple and innovative service that enables researchers, scientists, EU projects and institutions to share and showcase multidisciplinary research results (data and

Searching for trusted repositories

Considerations

- Does the repository assign a persistent identifier to your outputs? (eg DOI or Handle)
- Is the repository certified?
- Does the selected repository provide open access to stored outputs?
- Will the repository license your outputs? Does it clearly state the conditions under which your outputs stored in the repositories can be reused?
- Will the repository provide a landing page with metadata for your outputs?
- Does the repository allow versioning?

Searching for a suitable repository

Considerations

- What type of data are you planning to publish?
- Does the repository need to provide solutions for restricted access for sensitive data?
- Do you have the rights to publish the data via the repository?
- How sustainable is the repository, will the data remain public over time?
- How FAIR is the repository?
- Does the funding agency or the scientific journal pose specific requirements regarding data sharing?
- What are the repository's policies concerning licences and data reuse?
- Is repository metadata schema suitable to our needs?



Metadata

in line with the FAIR principles and machine-actionable

Must have:

Publications

- Title
- Creator(s) and contributor(s)
- Date of publication
- Publication type
- Language

Datasets

- Title
- Creator(s) and contributor(s)
- Date of deposit
- Description
- Licensing terms
- Eventually - embargo

Optional:

- Persistent identifiers, funding reference, related items (especially dataset - article)
- Licensing terms for publications



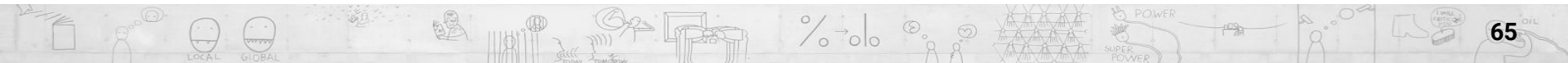
Licenses

Articles

Datasets



Monographs and other
long text formats



Metadata standards

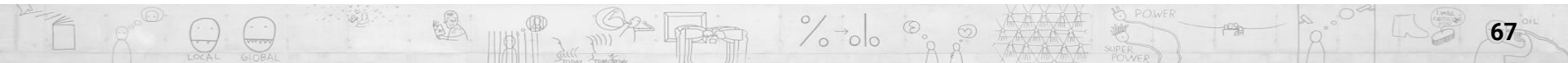
- **Dublin Core** - domain agnostic, basic and widely used metadata standard
- **DDI** (Data Documentation Initiative) - common standard for social, behavioral and economic sciences, including survey data
- **EML** (Ecological Metadata Language) - specific for ecology disciplines
- **ISO 19115 and FGDC-CSDGM** (Federal Geographic Data Committee's Content Standard for Digital Geospatial Metadata) - for describing geospatial information
- **MINSEQE** (MINimal information about high throughput SEQuencing Experiments) - Genomics standard
- **FITS** (Flexible Image Transport System) - Astronomy digital file standard that includes structured, embedded metadata
- **MIBBI** - Minimum Information for Biological and Biomedical Investigations



National Center for Persistent Identifiers

Methodological support for institutions with integration of persistent identifiers use in Czech research environment

- Starts on 1st January 2023
- Intended support of:
 - ORCID - identifies people
 - DOI - identifies objects
 - ROR - identifies institutions
 - ISSN - identifies serial publications
- Funded by project CARDS



ORCID Czech consortium: ORCID CZ

ORCID iD - Open Researcher and Contributor iD



- ORCID required by HE, publishers; used in IS VaVal
- Institutions that are members of consortia are allowed to use premium (wider) services for lower price
- Consortium starts on 1th April 2023
- Fees for each member are covered by project CARDS
- 5 spaces left for 2023



Do you follow a publishing workflow or are you depositing content?

Publishing workflow

We're doing both

Depositing content

What sort of publisher?

What sort of platform?

- Academic-led journal
- Publishing house
- University press
- Preprint server

- Domain repository
- Data repository
- Academic sharing platform
- Institutional repository

Join Crossref

Join Crossref & DataCite

Join DataCite

Where to get DOI: DataCite vs Crossref



Crossref is a membership organisation for scholarly publishers providing services to help the scholarly community find, cite, link, assess and re-use published content.

