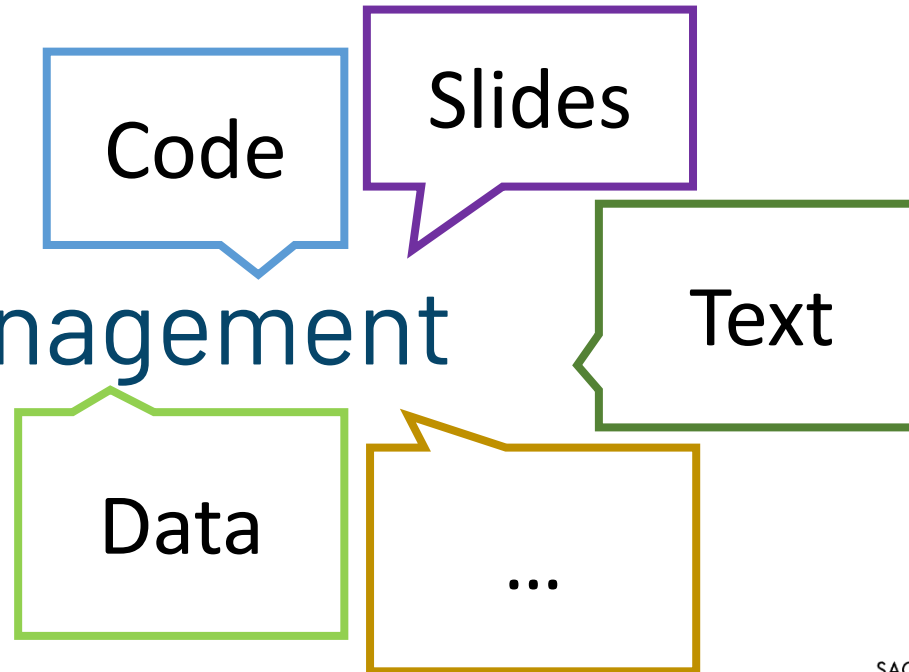


Research Data Management

Robert Haase



GEFÖRDERT VOM



Bundesministerium
für Forschung, Technologie
und Raumfahrt



Diese Maßnahme wird gefördert durch die Bundesregierung
aufgrund eines Beschlusses des Deutschen Bundestages.
Diese Maßnahme wird mitfinanziert durch Steuermittel auf
der Grundlage des von den Abgeordneten des Sächsischen
Landtags beschlossenen Haushaltes.

Recap quiz

- Which of the programs outputs „7“?



```
a = 14 / 2  
b = 3  
c = a - b
```

```
print(c)
```



```
n = 2  
m = pow(n, 3)  
p = m - n
```

```
print(p)
```



```
arr = []  
for i in range(7):  
    arr.append(i)
```

```
print(len(arr))
```



```
a = 3  
b = 4
```

```
print(a + b == 7)
```

Recap quiz

- What's the output of this python code?

```
data = ('A', 'B', 'C', 'D', 'E', 'F', 'G')  
print(data[1:3])
```

('A', 'B', 'C')

('B', 'C', 'D')

('A', 'B')

('B', 'C')



Recap quiz

- Which of the following does not raise an error?



```
data = ('A', 'B', 'C', 'D')  
print(data[4])
```



```
a = 5  
if a > 4  
    print("larger than 5")  
else  
    print("smaller than 5")
```



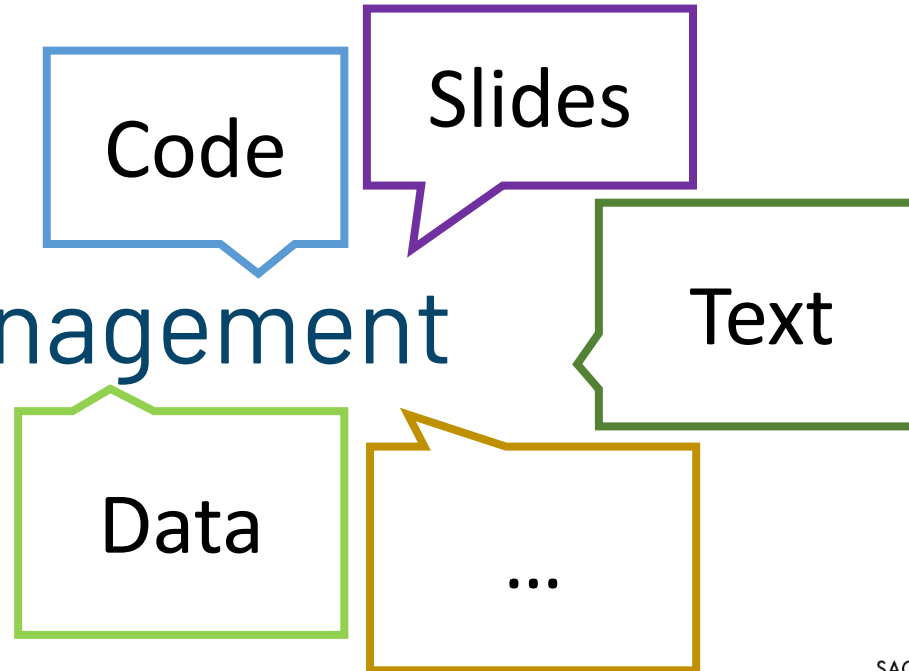
```
for i in range(0, 10):  
    print[i]
```



```
def sum_numbers(a, b):  
    result = a + b  
    return result  
  
sum_numbers(5, 6)
```


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Quiz

- When you published data with *your last publication*, which platform did you use?

Onedrive/Google
cloud/Dropbox/etc.



Zenodo/Figshare/
arxiv/F1000/github



Opara,
Institute Website



Other



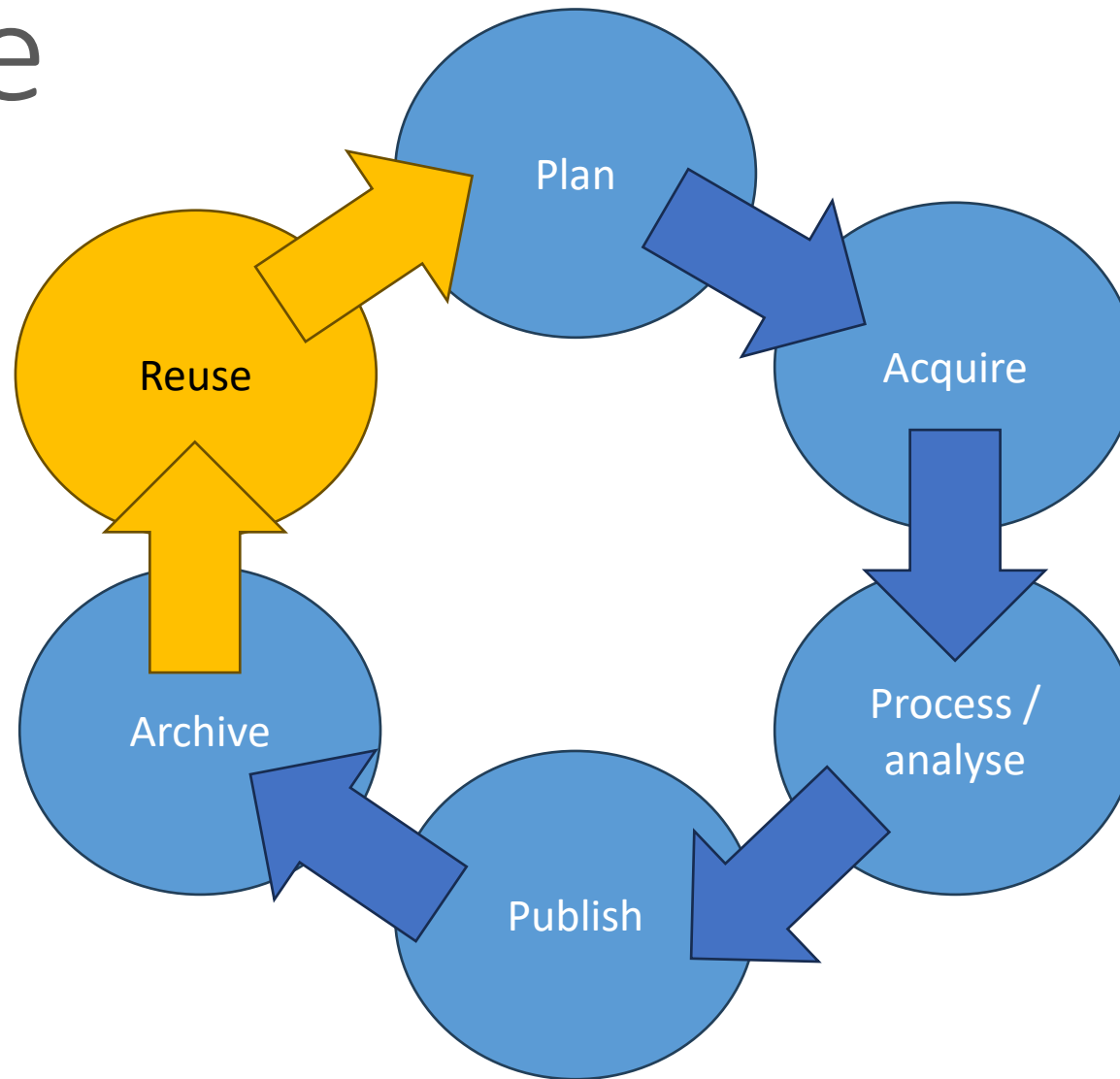
Research Data Management (RDM)

