

Otevřená věda a Citizen Science

VISK 2 - Mimoškolní vzdělávání knihovníků

19. říjen 2021, online webinář

eva.hnatkova@techlib.cz



Proč jsme tady?

Představit koncept **Open Science** a **inovativních nástrojů** pro komunikaci vědeckých poznatků včetně **zapojení veřejnosti do vědy**.

Webinář je financován z programu Ministerstva kultury VISK 2 - Veřejné informační služby knihoven – podprogram 2 Mimoškolní vzdělávání knihovníků



Program

Dopolední část: 10:00 - 12:00

- Úvod do Open Science /otevřené vědy
- Pozadí vědeckého publikování
- Otevřený přístup k vědeckým publikacím

Odpolední část: 13:00 - 16:00

- Správa výzkumných dat a Open/FAIR Data
- Open Science a Citizen Science v praxi
- Open Science v Horizon Europe

Krátce o nás



[@EvaHnatkova](#)

- **Eva Hnátková**
- Open Science koordinátorka na NTK a VŠCHT Praha
- Implementace evropských standardů do národního prostředí VaVal
- Předchozí prezidenka Eurodoc
- PhD z procesního inženýrství

NTK

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



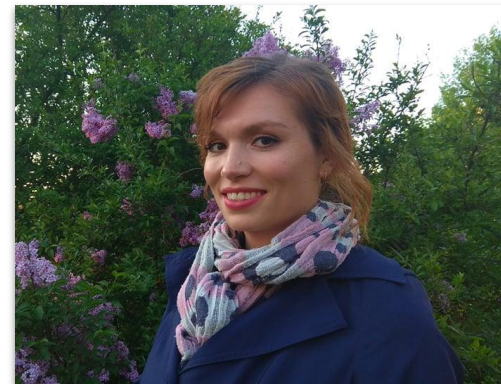
**UNIVERSITY OF
CHEMISTRY AND TECHNOLOGY
PRAGUE**

eurodoc

The European Council of Doctoral
Candidates and Junior Researchers

Krátce o nás

- **Barbora Votavová**
- V NTK od května 2021
- Zaměření na implementaci ORCID
- PhD na VŠCHT Praha



☎ 778 412 462

🐦 @[barboravotavova](https://twitter.com/barboravotavova)

✉ barbora.votavova@techlib.cz

🆎 <https://orcid.org/0000-0002-6445-2183>

Technikálie

19/10/2021



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Národní technická knihovna
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Úvod do Open Science

TODAY

TOMORROW

Témata

1. Úvod do Open Science /otevřené vědy
2. Vědeckého publikování a Open Access
3. Správa výzkumných dat a Open/FAIR Data
4. Open Science a Citizen Science v praxi
5. Open Science v Horizon Europe

Přehled

- Co je otevřená věda
- Jaké jsou přínosy
- Politická podpora
- CzechElib
- NCIP VaVal

OPEN SCIENCE:
JUST
SCIENCE
DONE RIGHT

Melanie Imming, & Jon Tennant. (2018, June 8). Sticker open science: just science done right

Definice Open Science

Existují různé

Open Science represents a new approach to the scientific **process** based on **cooperative work** and new ways of diffusing knowledge by using digital technologies and new **collaborative tools**.



Open Science is the effort to make the primary outputs of publicly funded research results - **publications and the research data** – publicly accessible in digital format with no or minimal restriction, to the scientific community, the business sector, or **society** more generally, to enhance transparency and collaboration, and fostering innovation.



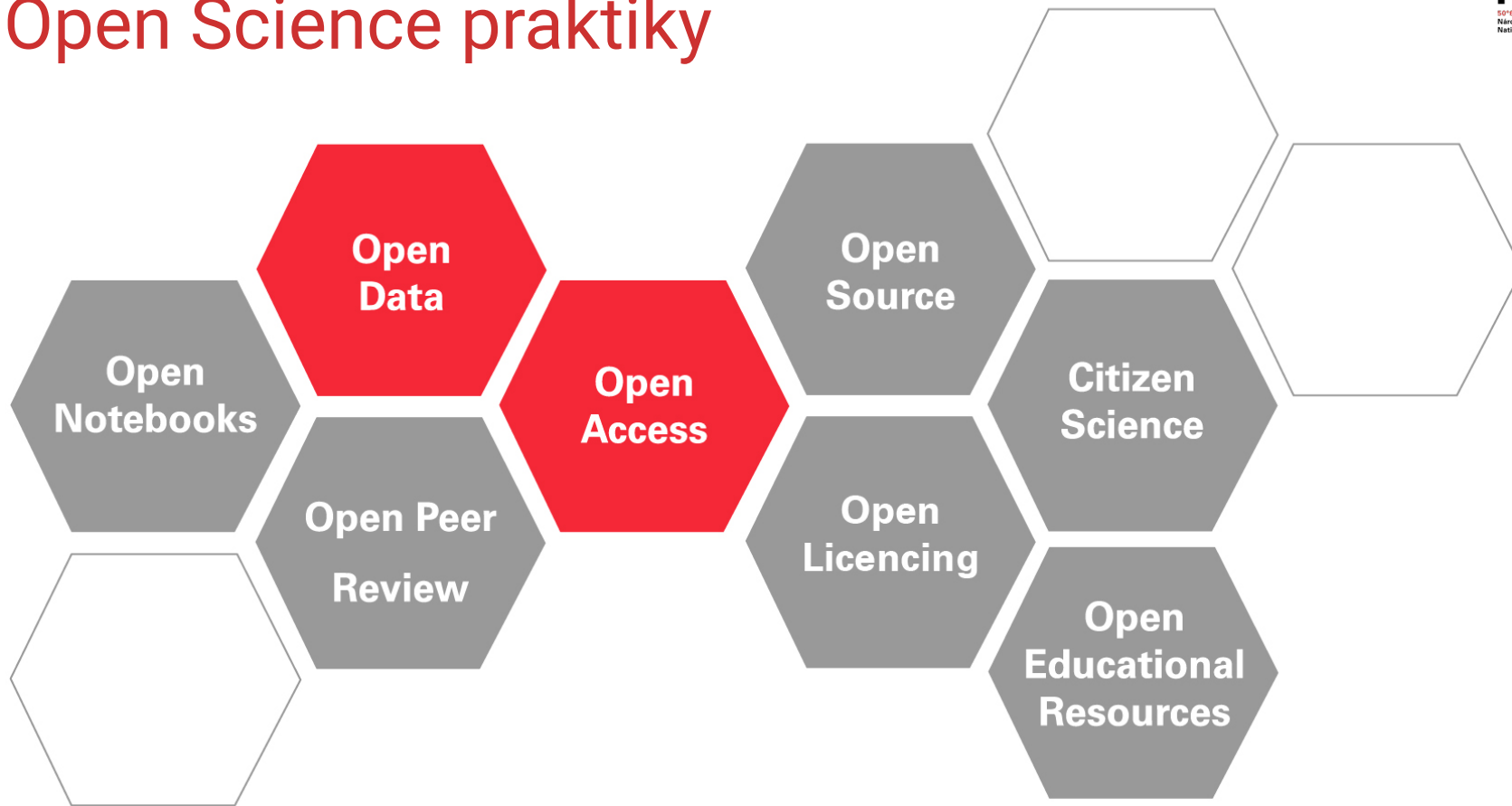
Define Open Science

“The term **Open Science** refers to an umbrella concept that combines various movements and practices aiming **to make scientific knowledge, methods, data and evidence freely available and accessible for everyone**, increase scientific **collaborations** and **sharing** of information for the benefits of science and society, and **open** the process of scientific knowledge creation and circulation to societal actors beyond the institutionalized scientific community.”



Source: [First draft of the UNESCO Recommendation on Open Science](#) (2/10/2020)

Open Science praktiky



Přínosy Open Science

- ↑ **Dostupnost** vědeckých výsledků
 - ↑ **Efektivnost** a **rychlé** šíření
 - ↑ **viditelnost** pro autory i instituce
 - ↑ Ekonomický a sociální **dopad**
 - Usnadňuje **reprodukovatelnost**
 - Možnost **sdílení** & **šetří zdroje**
- > Bud'te **otevřenější** a sdílejte svou vědu pod veřejnými licencemi **CC-BY**!



Image: [UNESCO Open Science elements](#)

Věda v době 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

Disclaimer

Quick search 

Key messages

Achievements of open science

OPEN

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.

Source: [OECD](https://www.oecd.org/coronavirus/policy-responses/why-open-science-is-critical-to-combatting-covid-19/)

Věda v době COVID-19



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](#) [via](#)

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 \(EC, July 2020\)](#)

Věda v době COVID-19

[DEPOSIT](#)[LINK](#)[SEARCH](#)[ABOUT](#)[SIGN IN](#)

Corona Virus Disease

COVID-19

Research outcomes ▾

Search by title, author, abstract, DOI, orcid...

SEARCH

SUMMARY

PUBLICATIONS

238,391

RESEARCH DATA

8,551

SOFTWARE

857

OTHER RESEARCH

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](#)

[OpenAIRE portal: Corona Virus Disease \(COVID-19\)](#)

19/10/2021



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Věda v době COVID-19



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

[The European COVID-19 Data Platform](#)

19/10/2021



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CÍLE UDRŽITELNÉHO ROZVOJE



Přístup k vědeckým informacím je považován za klíčový pro řešení mnoha problémů, kterým v současnosti čelíme

OSN - Organizace spojených národů

Politická podpora



Evropská komise (2016)

Otevřené inovace

- Zapojme do procesu inovace více zúčastněných stran

Otevřená věda

- Usnadníme otevřenější výzkum pomocí digitálních nástrojů

Otevření světa

- Podpoříme větší společenský dopad a spolupráci v Evropě i mimo ni

Evropské standardy pro Open Science

Key implementation components

Open Access

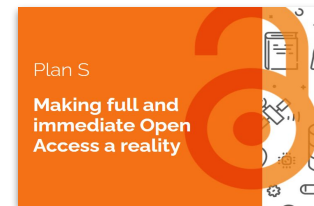
- Horizon 2020/Horizon Europe
- Plan S

Open Research Europe (ORE)

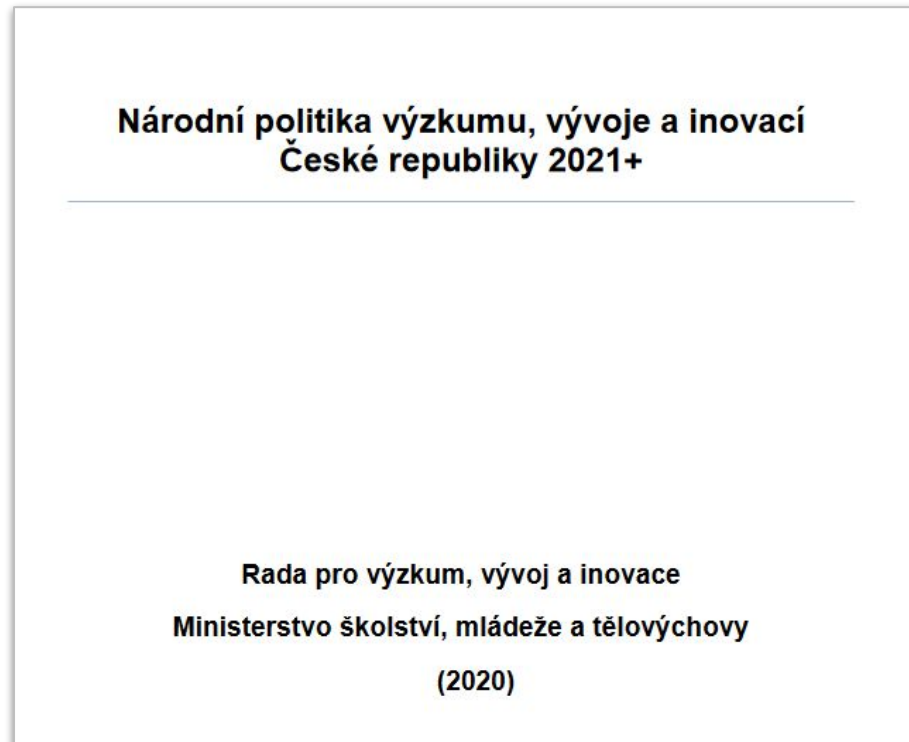
FAIR Data

- GO FAIR Initiative (FAIR principles)
- Horizon Europe

European Open Science Cloud (EOSC)

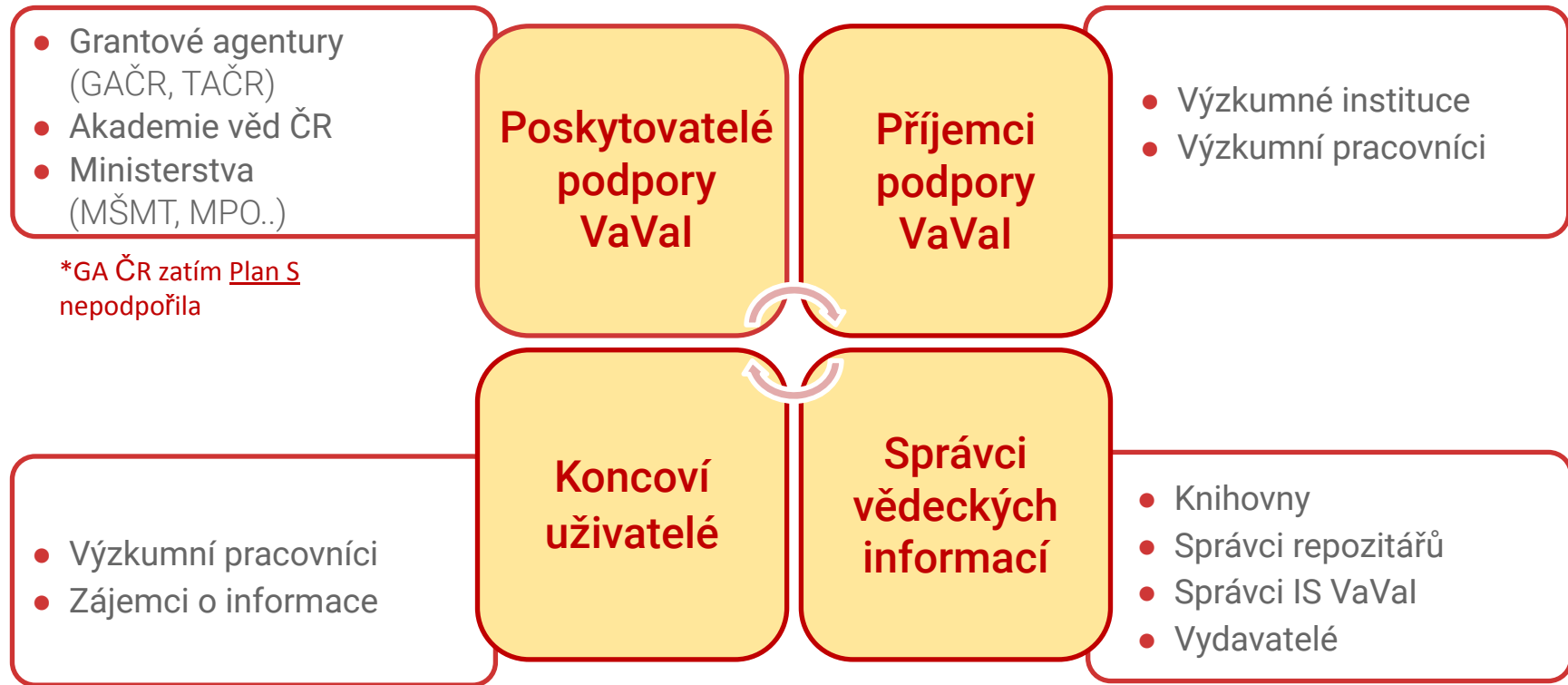


Národní strategie/politika



[Národní strategie OA ČR \(2017-2020\)](#) + [Akční plán](#) | [Národní politika VaVal ČR 2021+](#)

Akteři a cílové skupiny podle Národní strategie...



Národní technická knihovna (NTK)

Národní technická knihovna (NTK)

- největší a nejstarší knihovna technické literatury v ČR
- **součást národní informační infrastruktury**

Primární funkce: poskytování odborných informačních zdrojů a služeb

Cílová skupina: studenti, akademičtí a výzkumní pracovníci, zájemci o technické informace z řad nejširší veřejnosti

Naše motto „**knihovna je služba**“



Národní centrum pro elektronické informační zdroje

- Projekt OP VVV zahájen v roce 2017
- Vybudování **Národního centra CzechElib**



NTK v rámci projektu **CzechElib** zajišťuje od roku 2018 správu a centrální nákup elektronických informačních zdrojů (EIZ) formou předplatného

- pro **125 členských institucí** od cca **50 vydavatelů**
- pokrytí přes **85% výdajů na předplatném** v rámci ČR

Spoluúčast na financování EIZ z prostředků EU skončila v roce 2020

Národní centrum informační podpory VaVal

- Nový [projekt](#) NTK, schválen usnesením vlády ČR ze dne 26. října 2020
- Navazuje na projekt CzechElib

Hlavní účel

- Zajistit centralizovaný **nákup a správu klíčových EIZ** od roku 2021
 - **přechod na Gold OA** - otevřený přístup k vědeckým publikacím
- **Nástroj k podpoře VaVal** - vybudování platformy One-Stop-Shop for Researchers, **Národního repozitáře** a dalších → **ORCID**

Trvání projektu: 1. 1. 2021 - 31. 12. 2027 (**7 let**)

Financování ze státního rozpočtu

Projektové aktivity NCIP VaVal

PA1 - CzechElib

PA2 - Akademické &
firemní služby

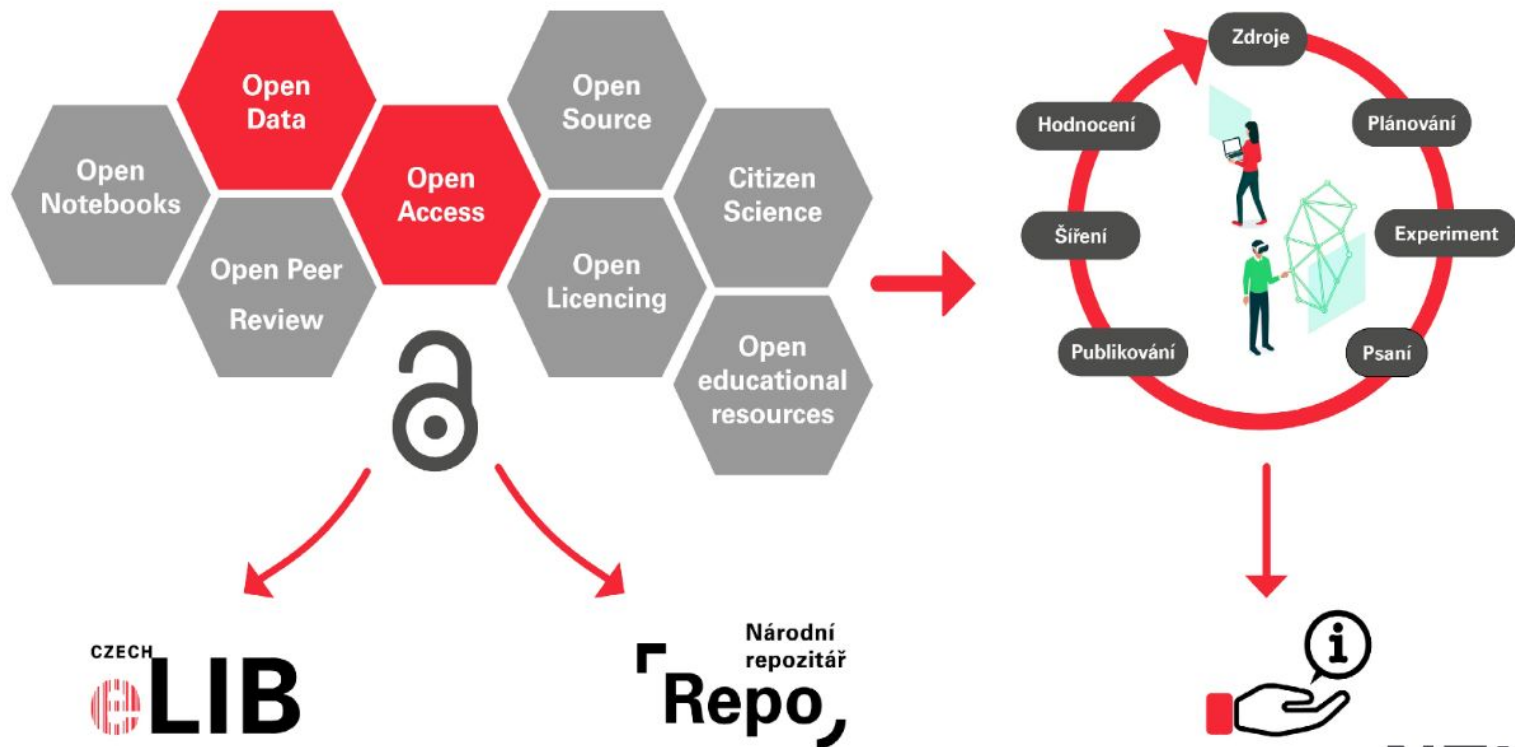
PA3 - Evropské
standardy

PA4 - Národní
repozitář

PA5 - Technické a
SW zabezpečení

PA6 - Řízení
projektu

Open Science – Otevřená věda



Přechod na Gold Open Access

Jednou z ambicí projektu NCIP VaVal, CzechElib

- Od 2021 **přechod od předplatného k EIZ na Gold OA**  model formou transformačních smluv (tam, kde to bude možné)

Pokud se podaří takové **smlouvy sjednat**, budou **články českých autorů** publikovány v rámci centrální úhrady vydavateli (bez dalšího poplatku od autora) a **budou veřejně dostupné**.

Transformační dohody - smlouvy mezi vydavateli a zákazníky (výzkumné organizace, konsorcia) transformující obchodní model - (postupný) přechod od předplatného k platbám za otevřené publikování → dočasný nástroj k prosazení změny na OA jako standard pro vědeckou komunikaci.

Národní repozitář

- Pro ukládání publikačních výstupů výzkumu, zejména **pro potřeby organizací, které repozitář nevlastní**
- Umožní plnění povinnosti **zveřejňovat výsledky výzkumu v režimu otevřeného přístupu** (Green Open Access )
- Snadný přístup ke všem výsledkům VaVal, přinejmenším jejich metadat
- Vybudován v synergiích s IS VaVal a ve spolupráci s národní e-infrastrukturou na **Open Source software - Invenio 3**
- **Interoperabilita** - možná výměna dat mezi ostatními úložišti institucí (např. IS VaVal, zahraničními registry - OpenAIRE)
- Automatické předávání výsledků event. projektů do CORDIS
- Zviditelnění výzkumné práce institucí a zvýšení jejich prestiže

Klíčové pilíře pro implementaci otevřené vědy

dle Evropské komise

Open Access	FAIR Data	Infrastruktura	Dovednosti a kompetence
Hodnocení a odměňování	Nové metriky	Integrita výzkumu	Citizen Science

Národní konsorcium pro ORCID

ORCID in the Czech Republic: towards National consortium

29 Sep 2021, online
14:00 – 16:00 CEST



#researchinstitutions

#repositories

#funders

#universities

#publishers

#researchers

ORCID
Connecting Research
and Researchers

NTK
2,5x 4,5x
4x x
Národní technická knihovna
National Library of Technology

project
National Centre for Information Support of Research,
Development, and Innovation

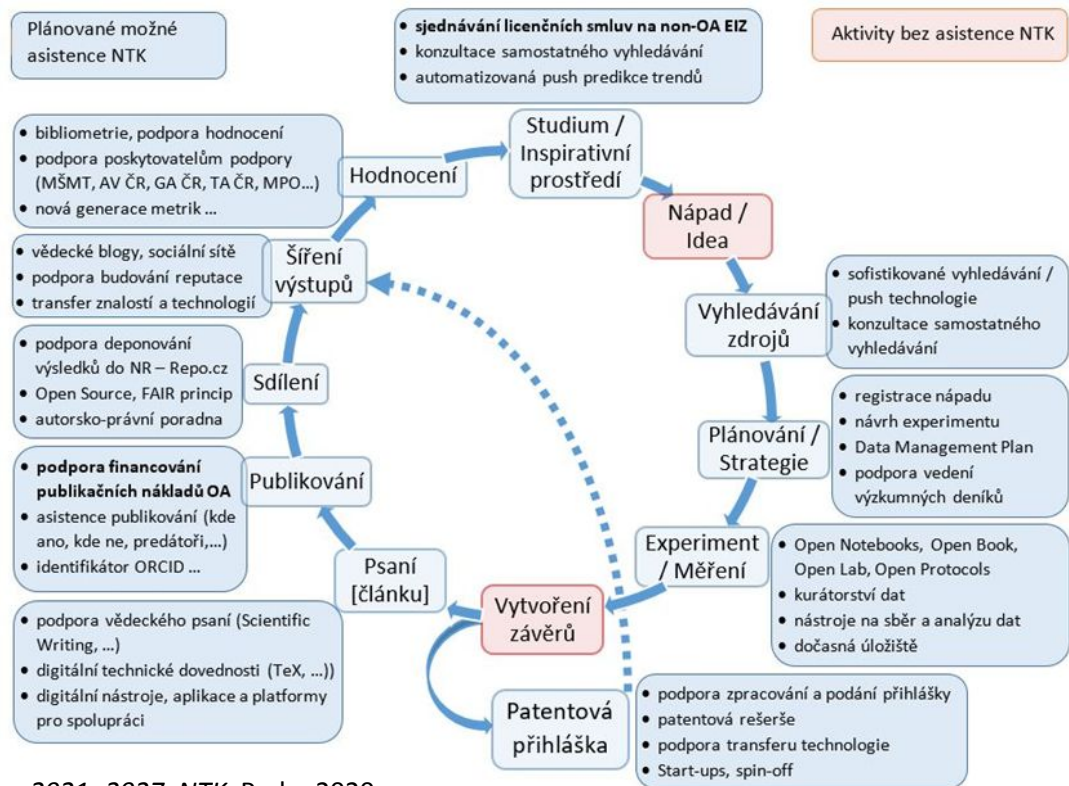
OSS4R – One-Stop-Shop for Researchers

Platforma OSS4R - jednotný přístup ke zdrojům, službám a metodické a instruktážní podpoře

- Open Science
- Vědecká etika a integrita
- Kariérní rozvoj vědců
- Rozvoj přenositelných dovedností
- Ochrana duševního vlastnictví
- Propojení výzkumné a realizační sféry

Fáze výzkumného cyklu:

Dibuszová, E.; Hnátková, E.; Svoboda, M.: *Strategické rámce 2021 -2027, NTK, Praha 2020.*



Nástroj podpory pro VŠ, resp. celé VaVal

Platforma „**One-Stop-Shop for Researchers (OSS4R)**“ - pokročilé asistované a samoobslužné informační a datové služby i centrální podpora Open Science

Cílem je

- **Zvyšovat** kvalitu a efektivitu národního prostředí pro VaVal
- **Snižovat** administrativní zatížení pracovníků VŠ
- **Kultivovat** české prostředí v souladu s evropskými trendy
- **Podpořit** implementaci evropských standardů, zejména v oblasti Open Science, a European Open Science Cloud (EOSC), do českého prostředí.
- Naplnit vizi a strategický cíl NTK “**Inovace podpory komunikace ve výzkumném cyklu**“

Inovace ve vědecké komunikaci



- Jeroen Bosman
j.bosman@uu.nl
- Bianca Kramer
b.m.r.kramer@uu.nl

over 13,000
responses
from >100
countries

The circle, January 2015

<https://101innovations.wordpress.com/>



You can make your workflow more open by ...



- adding alternative evaluation, e.g. with altmetrics
- communicating through social media, e.g. Twitter
- sharing posters & presentations, e.g. at FigShare
- using open licenses, e.g. CC0 or CC-BY
- publishing open access, 'green' or 'gold'
- using open peer review, e.g. at journals or PubPeer
- sharing preprints, e.g. at OSF, arXiv or bioRxiv
- using actionable formats, e.g. with Jupyter or CoCalc
- open XML-drafting, e.g. at Overleaf or Authorea
- sharing protocols & workfl., e.g. at Protocols.io
- sharing notebooks, e.g. at OpenNotebookScience
- sharing code, e.g. at GitHub with GNU/MIT license
- sharing data, e.g. at Dryad, Zenodo or Dataverse
- pre-registering, e.g. at OSF or AsPredicted
- commenting openly, e.g. with Hypothes.is
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. at RIO



 Bianca Kramer & Jeroen Bosman <https://101innovations.wordpress.com>

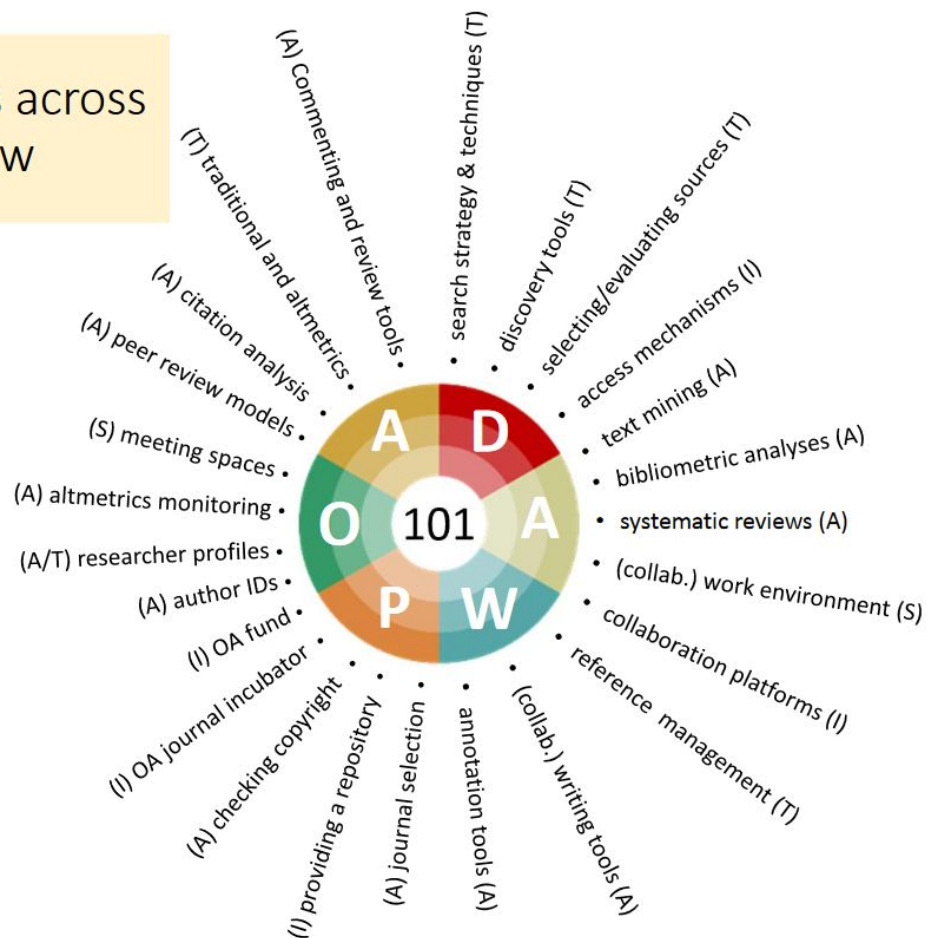
DOI: [10.5281/zenodo.1147025](https://doi.org/10.5281/zenodo.1147025)

Příklad typického workflow



<https://101innovations.wordpress.com/workflows/>

Library services across the full workflow



Service types:

A = advice

I = infrastructure

S = spaces

T = training

And in the research preparation phase:

- advice on OA funding
- advice on data requirements
- access to funding search engines

Děkuji vám za pozornost

Otázky?

eva.hnatkova@techlib.cz

Vědecká komunikace a Open Access

TODAY

TOMORROW

Témata

1. Úvod do Open Science /otevřeně vědy
2. **Vědeckého publikování a Open Access**
3. Správa výzkumných dat a Open/FAIR Data
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5. Open Science v Horizon Europe

Přehled

- Vědecké komunikace
- Co je špatně s vědeckým publikováním
- Vznik a modely Open Access
- Otevřené licence pro znovuvyužití
- Open Access via Plan S
- Right retention strategy
- Transformační dohody/časopisy
- Diskuze

Vědecká komunikace

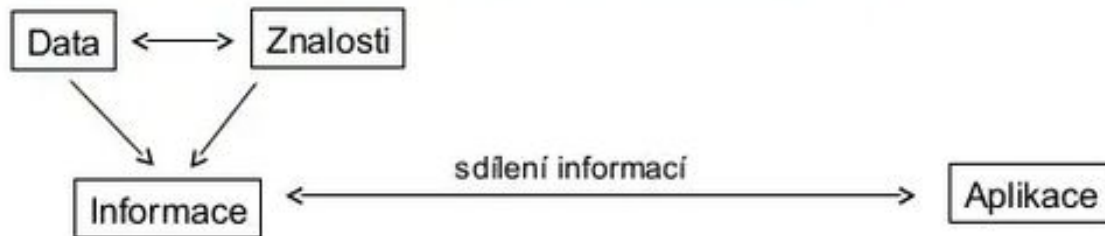
19/10/2021



Komunikace vědeckých informací

Zveřejňování a šíření výsledků je přirozenou součástí
výzkumného procesu

Proč píšeme vědecké články?