DataCite is a membership organisation working with the repository community to register DOIs for a range of content and provides services to create, find, cite, connect, and use research.

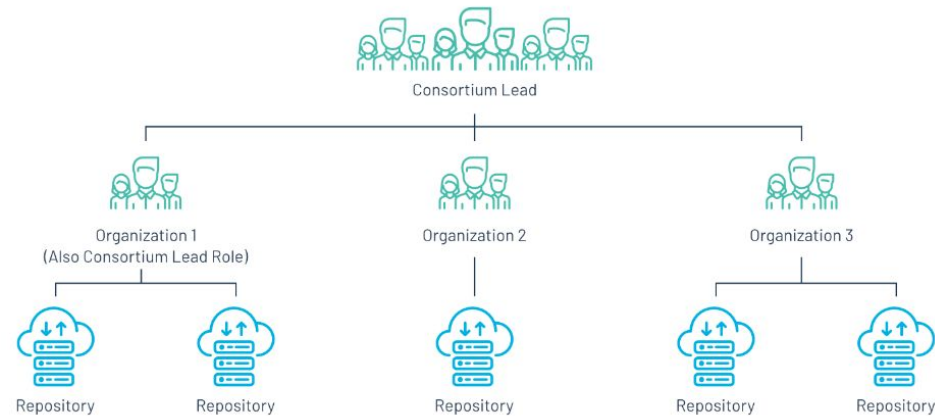


Source: [DataCite](https://www.datacite.org/)

DataCite Czech consortium: DataCite CZ

DOI - Digital Object Identifier

- DataCite assigns DOI **to research data and other research outputs**
- Institutions that are members of the consortium are allowed to assign DOI within their repositories with capped prices
- Consortium starts on 1st January 2023
- Fees for each member covered by project CARDS



Management of research data according to FAIR principles



What is data?

Anything containing information

Some might be self explanatory

- Text
- Tables

Some not

- Images
- Measurement results

Some might not be shared

- Personal information
- Diagnosis

And there is also **metadata** -
information (data) about data.

- Date of creation
- Author
- Licence
- Measurement device



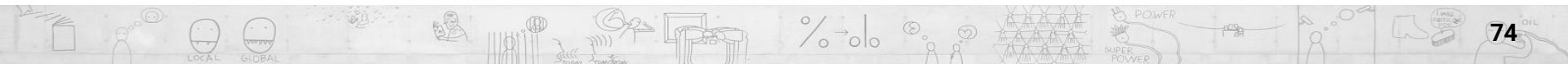
We need to plan in advance

- Instruments
 - Can we properly document what we are doing, and how?
- Data formats
 - Are we using open or close formats?
 - Are their standard in our field? (<https://fairsharing.org>)
- Size
 - Do we have enough storage?
- Software
 - Do we have workflow for processing of data?
 - Do we have access to proper software?
 - Can we properly document the analysis?
- Ethics
 - Are there any set procedures for data acquisition/storing/processing?