- All activities, processes, terms, persons which have relationships with data
 - Processing
 - Storage
 - Organization
 - Publication
 - ...
- In routine: working with data



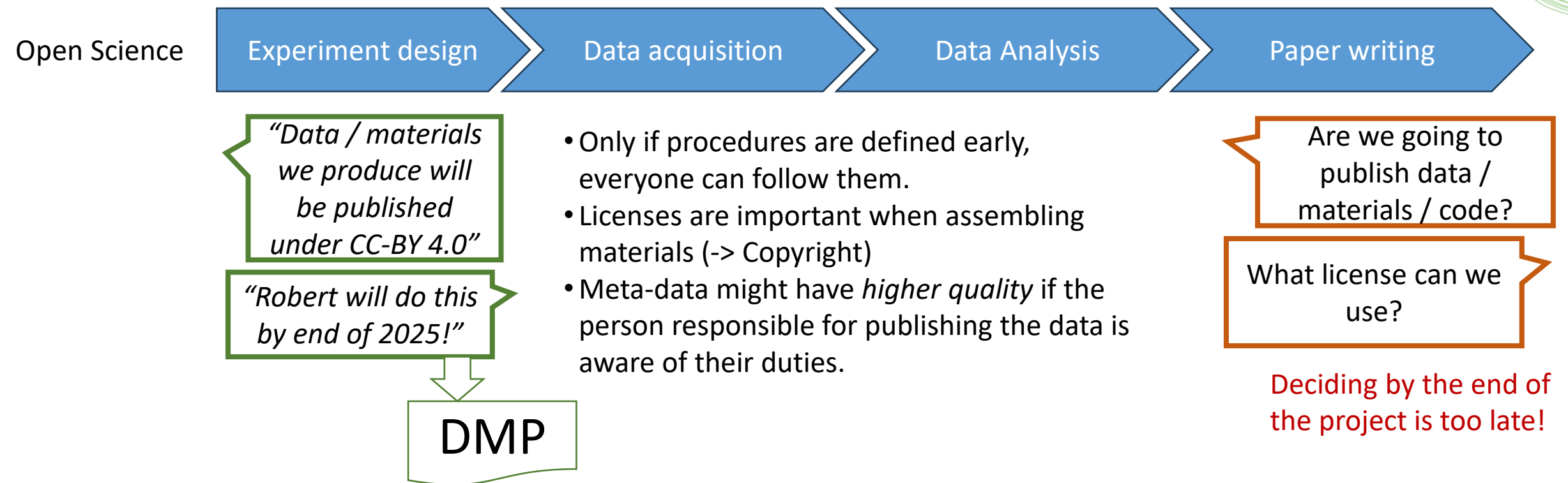
RDM Life Cycle

- Processes are ideally cyclic
- Closing the loop is a major the challenge



Data Management Plans (DMPs)

- Define responsibilities and procedures early!



Closed science

Why are some science-related materials/data/code not shared?

- Risk of being scooped
- Fear of blaming oneself (imposter syndrome)
- Lack of awareness (who is allowed to publish *my work*?)
- Assumption: it's not worth the effort.

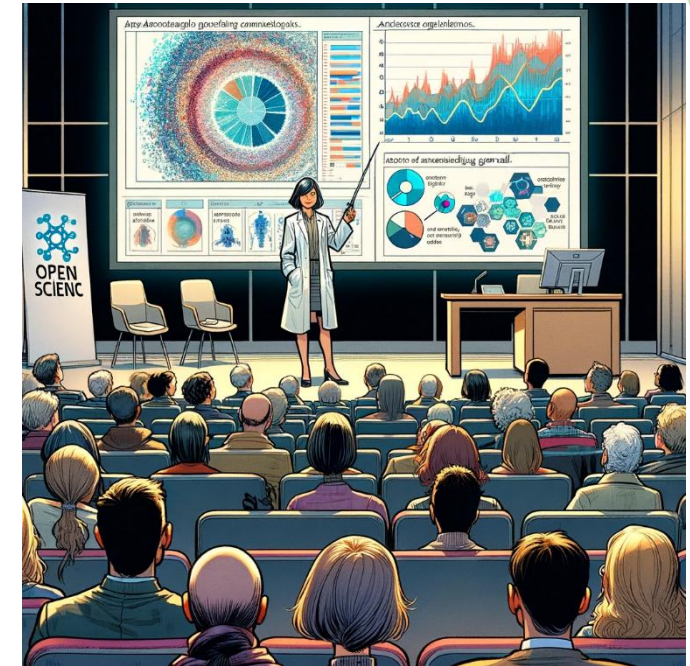


Open Science

- Research related
(hot topics)
- Often tailored towards
general audience
(science communication)
- Earliest at the time a
manuscript is published
(e.g. as preprint)

Open Training

- Routine tasks
(colder topics)
- Transfer of
domain-specific
knowledge



Scientific culture

Public access to research results -> Reusability



“Codex”

Guidelines for Safeguarding Good Research Practice

Code of Conduct

Guideline 13: Providing public access to research results

► As a rule, researchers **make all results available** as part of scientific/academic discourse. In specific cases, however, there may be reasons not to make results publicly available (in the narrower sense of publication, but also in a broader sense through other communication channels); this decision must not depend on third parties. **Researchers decide autonomously** – with due regard for the conventions of the relevant subject area – whether, how and where to disseminate their results. If it has been decided to make results available in the public domain, researchers describe them clearly and in full. Where possible and reasonable, this includes making the research data, materials and information on which the results are based, as well as the methods and software used, available and fully explaining the work processes. Software programmed by researchers themselves is made publicly available along with the source code. Researchers provide full and correct information about their own preliminary work and that of others.

Explanations:

In the interest of transparency and to enable research to be referred to and **reused by others**, whenever possible researchers make the research data and principal materials on which a publication is based available in recognised archives and repositories **in accordance with the FAIR principles** (Findable, Accessible, Interoperable, Reusable). Restrictions may apply to public availability in the case of patent applications. If self-developed

Scientific culture



Information for Researchers, No. 61 | September 1, 2022

Package of Measures to Support a Shift in the Culture of Research Assessment

DFG changes proposal forms and introduces mandatory CV template / The aim is to support a shift in the culture of research assessment / Improvement of equal opportunity practices

DFG changes proposal forms and introduces mandatory CV template / The aim is to support a shift in the culture of research assessment / Improvement of equal opportunity practices

Successful science and research require suitable framework conditions. The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) ensures these conditions by regularly conducting analyses, providing the relevant information and adapting its procedures accordingly. The DFG set out the challenges and fields of action in a position paper on academic publishing published in May of this year: it sees both the academic community as a whole and itself as a funding organisation as being responsible for initiating a cultural shift towards research assessment that is geared more towards equal opportunity and attaches even greater importance to the substance of research. In the interests of bringing about such a shift, it is up to research funding organisations to **broaden the spectrum of accepted publication formats, to attach greater value to content-based evidence of achievement** and to strengthen the recipient side of publishing. The DFG has launched a comprehensive and far-reaching package of measures in order to fulfil this mandate.

Binding CV template across all funding programmes

For this reason, the assessment of a researcher's accomplishments must be holistic and based on substantive qualitative criteria. In order to strengthen qualitative evaluation criteria over quantitative indicators, the DFG will be introducing a curriculum vitae template that will be mandatory across all programmes from 1 March 2023 (the template will be adapted shortly for proposals under the Collaborative Research Centre and Research Training Group programmes; information will be provided separately in this regard). The template adopted by the DFG Senate allows applicants to provide both narrative and tabular information, thereby facilitating a holistic view of the applicant's academic career in the review and evaluation process.

In addition to the mandatory information required in order to assess eligibility, applicants may also provide details of special circumstances or additional services to scholarship such as committee activities or the establishment of research infrastructures. As such, the template provides the basis for a qualitatively sound assessment of academic performance that takes greater account of the respective stage of the individual's life and career. Accordingly, reviewers are now instructed to consider applicants' academic performance in the context of their individual curriculum vitae and career stage.