Články jsou jedním z nástrojů sdílení informací výzkumu a vývoje, a tedy i prostředkem pokroku v nejrůznějších oblastech lidského bádání.

Z praktického pohledu je to také nástroj, kterým měříme „výkonnost vědy“.

Vladimír Sedlařík. [Publikace v odborných časopisech](#) (UTB, 2012)

Historie vědecké komunikace

Jak to začalo ...od dopisů mezi vědci až po periodika



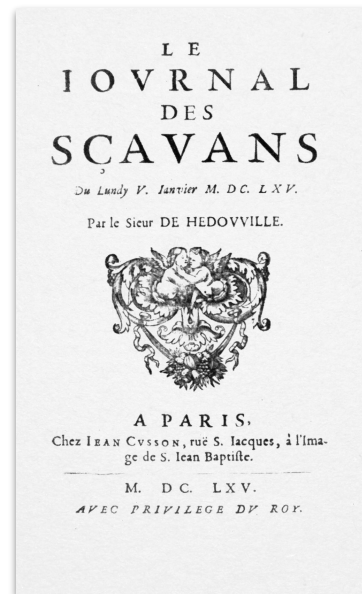
Učené společnosti před 350 lety

Journal des sçavans

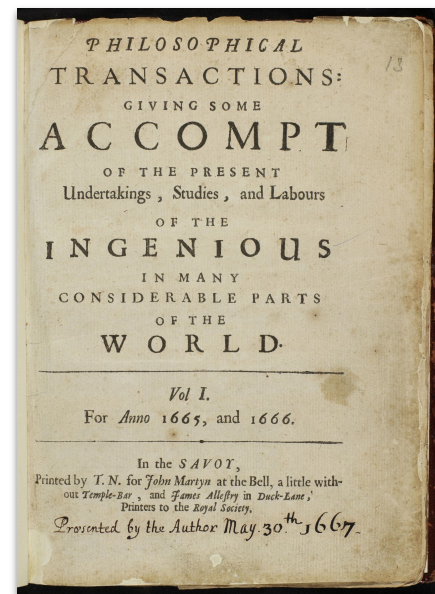
- Pondělí 5. ledna **1665**
- Ludvík XIV - král Slunce, Denis de Sallo, Versailles, Racine, Molière, ...

Philosophical Transactions of the Royal Society

- Pátek, 6. března **1665**
- Charles II, Boyle, Wren, ...



Journal des Sçavans



Philosophical Transactions

Oba obrázky jsou  z <https://en.wikipedia.org/>, 29. září 2020

Vědecká komunikace předtím a dnes

- Původní cyklus: vědec napíše -> vydavatel zrediguje a upraví pro tisk -> vytiskne a prodá za předplatné
- Včasnost nebyla zásadní
- Nature (1869), Science (1880), Elsevier (1880)
- ...
- Problémy: cena, dostupnost, rychlost –peer review trvá dlouho, „Publish or Perish“
- Z vědecké komunikace se stalo **zboží**
- Vydavatelé našli **bonanzu** >>> „Serials crisis“ začal už ve 30. letech!!! a vrcholí těsně před internetem



Publikování

Legálně zbrojení a farmaceutický průmysl, kromě toho drogy a obchod s bílým masem - to jsou konkurenti vydávání vědeckých časopisů pokud jde o výnosnost

např. Elsevier je posledních 30 let na NYSE trvale v černých číslech.

Ochota k jakékoliv změně je minimální

Dnes na existuje na trhu pro publikování oligopol
 5 největších komerčních nakladatelů:

Elsevier, Springer, Wiley, Taylor & Francis and Sage,
 kteří pokrývají více jak 50 % marketu.

Operating profit margins

- 37% - Elsevier **in 2019**
- 29% - T&F
- 27% - Wiley
- 23% - Springer Nature

[Bloomberg 2020](#)

Proč je nutné publikovat v top časopisech?

- Našlo se „**objektivní**“ měřítko kvality pro hodnocení vědy
 - pro hodnocení jednotlivců,
 - ústavů, institucí, mj. také kvůli
 - přidělování prostředků
- Za publikování svého článku jsou autoři ochotni vzdát se svých **majetkových práv** (zejména v STM)
- Toho vydavatelé využívají a rádi autorům vyhoví -> článků přibývá 5 % ročně
- Vydavatelům nutno přiznat obrovské inovace proti tištěným časopisům, ale **růst cen předplatného je neúnosný!**

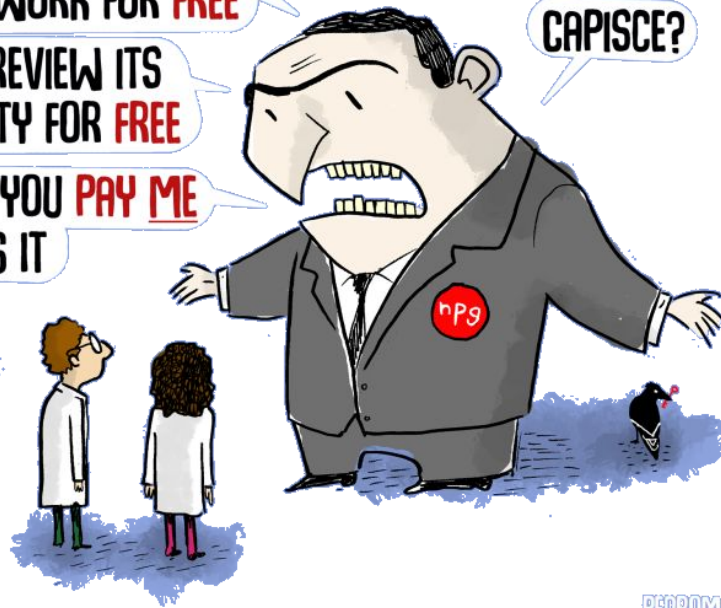
LOOK YOU NERDS IT'S A SIMPLE BUSINESS MODEL

YOU HAND ME THE FRUIT
OF YOUR WORK FOR **FREE**

YOU REVIEW ITS
QUALITY FOR **FREE**

AND THEN YOU **PAY ME**
TO ACCESS IT

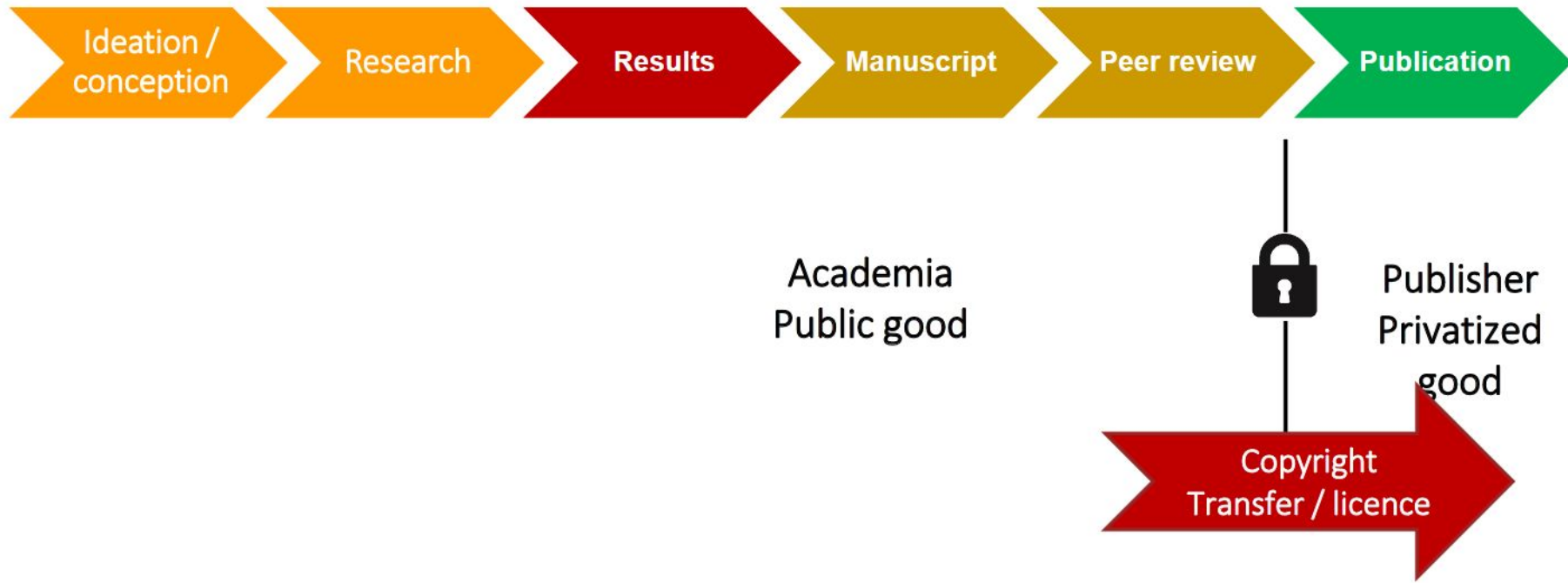
CAPISCE?



PEBROMICS

Publikační proces a tok peněz

Authors, reviewers and editors are not paid



Co je špatně s vědeckým publikováním dnes?

Krize

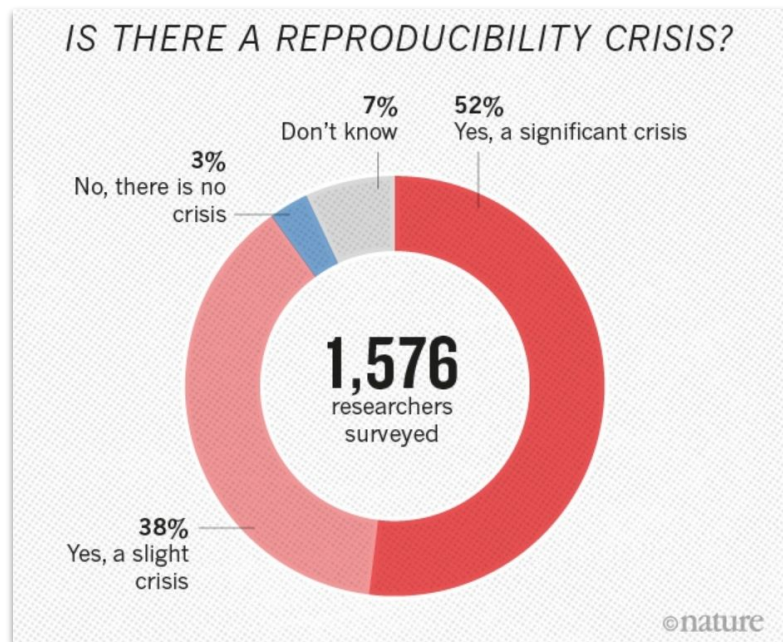
- **Access to research:** most of the research (cca 75%) is behind paywalls
- **Increasing prices:** of subscription in last 30 years
- **Evaluation:** driven by metrics controlled by publishers
- **Reproducibility:** 50% of research is not reproducible!!
- **Transfer of rights:** authors have to pass their IPRs /copyright to publishers



<https://paywallthemovie.com/>

Reproducibility “crisis”

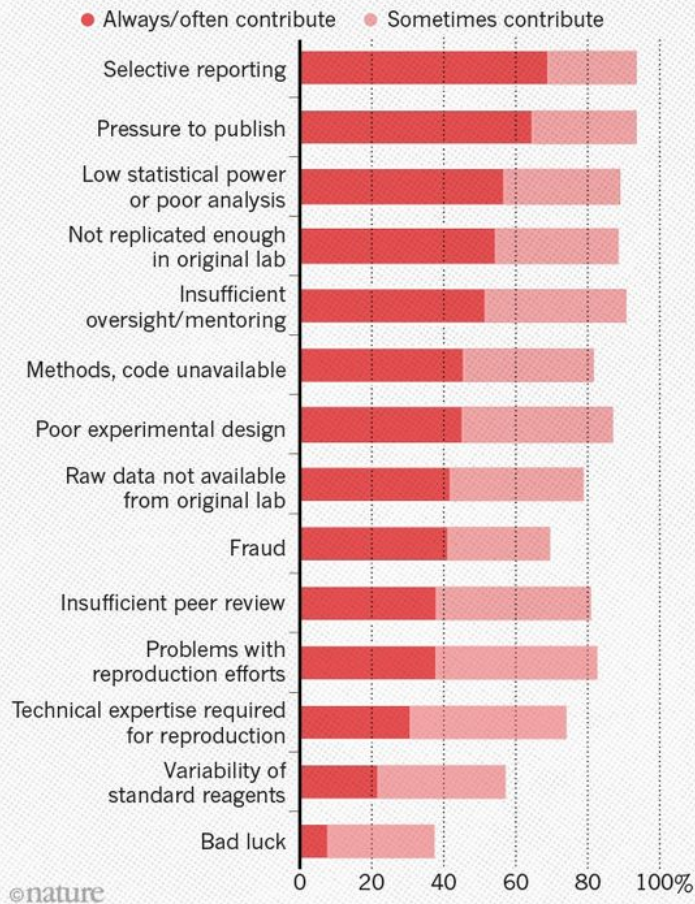
- 50% of research is not reproducible!!



[Monya Baker. \(Nature, 2016\)](#)

WHAT FACTORS CONTRIBUTE TO IRREPRODUCIBLE RESEARCH?

Many top-rated factors relate to intense competition and time pressure.



Další adaptivní chování



Contents lists available at [ScienceDirect](#)

Research Policy

journal homepage: www.elsevier.com/locate/respol



Self-citations as strategic response to the use of metrics for career decisions

Marco Seeber^{a,*}, Mattia Cattaneo^b, Michele Meoli^b, Paolo Malighetti^b



^a Department of Sociology, Ghent University, Korte Meer 3, 9000 Ghent, Belgium
^b Department of Engineering, University of Bergamo, Via Pabusio 7b, 24044 Dalmine, BG, Italy

[Marco Seeber et al. \(Elsevier, 2019\)](#)

Increase of **self-citations**

- +179 % in 12 years in Italy

other types of manipulation of indicators

- abuse of co-authorship, fake peer-reviews

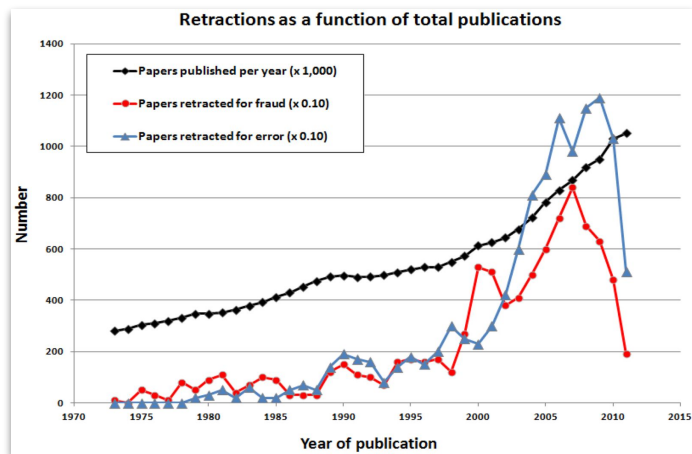
Další adaptivní chování

Increase in **retract rate**

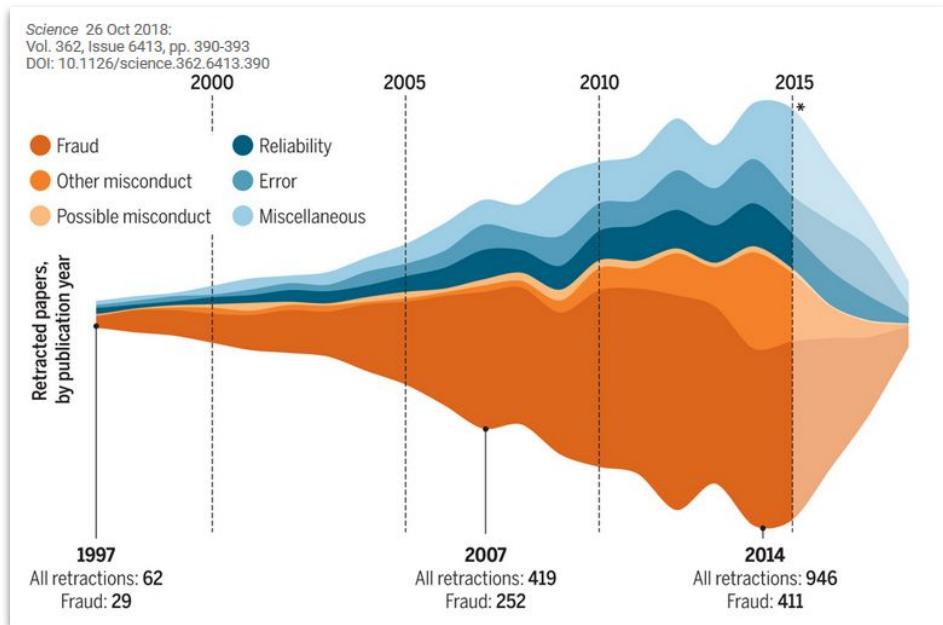


Particularly in **highly ranked journals**

- errors
- misconduct
- fraud



R. Grant Steen et al. (Plos, 2013)



Jeffrey Brainard: Rethinking retractions (Science, 2018)

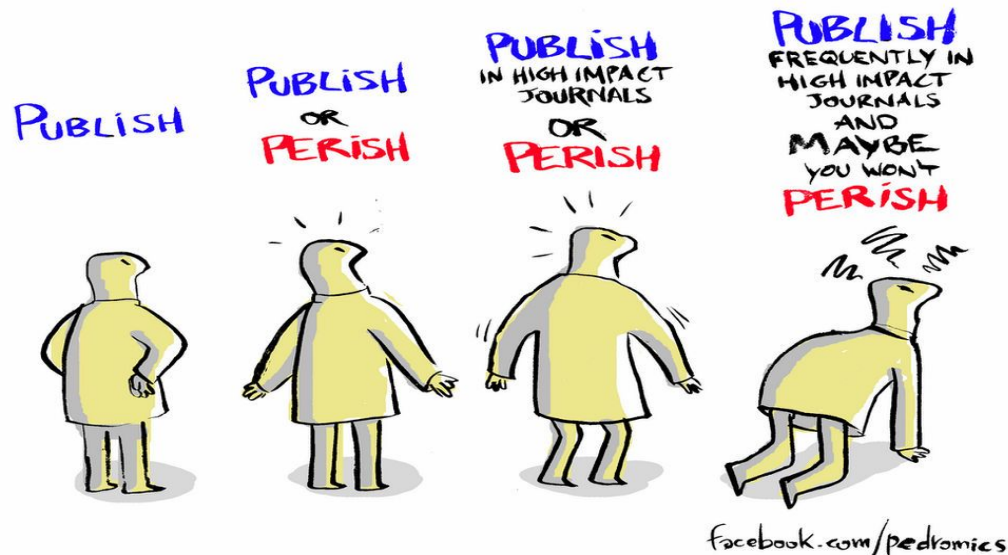
Proč komunikujeme vědecké výsledky?

Idealistická odpověď

- podporovat vědu a společnost
- šířit nové znalosti

Realistická odpověď

- k posílení naší kariéry



To, kde publikujete, je důležitější než to, co publikujete!

Původ Open Access

Vznik Open Access

- 1970 - anonymous ftp archives, "bulletin boards", USENET
- 1991 - arXiv.org - vznik preprintových serverů
- 2002 - **B**udapest OA Initiative – George Soros - **altruistická**
- 2003 - **B**ethesda Statement on Open Access Publishing – US NIH – **pragmatická**
- 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 podepsal 3letý **cost-neutral** kontrakt na OA pro jaderné fyziky
- 2015 - MPDL „**there is enough money in the system for a transition to OA**“
- 2016 - Council of Europe Competitiveness Council: „**OA by 2020**“
- 2018 - **Plan S** (cOAlition S) ...

Definice: otevřený přístup

„**Open Access (OA)** refers to **free, unrestricted** online **access** to research outputs such as journal articles and books. OA content is open to all, with **no access fee**“

([Nature Research](#))

„**Open Access (OA)** literature is digital, online, free of charge, and **free of most copyright and licencing restrictions**“

([Peter Suber, Harvard 'Open Access' project](#))



Definice: otevřený přístup

Otevřený přístup (Open Access) k výsledkům výzkumu financovaného z veřejných zdrojů znamená poskytnutí **bezplatného** a **neomezeného** online přístupu koncovému uživateli k vědeckým informacím s možností dalšího **opakovaného využití** těchto informací.

Zajišťuje šíření vědy a výměnu poznatků, podporuje inovace a maximalizuje přínosy vědy za plného respektování právního řádu, zejména autorských práv a práv průmyslového vlastnictví.

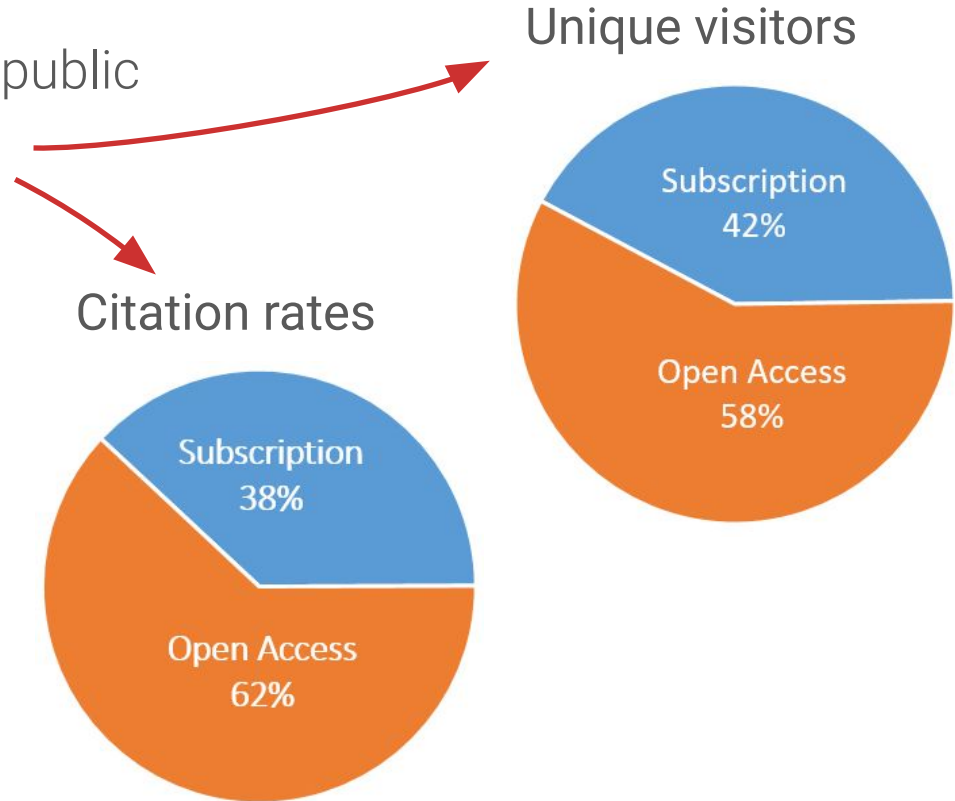
„Vědeckými informacemi“ - vědecké publikace a výzkumná data.

Motivace pro Open Access

- **Vědecká:** platební brány (paywalls) brání šíření výsledků výzkumu ve vědecké komunitě
- **Společenská:** platební brány (paywalls) brání přijímání výsledků výzkumu společností
- **Etická:** výsledky výzkumu financovaného z veřejných zdrojů by měly zůstat veřejně dostupné
- **Ekonomická:** model předplatného publikování se stal neudržitelným

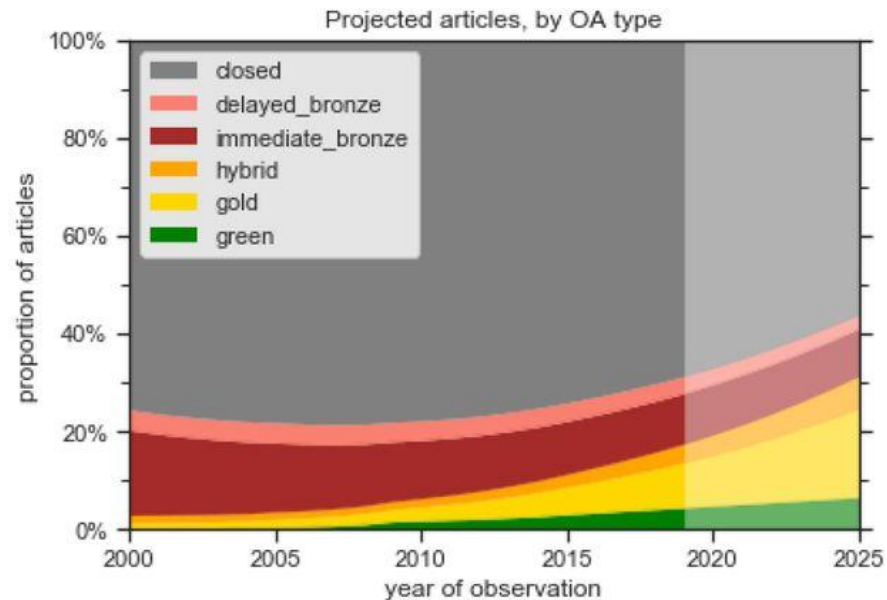
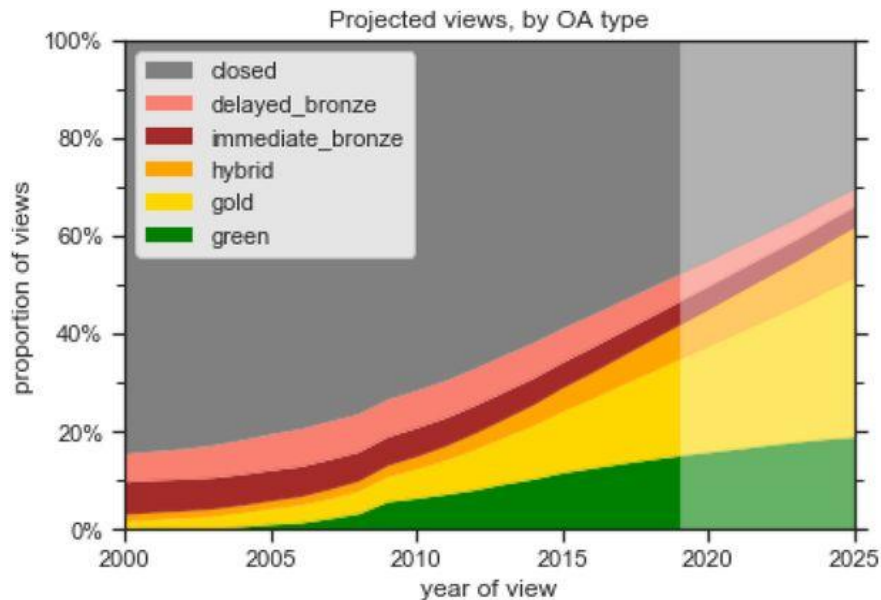
Benefity Open Access

- opens access to research & to public
- increases visibility & citations
- increases (social) impact
- facilitates reproducibility
- shares & saves resources
- drives innovation
- has global impact
- complies with funder policies



Open Access články mají vyšší viditelnost

Estimation: “By 2025, 44% of all journal **articles** will be OA, and 70% of article **views** will be to OA articles.”



This one and two preceding slides: [H. Piwowar et al. \(bioRxiv, 2019\)](https://doi.org/10.1101/000000)

Rozdíl mezi předplatným a Open Access

Tradiční model	Open Access (OA)
• předplatné časopisů platí instituce knihovna , konsorcium • Přístup k publikacím jen pro členy dané instituce • Přístup pro ostatní je zpoplatněn	• Volný přístup ke čtení všem • Některá verze manuskriptu je dostupná v repozitáři (Green ) • Nebo je finální verze dostupná v časopise (Gold )
	

Open Access modely

Open Access: zlatá vs. zelená cesta



GOLD



GREEN

Zlatá cesta - vydavatel umožní okamžitý otevřený přístup k vědeckým publikacím na stránkách časopisu/publikační platformě. Může, ale nemusí být vyžadován publikační poplatek.