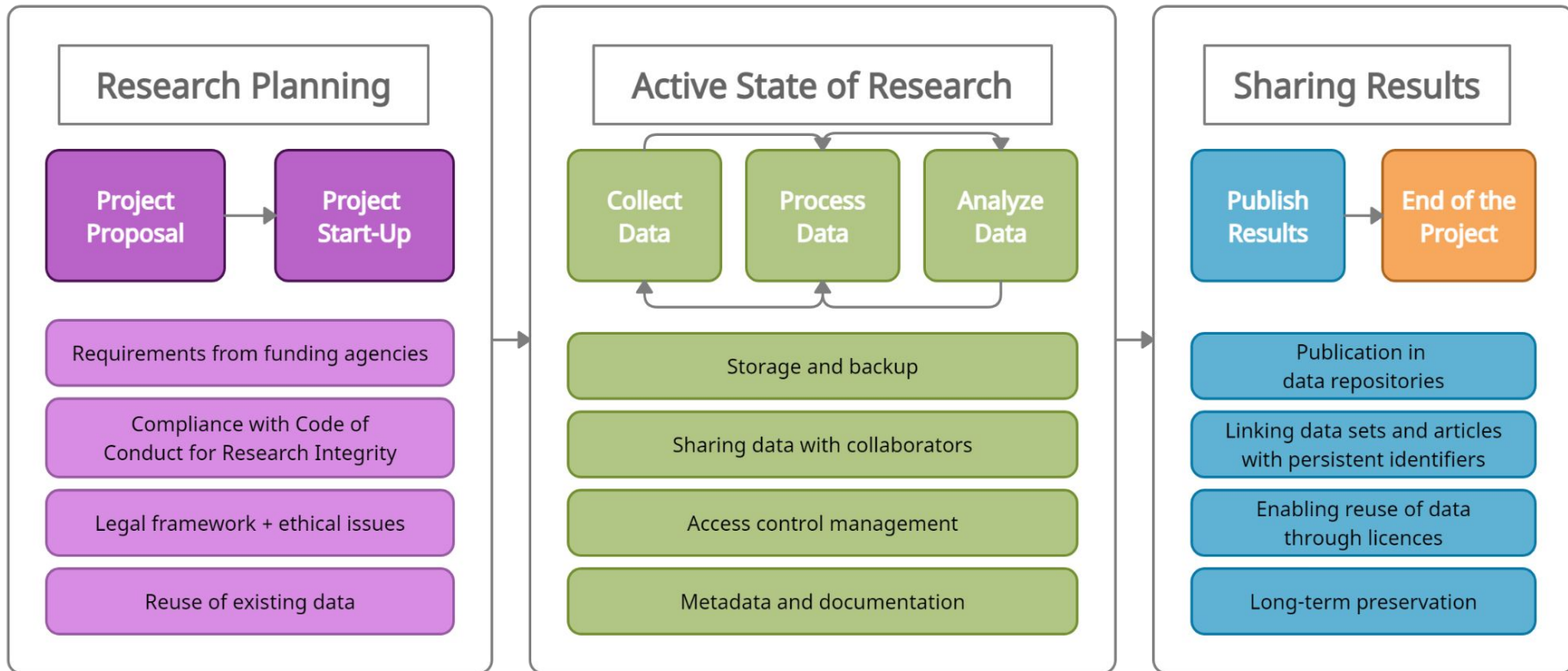


We need to plan in advance

- Backup (active storage)
 - How often and where?
 - Do we need encryption?
 - How is access control done?
- Copyright Licence
 - How are we legally bind? (Consortium agreement/already licensed data)
 - Who is data owner?
- Publishing
 - Can we publish data?
 - Is there any domain specific repository?
- Archiving (after end of the project)
 - What data to archive?
 - How long?



Research Data Cycle





Findable

To aid automatic discovery of relevant datasets, (meta)data should be easy to find by both humans and machines and be assigned a persistent identifier.

Accessible

Limitations on the use of data, and protocols for querying or copying data are made explicit for both humans and machines.