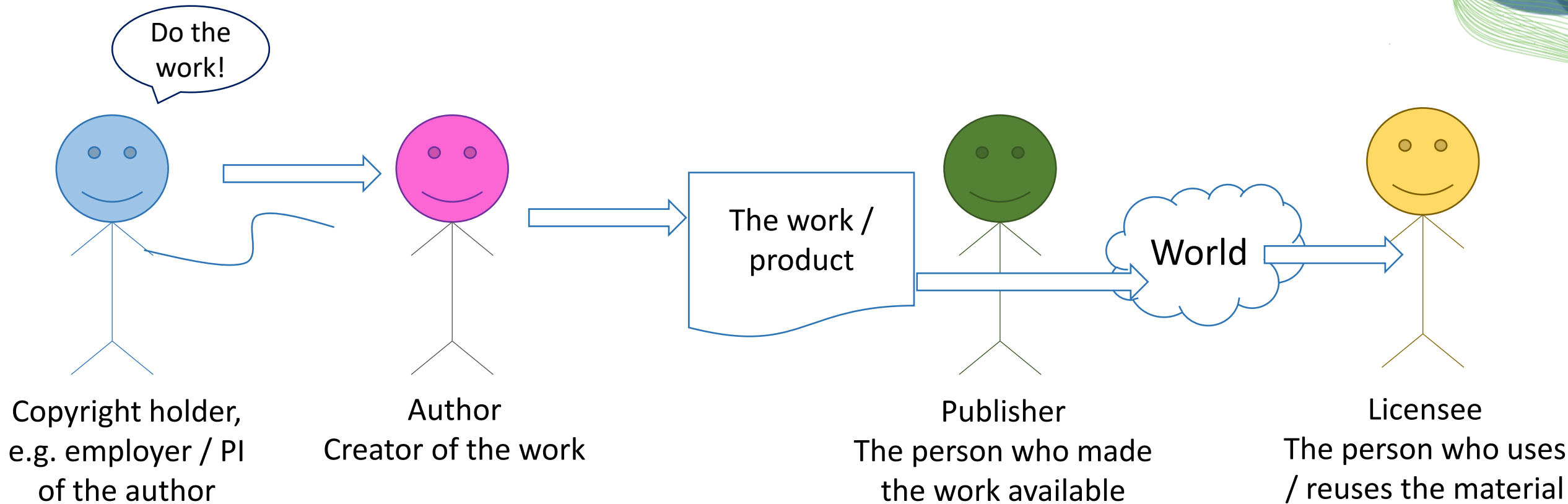
Publication details in proposals and CVs

Performance assessment based on content-related qualitative criteria also explicitly includes ensuring that the entire spectrum of academic publication types are equally displayed and acknowledged in funding proposals and CVs. In addition to a maximum of ten publications in the more common publication formats, the **CV can therefore now list up to ten further sets of research outcomes and findings that have been publicised in a variety of other ways, including articles on preprint servers, data sets or software packages, for example.** In DFG proposals, the project-specific list of publications will be included in the general bibliography. The intention here is to shift the focus of the review and the evaluation of a proposal away from the list of publications and towards the substance of the applicant's accomplishments. In order to document their own published preliminary work, applicants can typographically highlight (e.g. in bold) a maximum of ten of their own publications in the bibliography that are important for the project. **No information on quantitative metrics such as impact factors and h-indices is required in the CV or the proposal, and such information is not to be considered in the review.** The relevant details are included in DFG forms and review instructions.

These modifications and innovations reflect the fact that the DFG is continuing to promote the cultural shift in research assessment that was advocated in May with the publication of the position paper on academic publishing. The DFG hopes that this refocus – away from quantitative indicators and towards the substance of scholarship – will lead to improved equality of opportunity and a higher-quality basis for review overall.

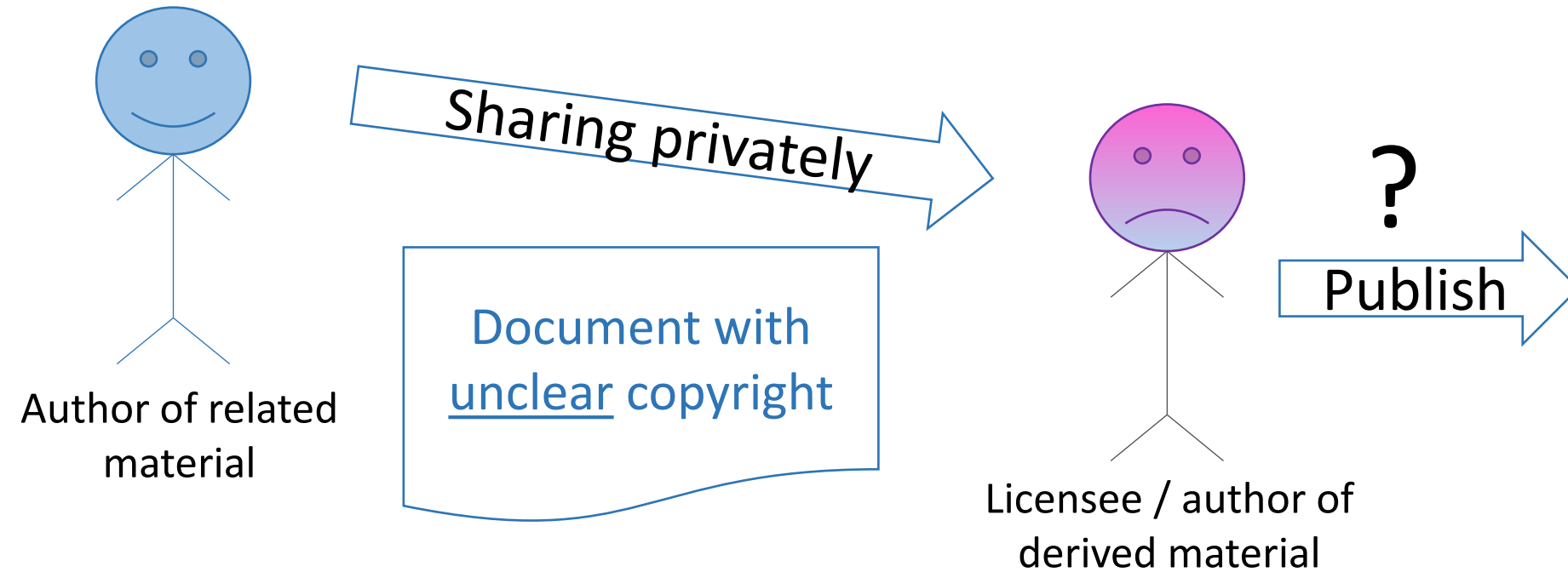
Am I allowed to publish my stuff?

- ... it depends... on who is responsible



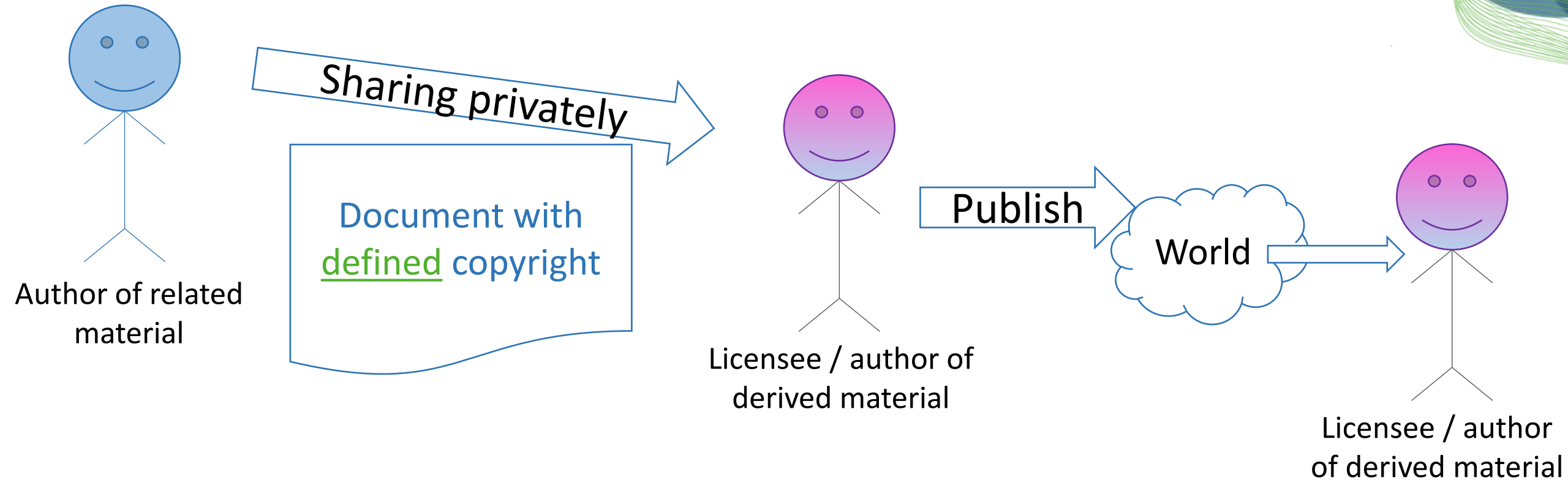
Am I allowed to publish my stuff?