Autoarchivace – autor publikuje v časopise s předplatným a **archivuje** některou verzi rukopisu v otevřeném repozitáři, která je následně volně dostupná.

Modely OA - variace Gold cesty



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, ...

Modely OA – alternativa ke Gold OA

Green OA → **via self-archiving**

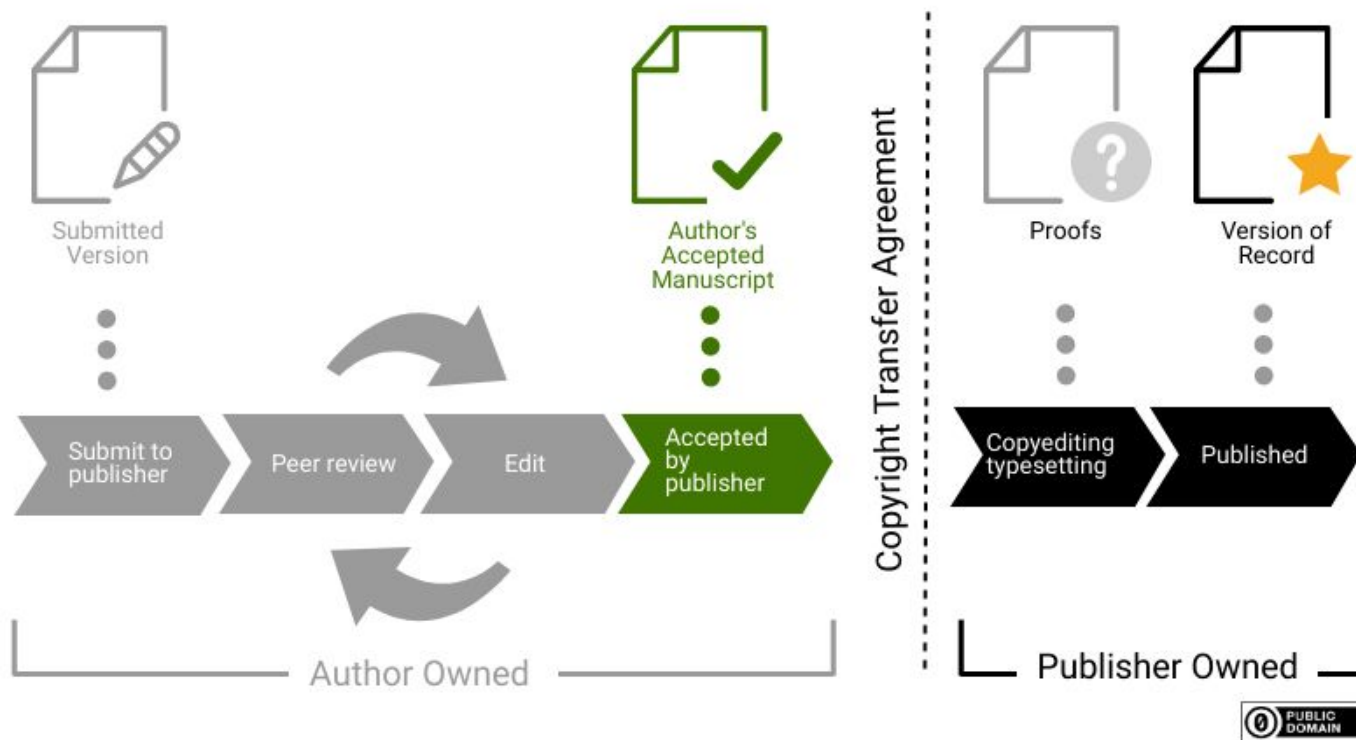
- published in a toll-access journal and a fulltext copy is available in an OA repository
- no payment, licensed journals, self-archiving, institutional repositories

Disadvantages:

- continuing subscriptions => no change in money flow
- delayed access - embargo 6, 12, 24 months!
- unclear what is available in the directory: author original manuscript (AOM) × author accepted manuscript (AAM) × version of record (VoR) ?

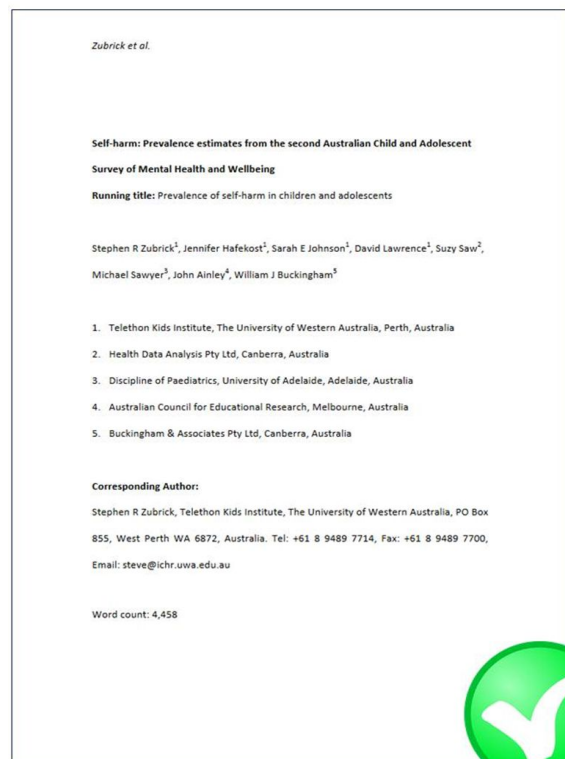
[DOAR \(Directory of Open Access Repositories\)](#)

Publikační proces - copyright transfer



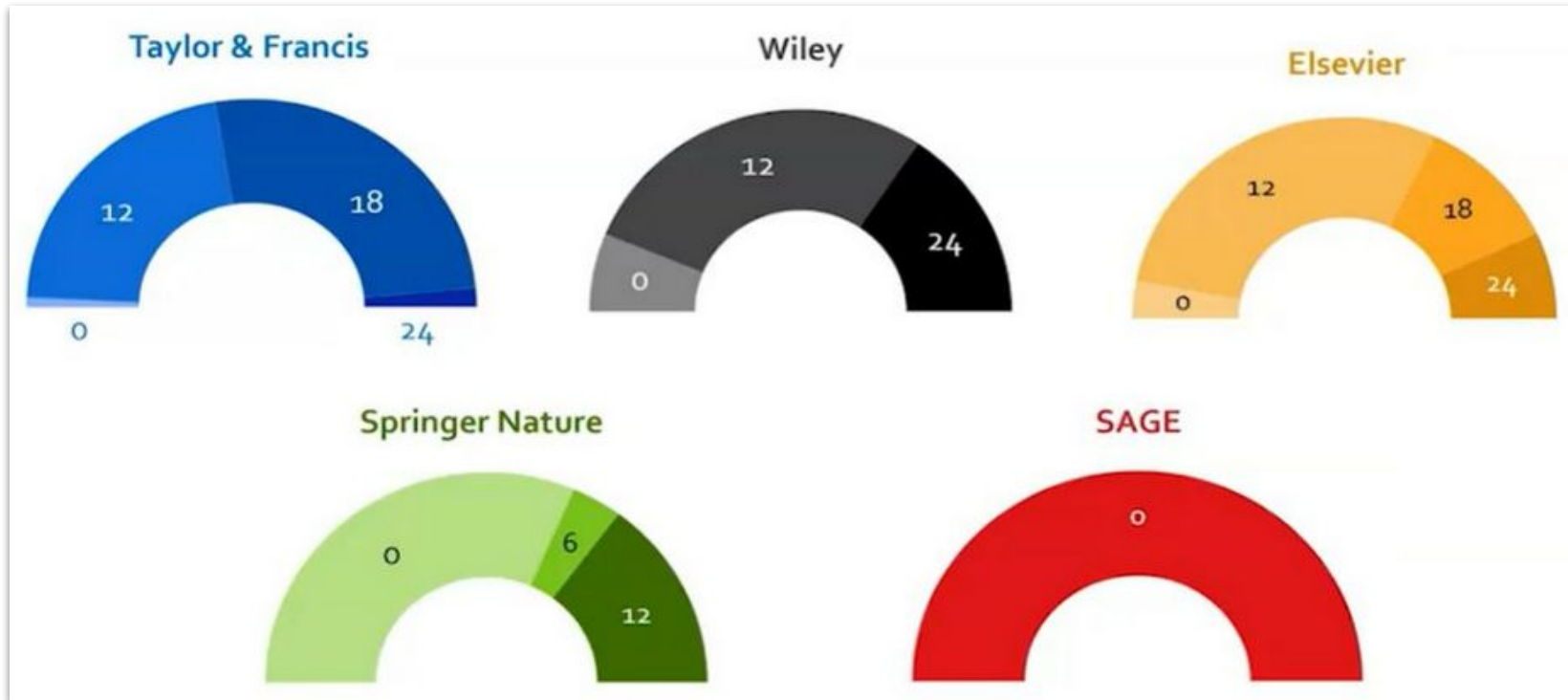
<https://canterbury.libguides.com/sharepublish/openaccess>

Author Accepted Manuscript vs. Version of Record



Embargo periods by 5 Big publishers (months)

“Pay now or wait a year: Embargos as a selective barrier to access”



SHERPA/RoMEO – publisher and journal OA policies

Jisc Digital Resources > Open Access

Sherpa Romeo

About
Search
Statistics
Help
Support Us
Contact
Admin

Search

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

Journal Title or ISSN

Search

Publisher Name

Search

Browse by Country

Browse by Publisher

[Sherpa Romeo](#)

19/10/2021



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[Creative Commons](https://creativecommons.org/)

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- Pojem 'dílo' a 'autor'
- Český autorský zákon vychází z principů kontinentálního práva
- Přiznává vznik práva automaticky se vznikem díla, tzn. autor nemusí nic dělat a právo samovolně vzniká při vzniku díla.
- Ten, kdo dílo vytvořil, je jeho autorem a z autorství díla pak plynou určitá práva k dílu.
- Práva osobnostní a majetková
- zaměstnanecké dílo (zaměstnavatel zpravidla vykonává majetková práva), školní dílo

Autorské právo

Práva dvojího druhu

- práva **osobnostní** (morální) - spojena s osobou autora, tj. jsou nepřevoditelná a autor se jich nemůže vzdát
- Práva **majetková** - výkon majetkových práv může být poskytnut jiné osobě formou licenční smlouvy

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- Licence může být výhradní nebo nevýhradní – v případě výhradní licence se autor zavazuje, že licenci neposkytne nikomu jinému.

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All rights reserved	Some rights reserved	No rights reserved
		
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Work CANNOT be adopted, copied, published or used without the owner's permission	Work MAY be used without permission but as per the rules set by the owner	Work CAN be adopted, copied, published or used without the owner's permission

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[Creative Commons](https://creativecommons.org/)

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- stanovují podmínky šíření výstupů výzkumu (právní aspekt)
- pokud licence není uvedena, pak jsou „všechna práva vyhrazena“

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Rights



Share



Remix

Obligations



Attribution



Share alike



Noncommercial



No Derivatives

Pojem Creative Commons vytvořil Lawrence Lessig, právník pro síť v roce 2001

Creative Commons - veřejné licence

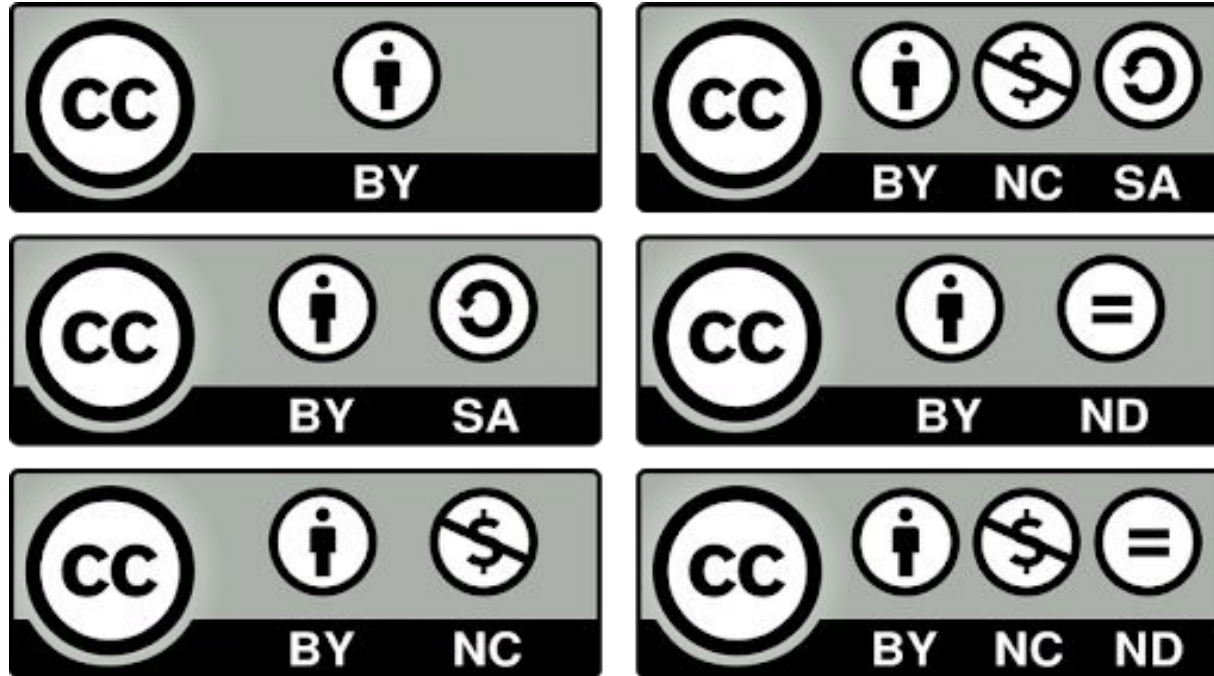


Image by [Ignasi Labastida i Juan](#)

Understanding CC Licences

CREATIVE COMMONS LICENSES

OVERVIEW FOR STUDENTS AND TEACHERS



ATTRIBUTION REQUIRED

BY	BY-SA	BY-ND	BY-NC	BY-NC-SA	BY-NC-ND
					
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.

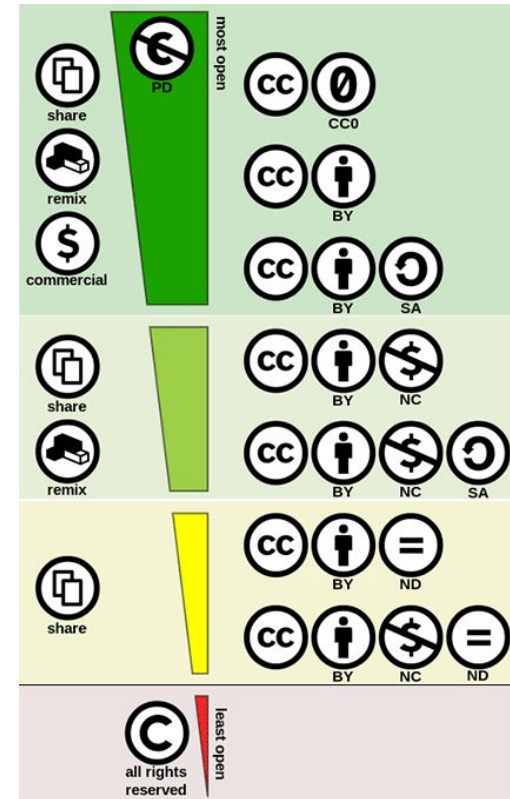
← Least restrictive
→ Most restrictive

ATTRIBUTION FREE OPTIONS

PUBLIC DOMAIN	CREATIVE COMMONS ZERO
	
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 Access via Plan S

Open Access via Plan S

Cílem je akcelarovat přesun na OA

- cOAlition S za Plánem S
- Národní poskytovatelé financí
- Politika OA publikování
- Okamžitý a plný přístup
- 10 principů k implementaci
- Autor/instituce si uchová práva
- CC-BY licence on AAM/VoR



[cOAlition S home](#) | [Plan S](#) | [Principles and Implementation](#) | [Rights Retention Strategy](#)

Plan S: založený na silných principech

Vyžaduje aby od roku 2021:

- byl volný přístup (bez jakýchkoliv poplatků/omezení) k publikacím, které jsou výsledkem výzkumu financovaného členskými organizacemi
- byl okamžitý přístup, tj. **žádné časové embargo**;
- autorům/institucím zůstaly autorská (majetková) práva;
- vědecké články měly standardně veřejnou licenci **CC BY**;
- ceny a smlouvy vydavatelů byly **transparentní**;
- výsledky byly hodnoceny podle přínosu, ne podle toho v jakém časopisu byly publikovány (viz deklarace DORA);
- hybridní model je přijatelný jen pokud existuje transformační smlouva a nanejvýš do konce roku 2024.

3 způsoby jak být v souladu s Plánem S

Gold route	Green route (see RRS)	Transformative route
Open Access journals/platforms • Authors publish in Open Access journals / platforms • cOAlition S funders WILL financially support publication fees for authors	Subscription journals • Authors can publish in subscription journals and make either the Author Accepted Manuscript (or Version of Records) available in repository at time of publication • cOAlition S funders DO NOT financially support publication fee in „hybrid“ subscription journals	Hybrid/subscription journals • Authors publish in a journal with a Transformative Arrangements • cOAlition S funders CAN financially support Open Access under Transformative Arrangements

<https://www.coalition-s.org/principles-and-implementation/>

Right Retention Strategy

Strategie k uchování práv

Plan S & Rights Retention

#RetainYourRights

www.coalition-s.org/rights-retention-strategy

Helping researchers
retain their rights
and share their work
Open Access

cOAlition S

Hosted by the European Science Foundation
info@coalition-s.org • www.coalition-s.org

Example where the Author Accepted Manuscript (AAM) is shared CC BY



Funder agreement

- At least the AAMs of all peer reviewed publications are published with a CC BY licence and no embargo



Owned by the author

- Upon submission, the author informs the publisher that the AAM arising from this submission is licensed CC BY in accordance with the grant's open access conditions
- Acceptance following peer review
- Author Accepted Manuscript (AAM)
Upon publication, the author immediately deposits the AAM in an Open Access repository (zero embargo, CC BY licence)



Managed by the publisher

- Licence to Publish
- Version of Record (VoR)



Plan S

Making full and immediate Open Access a reality

Plan S: Rights Retention Strategy

Rights Retention Strategy (RRS)

What is in it for Authors? **Ownership!**

- Authors should not give away to publishers what they rightfully own.
- Ownership of the AAM means authors can reuse and share it as they see fit, without restriction imposed by the publisher.
- The publisher can own the Version of Record (VoR)
- Publishers provide the means to organize peer review but ...
 - peer review is career out for free
 - peer review is part of the scholarly discourse
- This process is paid for but ...
 - in subscription journals, by the subscription
 - in Gold OA journals by the APC

Rights Retention Strategy (RRS)

Princip

- The RRS is based on a simple principle: the peer-reviewed **Author Accepted Manuscript (AAM)** is the intellectual creation of the **authors** and belongs to them.
- Delivering publication services does not entitle publishers to ownership of the AAM, which remains the of the author. Publication services should be paid for, but not for the ownership of the AAM.
- Funders and universities should ensure that they researchers are not deprived of essential intellectual ownership rights, a valuable asset.

Payment for services ≠ claim ownership

I pay a decorator to
decorate my house:

- Strip wallpaper
- Sand woodwork
- Undercoat and paint window frames



<https://pixabay.com/photos/painter-painting-lackierer-3009887/>

I pay for services:

- I do not expect the decorator to own the house after he has painted it
- I do not hand over the keys



<https://pixabay.com/photos/house-keys-key-security-door-key-4521073//>

cOAlition S webinar: [The Rights Retention Strategy and what it means for EU13 & Associated Countries](#)

Publisher permissions versus RRS

The complexity of publisher “permissions”:

- Embargoes differ between journals
- Conflicts between publisher’s and funder’s policy
- Time spent checking, applying, and releasing embargoes for different publishers
- Additional and different restrictions on dissemination:
 - personal website OK, but not in institutional repository.
 - free repositories OK, but not in commercial ones (ResearchGate)
 - invited groups of limited size OK, but not beyond.
- AAM locked up for months

cOAlition S webinar: [The Rights Retention Strategy and what it means for EU13 & Associated Countries](#)

Publisher permissions versus RRS

The complexity of publisher “permissions”:

- Embargoes differ between journals
- Conflicts between publisher's and funder's policies
- Time spent checking, applying, and negotiating permissions for different publishers
- Additional and different restrictions on reuse
 - personal website OK, but not for teaching
 - free repositories OK, but not in institutional repositories (ResearchGate)
 - invited groups of limited size OK
- AAM locked up for months

The simplicity of the RRS:

Always include the
CC BY claim:

*“A CC BY licence is applied to the
AAM arising from this submission”*

and

**Your AAM is yours to reuse
and share as you please!**

cOAlition S webinar: [The Rights Retention Strategy and what it means for EU13 & Associated Countries](#)

Transformační smlouvy/časopisy

Transformační dohody/časopisy

Main ambition is the **transition from subscription to Gold Open Access** model

- **Transformative Journals** - a subscription/hybrid journal that is committed to transitioning to a fully OA journal
- **Transformative Agreements** - type of contract negotiated between institutions (libraries, national and regional consortia) and publishers that transform the business model from subscription (**pay for reading**) to one (**payments for publishing**) in which publishers are remunerated a fair price for their OA publishing services.

"Ďábel je v detailech"

Transformative agreements in the world

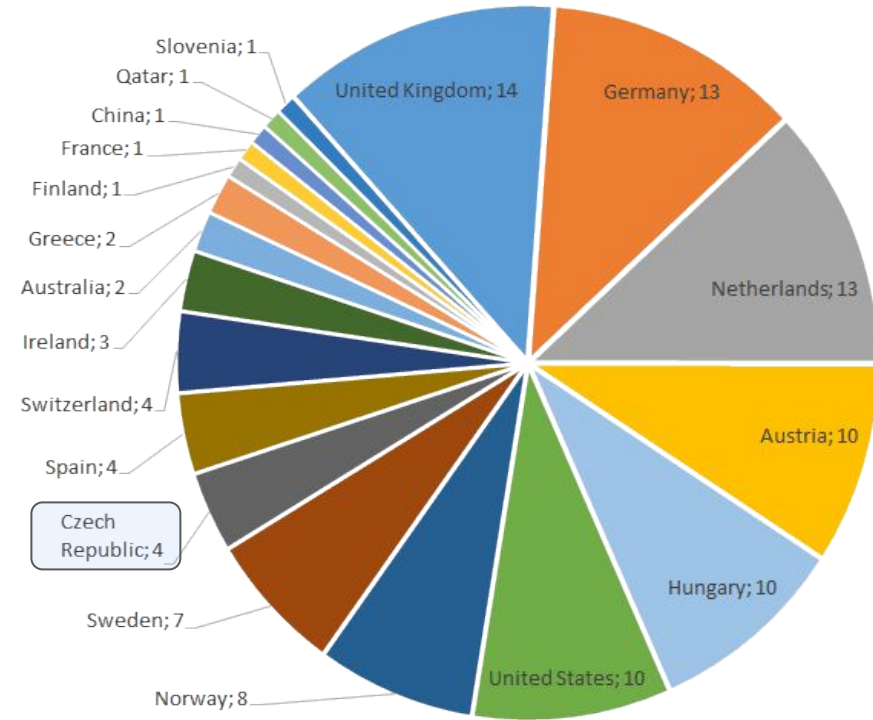
Read-and-Publish: The publisher receives payment for reading and payment for publishing bundled into a single contract.

Publish-and-Read: The publisher receives payment only for publishing and reading is included for no additional cost.

cost, copyright, transparency, transitional

<https://scholarlykitchen.sspnet.org/2019/04/23/transformative-agreements/>

Transformative agreements by country



Source: ESAC ([Efficiency and Standards for Article Charges](#)), 25. 8. 2020

Transformative Arrangements (CzechElib)

[Search current calls for papers](#) [Try the Taylor & Francis Journal Suggester](#)

 **AUTHORSERVICES**
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Open access publishing for researchers in the Czech Republic

New read & publish agreement with CzechElib

[Back to Open access agreements](#)

Corresponding authors based at participating institutions in the Czech Republic are now eligible to publish open access in Taylor & Francis and Routledge [Open Select](#) (hybrid) journals at no cost to themselves.

 [Keep up-to-date with Taylor & Francis Insights](#)

ESAC Registr transformačních smluv

Register your transformative agreements!
The registry is available for download here.

Search:

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

Zdroj: [ESAC Transformative Agreement Registry](#), 18. 10. 2021

ESAC Registr transformčních smluv

CZECH
eLIB

Search

Czech

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

E-resources
News
Member institutions
Open Access
About CzechELib
Contacts

Instructions for authors

[Homepage](#) / [Open Access](#) / Instructions for authors

CzechELib negotiated with several Electronic information resource (EIRs) providers a discount or a complete waiver of Open Access publishing fees for members of its consortium. For the publishers listed below, authors will find detailed instructions on how to take advantage of these benefits.

Instructions for authors

Cambridge University Press Free and unlimited Open Access	Emerald Free and unlimited Open Access publishing for corresponding	Taylor & Francis Free Open Access publication of a limited number of articles	Cambridge University Press Emerald Taylor & Francis
---	---	---	---

Otázky?

eva.hnatkova@techlib.cz

Správa výzkumných dat a Open/FAIR Data

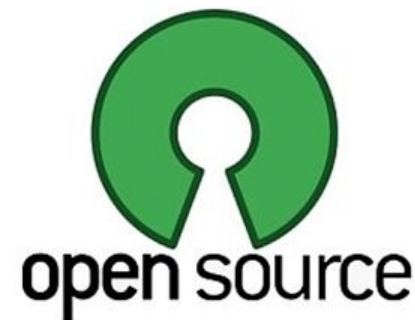
TODAY

TOMORROW

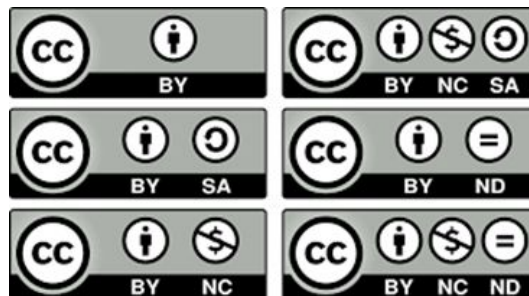
Témata

1. Úvod do Open Science /otevřeně vědy
2. Vědeckého publikování a Open Access
3. **Správa výzkumných dat a Open/FAIR Data**
4. Open Science a Citizen Science v praxi
5. Open Science v Horizon Europe

Open Science v praxi



OPEN LICENCING



[FOSTER Taxonomy of Open Science](#) | [Masuzzo & Martens \(2017\)](#)

Přehled

- Původ otevřeného přístupu k datům
- Správa výzkumných dat
- Open/FAIR data
- FAIR principy
- Plán správy výzkumných dat
- Nástroje pro DMP
- Diskuze

Opening the discussion about Open Research Data

Původ otevřeného přístupu k datům

In Jan **2004**, Ministers of science and technology of OECD countries met in Paris and discussed the **need for international guidelines on access to research data**.

- governments of the **30 OECD countries** + China, Israel, Russia & South Africa
- adopted a [Declaration on Access to Research Data from Public Funding](#) => recognised the importance of access to research data
- invited to develop a **set guidelines based on commonly agreed principles** to facilitate optimal cost-effective access to digital research data from public funding to be endorsed by the OECD Council at a later stage".



Původ otevřeného přístupu k datům

2004 - OECD: [Declaration on Access to Research Data from Public Funding](#)

2006 - OECD Council endorsed Recommendations for sharing research data
 'Principles and Guidelines for Access to Research Data from Public Funding'

- highlighted a perception that OECD countries were **suffering low returns on public funding for research because of a near-absence of data reuse**

2009 - Research cannot flourish if data are not preserved and made accessible.

All concerned must act accordingly. [Data's shameful neglect](#) (Nature, 2009)

2014 - EC /H2020: The Open Research Data Pilot Requirements

2019 - [Directive \(EU\) 2019 on open data and the re-use of public sector information](#)

2021 - EC /Horizon Europe: DMP + FAIR Data (mandatory)

Science in the time of COVID-19



[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

The European COVID-19 Data Platform

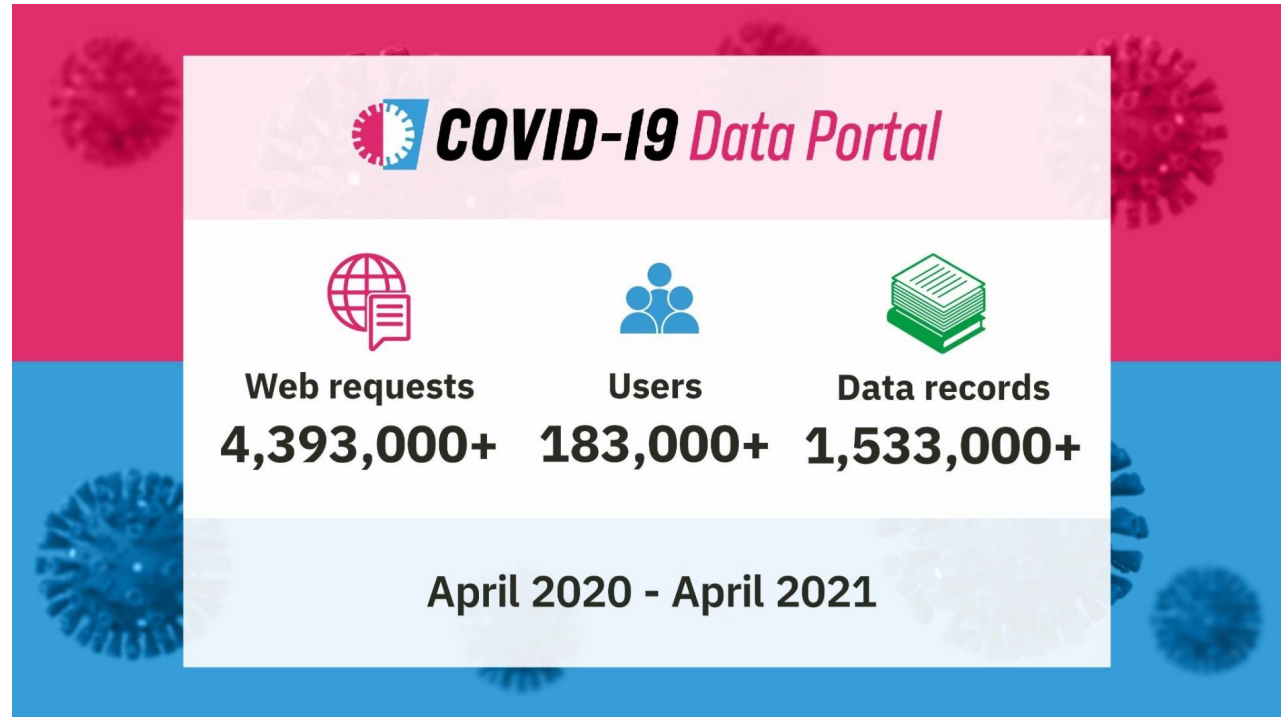
19/10/2021



European COVID-19 Data Platform

Example of Open Collaboration

- 1 year anniversary
- data from over 170 countries



[The European COVID-19 Data Platform](#)

Správa výzkumných dat

What is Research Data Management?