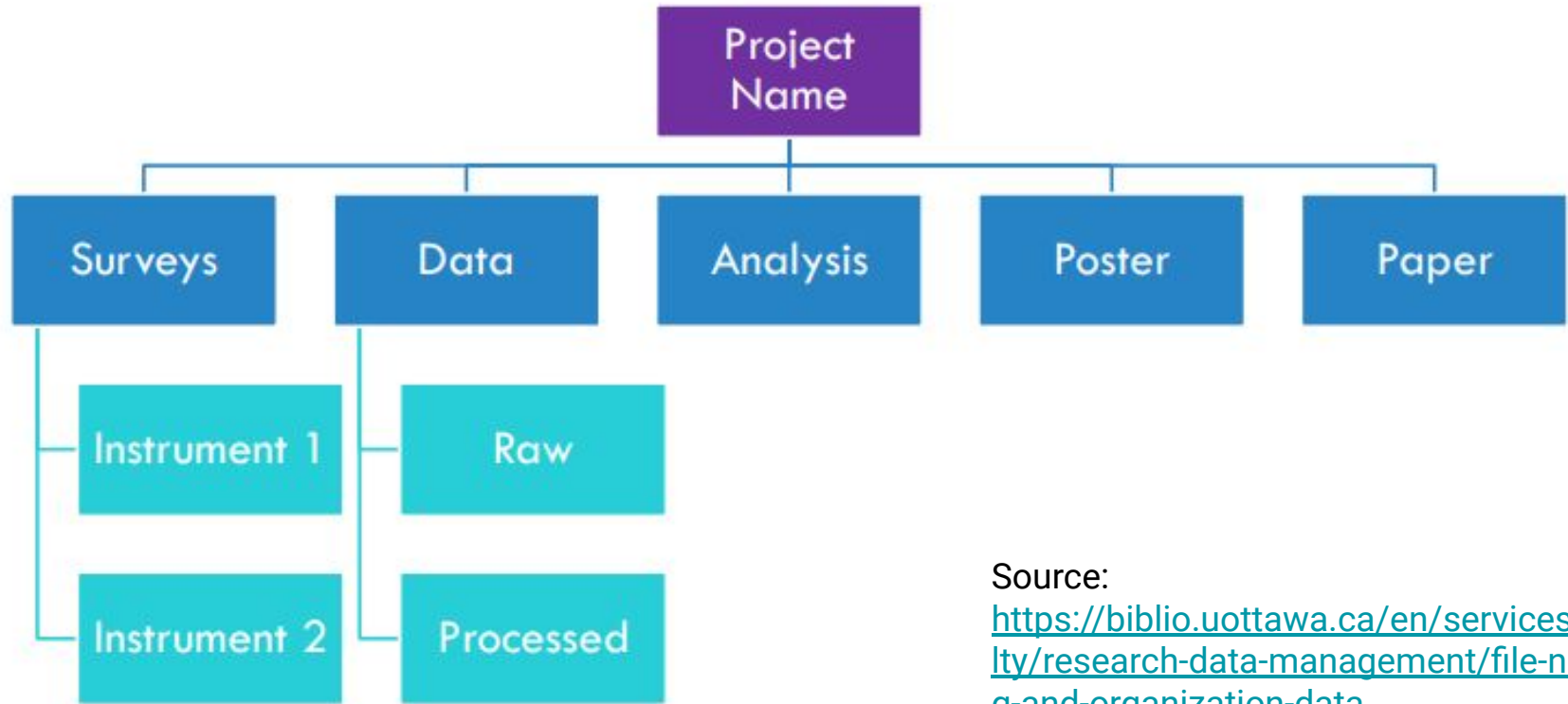
Interoperable

(Meta)data should use standardised terms (controlled vocabularies), have references to other (meta)data and be machine actionable.

Reusable

(Meta)data are sufficiently well described for both humans and computers to be able to understand them and have a clear and accessible data usage license.

Organizing your data (FAIR)



Source:

<https://biblio.uottawa.ca/en/services/faculty/research-data-management/file-naming-and-organization-data>