- ... it depends... on what materials served as basis



Am I allowed to publish my stuff?

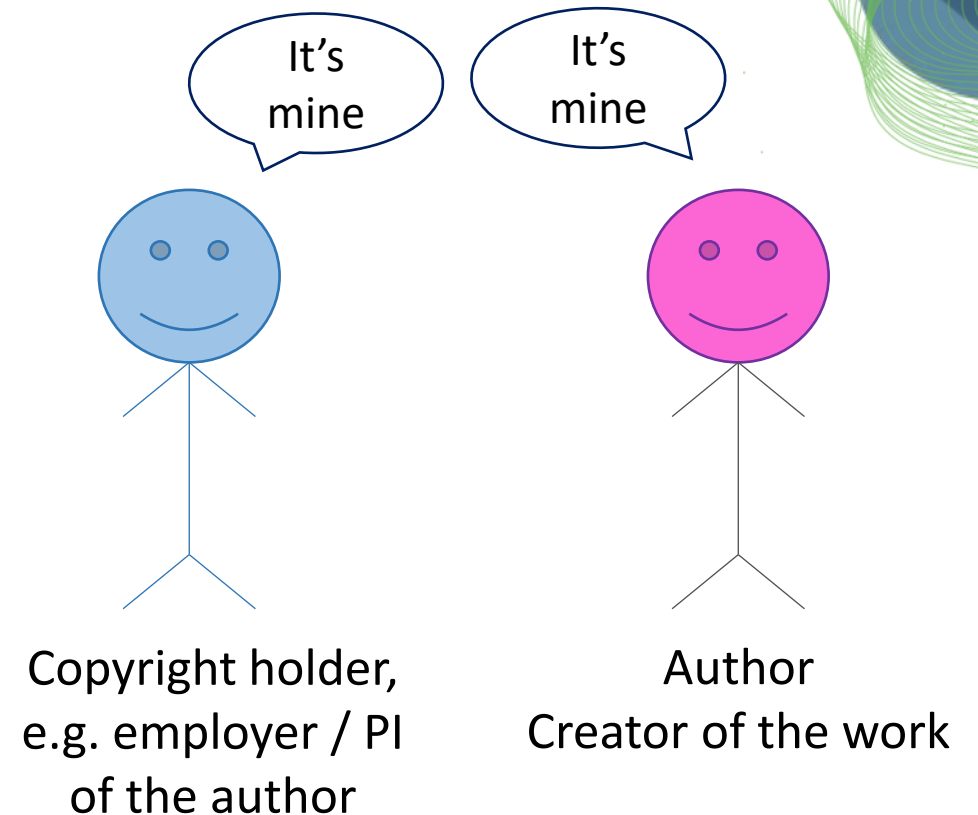
- ... it depends... on what materials served as basis



Public versus institutional repositories

Conflict of interest between employers and scientists

- Universities seek to keep things secret and potentially exploit them commercially (licenses, startups, ...)
- Scientists need to publish to advance their career.
- Hints:
 - Decide early during the project what will be published and by who (-> DMP)
 - Check your job description! (Is “Programming” or “model training” part of it?)



Quiz

- When you publish data on Zenodo.org, which role has Zenodo?

Copyright
holder



Author



Publisher



Licensee



Standard for sharing: The FAIR-principles

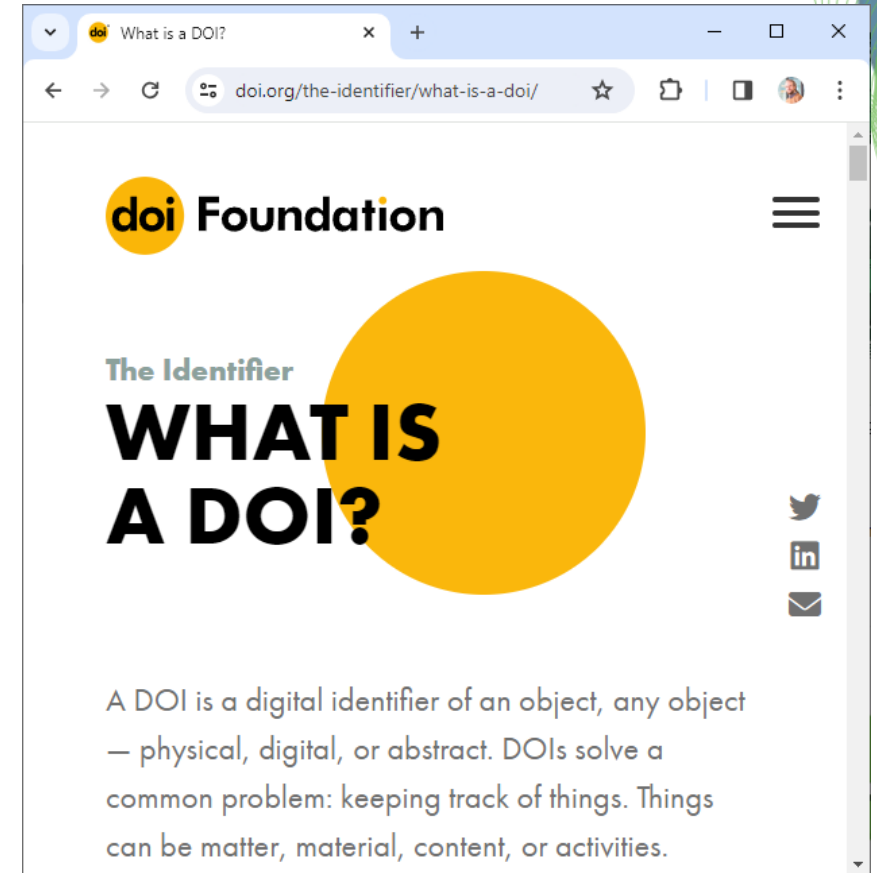
- Findable
- Accessible
- Interoperable
- Reusable



The FAIR-principles

Findable

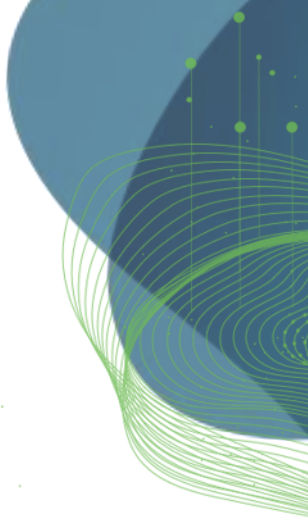
- F1. (Meta)data are assigned a globally unique and persistent identifier
 - Universal Resource Identifier (URI)
 - Digital Object Identifier (DOI)
- F2. Data are described with rich metadata (defined by R1 below)
- F3. Metadata clearly and explicitly include the identifier of the data they describe
- F4. (Meta)data are registered or indexed in a searchable resource





Meta data

- Generic
 - Author
 - Usage license
 - Creation date
- Field-specific (microscopy)
 - Exposure time
 - Wavelength (colour)
 - Microscope type/vendor
- Field-specific (software)
 - Dependencies
 - Requirements
 - Purpose of the code
 - User documentation



REMBI: Recommended Metadata for Biological Images—enabling reuse of microscopy data in biology

• Read more:

REMBI: Recommended Metadata for Biological Images—enabling reuse of microscopy data in biology

nature.com/articles/s41592-021-01166-8



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nature > nature methods > comment > article

Comment | Published: 21 May 2021

REMBI: Recommended Metadata for Biological Images—enabling reuse of microscopy data in biology

[Ugis Sarkans](#) , [Wah Chiu](#), [Lucy Collinson](#), [Michele C. Darrow](#), [Jan Ellenberg](#), [David Grunwald](#), [Jean-Karim Hériché](#), [Andrii Iudin](#), [Gabriel G. Martins](#), [Terry Meehan](#), [Kedar Narayan](#), [Ardan Patwardhan](#), [Matthew Robert Geoffrey Russell](#), [Helen R. Saibil](#), [Caterina Strambio-De-Castillia](#), [Jason R. Swedlow](#), [Christian Tischer](#), [Virginie Uhlmann](#), [Paul Verkade](#), [Mary Barlow](#), [Omer Bayraktar](#), [Ewan Birney](#), [Cesare Catavittello](#), [Christopher Cawthorne](#), ... [Alvis Brazma](#)  [+ Show authors](#)

REMBI: Recommended Metadata for Biological Images—enabling reuse of microscopy data in biology






SPRINGER NATURE

Author: Ugis Sarkans et al
Publication: Nature Methods
Publisher: Springer Nature
Date: May 21, 2021
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Adaptations/modifications - Springer Nature allows adaptation of figures for style and formatting purposes under this license under the condition that this does not alter the meaning of the content.

I would like to...	reuse in training materials/CME material ▾	Would you like a high resolution image with your order? 	no ▾
I am a/an...	academic/university or research institute ▾	Circulation/distribution 	100 - 199 ▾
Is this reuse sponsored by or associated with a pharmaceutical or a medical products company?	no ▾	Are you the author of this Springer Nature content? 	no ▾
My format is...	electronic ▾	I will be translating... 	no ▾
I would like to use...	figures/tables/illustrations ▾	My currency is...	USD - \$ ▾
Number of figures/tables 	2	Quick Price	239.80 USD

[QUICK PRICE](#) [CONTINUE](#)

Findability

Domain-specific

- Search repository registries for your field!