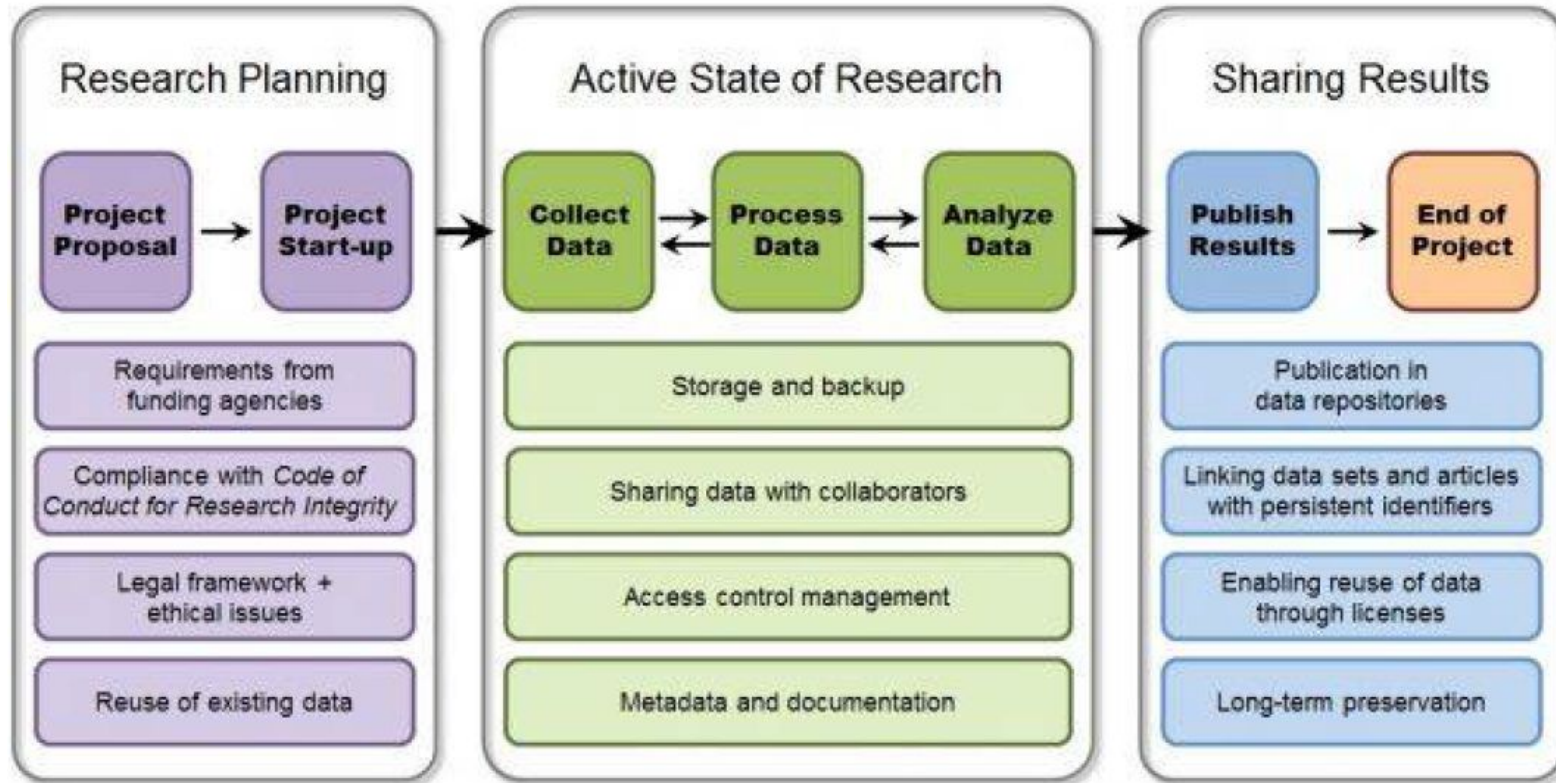
- RDM is the process of organization, storage, preservation, and sharing of data collected and used in a research project.
- It involves decision about how data will be preserved and shared after the project is completed.

Research Data Lifecycle

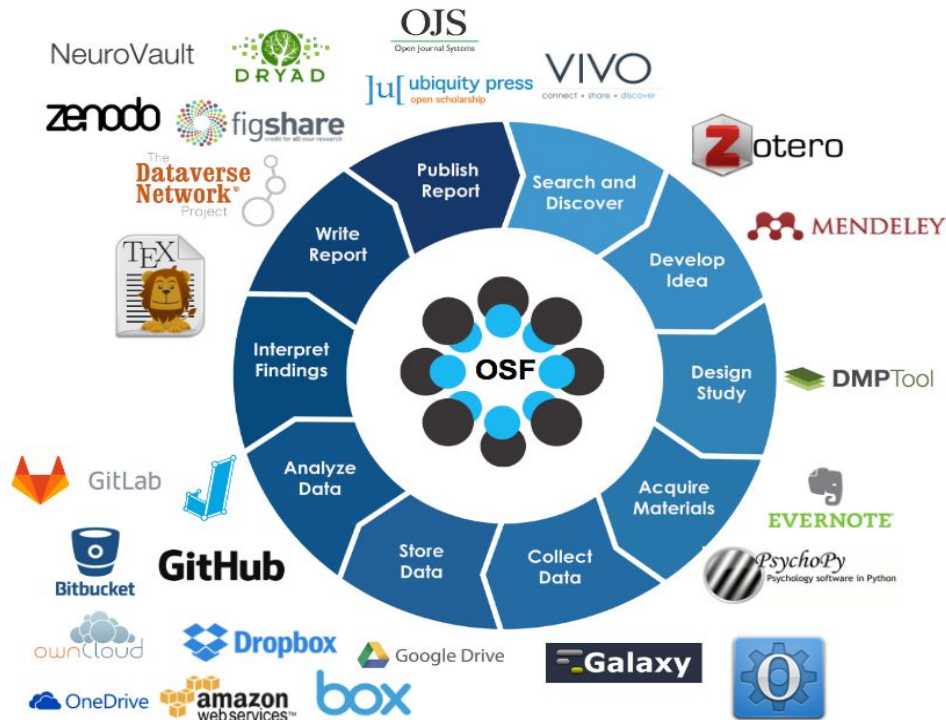


Source: [Elixir RDMkit](#)

Research Data Lifecycle



Research Data Management



Research data workflow

- collect data
- curate data
- analyse data
- report data
- archive data

➤ **Data Management Plan!**

Variety of tools | Open Science Framework

Why manage research data?



Why manage research data?



What could happen to you?

- The drive is broken and I didn't make a backup!
- A former student/collaborator worked on the data and he/she disappeared
- I can't find the password to access the data
- I don't have the software anymore
- I had troubles in understanding my code written years ago
- I cannot reproduce experiments done years ago

Why manage research data?

- Make your research easier
- Stop yourself drowning in irrelevant stuff
- Save data for later
- Avoid accusations of fraud or bad science
- **Share your data for re-use**
- **Get credit for it**
- **Meet funder/institution requirements**

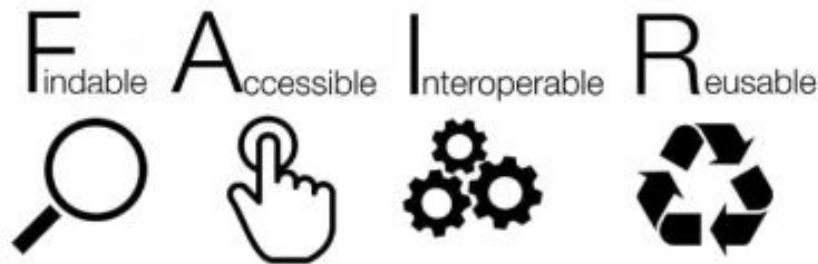
Well-managed data opens up opportunities for re-use, sharing, collaboration and makes for better science!

Open/FAIR data

Open vs FAIR Data

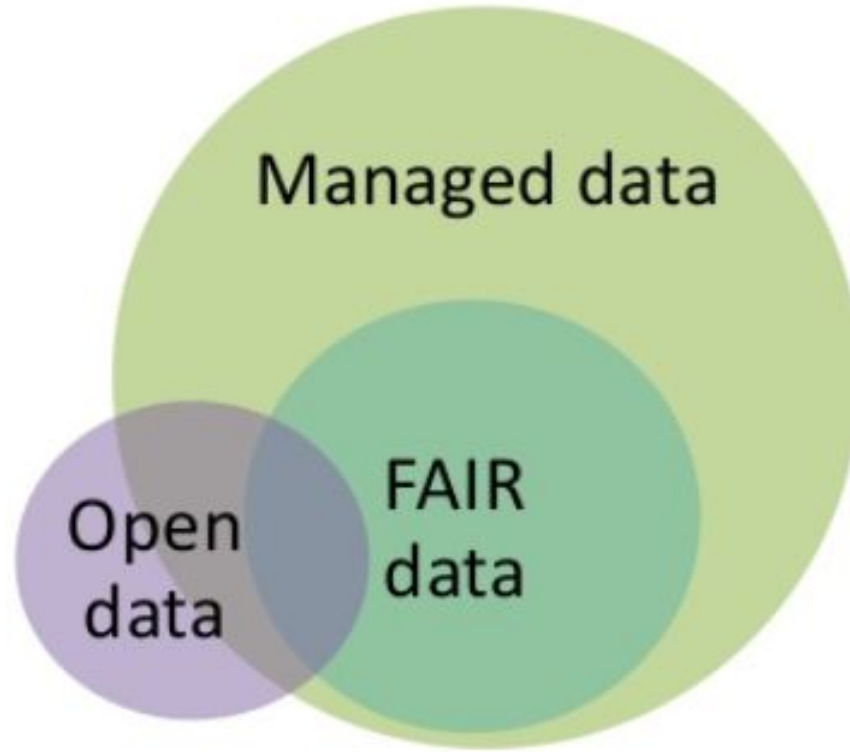
One of the most widely believed myths on FAIR data

- **FAIR data must be available as open data**, meaning that they should be free for everyone to download => **that is not the case!!!**



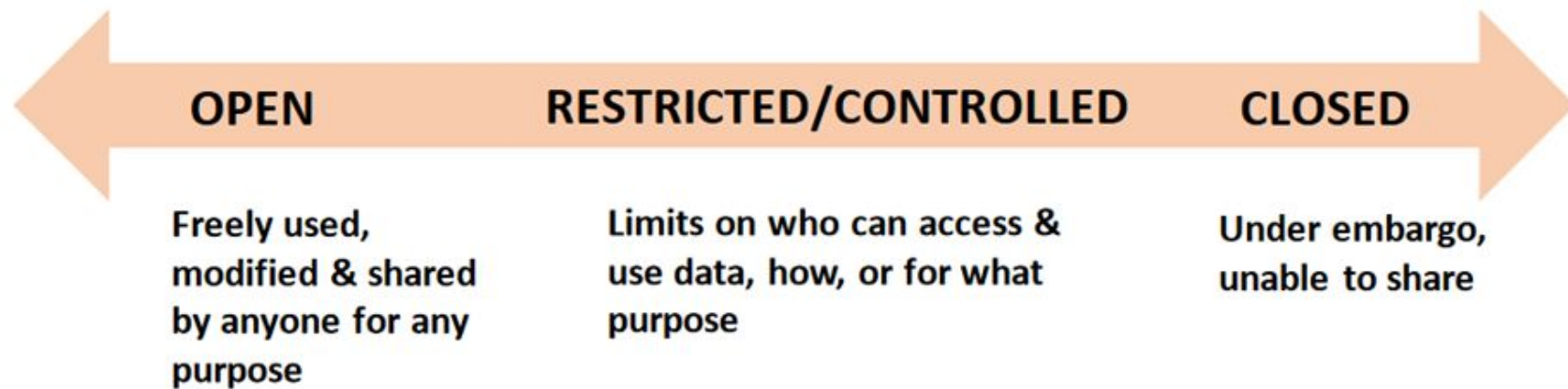
OPEN
DATA

Open Data, FAIR Data and Managed Data



FAIR Data – open by default

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



FAIR principy

FAIR principles

- **Findable** - rich metadata, keywords, persistent identifiers
- **Accessible** - data in trusted repositories
- **Interoperable** - standards
- **Re-usable** - licenses

The FAIR principles were **first published in 2016** originally from the life sciences => can be – and have been - applied within other research disciplines, including the humanities and the social sciences

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

Some clarification: what FAIR is not

- FAIR is **not** a standard, it is a guiding **principles**
- FAIR does **not** mean '**Open**' or '**Free**'
 - Data are often Open but **not** FAIR
 - Data could be **non-Open** yet perfectly FAIR
 - Many data can never be Open

FAIR principles do not directly prescribe data quality, trustworthiness, ethics or responsibilities

Some clarification: what FAIR is not

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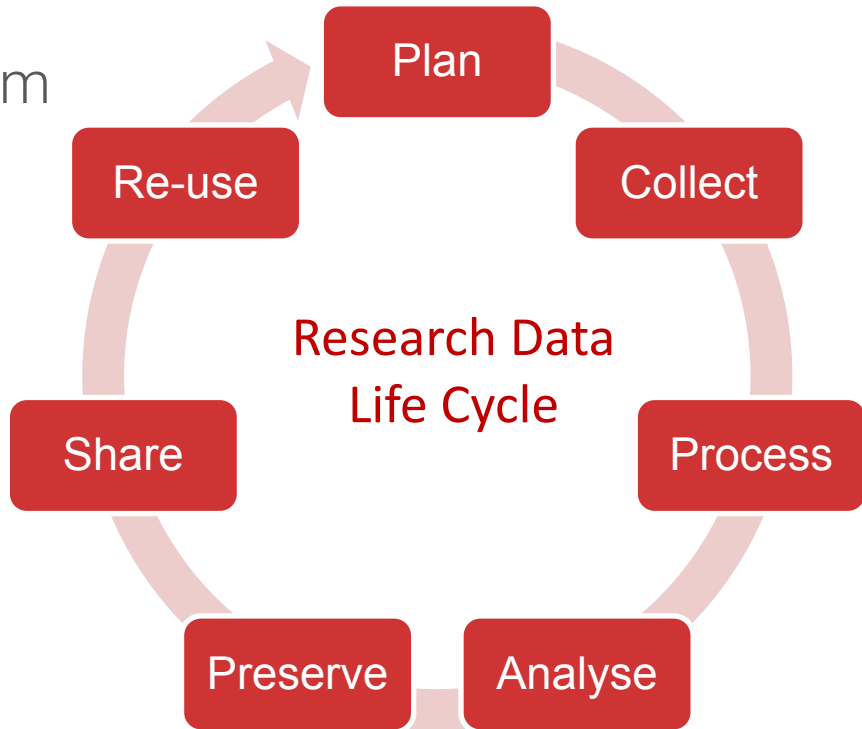
FAIR principles do not directly prescribe data quality, trustworthiness, ethics or responsibilities

FAIR principles

They **contain** guidelines for **good data management practice** that aim at making data FAIR:

- **Findable**
- **Accessible**
- **Interoperable**
- **Reusable**

Each letter refers to a list of principles with a total of 15 principles altogether



FAIR principles



FAIR\$FAIR
Fostering Fair Data Practices in Europe

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

F_{indable}

- F1. (meta)data are assigned a globally **unique and persistent identifier**
- F2. data are described with rich metadata (defined by R1 below)
- F3. metadata clearly and explicitly include the identifier of the data it describes
- F4. (meta)data are **registered or indexed in a searchable resource**

A_{ccessible}

- 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

I_{nteroperable}

- 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

R_{eusable}

- R1. meta(data) are richly described with 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 **detailed provenance**
 - R1.3. (meta)data meet **domain-relevant community standards**

Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* **3**, 160018 (2016). <https://doi.org/10.1038/sdata.2016.18>

19/10/2021



FAIR principles

A fundamental prerequisite for understanding FAIR

- 1) **both humans and machines** are intended as digesters of data.
 This will lead to an ecosystem that is fast to respond to change and automatically adapts to new findings or changes. That is the reason for focusing on standards for the data, identification mechanisms, availability of data etc.
- 2) the **FAIR principles apply to both data and its metadata** – i.e. records about data sets.
- 3) the principles are **not only about open data**, you can work in a FAIR *manner* with data that is not intended for public availability

FAIR principles

The implementation of the principles should be adapted to each research area => each community will make the principles work in their respective contexts

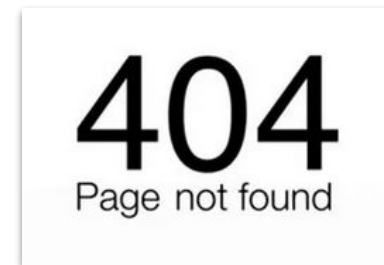
Findable

Findable #1

(Meta)data are assigned globally unique and **persistent identifiers**

One of the big problems with data concerns

- the ability to **cite** your own and other **people's data**,
- and keep pointing to its **exact location** in cyberspace, because the location might change.



=> this can be solved by using **persistent identifiers**

They work like a **big index or registry** where you assign a **unique key** (the identifier) to each data set. If someone tries to follow the identifier (often referred to as “resolving a persistent identifier”), the resolver will point to the correct web address (URL). If the URL changes – i.e. if data is moved – the one who made the key is responsible for providing the new location to the resolver. In this way, you do not end up in blind alleys of “page not found”. That is why it is called persistent.

Findable #1

(Meta)data are assigned globally unique and **persistent identifiers**

- The most common identifier (for data sets) is DOI

What is DOI?

- DOI stands for **Digital Object Identifier**
- A DOI is a **standardized system** for identifying an electronic or digital object
- A DOI looks like this: **DOI: 10.1080/1557533090327963**
(prefix/suffix)



Findable #1

Data availability

Underlying data

Zenodo: Raw data for manuscript "Simple and robust method for determination of laser fluence thresholds for material modifications: an extension of Liu's approach to imperfect beams". <http://doi.org/10.5281>

[/zenodo.4421003](http://zenodo.4421003)³⁰



This project contains the following underlying data:

- PSFlab_raw_1030nm-f50mm-T25.txt (PSFlab raw data of $P_T = 25\%$ profile represented in Figure 2).
- PSFlab_raw_1030nm-f50mm-T40.txt (PSFlab raw data of $P_T = 40\%$ profile represented in Figure 2).

References

30. Garcia-Lechuga M, Grojo D: Raw data for manuscript "Simple and robust method for determination of laser fluence thresholds for material modifications: an extension of Liu's approach to imperfect beams" [Data set]. *Zenodo*. 2021. <http://www.doi.org/10.5281/zenodo.4421003>

Findable #2

Data are described with **rich metadata**

What is metadata?

- **Metadata** is defined as the data providing information about one or more aspects of the data, in other words '**data about data**'
- it is used to summarize **basic information** about data which can **make tracking and working with specific data easier**

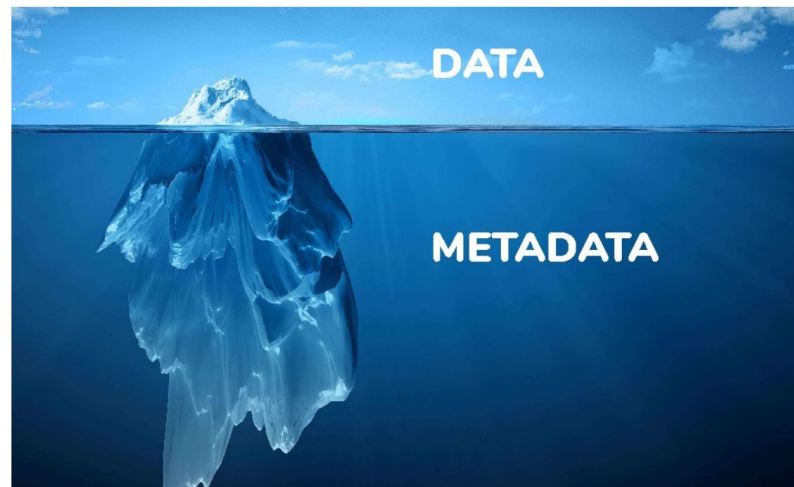
Metadata may be **generic** and **specific** for each discipline

Findable #2

Data are described with **rich metadata**

Metadata includes (e.g.):

- title, author (ORCID iD)
- key words
- creation/last modification date
- funder
- type, size, file names
- unique & persistent identifiers



Picture source: <https://zeenea.com/the-role-of-metadata-in-a-data-driven-strategy/>

Findable #2

Data are described with **rich metadata**

When humans and machines look for data

- metadata are often the **first point of contact**, as they are usually **indexed in search engines** etc.
- It is often the metadata that **determine whether the data set they describe is perceived as relevant or not** for a given usage scenario.
- If you asked a human being, the same query words they would use to find a data set should be available in the metadata.
- This is metadata **about the context and/or prerequisites** for the data set, quality issues etc., as well as a number of discipline-specific data, e.g. sample size, equipment etc.

Findable #3

Metadata clearly and explicitly include the identifier of the data they describe

Metadata and data are two separate things

- They **should be treated as such, they can have a life of their own.**
- E.g. metadata that are harvested for big indexes that do not hold or index the contents of the data files.
- Just like article metadata that are fetched for indexing in commercial and non-commercial search engines, without them looking at the content of the article itself.
- If the metadata do not include reference to the data they describe, it is doubtful - especially for a machine - that the data described by the metadata will ever be found.

Findable #4

(Meta)data are **registered or indexed in a searchable resource**

- **Repositories** are websites – most often – and represent a common way for building structured indexes of metadata and data sets that are uploaded to the repository.
- The indexes often adhere to a specific way of describing the data using a common standard.
- This will allow both repository and other search engines to harvest and index these registries, often aggregating them to larger indexes that eventually can be cross-searched

Accessible

Accessible #1

(Meta)data are retrievable by their identifier using a **standardised communication protocol**

Once the data or metadata have been found, the user must know how to access, possibly including authentication and authorization (standardised mechanisms)

- This principle states that access should be provided through a standardised protocol. Most often, these are protocols we know from the internet – e.g. http(s) or FTP.
- **This is usually the case, when data are deposited in a trusted repository**
- However, there might be cases where you will need additional mechanisms such as contract information or similar before someone can access your data.
- This is perfectly in line with the FAIR principles, if you clearly account for this in the metadata.
- This may be in the form of contact options that are broadly accepted and easy to use. Examples of this are telephone numbers and email addresses

Accessible #1.1

The protocol is open, free and universally implementable

A protocol is the technical term for the standard of how data are transported via a network, e.g. the internet.

- The Internet protocol suite is the conceptual model and set of communications protocols used in the Internet and similar computer networks.
- TCP/IP (Transmission Control Protocol and the Internet Protocol) is an example of an open, free and universally implementable protocol that is used as protocol for most of the internet.
- This means that **anyone can use it without having to pay usage fees**. If you choose a protocol with restrictions on usage, you might prevent other people from accessing to your (meta)data, thus making it hard – or even impossible – to use the data you have published. **If you use a trusted repository for data publication, the repository will make sure that you are in line with this principle.**

Accessible #1.2

The protocol allows for authentication and authorisation when required

One of the most widely believed myths on FAIR data is that FAIR data must be available as open data, meaning that they should be free for everyone to download. That is not the case.

- This principle states that if you place data behind some sort of digital wall, being a paywall or a **simple approval system for access**, the **system must allow for some type of authentication and authorisation**. This holds for both humans and machines.
- **Authentication** is all about telling a system **who you** - or your system - **are**.
- **Authorisation** is the **process where the system is evaluating, if you are allowed to access a given resource**.

There are many good reasons to place data behind authentication and authorisation mechanisms.

- **Manual processes** - who should have access to the data, the repository or storage system must be able to contact you and seek approval.
- **Other systems** will let users or systems register themselves and then provide access to the data, while maintaining a logbook of who has been given access to the data.

Accessible #2

Metadata are accessible even when the data are no longer available

There are plenty of good reasons why data disappear from repositories and similar places

- They may be withdrawn **due to cost** of having them online, if no one is left to maintain access to the data, or for other reasons.
- However, **if the metadata about the data set disappear as well, it will leave humans and machines in an “unfulfilled” state**, when they try to retrieve the data, e.g. when resolving a persistent identifier, or following a link to the entry of a repository.
- Therefore, make sure to leave metadata telling that “**yes, the data were here, but they are no longer available**”.
- **Leaving metadata may also offer information on the context, the authors and the institution, where the data were created**, for those looking for further details.

Interoperable

Interoperable #1

(Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation

Humans, and especially machines, can have a hard time interpreting data (heterogeneity: a well-known problem)

- Words are ambiguous, and the multitude of spoken and written languages add further to the complexity.
- Problems range from **not being able to interpret the value of a cell due to missing information** on the metrics used,
- to more complex situations where you will have to **look for many different terms describing the same object**

Interoperable #1

FAIR principles address this issue

by recommending the **use of shared data standards** for representing data, and the **use of vocabularies** and **ontologies** to represent values and mark-up data.

=> **Vocabularies** and **ontologies** are often defined within the research communities

Interoperable #2

(Meta)data use **vocabularies that follow the FAIR principles**

A vocabulary is only good, if it is accessible and allows for the right interpretation of the data.

This principle highlights the importance of using vocabularies that are

- common to the community and
- well documented, and
- can be referred to using persistent identifiers.

Usually, you will find this type of vocabulary, taxonomy etc. within your research discipline or maybe in other disciplines, where these are developed.

Interoperable #3

(Meta)data include qualified references to other (meta)data

It is important to be able to trace the connections between your data set and data sets that are related to it.

- by linking to other data sets that are not included in your work.
- through connections that **show how your data set is derived from a previous version or e.g. is processed data based on some raw data.**
- it is important to maintain these connections by referencing between data sets. If your data set relies on other's data - or your own - this is also an appropriate method to ensure that proper credit is given to the people who created the data that your data is based upon.

Reusable

Reusable #1

(Meta)data are richly described with a plurality of accurate and relevant attributes

Labelling your data with relevant attributes - most often in the form of metadata

- This can be in the form of purpose and **processing statements, equipment used, software versions** etc.
- Imagine finding your own data. Now think of the contextual information that would benefit you in determining whether the data is relevant to your specific needs - and whether you would be able **to understand how the data were created**.
- **Speaking of machines**, your best choice would be to use e.g. **controlled vocabularies, persistent identifiers** or similar to make the contextual description unambiguous

Reusable #1.1

(Meta)data are released with a clear and accessible **data usage license**

Licensing data and metadata is an important aspect of the FAIR principles

- both if you retain some or all rights, or if you set your **data free as completely open data**.
- In a FAIR context, a license is a **standardised machine-readable statement** that **tells the end user exactly how he/she can use the data, and under which conditions**.
- You can apply many different licenses to data. One of the **most common is the Creative Commons**
- you explicitly **state how and if you are to be cited** when your data are reused
- Typically, you **choose a license when depositing data in a repository**.
- **You do not have to apply the same license to all your data,**
- **The worst thing you can do is not to apply any license** at all. Because then your data is most likely protected by copyright as default, even though the data are publicly accessible.

Reusable #1.2

(Meta)data are associated with **detailed provenance**

Much of the value in data is the ability for a machine or a human to judge the origin of the data.

- This includes the ability to know **how the data was created, by whom it was created, and with which type of equipment?**
- Also, has the data been **processed, or is it raw data?** If it was processed, how was the **workflow?**
- This is quite **similar to a section on method in a paper or article**, and **you can refer to this type of documentation** from your data set. However, keep in mind that this might not be readable for a machine.
- **Remember to include provenance of who you are, and how you would like the data set to be cited/credited if used elsewhere.**
- The easiest way to get started, is to try and think of yourself as a re-user of your own data. What details would you need to evaluate and trust a given data set?

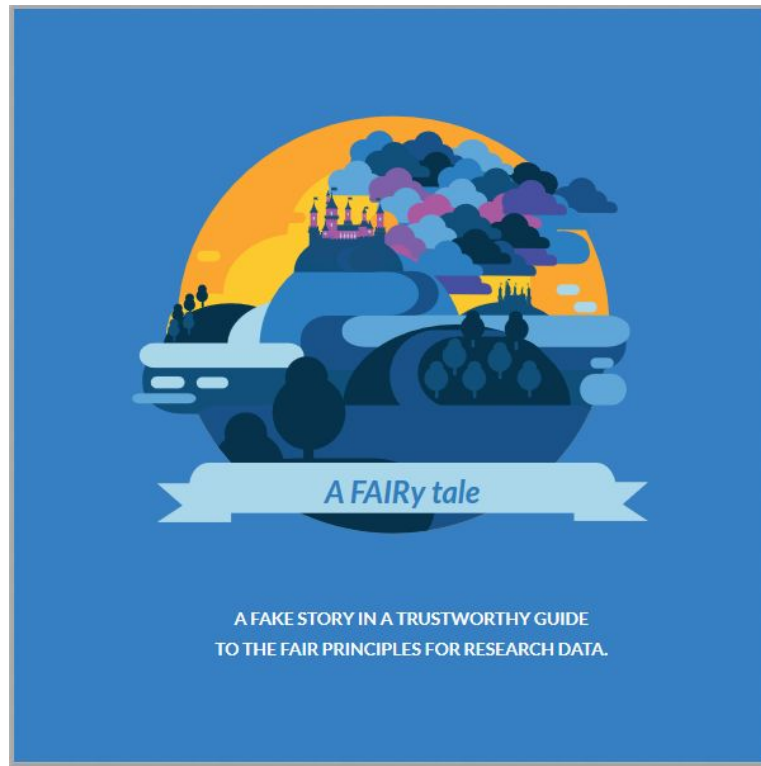
Reusable #1.3

(Meta)data meet domain-relevant community standards

Working with data sets from a variety of resources is much simpler, if everybody agrees to a certain standard way of organising and describing the data.

- That is why **many disciplines have created metadata standards** for describing data, and created **lists of recommended file formats** etc.
- However, **not everything can be standardized**, of course, and many research disciplines are breaking new ground where there are currently no standards – and then you will turn to more generic standards, or begin inventing new ones.
- Notice that **standard in this sense is not a quality measurement** indicating a level of high or low quality of the (meta)data. It should always be judged by the people who are re-using the data in their specific contexts.