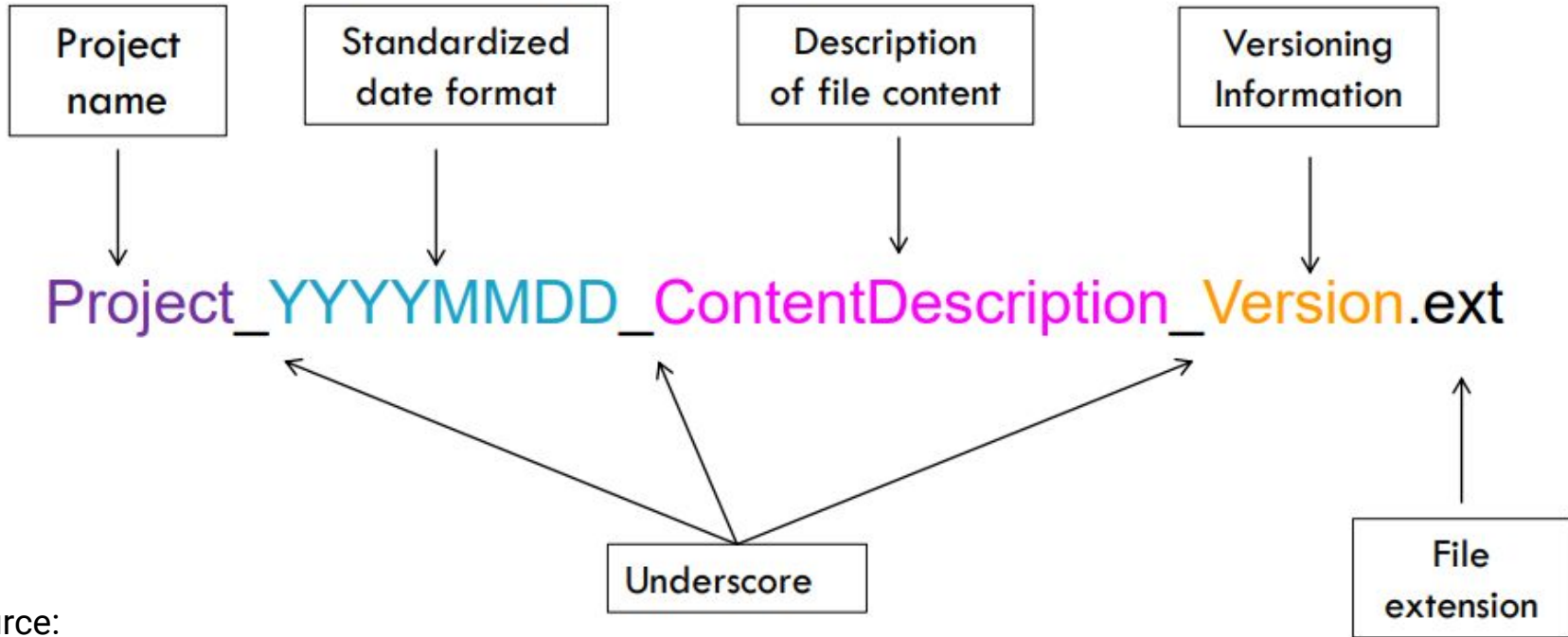


Organizing your data

- Restrict level of folders to three or four deep
- Consider limiting the number of folders within each folder, to ten
- Include a folder within the folder structure for “documentation”. This might include:
 - Project proposals/protocols
 - Consent and approval forms
 - Methodology documents
 - **Data management plan**
 - Code used for recodes, analysis, and outputs
 - Readme files with transformation information
 - Readme files with the full names or titles for any abbreviations used in file names
 - **Codebooks** or guides



Setting up naming convention (FAIR)



Source:

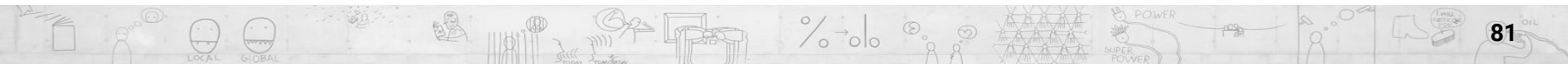
<https://biblio.uottawa.ca/en/services/faculty/research-data-management/file-naming-and-organization-data>



File types and formats (FAIR)

Here are some examples of preferred FAIR file formats for preservation:

- **Images:** TIFF, JPEG 2000, PDF, PNG, GIF, BMP, SVG
- **Tabular data:** CSV, TXT
- **Text:** XML, PDF/A, HTML, JSON, TXT, RTF
- **Containers:** TAR, GZIP, ZIP
- **Databases:** XML, CSV, JSON
- **Geospatial:** SHP, DBF, GeoTIFF, NetCDF
- **Video:** MPEG, AVI, MXF, MKV
- **Sounds:** WAVE, AIFF, MP3, MXF, FLAC
- **Statistics:** DTA, POR, SAS, SAV

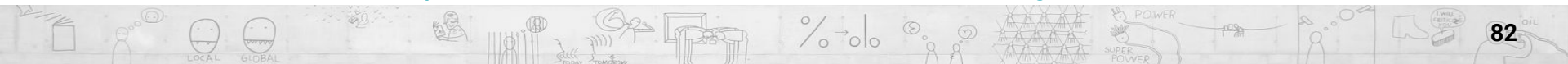


What are the metadata about provenience?

Properly describing and documenting data allows you to understand and track important details of the work. Having metadata about the data also facilitates search and retrieval of the data when deposited in a data repository.