Guidelines

- Publish where your community publishes
- Publish where everyone publishes (beyond your community)
- Publish in your local institute's infrastructure

Your individual interest



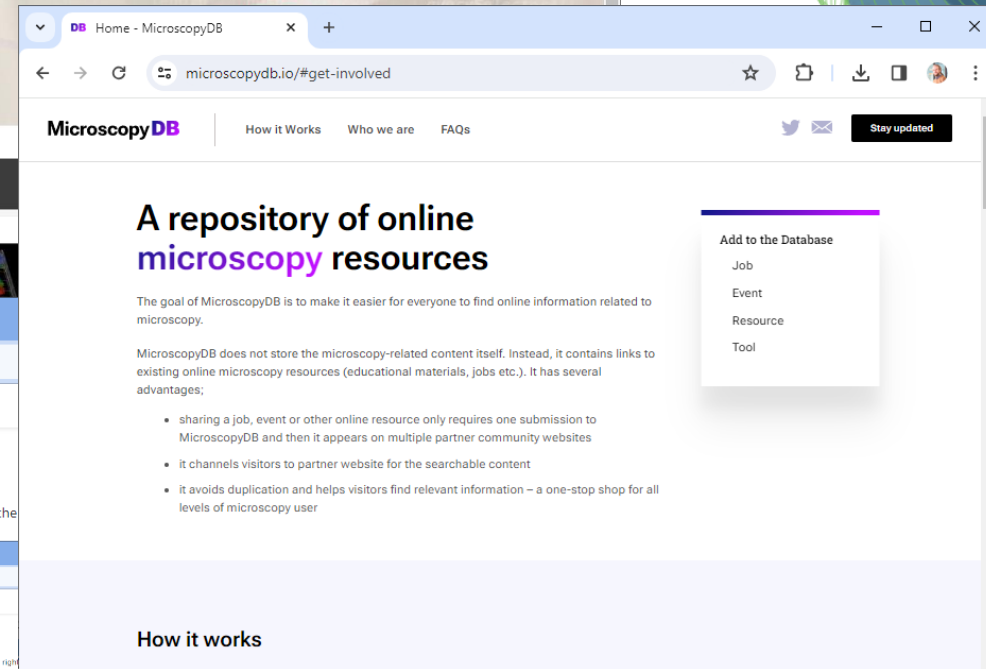
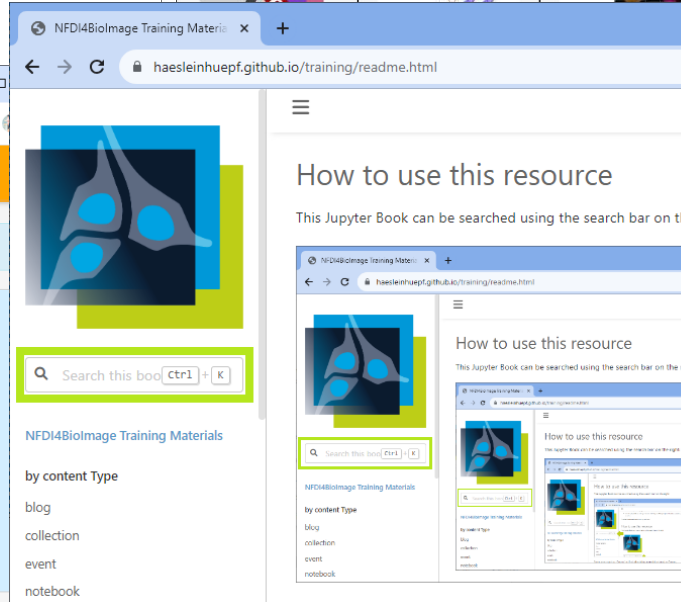
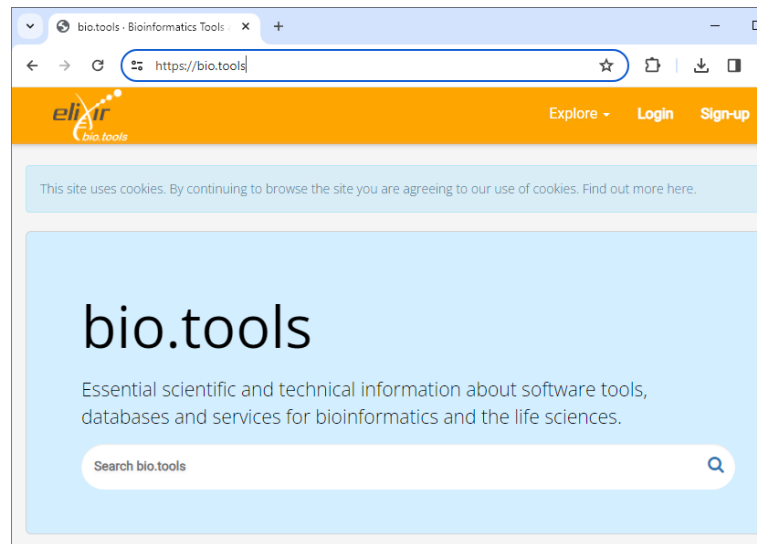
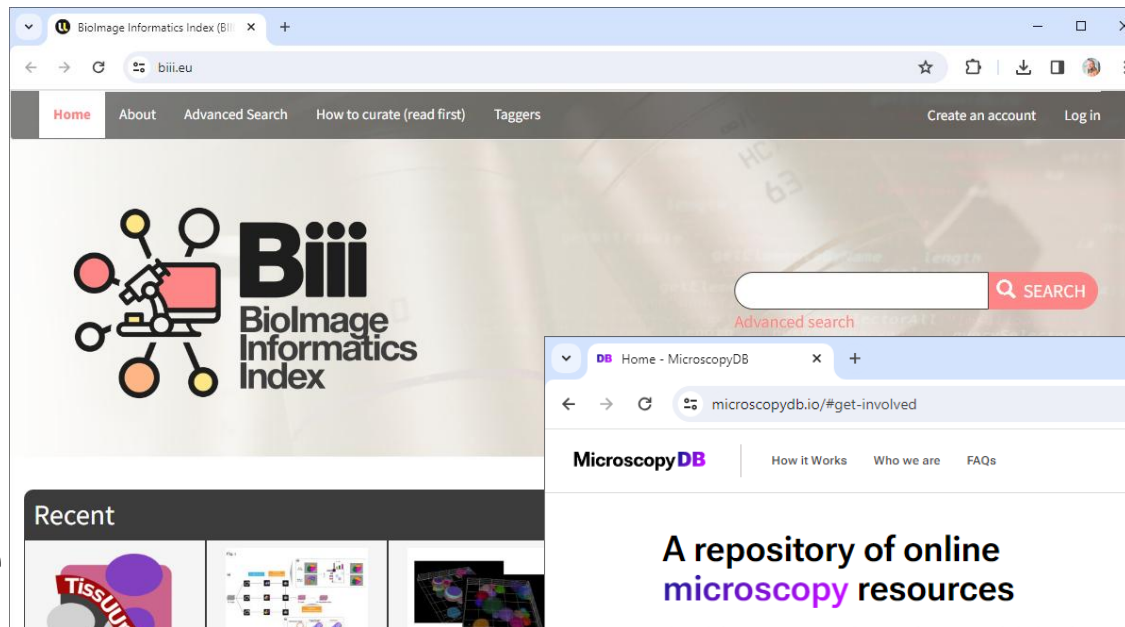
Your Institute's interest

The top screenshot shows the re3data.org search results for 'seismology'. The page displays the 'World Data Center for Solid Earth Physics' (WDC for SEP) as the primary result. It lists subject areas: Natural Sciences, Geosciences, and Geophysics and Geodesy. The repository type is 'disciplinary' and the provider type is 'dataProvider'.

The bottom screenshot shows the FAIRsharing.org search results for 'seismology'. The page displays a list of databases, including 'IRIS Data'. The search results are filtered by 'Registry: Database' and 'Query string: seismology'. The results show 'Displaying 1 to 14 of 14' items. The 'IRIS Data' entry is highlighted, showing it is 'Incorporated Research Institutions for Seismology Data'. The entry includes a description: 'IRIS provides management of, and access to, observed and derived data for the global earth science community. IRIS membership comprises virtually all US universities with research programs in seismolog...' and buttons for 'Environme...', 'Earth Scien...', and 'Not applic...'.