About FAIR Data principle



[Hansen & al \(2018\)](#)

19/10/2021

LOCAL
GLOBAL

% → o/o

⊕ ⊗

POWER
SUPER POWER

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SUPER POWER

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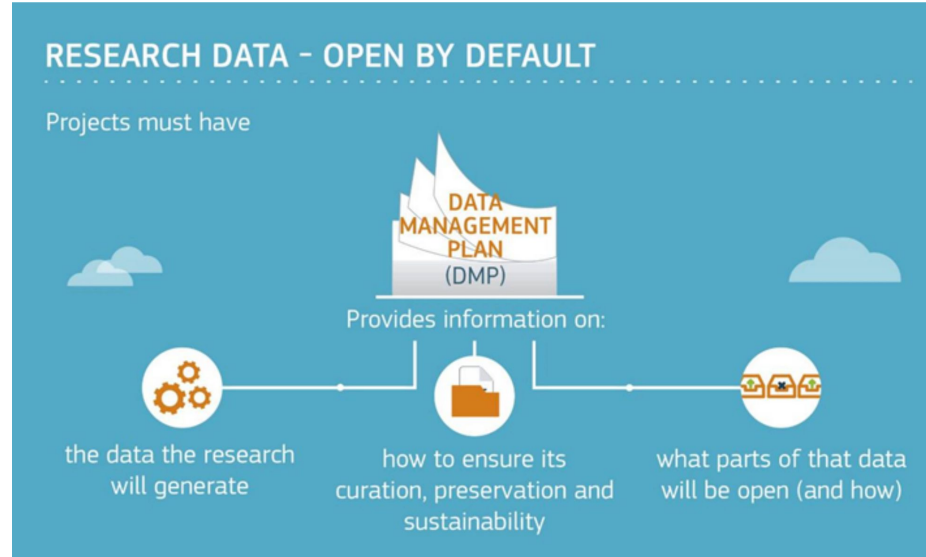
POWER
SUPER POWER

Data Management Plan (DMP)



Data Management Plan (DMP)

A DMP is a formal document that specifies how research data will be handled both during and after a research project. It identifies key actions to ensure that research data are safe, sustainable and – where possible – accessible and reusable.



Data Management Plan (DMP)

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

DMP should include information on

- the handling of research data during & after the end of the project
- what data will be collected, processed and/or generated
- which methodology & standards will be applied
- whether data will be shared/made open access and
- how data will be curated & preserved (including after the end of the project)

Example of Data Management Plan (DMP)

Evaluating the sustainability and nutritional benefits of alternative production systems and foods - focusing on vertical farming systems

A Data Management Plan created using dmponline

Creator: Ciara Byford

Affiliation: Cranfield University

Funder: Biotechnology and Biological Sciences Research Council (BBSRC)

Template: BBSRC Template

ORCID iD: 0000-0001-7429-5815

Project abstract:

Literature review looking at emerging trends, developments and innovations in the field of urban farming and vertical farming. Literature review of the social, environmental and economic risks and opportunities posed by vertical farming systems.

Last modified: 20-04-2021

Copyright information:

The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customise it as necessary. You do not need to credit the creator(s) as the source of the language used, but using any of the plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal

Evaluating the sustainability and nutritional benefits of alternative production systems and foods - focusing on vertical farming systems

Data areas and data types

Outline the volume, type and content of data that will be generated e.g. experimental measurements, models, records and images

Literature review is to be conducted for research paper, dataset to be created is a reference list. A reference list will be compiled of publicly available research papers, online newspapers, online market reports, business websites and online books for use in literature review paper. Reference list consists of approximately 116 references.

Standards and metadata

Outline the standards and methodologies that will be adopted for data collection and management, and why these have been selected

A broad horizon scanning methodology has been developed to gather, organise and rank insights on the subject of vertical farming, these insights are then to be used to identify key drivers of development and innovation in the field of vertical farming. All horizon scans conducted use publicly available research papers, online newspapers, online market reports, business websites and online books.

Metadata will be provided and added to a repository (CORD). Information gathered from publicly available literature will be organised into a reference list and all work relating to the project will be securely stored on Cranfield University secure cloud storage system (OneDrive).

File will be saved in folder named 'Vertical Farming', file name will consist of date in following format: day, month, year, file name 'vertical farming literature review' file will be saved in pdf and .doc format on both harddrive and Cranfield University secure onedrive cloud system.

Relationship to other data

State the relationship to other data available in public repositories

Dataset in the form of reference list will be compiled. A reference list consisting of publicly available research papers, online newspapers, online market reports, business websites and online books will be made. Approximately 116 references will be included.

Secondary Use

Outline the further intended and/or foreseeable research uses for the completed dataset(s)

Horizon scans will be made using publicly research papers, online newspapers, online market reports, business websites and online books. Insights will be developed based on this information and this will help identify key drivers of development and innovation in the field of vertical farming.

The paper and reference list will be made publicly available for transparency.

Methods for data sharing

Outline the planned mechanisms for making these data available, e.g. through deposition in existing public databases or on request, including access mechanisms where appropriate

Data will be retained securely in Cranfield's institutional data repository, CORD, which uses the figshare platform and preserves data for at least 10 years after project end, with datasets assigned a DOI for long-term accessibility, in accordance with Cranfield's Management of Research Data Policy. A CC BY license will be used.

Proprietary data

Outline any restrictions on data sharing due to the need to protect proprietary or patentable data

Entire literature review and reference list will be shared, no barriers to sharing. It is foreseen that information gathered in reference list of publicly available research papers, online newspapers, online market reports, business websites and online books could be accessed by other users looking for further information on the subject of vertical farming.

[DMPonline: Public DMPs](#)

Nástroje pro DMP

How to write a DMP

Manually fill in a template:

- [H2020 DMP Template](#) (EU)

DMP tools online:

- [DS Wizard](#) (EU level), [DMP Online](#) (UK)

Data Stewardship Wizard

Create Smart Data Management Plans
for FAIR Open Science

[Watch video](#)

	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

Example of Data Management Plan

The screenshot displays the Data Stewardship Wizard (DSW) interface. On the left is an orange sidebar with the DSW logo and navigation links: Questionnaires, Documents, Storage Costs Evaluator, Help, and Jan Slifka. The main content area is titled 'Current Phase: Before Submitting the Proposal'. It features a 'Chapters' list on the left with 'III. Creating and collecting data' selected (marked with a '7'). The main panel shows the content for this chapter, starting with the question '1 What data formats/types will you be using?'. Below this, there is a text input field for 'Data format/type' containing 'RDF/XML Syntax Specification', a link to 'FAIRsharing https://fairsharing.org/bsg-s001261', and a checkbox 'Desirable: Before Submitting the Proposal'. A second question '1.a.2 Is this a standard data format used by others in this field?' follows, also with a 'Desirable' checkbox and radio button options 'a. No' and 'b. Yes'. The 'a. No' option is selected, and a red 'Interoperability' tag is visible. A 'Get Started' button is in the top right corner.

Data Stewardship Wizard

DMP should help you take the care, not be yet another piece of paper for a grant agency

Otázky?

eva.hnatkova@techlib.cz

NTK

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

Open Science v praxi

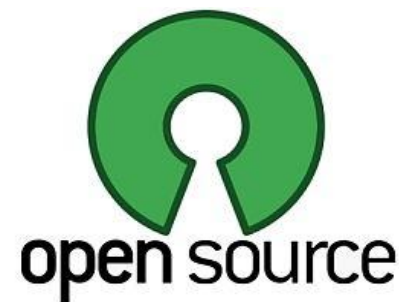
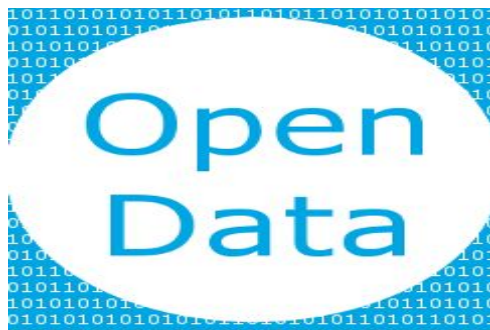
TODAY

TOMORROW

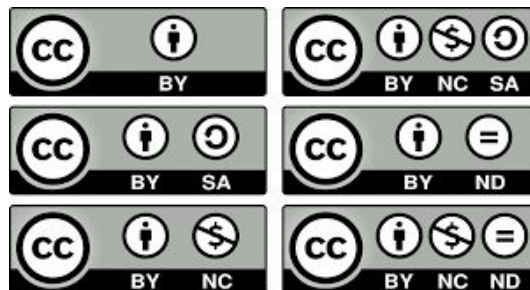
Témata

1. Úvod do Open Science /otevřeně vědy
2. Vědeckého publikování a Open Access
3. Správa výzkumných dat a Open/FAIR Data
4. **Open Science a Citizen Science v praxi**
5. Open Science v Horizon Europe

Open Science v praxi



OPEN LICENCING



[FOSTER Taxonomy of Open Science](#) | [Masuzzo & Martens \(2017\)](#)

Přehled

- Open Access Gold/Green
- Open/FAIR Data
- Datové repozitáře
- Open Peer Review
-
- Perzistentní identifikátory
- Citizen Science

Otevřený přístup k vědeckým publikacím

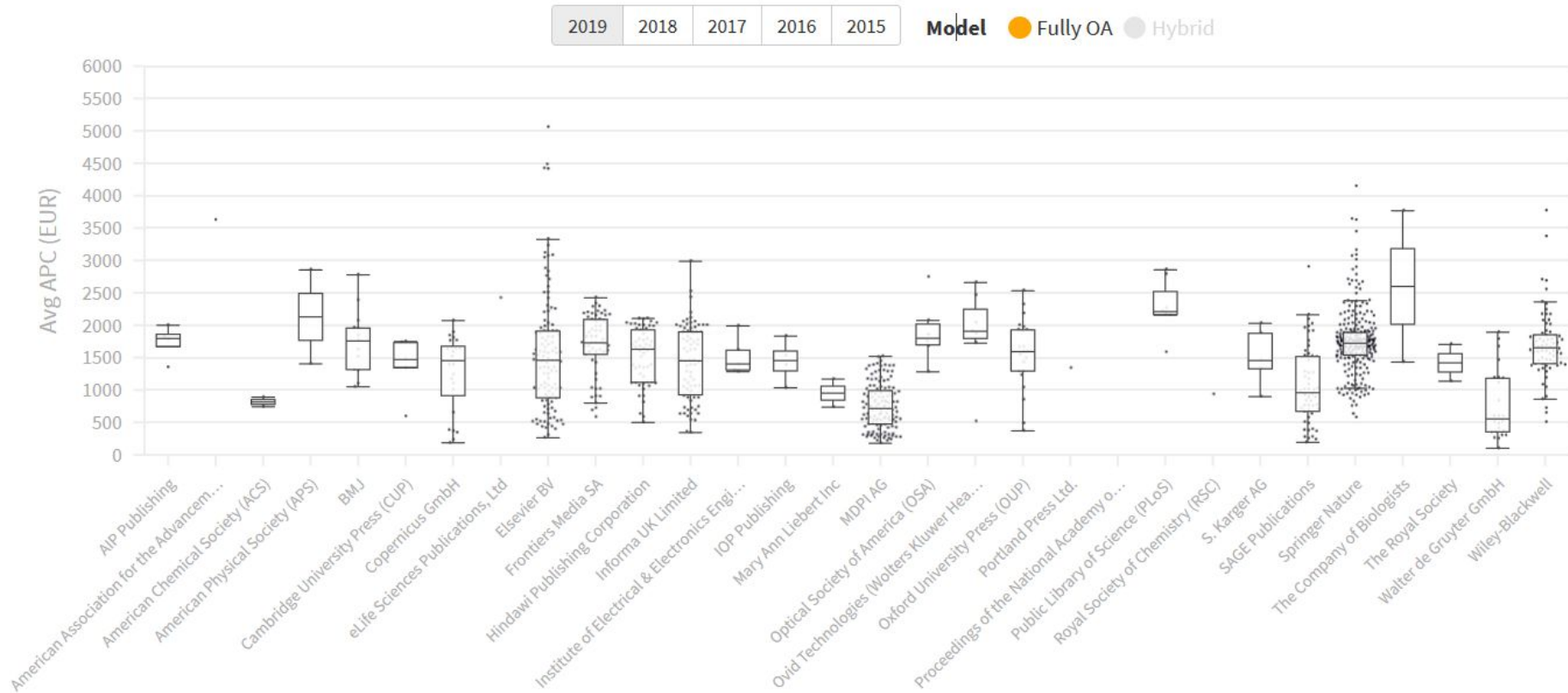
Open Access: zlatá vs. zelená cesta



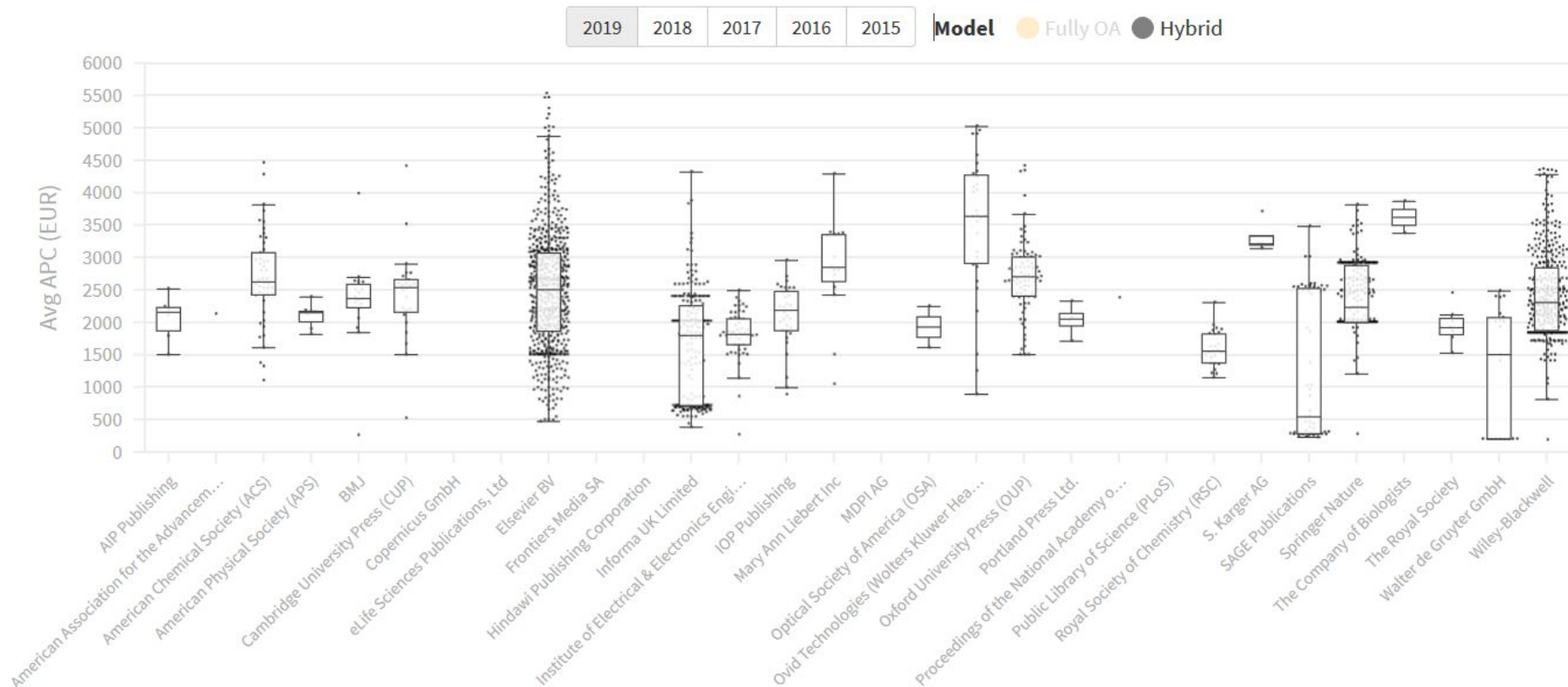
Zlatá cesta - vydavatel umožní okamžitý otevřený přístup k vědeckým publikacím na stránkách časopisu/publikační platformě. Může, ale nemusí být vyžadován publikační poplatek.

Autoarchivace – autor publikuje v časopise s předplatným a **archivuje** některou verzi rukopisu v otevřeném repozitáři, která je následně volně dostupná.

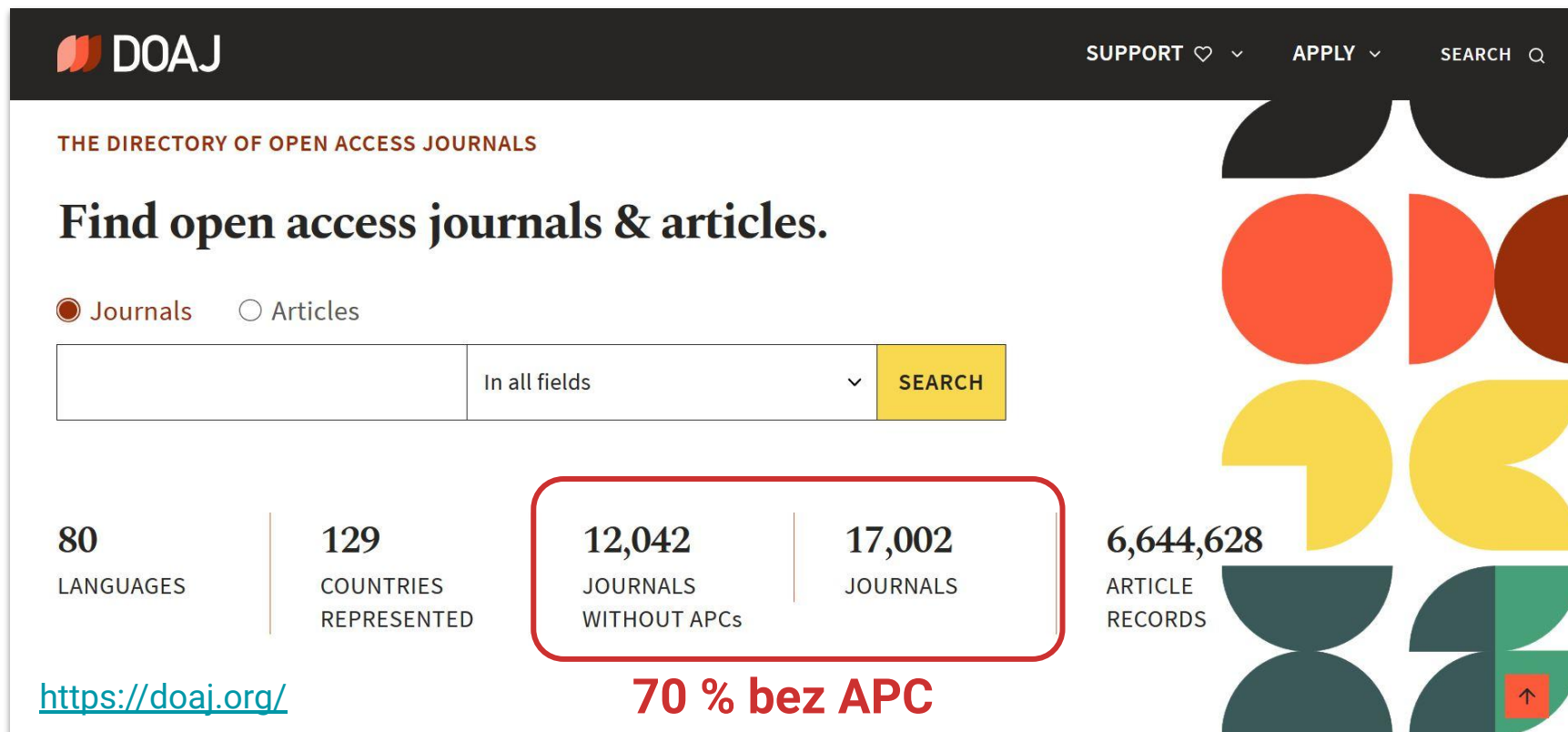
Article processing charge - APC



Article processing charge - APC



Registr časopisů s otevřeným přístupem



DOAJ

SUPPORT ♥ ▾ APPLY ▾ SEARCH 🔍

THE DIRECTORY OF OPEN ACCESS JOURNALS

Find open access journals & articles.

☒ Journals ☐ Articles

In all fields ▾ **SEARCH**

80 LANGUAGES	129 COUNTRIES REPRESENTED	12,042 JOURNALS WITHOUT APCs	17,002 JOURNALS	6,644,628 ARTICLE RECORDS
------------------------	--	---	---------------------------	--

<https://doaj.org/>

70 % bez APC

DOAJ - Czech journals

137 indexed journals

Publishers' countries: Czechia X

CLEAR ALL X

⚙️ Refine search
results

SEE JOURNALS...

☐ With a DOAJ Seal ☒

☐ Without article
processing charges (APCs)

SUBJECTS

Search 513 subjects

☐ Agriculture

☐ Auxiliary sciences of
history

☐ Bibliography. Library

Sort by

Added to DOAJ (newest first) ▼

Results per page

50 ▼

<< First

< Prev

Page 1 of 3

Next >

Opera slavica 🔗

Published by Masaryk University in Czechia

Accepts manuscripts in Slovak, Bulgarian, Russian, Czech, Polish

Language and Literature: Philology. Linguistics

Last updated on 30 Sept 2021

[Website](#) 🔗

No charges

[CC BY-SA](#)

DOAJ - search journals by licences

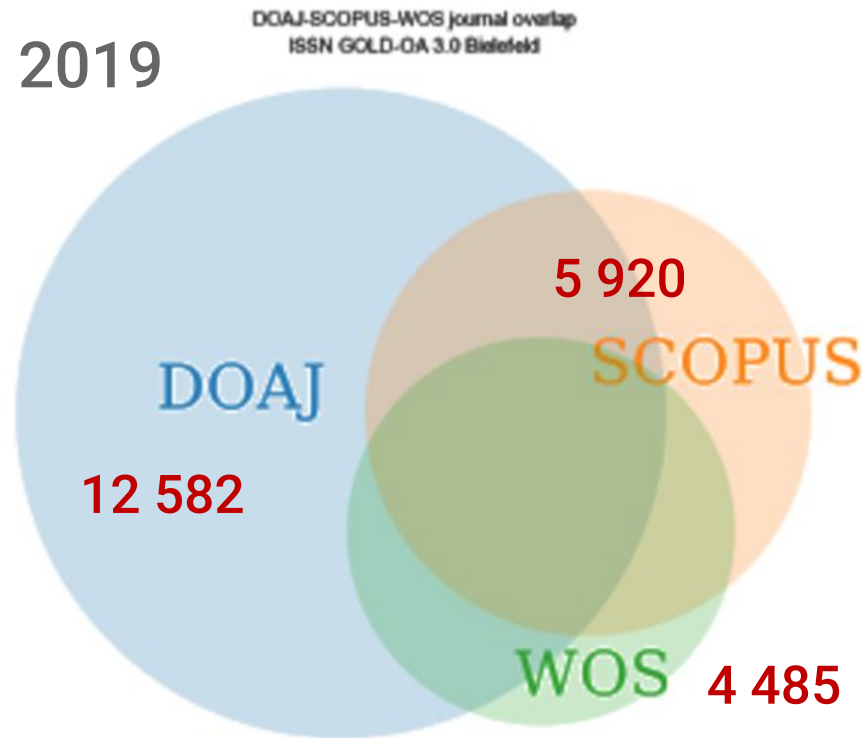
LICENSES

- ☒ CC BY (7824)
- ☐ CC BY-NC (3035)
- ☐ CC BY-NC-ND (3614)
- ☐ CC BY-NC-SA (1517)
- ☐ CC BY-ND (230)
- ☐ CC BY-SA (1119)
- ☐ CC0 (269)
- ☐ Publisher's own

<https://doaj.org/>

Počet OA časopisů v DOAJ, SCOPUS a WoS

k lednu 2019



Časopisy, které v DOAJ nejsou (ale které jsou uvedeny ve SCOPUS nebo WoS)

- nesplňují kritéria DOAJ
- nepodaly žádost

[Myth-busting: all open access journals can be listed in DOAJ \(2019\)](#)

DOAJ: Guide to applying

Basic criteria for inclusion

- Open access journals published in any language may apply
- DOAJ **only accepts open access journals**.
- journals where the copyright holder grants usage rights to others **using an open license** (Creative Commons or equivalent)
- the full text of all content must be available for free and Open Access **without delay**
- A journal must have at least one **ISSN**
- and so on ..

<https://doaj.org/apply/guide/>

Transformative agreements (CzechElib)

CZECH



Vyhledat

English

in

NTK
Národní technická knihovna
National Library of Technology

E-zdrojeAktualitySeznam členských institucíOpen AccessO CzechElibKontakty

Instrukce pro autory

[Titulní strana](#) / [Open Access](#) / Instrukce pro autory

U několika poskytovatelů EIZ CzechElib vyjednal pro členy svých konsorcií slevu, nebo úplné odpuštění poplatků za publikování v otevřeném režimu. U níže uvedených vydavatelů naleznete detailní instrukce pro autory, jak těchto výhod využít.

Cambridge University Press

Bezplatné a neomezené publikování v režimu Open Access pro korespondující autory z institucí, které jsou členy konsorcia CzechElib.

[více](#)

Emerald

Bezplatné a neomezené publikování v režimu Open Access pro korespondující autory z institucí, které jsou členy konsorcia CzechElib.

[více](#)

Taylor & Francis

Bezplatné publikování omezeného množství článků (za použití tokenů) v režimu Open Access pro korespondující autory z institucí, které jsou členy konsorcia Taylor & Francis CzechElib.



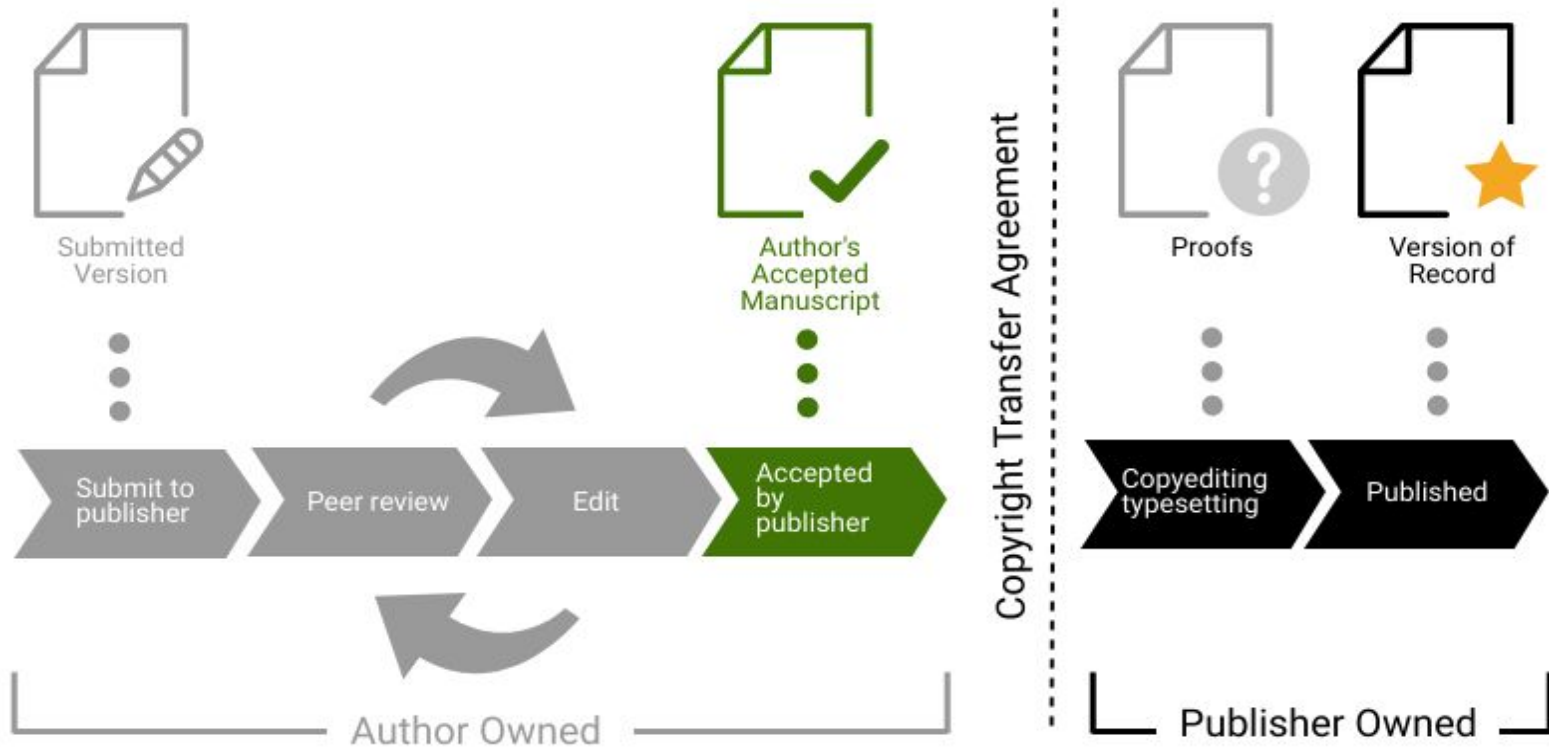
Instrukce pro autory

Cambridge University Press

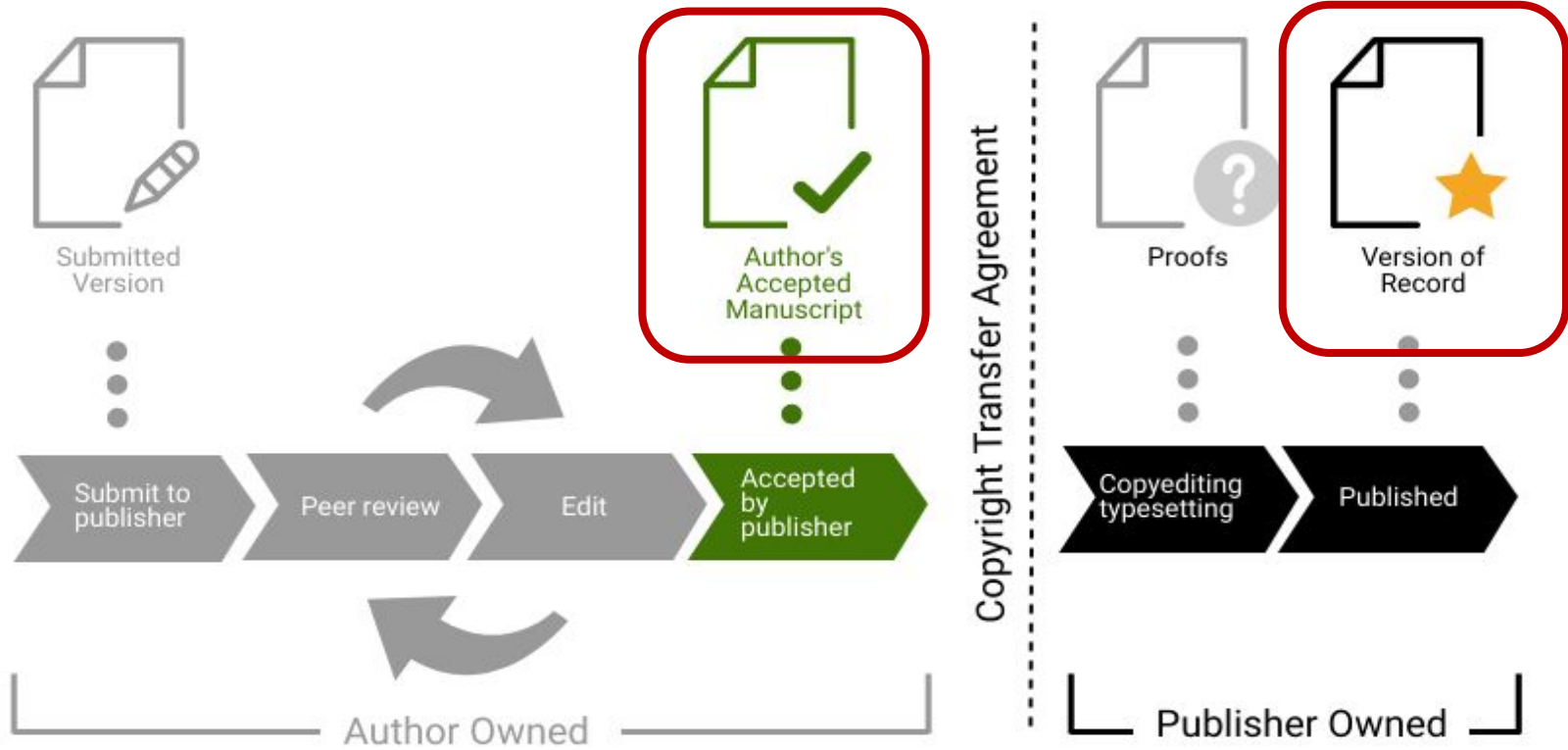
Emerald

Taylor & Francis

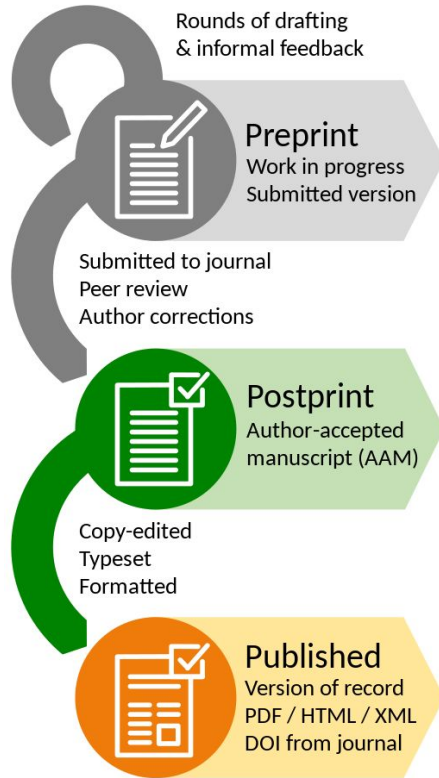
Publishing process → transfer of copyright