Metadata: the **who, what, when, where, why, how** of your research

source: <https://data.research.cornell.edu/content/writing-metadata>



What is research data?

Research data is any information that has been collected, observed, generated or created to validate original **research** findings

Research data takes many different types

- Data Documents (text, MS Word)
- Spreadsheets
- Lab notebooks
- Questionnaires
- Experimental data
- Photographs, image files
- Films, audio or video tapes/files
- Sensor readings
- Test responses
- specimens, physical samples
- Models, algorithms, scripts
- interview notes



Research Data Lifecycle



It describes the different stages research data go through

- before,
- during,
- and after a research project

Source: [Elixir RDMkit](#)



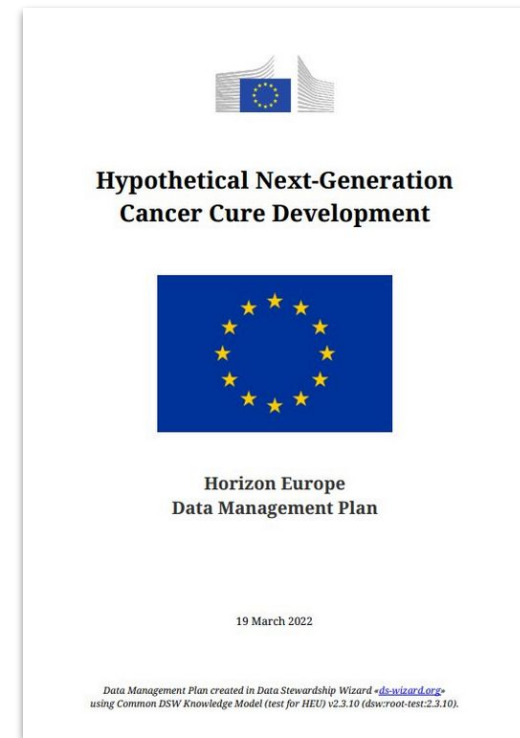
Data Management Plan



Data Management Plan (DMP)

- A practical tool for researchers working on individual or collaborative projects.
- Most funders and institutions now require that projects have a DMP, as this may facilitate workflow and FAIR-ness

Should be a **'living document'** which is updated along the research process to reflect what actually happened with the data.



How to create a DMP

Funder template:

- [Horizon Europe DMP Template](#) (EU) | [Template in Czech](#)

Online tools for creation of DMPs:

- [DS Wizard](#) (EU level), [DPM Online](#) (UK), [Argos](#) (OpenAIRE)


Data Stewardship Wizard

Create Smart Data Management Plans
for FAIR Open Science

[Watch video](#)

DSW About Features Resources [Get Started](#)

DSW Compared to Other DMP Tools

| |  DSW | DMPonline Free | DMPonline Subscription | DMPTool | Argos | DataWiz | easyDMP |
|--------------------------|---|----------------|------------------------|---------|---------|---------|---------|
| Template Selection | ✓ | ✓ | ✓ | ✓ | ✓ | Limited | ✓ |
| Detailed Export Settings | ✓ | ✓ | ✓ | ✓ | ✓ | Limited | Limited |
| Template Creation | ✓ | ✗ | ✓ | Limited | ✓ | ✗ | Limited |
| Template Styling | ✓ | ✗ | ✓ | Limited | Unknown | Limited | Limited |

DMP Tool Data Stewardship Wizard

Get Started Using the Data Stewardship Wizard

Self-Managed

For open-source adventurers

- Requires IT infrastructure
- Absolute freedom in setup
- Keeping data in-house

- ✓ Projects & DMPs
- ✓ Online Collaboration
- ✓ Version History
- ✓ Knowledge Models Management
- ✓ Template Management
- ✓ User Management
- ✓ Settings & Configuration

Explore guide

DSW Cloud for ELIXIR

For researchers in ELIXIR

- Easy to sign up and use
- Ready to use Knowledge Models
- Privacy and stability

- ✓ Projects & DMPs
- ✓ Online Collaboration
- ✓ Version History
- ✓ Life Science Login