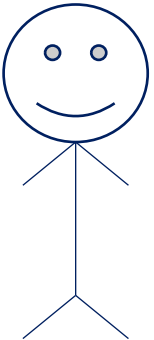
Indexing

- Make sure your materials are listed in public search indices
- Do not trust google to make your stuff findable



Incentives: Findability

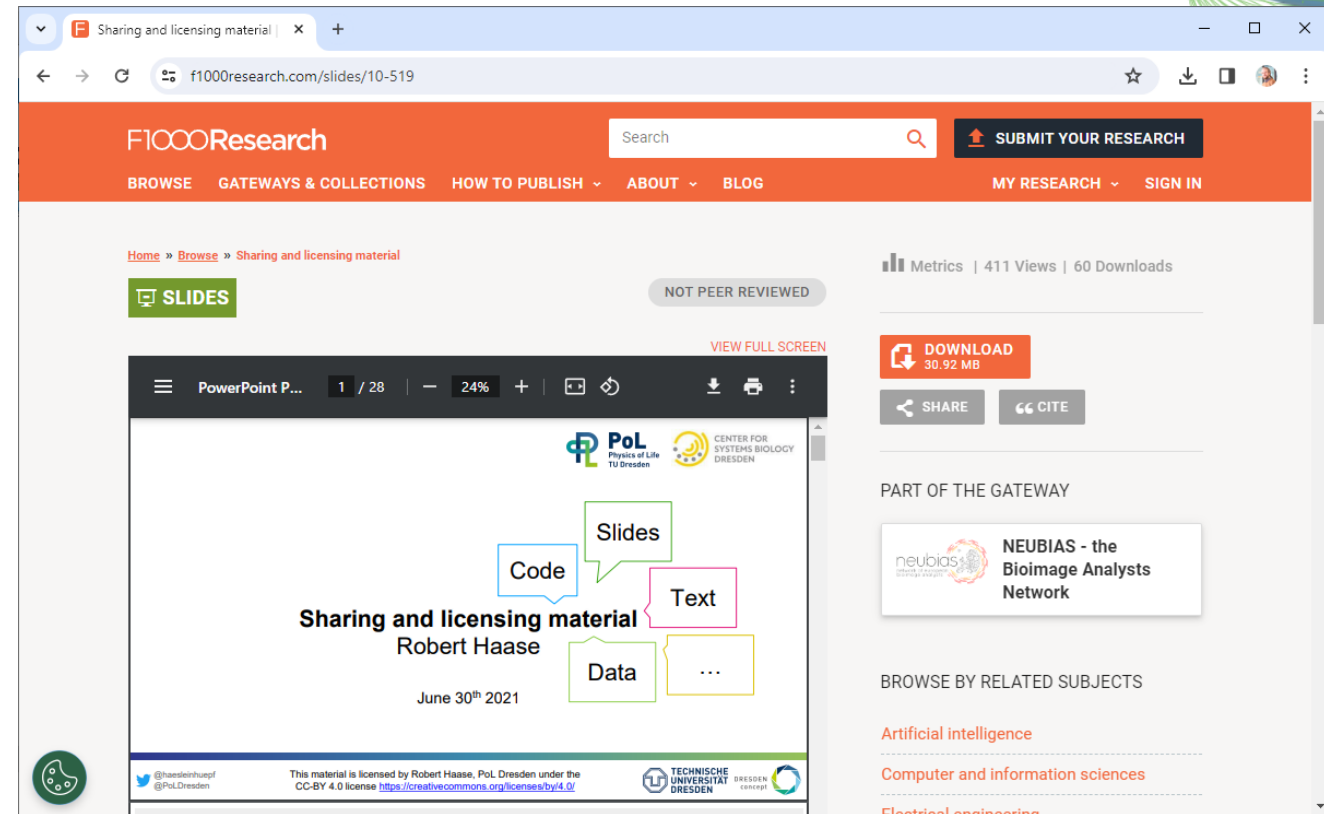
- Your *future-self* will thank you, because they will find your work



You remember
that talk you gave
in 2021?

Where are the
slides?

Online,
open access!



Accessibility

- The A in FAIR does not necessarily stand for Open Access

April 7th 2024:

26
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📄 DOWNLOADS

► Show more details

blobs.tif

Haase, Robert^{1,2}

Published March 18, 2024 | Version v1

Dataset **Restricted**

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► Show affiliations

Files

Restricted

The record is publicly accessible, but files are restricted to users with access.

Citations

Show Literature (0) Dataset (0) Software (0)

Search for citation ... Search

Waiting for zenodo.org...

blobs.tif

Haase, Robert^{1,2}

Published March 18, 2024 | Version v1

Dataset **Restricted**

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► Show more details

► Show affiliations

Files

blobs.tif

Version v1

10.5281/zenodo.10829230

Mar 18, 2024

Cite all versions? You can cite all versions by using the DOI 10.5281/zenodo.10829229. This DOI represents all versions, and will always resolve to the latest one. [Read more.](#)

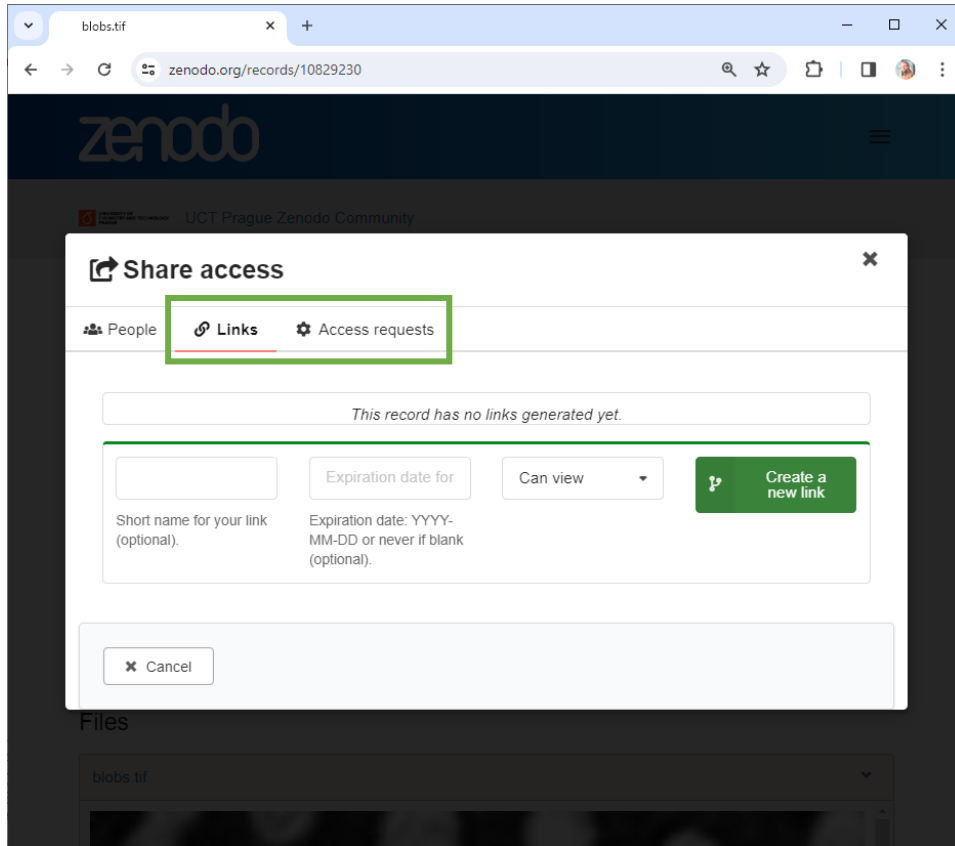
External resources

Indexed in

OpenAIRE

Accessibility

- The A in FAIR does not necessarily stand for Open Access



Accessibility

- The A in FAIR does not necessarily stand for Open Access

blobs.tif

zenodo.org/records/10829230

Share access

People Links **Access requests**

- ☒ Allow authenticated users to request access to restricted files.
- ☒ Allow non-authenticated users to request access to restricted files.

Enable users and guests to request access to your record's files. When access is requested by someone, you will get an e-mail asking for approval. After you approve a request, users will be granted access and guests will receive a secret link.

Accept conditions

Optional. Specify conditions under which you approve access. This message will be visible for any user when requesting access to this record.

Paragraph B I Link Quote Table List Bulleted List Numbered List Indent Outdent More

Advanced options

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zenodo.org/records/10829230

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Show affiliations

This dataset contains blobs.tif, which was published before as blobs.gif as part of ImageJ's example images. The dataset is public-domain, available online in png format as well: <https://samples.fiji.sc/blobs.png>

This record in Zenodo serves demonstrating that data can be published with closed access.

Files

Restricted

The record is publicly accessible, but files are restricted to users with access.

Request access

If you would like to request access to these files, please fill out the form below.

You are currently not logged in. Do you have an account? [Log in here](#)

Your email address * Your full name *

Email address Full name

Request message

I agree to that my full name and email address is shared with the owners of the record

Request access

Versions

Version v1	Mar 18, 2024
10.5281/zenodo.10829230	

Cite all versions? You can cite all versions by using the DOI [10.5281/zenodo.10829229](https://doi.org/10.5281/zenodo.10829229). This DOI represents all versions, and will always resolve to the latest one. [Read more](#).