Publishing process → transfer of copyright



Different versions and terminology



Submitted Version (pre-print)

- The version of the work the author submits to the publisher

Author Accepted Manuscript (AAM) - post-print

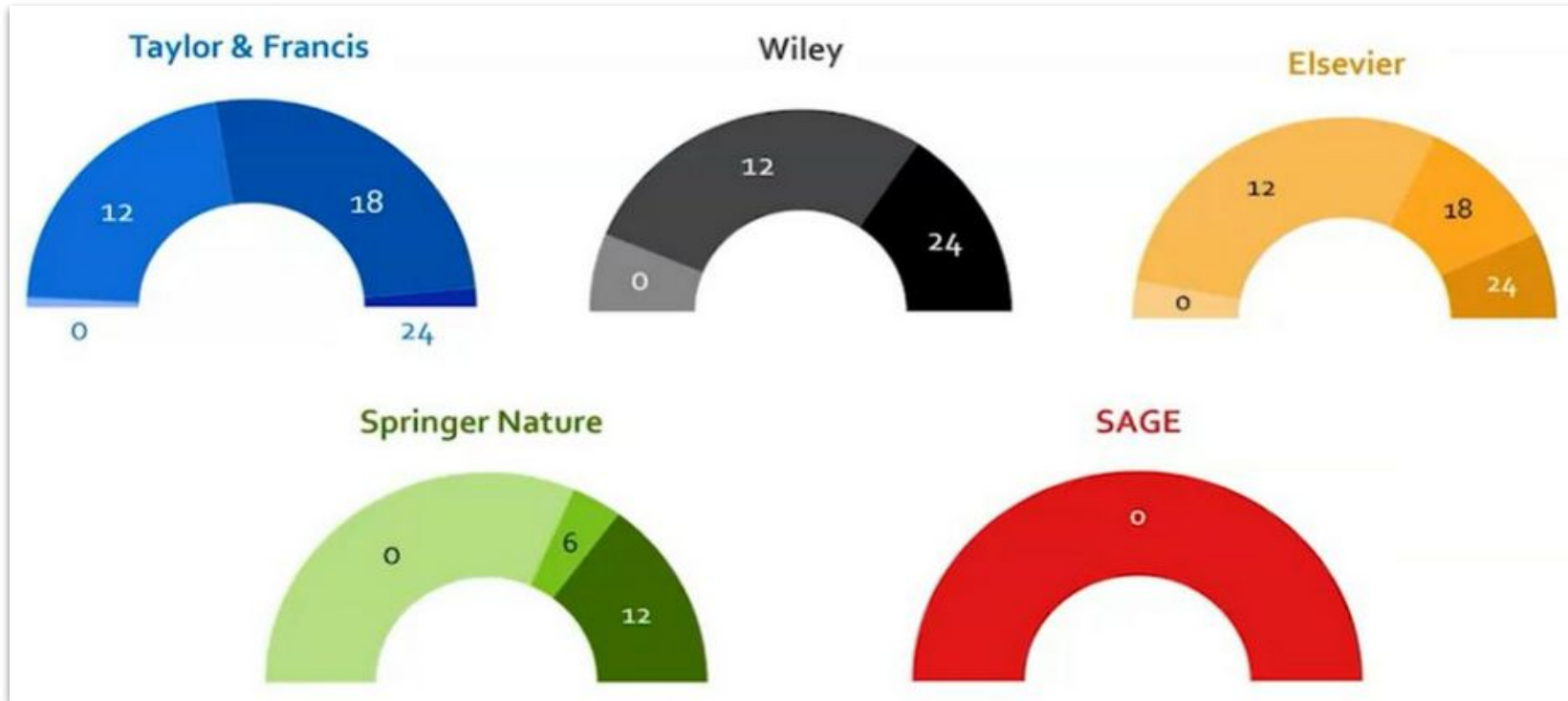
- The author's final, peer reviewed and corrected manuscript,
- Typically **can** be posted to repositories (sometimes after **embargo**)

Version of Record (VoR) - published version

- Provide by the publisher
- Final version of the paper, includes layout and copyediting done by **publisher**
- Typically **cannot** be posted to repository or website

Embargo periods by 5 Big publishers (months)

“Pay now or wait a year: Embargos as a selective barrier to access”



SHERPA/RoMEO – publisher and journal OA policies

Jisc Digital Resources > Open Access

Sherpa Romeo

About Search Statistics Help Support Us Contact Admin

Search

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

Journal Title or ISSN

Publisher Name

[Sherpa Romeo](#)

Types of repositories where to self-archive

Many repositories are Open Access, meaning that the material contained within it is free to access for everyone.



Institutional Repository

- A collection of papers stored by a university or research institution. It is managed by library staff to house their own authors' works



Subject-based Repository

- An online collection which relates to the specific subject area. Examples include: [PubMed](#), [Europe PMC](#) and [PubChem](#)



General (multidisciplinary)

- An online collection that includes articles from variety of subject areas. Examples include: [Zenodo](#), OpenAIRE

20

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/>

How to check where [not] to publish

Where to publish:

- [DOAJ](#) - Directory Of Open Access Journals
- [OASPA](#) - Open Access Scholarly Publishers Association
- [COPE](#) - Committee on Publication Ethics

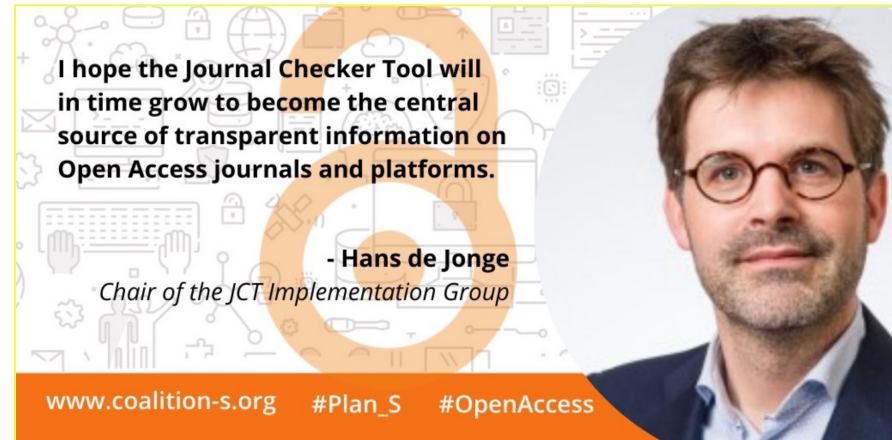
Possible / potential predatory journals and publishers:

- Beall's list of predatory journals <https://beallslist.net/>
- Stop Predatory Journals <https://predatoryjournals.com/publishers/>

Plan S: Journal Checker Tool (1/3)

A search engine that checks Plan S compliance

Simple and easy web-based tool which provides clear advice to researchers on how they can comply with their funder's Plan S-aligned OA policy when seeking to publish in their chosen journal.



<https://www.coalition-s.org/coalition-s-releases-the-journal-checker-tool/>

Plan S: Journal Checker Tool (2/3)

JOURNAL CHECKER TOOL

BETA

Is this compliant with
Plan S ?

JOURNAL

Powder Technology, ISSN: 18



MY FUNDER

European Commission(Horiz



MY INSTITUTION

By ROR or name

<https://journalcheckertool.org/>

Plan S: Journal Checker Tool (3/3)

Yes, this combination is compliant.

What options do I have?



Self-archiving using rights retention ×

cOAlition S has developed a Rights Retention Strategy to give researchers supported by a cOAlition S Funder the freedom to publish in their journal of choice, including subscription journals, whilst remaining fully compliant with Plan S. More information on how to use it is available here.



SELF-ARCHIVING USING RIGHTS RETENTION

You have the right to self-archive the author accepted manuscript should you choose. More information on how available here.



Plan S: Rights Retention Strategy

The simplicity of the RRS:

Always include the
CC BY claim:

*“A CC BY licence is applied to the
AAM arising from this submission”*

and

**Your AAM is yours to reuse
and share as you please!**

[Plan S - Rights Retention Strategy](#)

Open/FAIR Data

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 forms

- 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

The FAIR Principles in a nutshell

Findable



Globally unique, resolvable, and persistent identifiers

- to retrieve and connect data



Accessible



Community defined descriptive metadata

- to enhance discoverability (key words, trusted repositories)

Common terminologies (standards)

- to use the same term mean the same thing (vocabularies)

Interoperable



Detailed provenance

- to contextualize the data and facilitate reproducibility

Term of access

- Open as possible, closed as necessary (authorization, authentication)

Reusable



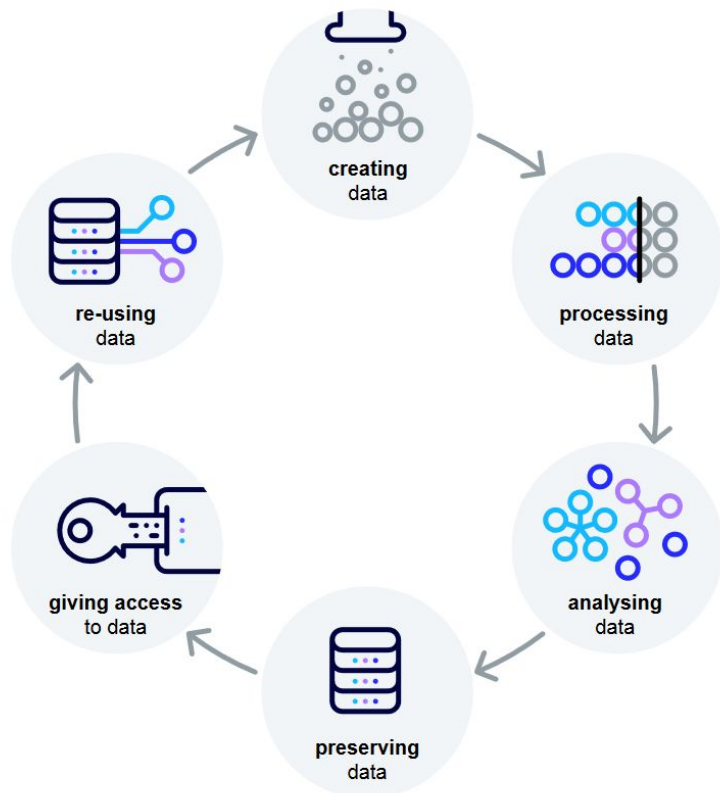
Terms of use

- Clear licences, ideally to enable innovation and reuse



Research Data Management DMP

Data Management Checklist



Planning

- State the project title, aim of the research and project duration
- List the principal investigator, researchers and project members as well as collaborators and partner institutions.
- Who is responsible for (which part of) data management?
- What (additional) resources will be required to implement the necessary data management (e.g. training for employees, data repository fees, funding for special hard- or software)?

Data collection and creation

- What type (e.g. observational data, experimental data, statistical data, survey results...) will be created?
- Will you be reusing existing datasets, and if so, from where?
- What is the expected volume (in GB or TB) of data created within the project?
- How is data creation distributed over time?
- Have you ensured that adequate resources for handling the data are available when needed?
- Is the created data reproducible (e.g. experiment) or irreproducible (e.g. observations)?
- Will quality assurance processes be adopted?
- How will the versioning be handled?
- Will special standards or methodologies be used?

Appraisal and selection

- By which criteria will data be appraised and selected for further work within the project?
- What tools, if any, will be used for appraising and selecting data?

Documentation and metadata

- What information will be needed for the data to be read and interpreted in the future?
- Are special tools or software needed to read and work with the data?
- How will the data be labelled and organized (file and folder naming conventions)?
- Are your data self-explanatory in terms of variable names, codes and abbreviations used?
- How will metadata be captured, created and managed? Is there a discipline-specific standard?
- What other documentation and contextual information will be available in order to help others understand the data (e.g. data dictionaries, questionnaires)?
- What metadata standards will be used?
- Will any unique identifiers be used?

File Formats

- What file formats of data will be produced?
- Do your chosen formats and software enable sharing and long-term access to the data?
- Are you using a format that is standard in your field? If not, how will you document the alternative format you are using?
- Do these formats conform to an open standard and/or are they proprietary?
- When converting across formats, how will it be ensured that no data, annotation or internal metadata have been lost or altered?

Storage

- Where and on what media will the data be stored?
- Which data will be stored and for how long?
- What data must be retained/ destroyed for contractual, legal, or regulatory purposes?
- How will data be filtered, appraised and selected to effectively separate data to be retained from data to be destroyed?
- How will the back-up be organized (frequency and responsibilities)?
- What are the risks to data security?
- How will data security be guaranteed (e.g. encryption or recovery after an incident)?
- Is the available storage sufficient or will you need to invest in additional services?

Ethics

- Are there any ethical and privacy issues concerning your data in general and sharing it in particular?
- If so, have you sought guidance from your institution's contact person(s) for research ethics and/or data protection issues?
- Does your data contain confidential or sensitive information? If so, have you discussed data sharing with the respondents from whom you collected the data and gained their written consent if needed?
- Does the data need to be anonymized prior to sharing?
- How will the sensitive data be handled to ensure it is stored and transferred securely?

Research Data Management: TO DO



How to write a DMP

Manually fill in a template:

- [H2020 DPM Template](#) (EU)

DMP tools online:

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

Data Stewardship Wizard

Create Smart Data Management Plans
for FAIR Open Science

[Watch video](#)

	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

Example of Data Management Plan

The screenshot displays the Data Stewardship Wizard (DSW) interface. On the left is an orange sidebar with the DSW logo and navigation links: Questionnaires, Documents, Storage Costs Evaluator, Help, Jan Slifka, and a Collapse sidebar button. The main content area is titled 'Current Phase: Before Submitting the Proposal'. It features a 'Chapters' list on the left with 'III. Creating and collecting data' selected (marked with a '7'). The main panel shows the content for Chapter III, starting with the question '1 What data formats/types will you be using?'. Below this, it asks '1.a.1 Data format/type' with a text input field containing 'RDF/XML Syntax Specification' and a link to 'FAIRsharing https://fairsharing.org/bsg-s001261'. It also includes a question '1.a.2 Is this a standard data format used by others in this field?' with radio button options 'a. No' and 'b. Yes', and a section for 'Interoperability'. A 'Get Started' button is visible in the top right corner.

Data Stewardship Wizard

Research Data Management: to do



Disciplinary repositories



This list is part of the [Open Access Directory](#).

- This is a list of OA disciplinary repositories (also called central or subject repositories). Unless otherwise noted, they accept relevant deposits regardless of the author's institutional affiliation.
- This list includes both preprint and postprint repositories.
- When possible, please indicate the institution hosting or maintaining the repository. If a repository only accepts submissions in certain languages, please indicate the languages. If a repository is open in some respects but not others, please include it with an annotation rather than exclude it.
- For a bibliography of works on disciplinary repositories, see the section on [Disciplinary Archives](#) in the OAD [Bibliography of open access](#).
- Related lists in OAD: [Data repositories](#).
- Also see the [Wikipedia list of preprint repositories](#), organized by field or discipline.
- For news about disciplinary repositories, including some newly launched repositories not yet listed here, follow the [oa.repositories.disciplinary](#) tag of the [Open Access Tracking Project](#).
- Wikidata identifier for this page: [Q56229148](#).
- Alphabetical by field.

Contents [\[hide\]](#)

- 1 Agriculture
- 2 Anthropology
- 3 Architecture and Civil Engineering
- 4 Arts
- 5 Art history
- 6 Astrophysics
- 7 Biology / Life sciences
- 8 Business
- 9 Classics
- 10 Cognitive science
- 11 Computer science
- 12 Cryptology
- 13 Development
- 14 Digital preservation

http://oad.simmons.edu/oadwiki/Disciplinary_repositories

Registry of Research Data Repositories



Re3data offers

- Researchers
- Funding
- Organization
- libraries and
- publishers

an overview of existing international repositories for research data

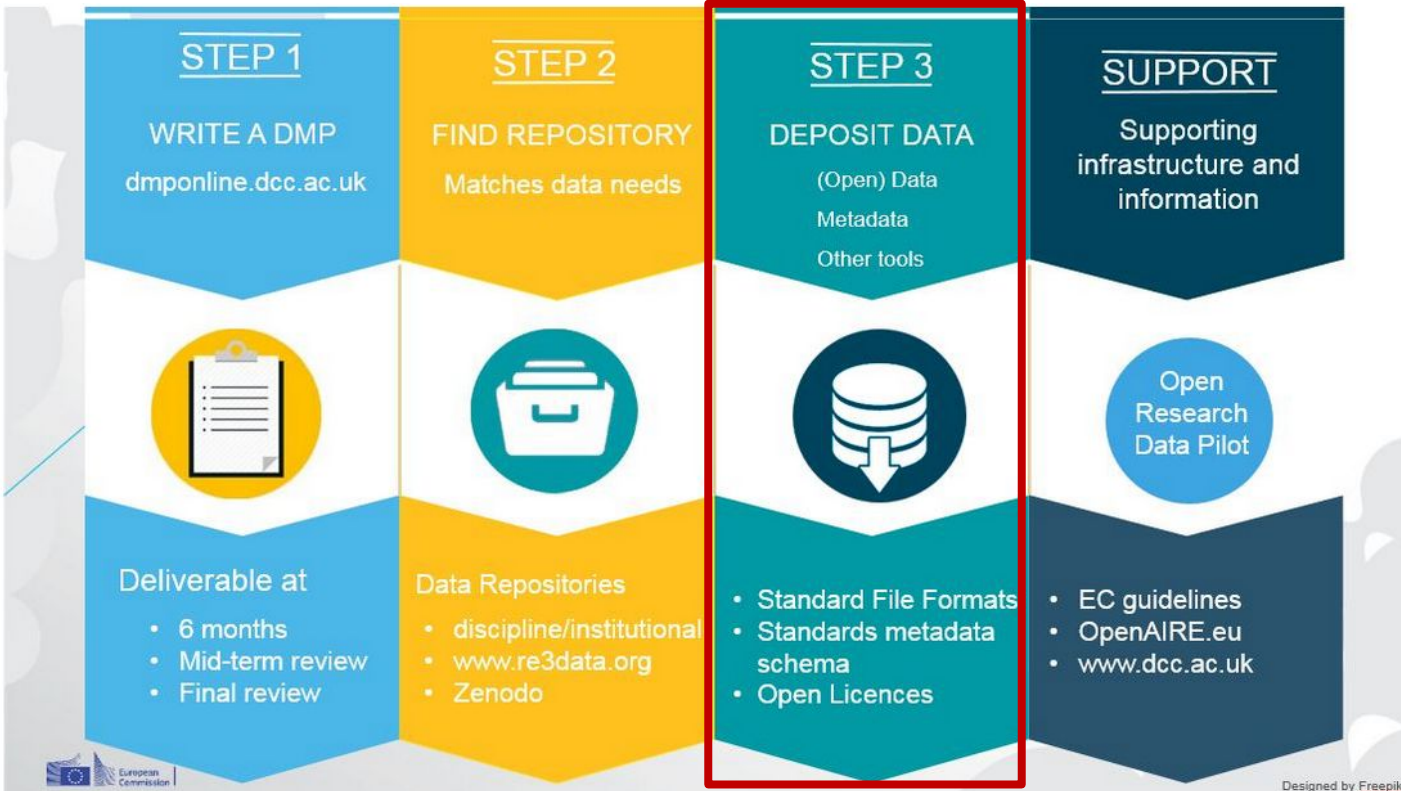
<https://www.re3data.org/>

Re3data - search & filters

- Subjects ⊕
- Content Types ⊕
- Countries ⊕
- AID systems ⊕
- API ⊕
- Certificates ⊕
- Data access ⊕
- Data access restrictions ⊕
- Database access ⊕
- Database access restrictions ⊕
- Database licenses ⊕
- Data licenses ⊕
- Data upload ⊕
- Data upload restrictions ⊕
- Enhanced publication ⊕
- Institution responsibility type ⊕
- Institution type ⊕
- Keywords ⊕
- Metadata standards ⊕
- PID systems ⊕

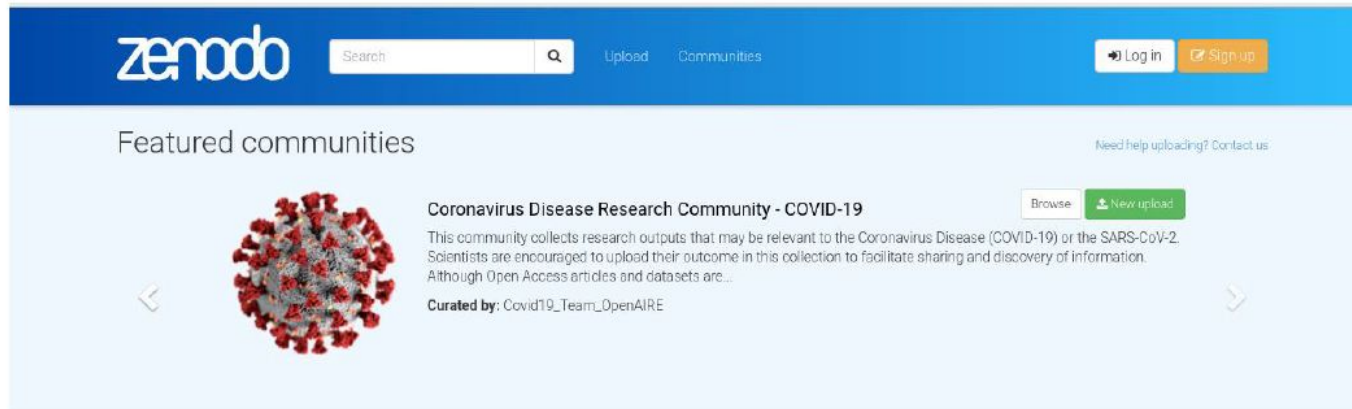


Research Data Management: TO DO



Public repositories

EU level (e.g. Zenodo)



zenodo Search Upload Communities Log in Sign up

Featured communities Need help uploading? Contact us

Coronavirus Disease Research Community - COVID-19 Browse New upload

This community collects research outputs that may be relevant to the Coronavirus Disease (COVID-19) or the SARS-CoV-2. Scientists are encouraged to upload their outcome in this collection to facilitate sharing and discovery of information. Although Open Access articles and datasets are...

Curated by: Covid19_Team_OpenAIRE

Recent uploads

November 11, 2020 (v28-10-20) Software Open Access

roblanf/sarscov2phylo: 28-10-20

roblanf; Richard Mansfield

Citation and reuse Please cite this release as: Lantear, Rob (2020). A global phylogeny of SARS-CoV-2 sequences from GISAID. Zenodo DOI: 10.5281/zenodo.3958883 You can visit that DOI here: If you publish papers that use this tree you must

View

Need help?

Contact us

Zenodo prioritizes all requested related to the COVID-19 outbreak.

We can help with:

<https://zenodo.org/>

19/10/2021



40



{ Findable
Accessible



{ Interoperable
Reusable

What is Zenodo?

Zenodo is a **general-purpose open-access repository** developed under the European OpenAIRE program (2013) and **operated by CERN**.

It allows researchers to deposit (**up to 50GB**)

- research papers,
- data sets,
- research software,
- reports,
- and any other research related digital artifacts.



<https://zenodo.org/>

It provides a **persistent digital object identifier (DOI)** to make the work easier to cite and supports **various license type**

Why to use Zenodo?

- **Safe** — your research is stored safely for the future in CERN's Data Centre for as long as CERN exists.
- **Trusted** — built and operated by CERN and OpenAIRE to ensure that everyone can join in Open Science.
- **Citeable** — every upload is assigned a Digital Object Identifier (DOI), to make them citable and trackable.
- **No waiting time** — Uploads are made available online as soon as you hit publish, and your DOI is registered within seconds.
- **Open or closed** — Share e.g. anonymized clinical trial data with only medical professionals via our restricted access mode.
- **Versioning** — Easily update your dataset with our versioning feature.
- **GitHub integration** — Easily preserve your GitHub repository in Zenodo.
- **Usage statistics** — All uploads display standards compliant usage statistics

Zenodo - Login-in

Log in to account

 Log in with GitHub

 Log in with ORCID

— OR —

Email Address 

Password 

 Log In

New to Zenodo? [Sign Up](#)

[Privacy notice](#)

Zenodo has integrated **authentication mechanism**:

- Login via ORCID or Github credentials

Zenodo - Data upload

zenodo

Search

Upload Communities

eva.hnatkova@post.cz

Delete Save Publish

New upload

Coronavirus Disease Research Community - COVID-19

Instructions: (i) Upload minimum one file or fill-in required fields (marked with a red star). (ii) Press "Save" to save your upload for editing later. (iii) When ready, press "Publish" to finalize and make your upload public.

Files

Choose files Start upload

Drag and drop files here

— or —

Choose files

(minimum 1 file required max 50 GB per dataset - contact us for larger datasets)

If you're experiencing issues with uploading larger files, read our [FAQ section](#) on file upload issues.

Files can be dragged and dropped, with the following **limitations:**

- **5 GB** max each
- **50 GB** total / dataset

Zenodo - Data upload

Files ▼ Choose files Start upload

Filename (2 files)	Size	Progress	Delete
20201012_Data a datové repozitáře_NTK_VSCHT.pdf	198 kB		
2020_What is ERA and EHEA_by Eva.pdf	290 kB		

Note: File addition, removal or modification are not allowed after you have published your upload. This is because a Digital Object Identifier (DOI) is registered with [DataCite](#) for each upload.

(minimum 1 file required, max 50 GB per dataset - [contact us](#) for larger datasets)

If you're experiencing issues with uploading larger files, read our [FAQ section](#) on file upload issues.

Communities ? recommended ▼

Specify communities which you wish your upload to appear in. The owner of the community will be notified, and can either accept or reject your request. Please make sure your record complies with the content policy of the communities you add; reported abuse will be followed by account inactivation.

Q

x

Zenodo - Data upload

Upload type required ▼

 Publication ☐	 Poster ☐	 Presentation ☐	 Dataset ☒	 Image ☐
 Video/Audio ☐	 Software ☐	 Lesson ☐	 Physical object ☐	 Other ☐

Zenodo - Providing Metadata

Basic information required

Digital Object Identifier

e.g. 10.1234/foo.bar

Optional. Did your publisher already assign a DOI to your upload? If not, leave the field empty and we will register a new DOI for you. A DOI allows others to easily and unambiguously cite your upload. Please note that it is NOT possible to edit a Zenodo DOI once it has been registered by us, while it is always possible to edit a custom DOI.

Reserve DOI

Publication date *

2021-04-29

Required. Format: YYYY-MM-DD. In case your upload was already published elsewhere, please use the date of first publication.

Title *

Required.

Authors *

Family name, given names

Affiliation

ORCID (e.g.: 0000-0002-1825-0097)

Optional.

+ Add another author

Description *

B

I

S

x_2

x^2

$\frac{1}{2}$

$\frac{3}{4}$

$\frac{1}{x}$

$\frac{1}{x^2}$

”

”

←

→

I_x

Σ

Ω

Zdroj

19/10/2021

LOCAL GLOBAL

More information: [FAIRcookbook: Deposit to Zenodo Archive](#)

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Zenodo - Providing Metadata

Version

Optional. Mostly relevant for software and dataset uploads. Any string will be accepted, but semantically-versioned tag is recommended. See semver.org for more information on semantic versioning.