Learn more

FAIR Wizard

For groups and institutions

- All the DSW features available
- Your own instance with ease
- Enterprise-ready ecosystem

- ✓ Projects & DMPs
- ✓ Online Collaboration
- ✓ Version History
- ✓ Knowledge Models Management
- ✓ Template Management
- ✓ User Management
- ✓ Settings & Configuration
- ✓ Enhanced SSO and Integrations
- ✓ Deployment Customisations
- ✓ Support and Consultancy
- ✓ Additional Services

Learn more

COMMERCIAL



For Researchers

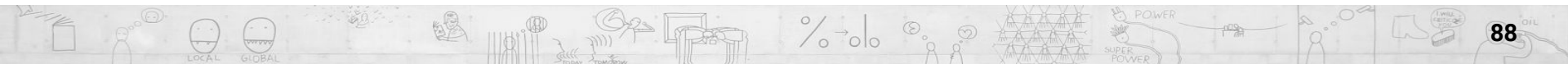
You can always use the latest version of the open-source tool Data Stewardship Wizard as a researcher in ELIXIR DSW Cloud. Log in using Life Science Login and plan your data management in a DSW instance running on the infrastructure provided by ELIXIR and managed by the DSW developers.

Get started

For Institutions

If you represent an ELIXIR Node, Platform, Community, Focus Group, or a research group affiliated with one of the previously mentioned, we can provide you a dedicated instance of DSW in the ELIXIR DSW Cloud where we will manage it for you. Let us know to arrange necessary details.

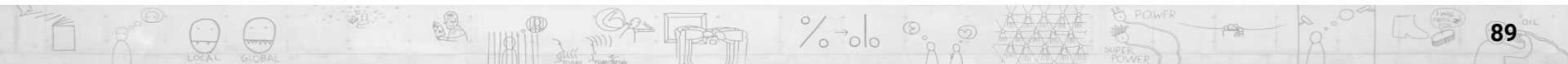
Contact us



DSW online tool for creation of DMP

The screenshot shows the DSW (Data Stewardship Wizard) interface. On the left is a navigation sidebar with options: Questionnaires, Documents, Storage Costs Evaluator, Help, and Jan Slifka. The main content area is titled 'III. Creating and collecting data' and includes a 'Current Phase' dropdown set to 'Before Submitting the Proposal'. A table of contents lists chapters I through VII, with 'III. Creating and collecting data' selected and highlighted in orange. The main content area contains a question: '1 What data formats/types will you be using?'. Below the question is a text input field containing 'RDF/XML Syntax Specification', a link to 'FAIRsharing https://fairsharing.org/bsg-s001261', and a checkbox for 'Desirable: Before Submitting the Proposal'. A second question, '1.a.2 Is this a standard data format used by others in this field?', is also visible with a 'Desirable: Before Submitting the DMP' checkbox and radio button options for 'a. No' and 'b. Yes'. The 'a. No' option is selected, and a red 'Interoperability' tag is visible below it. A 'Get Started' button is located in the top right corner.

Data Stewardship Wizard



Key Factor: Good Guidance

Explanation

Project phases
References

Choice of Option

FAIR metrics



Recommendation

1.a.4.b.1.a.1 What repository will this data be stored in?



Domain repositories often have the best functionality to make the data findable and reusable: even though it may look like a database that could be reused in a completely different field would be better findable in a generic repository, the limited availability of domain-specific metadata make that less valuable.

Many repositories are listed in <https://fairsharing.org/>

If a repository offers to give your data set a DOI or alternative persistent identifier it is a good idea to use that option.

Desirable: *Before Finishing the Project*

External links: [FAIRSharing](#), [Registry of Research data Repositories](#)

a. A domain-specific repository 

Findability

b. Our national repository

Findability

c. Our institutional repository

Findability

d. A special-purpose repository for the project 

Findability

 Clear answer

Disadvantage of a general purpose repository is the lack of data-specific features (e.g. 'play' instead of 'download' for an audio file) and limited findability

Source:
Slide from
[presentation](#) of
Robert Pergl
under [CC](#)
[BY-NC-ND](#)

Working Together with your Colleagues



Share Project

Users

Add users

| | |
|--|------------|
|  Vojtěch Knaisl | Owner ▾ ✕ |
|  Jan Slifka | Editor ▾ ✕ |
|  Marek Suchánek | Viewer ▾ ✕ |

Visible by all other logged-in users
Other logged-in users can the Project.