External resources

Indexed in

OpenAIRE

Communities

UCT Prague Zenodo Community

Details

DOI

DOI [10.5281/zenodo.10829230](https://doi.org/10.5281/zenodo.10829230)

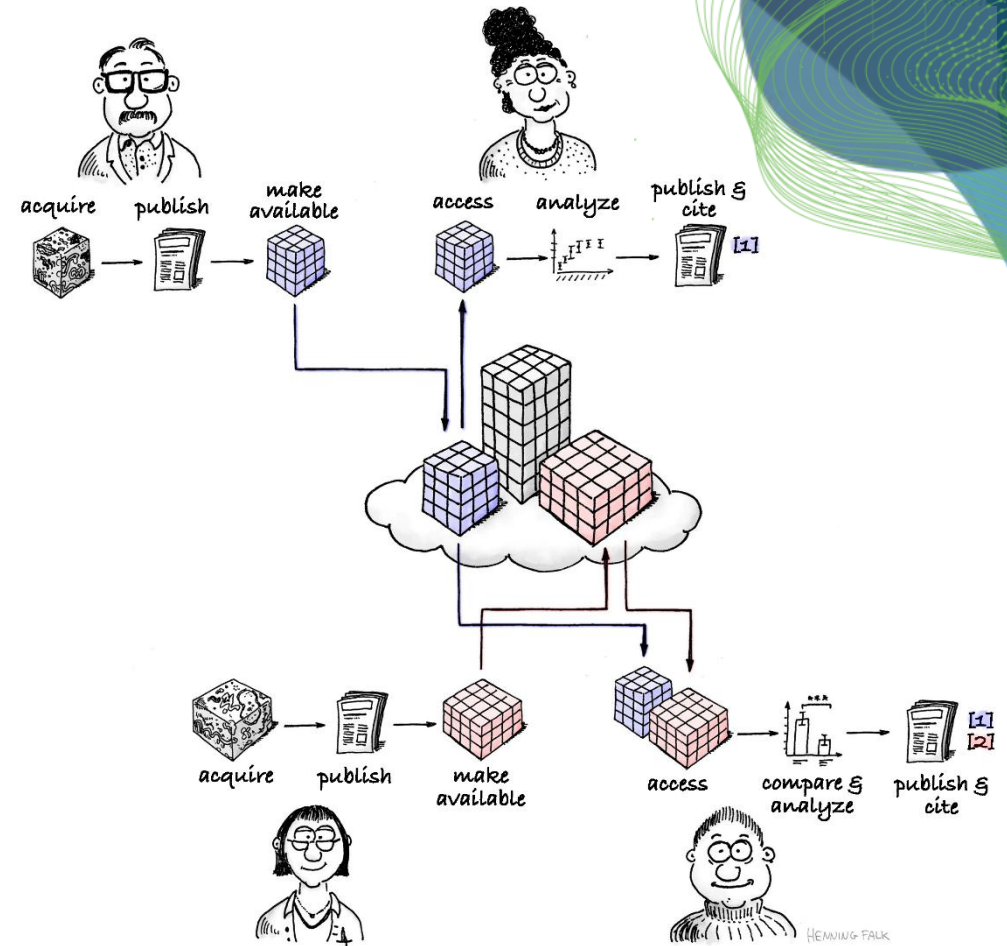
Interoperability

- 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



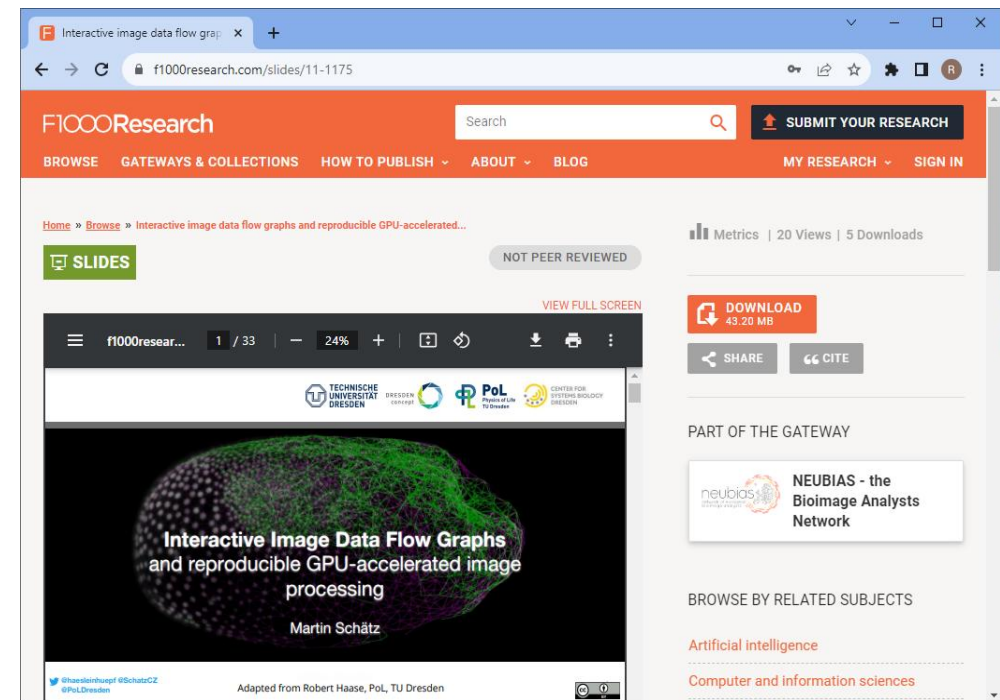
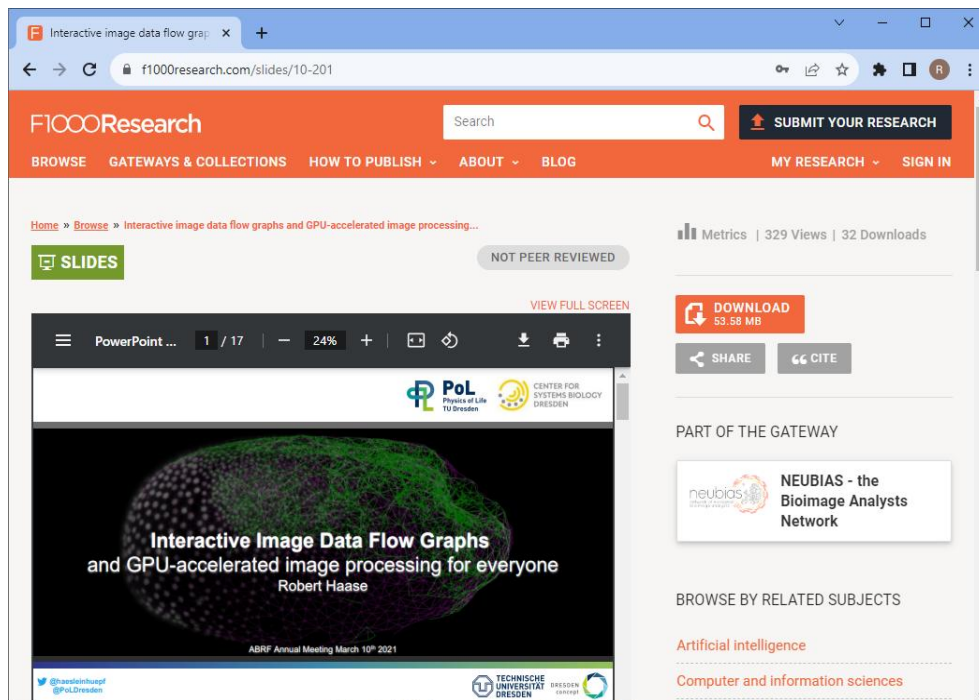
Reusability

- 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



Incentives: Reusability

- Open Educational Resources
-> Others teach how to use your *tools & methods*



Incentives: Citability

The screenshot shows the Zenodo interface for a dataset. The header includes the Zenodo logo, a search bar, and navigation links for 'Communities' and 'My dashboard'. The dataset title is 'Dataset associated with article: Self-sufficient seismic boxes for monitoring glacier seismology in Greenland'. It shows 240 views and 131 downloads. The 'Versions' section lists two versions: 'Version Uploaded at 2023-01-09' (DOI: 10.5281/zenodo.7516192) and 'Version v1' (DOI: 10.5281/zenodo.7105052). The dataset description includes details about seismic data, weather data, and MSR logger data from the Gornergletscher fieldtest, 2021.