Language

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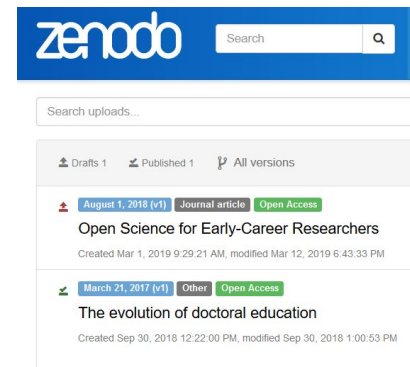
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Open Peer Review

Open Peer Review

Novel approaches to peer-review

- **Open identities:** both authors and reviewers are aware of each other's identity
- **Open reports:** reviews are published together with the paper
- **Open participation:** the community can contribute to the review process (various options)



Open Peer Review



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[Tennant \(2018\)](#) | [Ross-Hellauer \(2017\)](#)

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SYSTEMATIC REVIEW

REVISED What is open peer review? A systematic review
[version 2; peer review: 4 approved]

Tony Ross-Hellauer

Author details

This article is included in the Science Policy Research gateway.

Abstract

Background: "Open peer review" (OPR), despite being a major pillar of Open Science, has neither a standardized definition nor an agreed schema of its features and implementations. The literature reflects this, with numerous overlapping and contradictory definitions. While for some the term refers to peer review where the identities of both author and reviewer are disclosed to each other, for others it signifies systems where reviewer reports are published alongside articles. For others it signifies both of these conditions, and for yet others it describes systems where not only "invited experts" are able to comment. For still others, it includes a variety of combinations of these and other novel methods.

Methods: Recognising the absence of a consensus view on what open peer review is, this article undertakes a systematic review of definitions of "open peer review" or "open review", to create a corpus of 122 definitions. These definitions are systematically analysed to build a coherent typology of the various innovations in peer review signified by the term, and hence provide the precise technical definition currently lacking.

Results: This quantifiable data yields rich information on the range and extent of differing definitions over time and by broad subject area. Quantifying definitions in this way allows us to accurately portray exactly how ambiguously the phrase "open peer review" has been used thus far, for the literature offers 22 distinct configurations of seven traits, effectively meaning that there are 22 different definitions of OPR in the literature reviewed.

Conclusions: I propose a pragmatic definition of open peer review as an umbrella term for a number of overlapping ways

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Version 1 27 Apr 17	 read	 read	 read	 read

1. Richard Walker

2. Theodora Bloom

3. Bahar Mehmami

4. Emily Ford

Swiss Federal Institute of Technology in Lausanne, Geneva, Switzerland

The BMJ, London, UK

RELX Group, Amsterdam, The Netherlands

Portland State University, Portland, USA

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Ross-Hellauer (2017)

19/10/2021

Příklad: Open Peer Review

Home » Browse » Silent myelin-weighted magnetic resonance imaging

METHOD ARTICLE [EDIT VERSION](#) [Check for updates](#)

REVISED Silent myelin-weighted magnetic resonance imaging [version 2; peer review: 2 approved, 2 approved with reservations]

[✉ Tobias C. Wood](#) [ID](#)¹, [Nikou L. Damestani](#)¹, [Andrew J. Lawrence](#)², [Emil Ljungberg](#) [ID](#)¹, [Gareth J. Barker](#) [ID](#)¹, [Ana Beatriz Solana](#)², [Florian Wiesinger](#)^{1,3}, [Steven C.R. Williams](#) [ID](#)¹

[✎ Author details](#)

Abstract

Background: Inhomogeneous Magnetization Transfer (ihMT) is an emerging, uniquely myelin-specific magnetic resonance imaging (MRI) contrast. Current ihMT acquisitions utilise fast Gradient Echo sequences which are among the most acoustically noisy MRI sequences, reducing patient comfort during acquisition. We sought to address this by modifying a near silent MRI sequence to include ihMT contrast.

Methods: A Magnetization Transfer preparation module was incorporated into a radial Zero Echo-Time sequence. Repeatability of the ihMT ratio and inverse ihMT ratio were assessed in a cohort of healthy subjects. We also investigated how head orientation affects ihMT across subjects, as a previous study in a single subject suggests this as a potential confound.

Results: We demonstrated that ihMT ratios comparable to existing, acoustically loud, implementations could be obtained with the silent sequence. We observed a small but significant effect of head orientation on inverse ihMT.

Conclusions: Silent ihMT imaging is a comparable alternative to conventional, noisy, alternatives. For all future ihMT studies we recommend careful positioning of the subject within the scanner.

Keywords

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1. **Richard Dortch** [ID](#), Barrow Neurological Institute, Phoenix, USA
2. **Olivier Girard** [ID](#), Aix-Marseille University, Marseille, France
Lucas Soustelle [ID](#), Aix-Marseille Univ, CNRS, CRMBM UMR 7339, Marseille, France; SATT Sud-Est, Marseille, France
3. **Douglas Dean** [ID](#), University of Wisconsin-Madison, Madison, USA; University of Wisconsin-Madison, Madison, USA; University of Wisconsin-Madison, Madison, USA
4. **Gunther Helms** [ID](#), Lund University, Lund, Sweden

Alongside their report, reviewers assign a status to the article:

✓ APPROVED

The paper is scientifically sound in its current form and only minor, if any, improvements are suggested

? APPROVED WITH RESERVATIONS

Key revisions are required to address specific details and make the paper fully scientifically sound

✗ NOT APPROVED

Fundamental flaws in the paper seriously undermine the findings and conclusions

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- Co-reviewing
- ORCID ids
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Příklad: otevřený report z recenzního řízení

Reviewer Report

26 Views

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[Responses \(1\)](#)

14 May 2020 | for Version 1

Richard Dortch  Division of Neuroimaging Research, Barrow Neurological Institute, Phoenix, AZ, USA

APPROVED WITH RESERVATIONS

This well-written manuscript seeks to develop and evaluate a silent myelin-specific MRI sequence for applications in infants and the elderly, where loud imaging sequences can be problematic. Recent work has demonstrated that so-called inhomogeneous MT (ihMT), which arises primarily from dipolar order effects in myelin lipids, may be a more specific assay of myelin content than other MRI measures (e.g., T_2 relaxation, diffusion, conventional magnetization transfer). As a result, there is significant interest in developing clinically feasible ihMT sequences for applications in neurodegenerative diseases, development, and aging. Overall, the study was well designed (e.g., strong repeatability and ROI analyses) and the results were compelling. However, there are several minor-to-moderate flaws, particularly in the motivation (e.g., the need for silent ihMT sequences) and methods (e.g., the influence of head orientation on ihMT), that slightly reduced my enthusiasm and lead me to recommend a minor revision.

1. The case made for silent MT sequences is not particularly compelling. The authors mention that these are "among the loudest" sequences because they use fast gradient-echo readouts to obtain whole-brain data in clinically feasible scan times. However, these sequences are usually SAR-limited with fairly reasonable TRs (typically between 25-50 ms) that are acquired at lower resolutions to ensure adequate SNR. Together, this results in a sequence with reduced acoustic noise compared to most rapid, high-resolution gradient echo sequences as well as other quantitative approaches that use EPI (e.g., diffusion). (moderate)
2. Furthermore, the benefits of using a silent myelin sequence may not outweigh the drawbacks. For example, the proposed method requires very low flip angles (2 degrees), which results in a significant SNR penalty relative to standard ihMT sequences. In addition, the RUFIS readout results in a small increase in scan time. Given that SNR is already relatively low for ihMT indices, the proposed method may be suboptimal in many clinical scenarios. (moderate)
3. The study was not designed to specifically measure the effect of head orientation on ihMT. Subjects were scanned four times (across two sessions), but head orientation was not directly controlled or measured across these scans. Instead a mixed effects model was used and head orientation was inferred from the images (rather than the orientation of individual tracts being measured using DTI for example). Furthermore, the confounding influences of T_1 and R_1 were not measured. The authors attempt to overcome this by using

Responses (1)

AUTHOR RESPONSE 19 Aug 2020
Tobias C. Wood, King's College London, London, UK

We thank the reviewer for their time and insight. There were in total five reviewers, with many helpful suggestions, and hence there have been many edits to the paper. Responses to this particular review follow below.

1. We concede that the acoustic noise from any scan will depend on the precise sequence settings. However, we note that recent ihMT work has used both an MP-RAGE style acquisition, with an imaging TR of 4.3ms and also SSFP with a TR of only 5ms. The introduction has been amended to explicitly reference these papers.
2. We agree that radial sequences are SNR constrained relative to cartesian sequences, this has now been explicitly stated in the discussion. Although the 3D radial readout does imply a time penalty relative to cartesian, we note that our overall scan time is competitive with recent cartesian ihMT papers. This has been added to the discussion.
3. We agree that it would have been preferable to acquire explicit T1 & B1 maps for comparison, but total protocol time prevented that in this study. In our opinion the ihMTRinv maps display more even contrast than the ihMTR maps, we hope that the revised figures with axial and coronal sections make this clearer.
4. We did not have a conventional cartesian ihMT implementation available when this study was conducted. However, as there are multiple such implementations in the literature, it is possible to broadly compare image quality and achieved ihMTR values. We have added a table of ihMTR values to make this comparison easier. We concede that it is not possible to compare acoustic noise levels, because it is not standard in the MR literature to record and report the acoustic noise of a sequence. In previous work (reference 22) we did directly compare noise levels between a radial ZTE and cartesian implementation of Variable Flip-Angle T1 mapping, which in our opinion would be similar to the noise levels in this work and found a 30 dB reduction in noise level.
5. Figure 1 has been updated with a reduced number of spokes to emphasise the stepped gradients. We hope this is clearer.
6. We thank you for pointing out that the frequency offset is not ideal for generating single-sided MT contrast. With hindsight, this is obvious. The discussion has been amended to reflect this.
7. Because the MT indices are calculated off resonance, they should not suffer from inhomogeneity with the

REVISED **Amendments from Version 1**

The manuscript has been updated in response to the reviewer's helpful and insightful comments. The most important changes are that the figures have been redesigned and the emphasis on the head-orientation study reduced. The MR images have been updated to use a consistent set of slices, Figures 3 & 4 have been merged into a single figure, and the average within-subject CoV has been added. Figure 1 (the number of spokes) and Figure 6 (colour scheme) have been updated for clarity. We hope that these new figures are clearer and more intuitive than the previous figures. The language used to refer to the head orientation study has been clarified to refer to results as "highly statistically significant" rather than "strong". A reviewer provided a plausible explanation for the negative values of ihMTR in CSF, namely the use of Fermi pulses in the preparation module, and this limitation has been discussed. A table with the mean ihMTR and inverse ihMTR values has been added. The discussion has been expanded to better set the context of the paper within existing literature, with better comparisons between our results and previous papers. We think the resulting paper is much improved and thank the reviewers again for their valued input.

[See the authors' detailed response to the review by Douglas Dean](#)
[See the authors' detailed response to the review by Gunther Helms](#)
[See the authors' detailed response to the review by Richard Dortch](#)
[See the authors' detailed response to the review by Olivier Girard and Lucas Sostelle](#)

<https://wellcomeopenresearch.org/articles/5-74>

Otázky?

eva.hnatkova@techlib.cz

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Citizen Science



- Reaching out to citizens
- Citizens deciding research
- Citizens helping research
- Citizens doing research

Citizen Science - občanská věda

Občanská věda

- Reaching out to citizens
- Citizens deciding research
- Citizens helping research
- Citizens doing research



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Citizen Science – občanská věda

VISK 2, 19. 10. 2021

Barbora Votavová



Citizen Science

The diagram illustrates the Citizen Science process as a continuous cycle of six stages surrounding the central concept of 'Citizen Science':

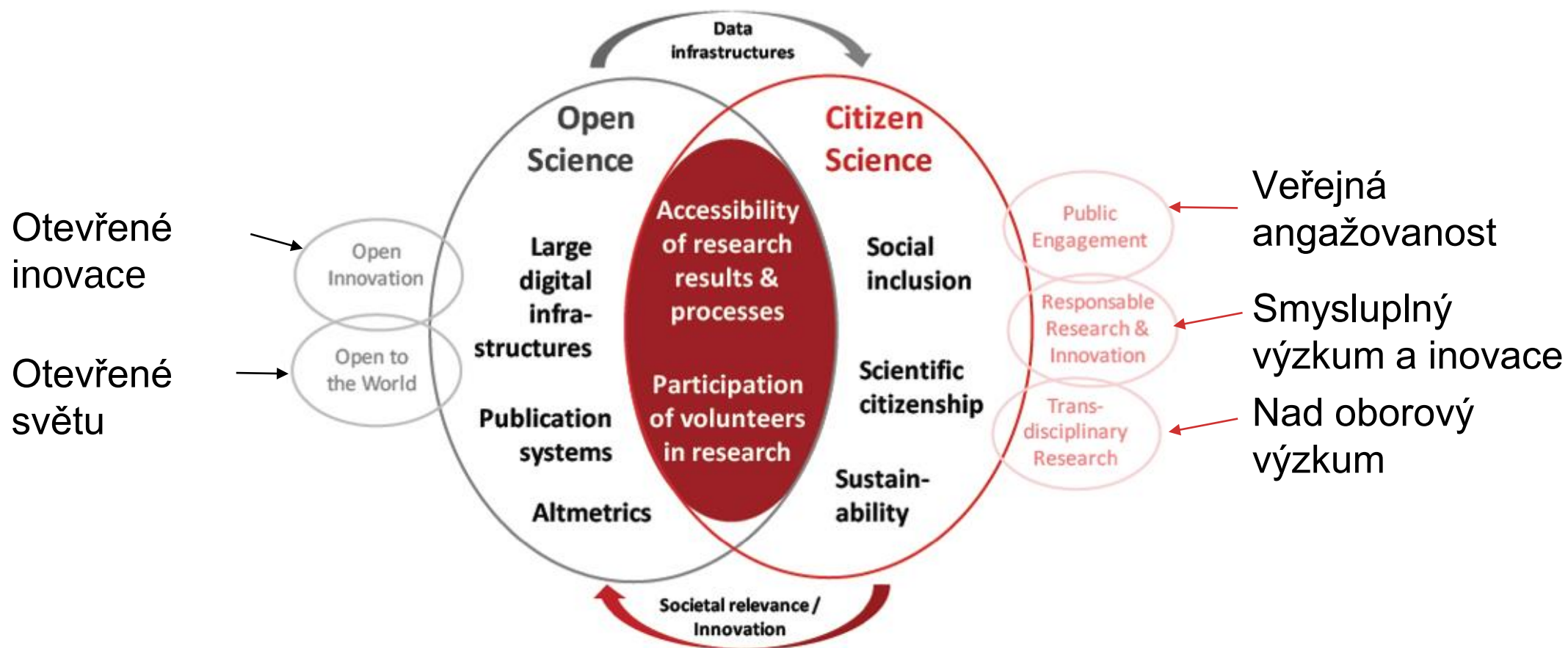
- Research:** Represented by a cloud with raindrops.
- Community:** Represented by a group of stylized people.
- Share:** Represented by a clipboard with a pie chart.
- Learn:** Represented by a lightbulb with a plant growing inside.
- Research:** Represented by a hand holding a seedling.
- Community:** Represented by a scientist in a lab coat.

Arrows indicate a clockwise flow from Research to Community, then to Share, Learn, Research, and finally to Community again, completing the cycle.

- V překladu - občanská věda
- Je cílem i aktivátorem otevřené vědy (Open Science)
- Lepší porozumění vědy veřejností
- Často se občané účastní pomocí tzv. crowdsourcingových aktivit
 - Označení dělby práce, kdy se blíže nespecifikované skupině lidí zadá všeobecná výzva
- Co-creation techniky
 - kolaborativní způsob práce, občané pokládají otázky vědcům, kolektivní rozhodování, vytváření nápadů aj.)
- Občanská věda může vést k objevům, kterých by jednotlivec nemohl nikdy dosáhnout!

Zdroj: [LibGuides](#)

Citizen Science



Zdroj: Open science and Citizen science Core Concepts and Areas of Synergy from Vohland & Göbel, 2017. Translated from German in DITOs consortium (2017).

Občanská věda a zapojení veřejnosti

- Zapojení neakademické veřejnosti do procesu vědeckého výzkumu
- Podporují sběr, analýzu a popis výzkumných dat
- Jsou cenným přínosem pro vědu
- Jejich role: jako přispěvatelé, spolupracovníci, ale i vedoucí projektů
- Mají smysluplnou roli v projektech

Občanská věda a zapojení veřejnosti

- **Doba trvání:** den nebo desetiletí
- **Účast:** jednorázová nebo průběžně
- **Zlepšení výzkumu** v astronomii, ekologii, strojírenství, genetice, medicíně, sociálních vědách a v mnoho dalších



Zdroj: Citizenscience.org



Jak může být veřejnost oslovena?

- Konferenční příspěvky,
- Výzkumné články,
- Knižní publikace
- Blogy,
- Sociální sítě,
- Video,
- Webové platformy

DŘÍVE

DNES

Nejznámější projekty ve světě

- První zdokumentovaný projekt byl uskutečněn v roce 1900 v USA, „Christmas Bird Count“
 - 14. 12. 2021 – 5. 1. 2022
 - Mapu s okruhy, kde se bude počítat
 - Možnost se přihlásit do sčítání – nelze sčítat na vlastní pěst a pak poslat data
 - Nahrávat fotky ptáků
- 
- Zdroj: audubon.org
Photo: Geoff White
Photography



Zdroj: [audubon.org](https://www.audubon.org)
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Photography

Nejznámější projekty ve světě



Zdroj: Galaxy ZOO

- Zatím nejúspěšnější projekt „Galaxy ZOO“
 - Začátek - červenec 2007
 - Databáze s milionem galaxií – do 24 hodin od spuštění získali skoro 70 tis. Klasifikací za hodinu
 - Klasifikování galaxií během jednoho roku za pomoci cca 150 tis. účastníků
 - Cílem je porozumět procesům mezi jednotlivými galaxiemi a zjistit co za informace nám mohou poskytnout pro vesmír jako celek.
- 
- Zdroj: Galaxy ZOO

Experiment Tuskegee

- Studie trvala 40 let (1932-1972)
 - Byla známa pod jménem: the U.S. Public Health Service Syphilis Study at Tuskegee
 - Zkoumala přirozený průběh neléčené syfilidy
 - **Původní plán:**
 - Studie měla trvat 6 měsíců,
 - Pacientům měla být poskytnuta zdravotní péče,
 - Ztráta financování
 - Lživé informace na co jsou léčeni
 - 1974 – Kongres Spojených států amerických – zákon upravující podmínky výzkumů (písemné souhlasy, sdělení diagnózy, průběžné info o výsledcích)
- 
- Zdroj: [g](#)



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10 pravidel pro občanskou vědu

- 1) **Vědecké projekty týkající se občanu, je aktivně zapojují do vědeckého úsilí, které přináší nové znalost a porozumění.**
(Smysluplná role v projektech)
- 2) **Občanská věda má skutečný vědecký výsledek.** (zodpovězení výzkumné otázky, usnadnění politických rozhodnutí apod.)
- 3) **Poskytuje výhody vědě i společnosti.** Zvyšuje příležitost pro vzdělávání, osobní zážitek, sociální výhody, příspěvek k vědeckým důkazům a propojení s veřejností s vědeckou komunitou.
- 4) **Vědci z řad občanů se mohou účastnit různých fází vědeckého procesu** (vývoj výzkumných otázek, navržení metod, shromažďování a analýza dat, sdělování výsledků).
- 5) **Vědci z řad občanů by měli dostat zpětnou vazbu od projektu, jak jsou jejich data a výsledky využita ve výzkumu.**

10 pravidel pro občanskou vědu

- 6) **Občanská věda má také své omezení a předsudky**, které musí být zváženy a kontrolovány. Poskytuje ale větší příležitost pro veřejnost se zapojit do vědy.
- 7) **Pokud je to možné a vhodné, jsou data a metadata z projektů veřejně dostupná** a výsledky jsou zveřejňovány ve formátu otevřeného přístupu. (sdílení dat během nebo po projektu, pokud nedojde k ohrožení bezpečnosti nebo soukromí).
- 8) **Vědci z řad občanů jsou projektem náležitě uznáváni.** To může zahrnovat uznání v projektové komunikaci, hlášení výsledků a publikací.
- 9) **Programy občanské vědy nabízí celou řadu výhod a výstupů, které by měly být uznány při hodnocení projektů.** Hodnocení by v sobě mělo zahrnovat vědecké výstupy kvalitu údajů, zkušenosti a získané vědomosti (učení) účastníků, sdílení znalostí, sociální výhody, nové způsoby zapojení vědy aj.
- 10) **Vedoucí projektu občanské vědy musí zohlednit právní a etické aspekty projektu.** Jako jsou autorská práva, duševní vlastnictví, dohody o sdílení údajů, důvěrnost, bezpečnost a blaho účastníků, tak také dopad na životní prostředí a další.

Knihovny a občanská věda

- **Místo pro setkávání lidí** a prostor pro debaty a výzkum – knihovnická centra, kde knihovníci přebírají stále aktivnější role.
- Výzkum z roku 2018 provedený Americkou asociací veřejných knihoven zjistil rozpor mezi nabízenými službami a tím co požadují uživatelé knihoven.
- Ideální by bylo aby kromě tichých míst a připojení k internetu, zde bylo **vytvořeno komunitní centrum s větší aktivitou knihovníků.**



Zdroj: praha.eu

Knihovny a občanská věda

- Iniciativa projektů občanské vědy Scistarter má za cíl vybavit knihovníky nástroji, znalostmi a dovednostmi, které potřebují k zavedení občanské vědy do veřejných knihoven.
- Vznikl tzv. Průvodce pro knihovníky občanskou vědou
- Občanská věda a veřejné knihovny mají mnoho společného
 - Snaha demokratizovat přístup k informacím,
 - Rozšiřovat znalosti,
 - Vytvářet spolupracující vzdělávací zkušenosti
 - Budovat a podporovat komunitu

Jak zapojit knihovnu do občanské vědy

- Identifikovat možné spolupráce v rámci komunity,
- Identifikovat rozložení/zastoupení komunity,
- Stovky projektů
- Najděte si vědce ve vašem okolí, kteří by mohli mít zájem o zapojení do občanské vědy nebo už takový projekt mají
- Pozvěte je k vám do knihovny a uspořádejte přednášku se zájemci z komunity



Jak vybrat správný projekt?

- Potřebuje projekt data z vaší lokality?
- Jsou k projektu vyžadovány speciální nástroje (senzory, srážkoměry aj.)
 - zajistí tyto přístroje vedoucí projektu?
 - Budou instalovány v knihovně nebo si je mohou účastníci vzít domů?
- Jaké je potřeba technologické úrovně do zapojení projektu? Může se zapojit člověk nevlastnící chytrý telefon? Je požadována wi-fi/přístup k internetu? Mohou přístup k internetu využívat jen v knihovně?
- Bude vedoucí projektu k dispozici osobně nebo virtuálně k rozhovorům?
- Jaké další zdroje může knihovna poskytnout pro zlepšení podmínek pro účastníky? (knihy, průvodce souhvězdími, různé typy příruček apod.?)
- Jakým způsobem uvidí účastníci svá data a jak se budou používat? Jak se dozví o výsledcích individuálních i kolektivních?
- Jaká je motivace účastníků se zapojit?

Příklady zapojení knihovníků do občanské vědy

- Knihovna v Bronxu (NY, USA) - s podobnou strategií jaká byla používána u čtenářského klubu, strávila skupina residentů 2 roky dokumentování zkušeností s násilím, diskriminací a týráním NY policie proti lidem různé barvy pleti.
- Tři knihovny ve Španělsku spolu vytvořily projekt zaměřený na přístup k bydlení. Během společných zasedání s výbory převzali knihovníci roli zprostředkovatelů v procesech transformace jejich měst nebo čtvrtí.
 - Sběr dat probíhal v ulicích,
 - Cíl byl mluvit přímo s residenty (trh s pronájmy, dopad prázdných bytů, přístup k bydlení zranitelných skupin společnosti aj.)
 - Shromážděné údaje pak byly interpretovány a byly z nich vytvořeny návrhy pro každou obci/město.

Příklady zapojení knihoven do občanské vědy v ČR

- Nejlepší je podívat se na projekty, které jsou vypsány na citizenscience.cz
- Můžete vyhledávat přes knihovnu projektů (klíčová slova, autor, rok, název) aj.)
- U každého projektu je cíl a úkol pro zapojené občany
- Kontaktovat vedoucího projektu a domluvit se jak by mohla knihovna přispět, co může nabídnout

Příklady zapojení knihoven do občanské vědy v ČR

[BLOG](#)[DATABÁZE PROJEKTŮ](#)[O CITIZEN SCIENCE](#)[KNIHOVNA](#)[ODKAZY](#)[FÓRUM](#)[KONTAKTY](#)

Svátek citizen science, geověd a nových technologií: FOSS4G a State of the Map

Prvky občanské vědy najdeme v mnoha projektech a mezi ty vlajkové patří také OpenStreetMap (OSM). Tento projekt představuje svobodnou mapu světa, kterou vytvářejí uživatelé (občanští vědci) dobrovolně už desetiletí. Mapy se využívají [...]



Příklady zapojení knihovníků do občanské vědy v ČR

- Mezinárodní sčítání vodních ptáků,
- Kroužkování ptáků
- Okáčům na stopě
- Motýlí klenoty
- A další



Praha kvete

V rámci projektu Praha kvete
zakládáme květnaté loučky pro hmyz v
Praze a okolí. Projekt běží již druhým
rokem a jsou do něj zapojeny mnohé
městské části, školy a školky. Letos
rozšiřujeme naše působení i do
sousedních zahrad. Současně se
zakládáním květnatých louček
připravujeme přednášky pro děti či
širokou veřejnost. Zapojit se může
každý – at už samotným založením
loučky na vlastním pozemku či
následným monitoringem hmyzu přes
aplikaci iNaturalist.



Okáčům na stopě

Projekt slouží ke sběru dat pro výzkum a ochranu kriticky ohroženého okáče metlicového (Hipparchia semele) v Prokopském údolí a jeho okolí. Jednotlivá pozorování veřejnosti budou využita ke zpřesnění standardního monitoringu, který provádějí odborníci za pomoci metody značení a zpětného odchytu jedinců.



CSI-COP: COokie, Pozor!



Netopýři na výletě

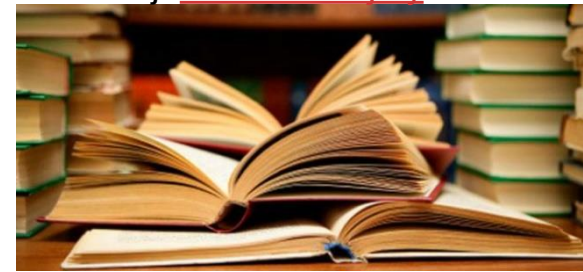
Netopýři na výletě je projekt, který má za cíl zapojit širší veřejnost do sledování těchto odlišných živočichů. V tomto projektu se shromažďují data o výletové aktivitě samicích kolonií netopýřů, ty jsou formovány v každoročním intervalu od května do července. Poznejte své sousedy – netopýře! Jsou fascinující a možná nevíte, jak blízko k vám jsou!



Honba za petrklíči

vydejte se do přírody, najděte petrklíče, podívejte se do květů a sdílejte je s ostatními

Jak mohou knihovny pomoci?



- Zahrnout knihu, průvodce, informační brožuru o citizen science v prostoru knihovny.
- Zapojení do projektu, odpovídání na otázky související s konkrétním výzkumem.
- Knihovny mají možnost podporovat občany ze všech sociálních vrstev, zvýšit jejich zvědavost, znalosti a další
- Mohou naslouchat obavám místních obyvatel a převzít klíčovou roli při posilování komunity (obyvatelé, vědci, obce) díky spoluvytváření nových znalostí s jasně viditelným cílem a dopadem.



Odkazy k podkladům o občanské vědě

- EU-citizen science (AJ)
- Průvodce knihovníků občanskou vědou (AJ)
- E-manuál komunikace občanské vědy v České republice
- Občanská věda v České republice
- 10 pravidel Občanské vědy

Libraries are ... essential to the functioning of a democratic society ... libraries are the great symbols of the freedom of the mind.

Knihovny jsou ... zásadní pro fungování demokratické společnosti ... knihovny jsou velkými symboly svobody mysli.

— *Franklin D. Roosevelt*



Perzistentní identifikátory

VISK 2, 19. 10. 2021

Barbora Votavová



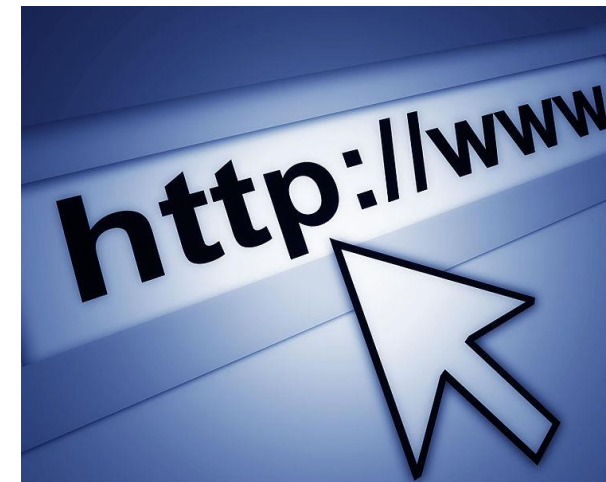
Co jsou perzistentní identifikátory?

- Zkratka – PID
- Jedná se o dlouhodobý odkaz na dokument, soubor, webovou stránku nebo jiný digitální objekt
- PID má jedinečný identifikátor spojený s aktuální adresou metadat nebo obsahu.
- PID umí na rozdíl od URL aktualizovat umístění a stále odkazovat na správné místo



Proč je dobré používat PID?