Public link

Cancel

Save

Source:
Slide from [presentation](#)
of Robert Pergl under
[CC BY-NC-ND](#)

DMP Export in Various Templates

New document


Name

Answered (current phase): 100/100







Answered: 293/305



Template

 **Horizon 2020 DMP 0.1.0**
Data Management Plan according to the H2020 template

Format

| | |
|---|---|
| <input type="radio"/>  HTML | <input checked="" type="radio"/>  PDF Document |
| <input type="radio"/>  LaTeX Document | <input type="radio"/>  MS Word Document |
| <input type="radio"/>  OpenDocument Text | <input type="radio"/>  Markdown Document |

Cancel

Create

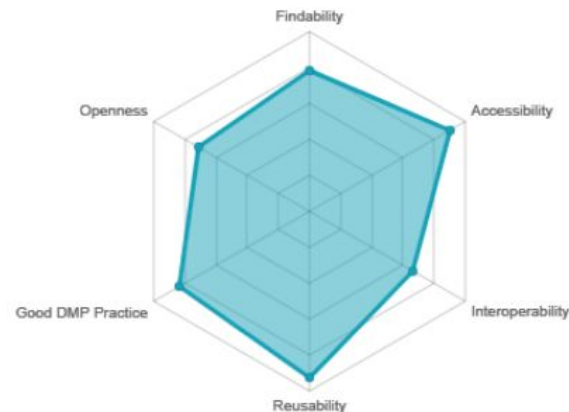
Indications and Metrics

Summary Report

Answered (current phase): 100/100 

Answered: 293/305 

| Metric | Measure | |
|-------------------|---------|---|
| Findability | 0.78 |  |
| Accessibility | 0.90 |  |
| Interoperability | 0.67 |  |
| Reusability | 0.92 |  |
| Good DMP Practice | 0.84 |  |
| Openness | 0.72 |  |



Source: Slide from [presentation](#) of Robert Pergl under [CC BY-NC-ND](#)



FAIRWizard

- Fair Wizard cloud
 - Always up-to-date environment with preview instance for new features testing
- On-premise deployment
 - Setting up an on-premise environment suited to customer needs
- Professional support services and user training
 - Training for all possible user roles and solution support
- Content consultancy
 - Knowledge model, template, integration services custom development and consultancy
- Custom features development
- More on www.fair-wizard.com



Reporting

- First version DMP, updated version of DMP (including report of published datasets)
- The overview of publications containing the following basic information:
 - title, type, and year of the publications
 - **DOI identifier** (or other identifier or permanent URL) **of the publication site**
 - **DOI identifier** (or other identifier or persistent URL) **of the deposit in repository**
 - **CC license** type described by an abbreviation (e.g. CC BY 4.0)



Open discussion Q&A



Příručka postupů otevřené vědy



Operační program Jan Amos Komenský

<https://opjak.cz/dokumenty/otevrena-veda/>



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Vědecké publikování jako byznys



VĚDECKÉ PUBLIKOVÁNÍ

Online odborné zdroje válčují ty tištěné. Jen zlomek si jich ale instituce nakupují samy

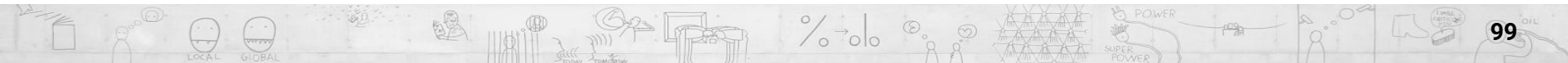
Vidět vědce sedícího v knihovně je dnes spíše vzácnost. Informace k výzkumu či pro své studenty sice stále hledají listováním v časopisech, teď...

13. 9. 2022 ▪ 6 min. čtení

Youtube video CzechElib

[Otevřený přístup k vědeckým publikacím - Open Access \(CZ\)](#)

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Thank you for your attention!

Questions?

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