- Řeší problém citovaného zdroje
 - Především od 90. let a rozvoje internetu
- Zajistí dohledatelnost a identifikovatelnost informačního zdroje (publikací, dat, osob aj.)
- Nezbytné pro hodnocení vědy
- Šíření a dostupnost digitálních publikací → strojově čitelné



Zdroj: [Universal postal union](#)



Druhý PID

PID pro autory/vědce

PID pro digitální objekty

PID pro organizace

PID pro vědce



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RESEARCHID



Scopus iD

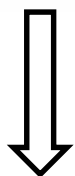
PID pro digitální objekty (publikace, data)



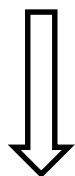
PID pro instituce/organizace



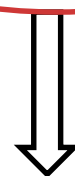
Přehled nejčastěji používaných PID v OS



Data z výzkumu
(DOI)



Publikace,
granty
(DOI)



Autoři
(ORCID iD)



Výzkumné
organizace
(ROR iD)



- Nezisková organizace
- Zajišťuje jedinečný, globální identifikátor pro vědce
- Řeší nejednoznačnosti příjmení
- Stále více používaný ve vědeckém světě
- V centrálním registru je více jak 12 miliónů ORCID iDs





[https://orcid.org/
0000-0002-6445-2183](https://orcid.org/0000-0002-6445-2183)

Other IDs



Scopus Author ID: 57200001684

Source:

Scopus - Elsevier 2021-06-10

ResearcherID: AAA-9430-2021

Source:

Publons 2021-06-10

Keywords



CO2 emissions, carbon capture ,
climate changes, adsorption processes,
specific surface area, porosity
characterization

Printable version

Name

Barbora Votavová

Activities

[Collapse all](#)

▼ Employment (2)

Sort

University of Chemistry and Technology: Prague, CZ

Employment

[Show more detail](#)

Source: Barbora Votavová

National Library of Technology: Prague, CZ

(Strategy and Development)
Employment

[Show more detail](#)

Source: Barbora Votavová

Nápověda



✓ Education and qualifications (2)

Sort

University of Chemistry and Technology: Prague, CZ

Ing. (Department of Gaseous and Solid Fuels and Air Protection)
Education

[Show more detail](#)

Source: Barbora Votavová

University of Chemistry and Technology: Prague, CZ

2016 to 2021 | Ph.D. (Department of Gaseous and Solid Fuels and Air Protection)
Education

[Show more detail](#)

Source: Barbora Votavová

Flavin photocatalysis

Chemical Photocatalysis

2013 | book

Part of DOI: [10.1515/9783110269246.45](https://doi.org/10.1515/9783110269246.45)

EID: 2-s2.0-84979168063

[Show more detail](#)

Source: Radek Cibulka *via* Scopus - Elsevier

Planar Chiral Flavinium Salts: Synthesis and Evaluation of the Effect of Substituents on the Catalytic Efficiency in Enantioselective Sulfoxidation Reactions

European Journal of Organic Chemistry

2013 | journal-article

DOI: [10.1002/ejoc.201300847](https://doi.org/10.1002/ejoc.201300847)

WOSUID: WOS:000332831100017

[Show more detail](#)

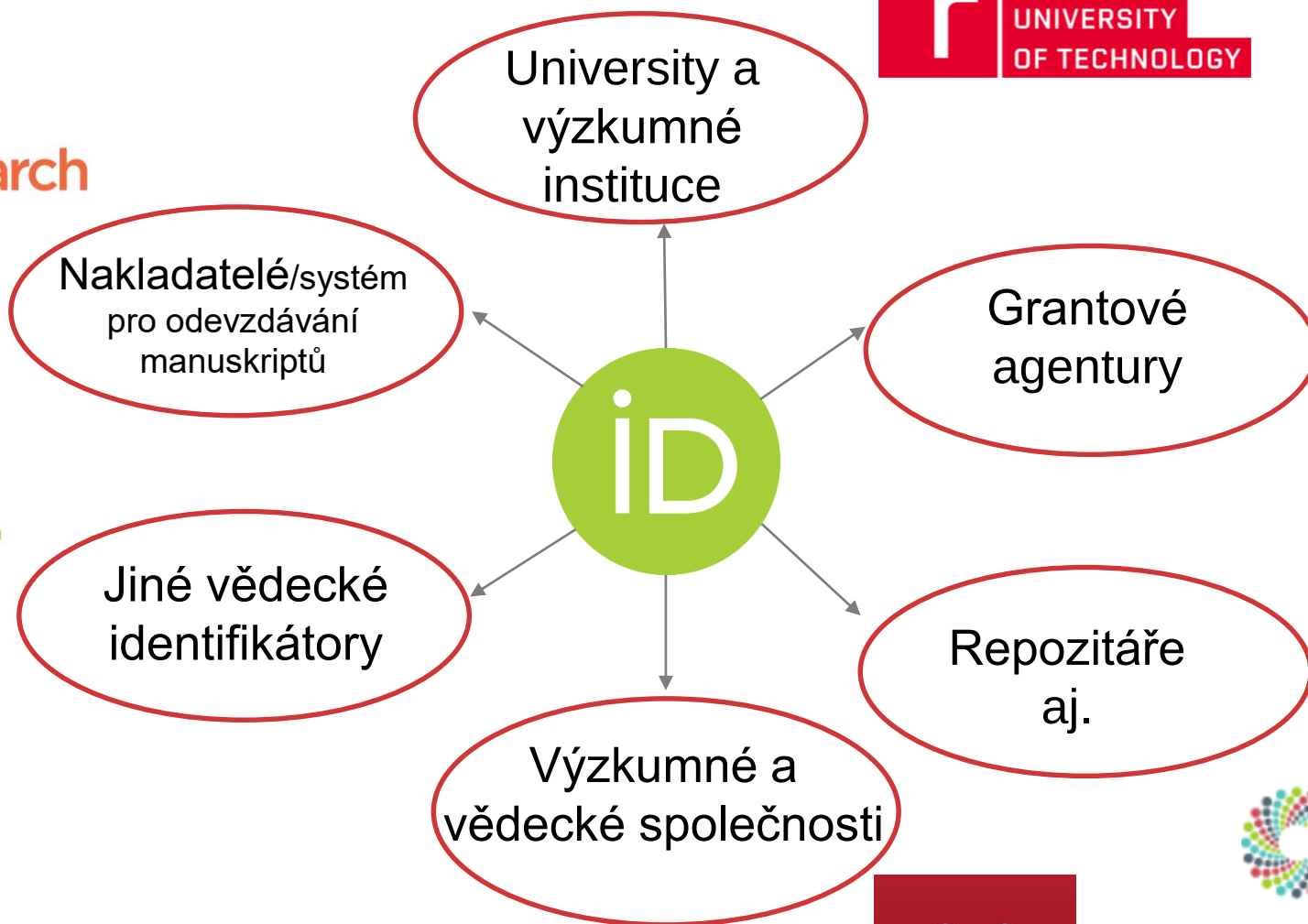
Source: Radek Cibulka *via* ResearchID ★ Preferred source (of 2)



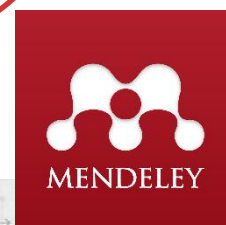
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Požadavky na PIDs v Horizon Europe

- Zajistit otevřený přístup k vědeckým publikacím a datům.
- Požadavky na metada:
 - Pro verzi záznamu publikace musí být uveden PID (např. DOI),
 - Autoři uvedení na dané publikaci musí mít uveden ORCID,
 - Pokud je to možné, uvést PID jejich organizace (ROR) a grantu (DOI).



September 23, 2021

Presentation

Open Access

re3data COREF – Developing a Conceptual Model for User Stories for the Registry of Research Data Repositories (Presentation at the Open Science Fair 2021)

 Weisweiler, Nina Leonie

Project member(s)

 Elger, Kirsten;  Ferguson, Lea Maria;  Kindling, Maxi;  Nguyen, Thanh Binh;  Pampel, Heinz;  Schabinger, Rouven; Schnepf, Edeltraut; Semrau, Angelika;  Strecker, Dorothea;  Trofimenko, Margarita;  Ulrich, Robert;  Vierkant, Paul;  Wang, Yi

Related person(s)

 Witt, Michael

Supervisor(s)

 Bertelmann, Roland;  Cousijn, Helena;  Petras, Vivien;  Upmeier, Arne

re3data is the global registry for research data repositories. As of January 2021, the service lists over 2700 digital repositories across all scientific disciplines and provides an extensive description of repositories based on a detailed metadata schema. A variety of funders, publishers, and scientific organizations around the world refer to re3data within their guidelines and policies, recommending the service to researchers looking for appropriate repositories for storage and discovery of research data.

64

views

14

downloads

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Indexed in

OpenAIRE

Publication date:

September 23, 2021

DOI:

DOI [10.5281/zenodo.5529651](https://doi.org/10.5281/zenodo.5529651)

Keyword(s):

re3data COREF project

research data repositories

registry service

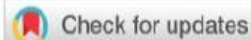
use case analysis

conceptual model

Meeting:

<https://doi.org/10.5281/zenodo.5529651>

SYSTEMATIC REVIEW



REVISED What is open peer review? A systematic review [version 2; peer review: 4 approved]

✉ Tony Ross-Hellauer

✚ Author details



This article is included in the [Science Policy Research](#) gateway.

Abstract

Background: “Open peer review” (OPR), despite being a major pillar of Open Science, has neither a standardized definition nor an agreed schema of its features and implementations. The literature reflects this, with numerous overlapping and contradictory definitions. While for some the term refers to peer review where the identities of both author and reviewer are disclosed to each other, for others it signifies systems where reviewer reports are published alongside articles. For others it signifies both of these conditions, and for yet others it describes systems where not only “invited experts” are able to comment. For still others, it includes a variety of combinations of these and other novel methods.

Methods: Recognising the absence of a consensus view on what open peer review is, this article undertakes a systematic review of definitions of “open peer review” or “open review”, to create a corpus of 122 definitions.

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	1	2	3	4
Version 2 (revision) 31 Aug 17				
		read	read	read
Version 1 27 Apr 17				
	read	read	read	read

1. **Richard Walker** , Swiss Federal Institute of Technology in Lausanne, Geneva, Switzerland
2. **Theodora Bloom** , The BMJ, London, UK
3. **Bahar Mehmani** , RELX Group, Amsterdam, The Netherlands
4. **Emily Ford** , Portland State University, Portland, USA

Alongside their report, reviewers assign a status to the article:

APPROVED

The paper is scientifically sound in its current form and only minor, if any, improvements are suggested

APPROVED WITH RESERVATIONS

Key revisions are required to address specific details and make the paper fully scientifically sound

NOT APPROVED

Fundamental flaws in the paper seriously undermine the findings and conclusions

Visibility & credit for reviewers:

- Co-reviewing
- ORCID ids
- DOIs for reports

Přehled nejčastěji používaných PID v OS



Data z výzkumu (DOI)



Publikace,
granty
(DOI)



Autoři
(ORCID iD)

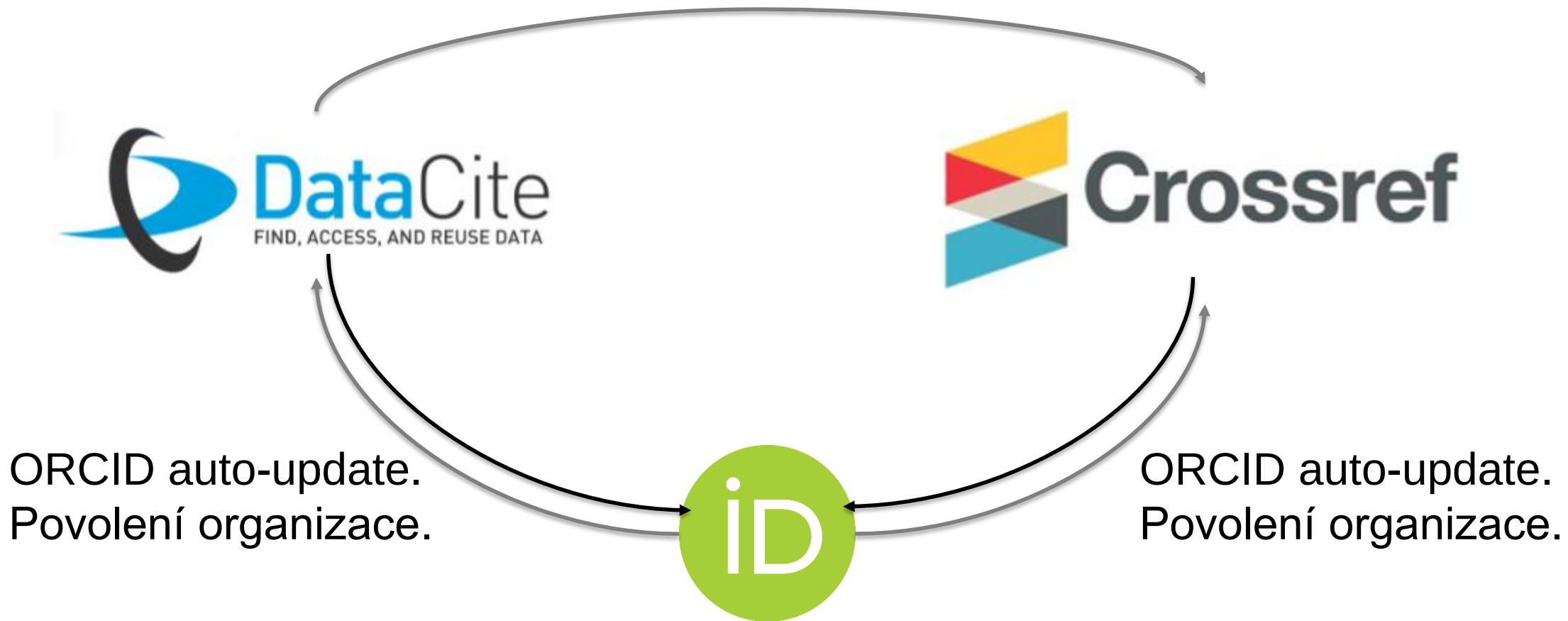


Výzkumné
organizace
(ROR iD)

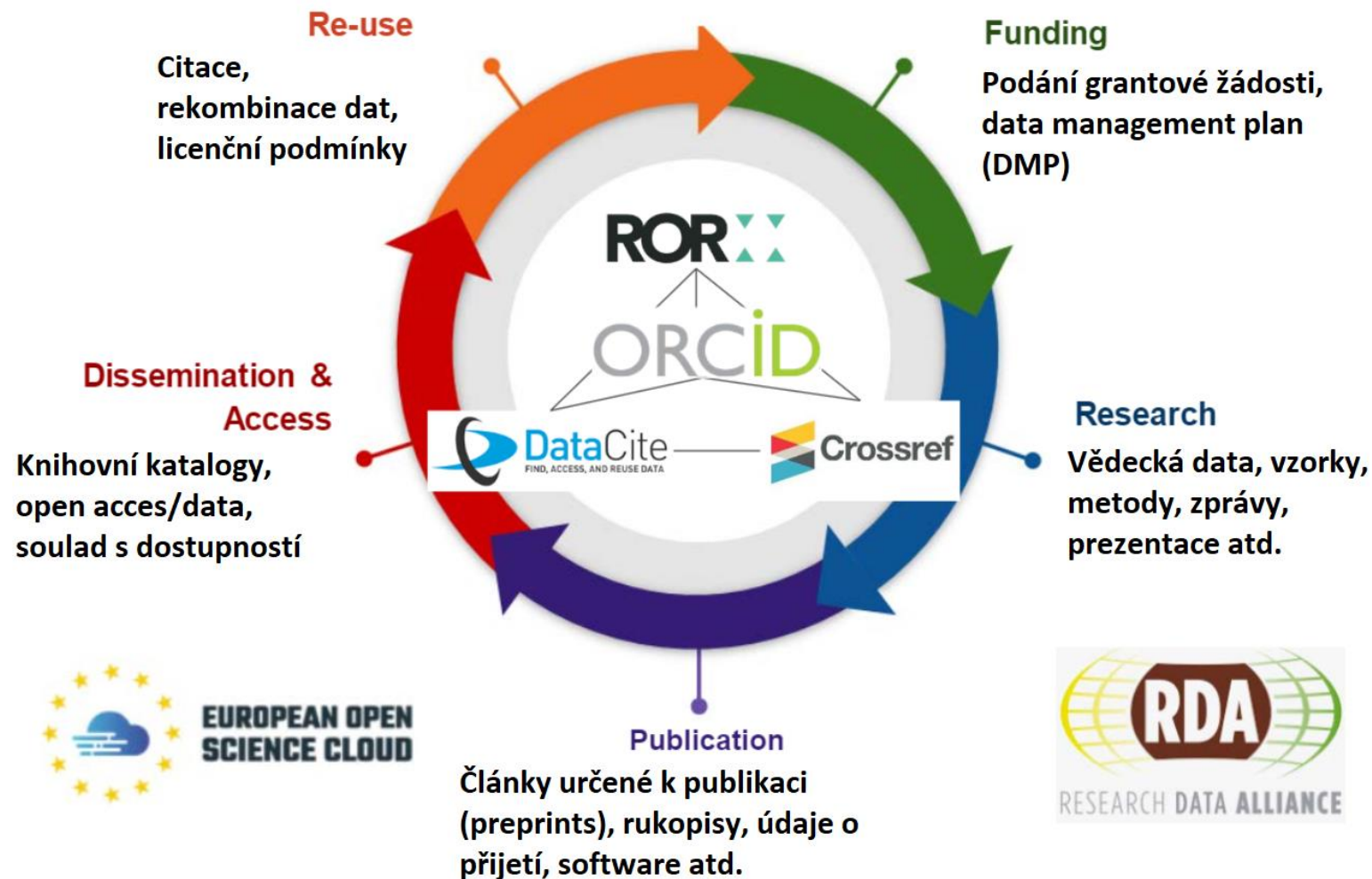
Použití DOI

- DataCite nebo Crossref umožňuje lepší vyhledatelnost a citovatelnost výstupů → lepší znovupoužití dat
- DataCite zpřístupňuje citace dat získané prostřednictvím Crossref v jejich vyhledávání

Citace dat, zahrnutí iD ve svých metadatech



Propojení PIDs ve vědeckém prostředí s podporou Open Science



Source: [National approach to ORCID adoption in Germany](#)

Plán NTK na podporu PIDs

- Oslovení VŠ a poskytovatelů financí (ČR) ➡ v rámci webináře ORCID in the Czech Republic: towards National consortium (29. 9. 2021)
- Podpora vzniku národního konsorcia ORCID
 - NTK by se ujala role vedoucí organizace a vytvářela centrální podporu konsorcia
- Podpora vzniku konsorcia DataCite ➡ pokud by byl zájem ze strany výzkumných organizací
 - NTK by se spojila s CESNETem a byly by dvě vedoucí organizace

NTK

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

Open Science v Horizon Europe

The background features a light gray graphic of two stylized human figures. The figure on the left is labeled 'TODAY' and has a head composed of several concentric, wavy lines. The figure on the right is labeled 'TOMORROW' and has a head composed of several concentric, curved lines, resembling a signal or antenna. The figures are positioned as if they are looking at each other or at the central text.

Témata

1. Úvod do Open Science /otevřeně vědy
2. Vědeckého publikování a Open Access
3. Správa výzkumných dat a Open/FAIR Data
4. Open Science a Citizen Science v praxi
5. **Open Science v Horizon Europe**

- Vývoj Politiky v EU rámcových programech
- Open Science in Horizon Europe
- Open Access to research Publication
- Research Data Management
- Open Research Europe (ORE)
- European Open Science Cloud (EOSC)

Open Science in Horizon Europe

19/10/2021



% → ‰



4

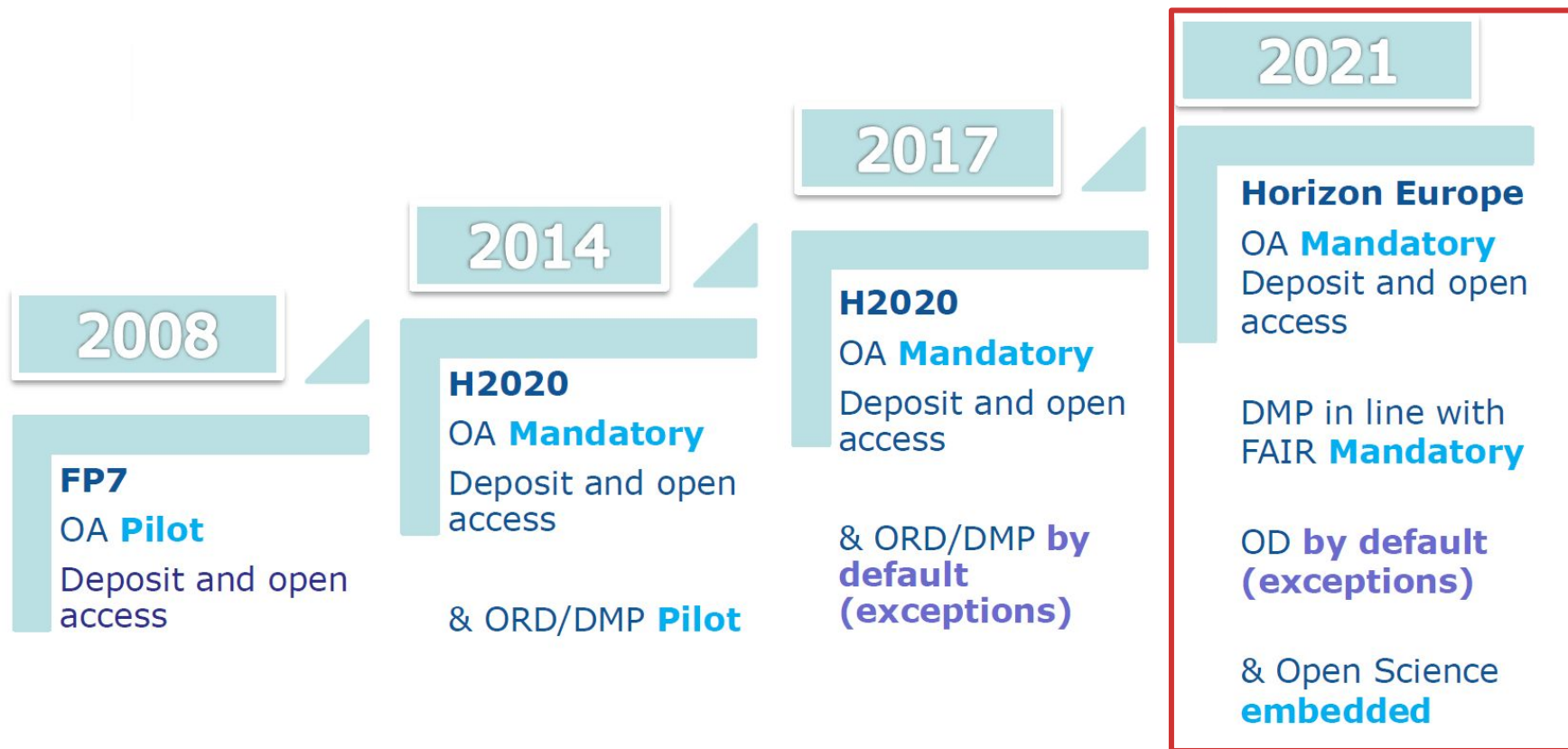
Open Science - nový “modus operandi”

Horizon Europe

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



Policy in EC Framework Programs for R&I



Lessons learned and key novelties in HE

from Horizon 2020 Interim Evaluation

in Horizon Europe



Support breakthrough innovation



European Innovation Council



Create more impact through mission-orientation and citizens' involvement



R&I Missions



Strengthen international cooperation



Extended association possibilities



Reinforce openness



Open science policy



Rationalise the funding landscape



New approach to Partnerships

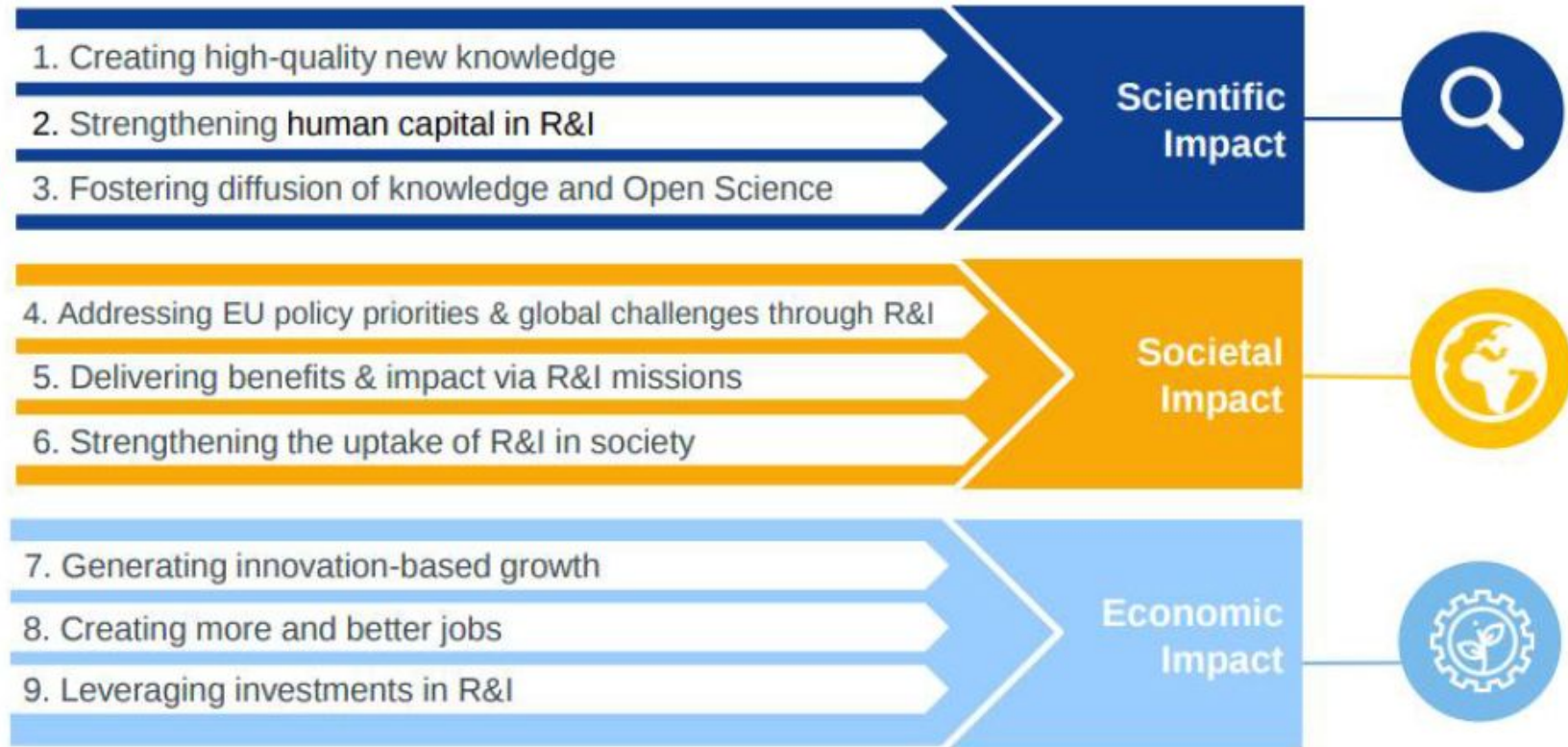


Encourage participation



Spreading Excellence

Key impact pathways to track progress



Open Science in Horizon Europe

Dokumenty Evropské komise

- [General Model Grant Agreement](#) - str. 108
- [Annotated Model Grant Agreement](#) - Open Science požadavky, str. 152-161
- [Horizon Europe Programme Guide](#)

Horizon Europe - definice

- **Open Science** - An approach to the scientific process based on open cooperative work, tools and diffusing knowledge
- **Open access** - Online access to research outputs provided free of charge to the end-user.

Open Science across the programme

Open Science

Better dissemination and exploitation of R&I results and support to active engagement of society

Mandatory Open Access to publications: beneficiaries shall ensure that they or the authors retain sufficient intellectual property rights to comply with open access requirements

Open Access to research data ensured: in line with the principle "as open as possible, as closed as necessary"; Mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Re-usable) and Open Research Data

- Support to researcher skills and reward systems for open science
- Use of European Open Science Cloud

Publikace v Horizon Europe

Otevřený přístup k vědeckým publikacím

Příjemce jsou **povinni zajistit otevřený přístup** k recenzovaným publikacím. 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** nejpozději v den vydání publikace.
- **okamžitý otevřený přístup** k uložené publikaci
- prostřednictvím repozitáře poskytnout informace o jakémkoliv dalším výstupu výzkumu nebo nástrojích potřebných k ověření závěrů vědecké publikace.

Příjemci (nebo autoři) jsou **povinni uchovat si k publikaci autorská majetková práva** v takovém rozsahu, aby bylo možné stanoveným povinnostem vyhovět.

Licence k publikaci

Články



Monografie a jiné dlouhé textové formáty



Metadata k publikaci

Musí obsahovat minimálně následující údaje:

- Autoři publikace, název, datum publikování
- Výraz „Horizon Europe“ nebo „Euratom funding“
- Název grantového projektu, jeho akronym a číslo
- Licenční podmínky
- **Trvalé identifikátory** pro publikace ([DOI](#)), pro datasety ([DOI](#)), [ORCID](#) pro autory, a pokud možno i pro ostatní autory jejich organizace a granty



Výzkumné data v Horizon Europe

Správa výzkumných dat

Příjemce je **povinen spravovat výzkumná data v souladu s principy FAIR.**

Především je povinen:

- **Vypracovat plán správy výzkumných dat v souladu s FAIR principy** a pravidelně ho aktualizovat.
- **Uložit výzkumná data** co nejdříve do důvěryhodného repozitáře dle plánu pro správu výzkumných dat.
- V souladu s plánem pro správy dat **zajistit co nejdříve otevřený přístup k výzkumným datům uložených v repozitáři** za podmínek poslední dostupné verze veřejné licence Creative Commons Attribution International (CC BY) nebo jejího ekvivalentu.

Správa výzkumných dat

- Poskytnout prostřednictvím repozitáře dostatečné informace o všech dalších výsledcích výzkumu nebo nástrojích a instrumentů potřebných k opětovnému využití výzkumných dat nebo k jejich validaci.

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).

Správa výzkumných dat

Otevřený přístup k výzkumným datům se řídí zásadou „**co nejotevřenější, uzavřené podle potřeby**“ s ohledem na soukromí, ochranu osobních údajů, důvěrnost, oprávněné obchodní zájmy a práv 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.

Poskytnout prostřednictvím repozitáře dostatečné informace o všech dalších výsledcích výzkumu nebo nástrojích a instrumentů potřebných k opětovnému využití výzkumných dat nebo k jejich validaci.

Metadata k datům

Musí obsahovat minimálně následující údaje:

- Autoři, název datové sady, datum publikování
- Výraz „Horizon Europe“ nebo „Euratom funding“
- Název grantového projektu, jeho akronym a číslo
- Licenční podmínky
- **Trvalé identifikátory** pro publikace ([DOI](#)), pro datasety ([DOI](#)), [ORCID](#) pro autory, a pokud možno i pro ostatní autory jejich organizace a granty



Licence k datům

Datové sady



Horizon Europe



Otázky?

eva.hnatkova@techlib.cz