Published September 22, 2022 | Version Uploaded at 2023-01-09

Dataset **Open**

240 VIEWS **131** DOWNLOADS

Show more details

Versions

Version	Uploaded at
Version Uploaded at 2023-01-09	Sep 22, 2022
Version v1	Sep 22, 2022

View all 2 versions

Cite all versions? You can cite all versions by using the DOI [10.5281/zenodo.7105051](https://doi.org/10.5281/zenodo.7105051). This DOI represents all versions, and will always resolve to the latest one. [Read more.](#)

Dataset associated with article: Self-sufficient seismic boxes for monitoring glacier seismology in Greenland

Ana Nap¹; Fabian Walter²; Martin P. Lüthi¹

Show affiliations

Dataset associated with article: Self-sufficient seismic boxes for monitoring glacier3 seismology in Greenland

Contains:

- Seismic data of both SG-boxes and regular geophones from Gornergletscher fieldtest, 2021(Seismic_Data_Gorner_Fieldtest.zip)
 - > SG-box data naming: GO*station_number*SG
 - > Geophone data naming: GO*station_number*GP
- Weather data Gornergletscher fieldtest from Monte Rosa, Meteo Swiss Weather station (Weather_data_Gorner_Fieldtest_2021.zip)
 - > 1hr wind averages
 - > 1hr temperature averages
- MSR logger data from SG-boxes from Gornergletscher fieldtest, 2021. Every 5 min these log battery power, tilt (along three axes, temperature and humidity inside the box and light strength on two sides of the SG-box. (MSR logger data SGboxes Gorner Fieldtest.zip)

The right sidebar contains three main sections: 'Rights', 'Citation', and 'Export'. The 'Rights' section shows 'Creative Commons Attribution 4.0 International'. The 'Citation' section provides the citation for the dataset in APA style. The 'Export' section shows a dropdown menu set to 'JSON' and an 'Export' button. Below these is a 'Technical metadata' section with creation and modification dates.

Rights

Creative Commons Attribution 4.0 International

Citation

Ana Nap, Fabian Walter, & Martin P. Lüthi. (2022). Dataset associated with article: Self-sufficient seismic boxes for monitoring glacier seismology in Greenland (Uploaded at 2023-01-09) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.7516192>

Style **APA**

Export

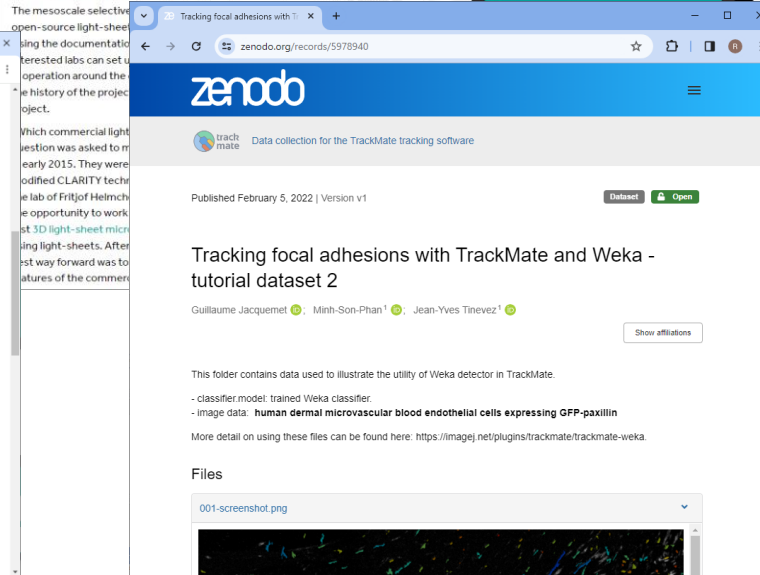
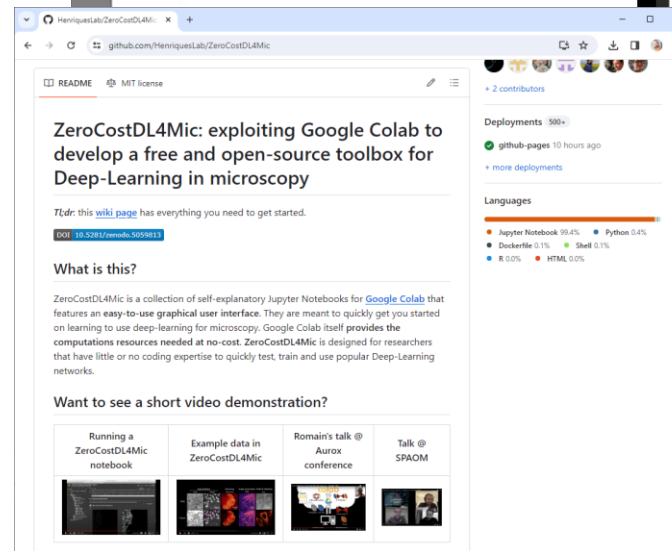
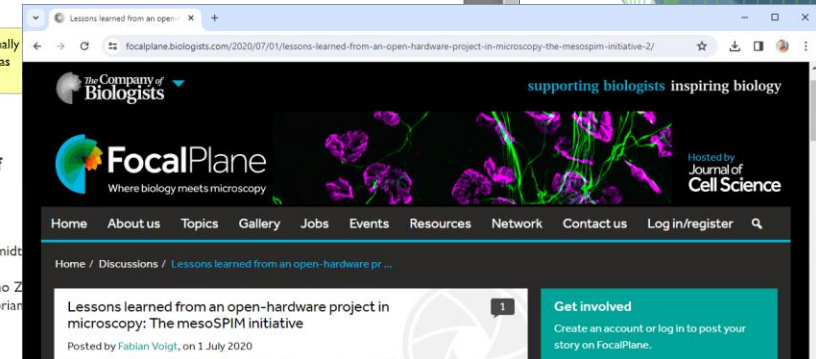
JSON **Export**

Technical metadata

Created January 9, 2023
Modified April 3, 2023

Where to share?

- Open science related content
 - bioRxiv (manuscripts, no reviews)
 - Figshare
 - F1000
 - Bioimage Archive (data)
 - Github (code)
 - Zenodo
 - Focalplane
 - Institutional servers (if there is no alternative)



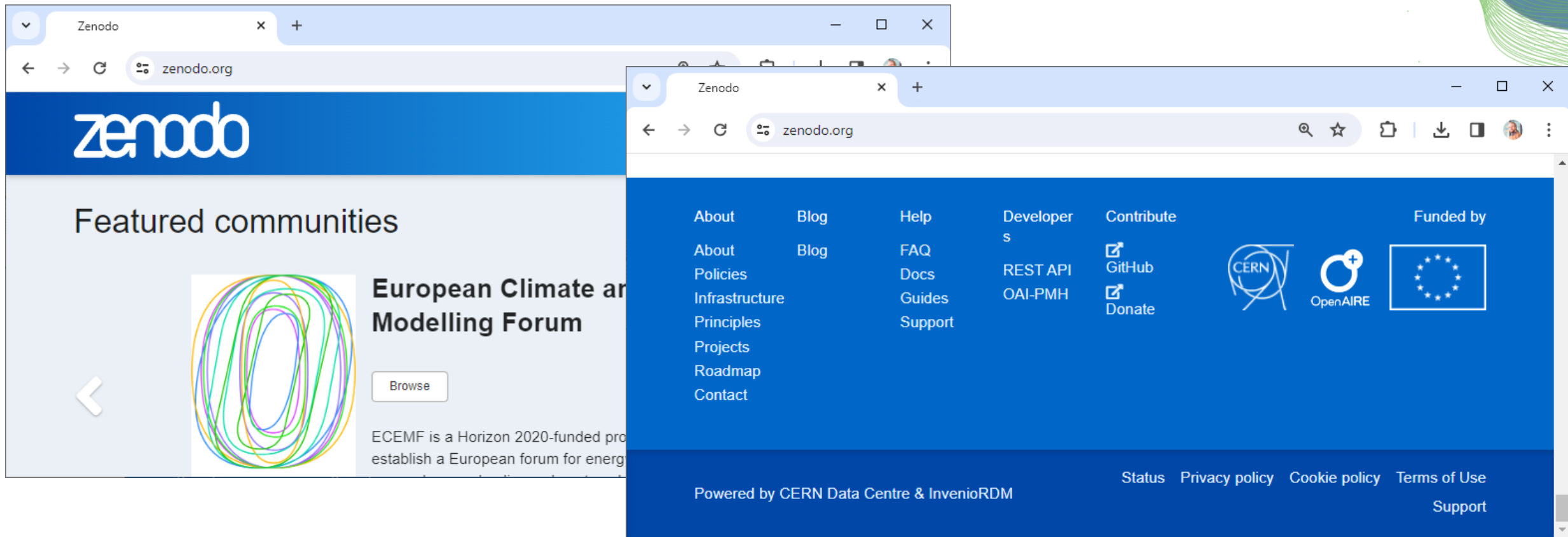
Quiz

- I'm sharing data in a public repository on Github.com in a file format we developed using an open source license.
- Which FAIR principle am I violating?



Zenodo

- Publicly funded infrastructure @ CERN / Switzerland



Exercise: Sharing files on Zenodo

Research Data Management in Medicine

scads.github.io/ai4medicine-2025/day2.1_rdm_medicine/readme.html

ScaDS.AI
DRESDEN LEIPZIG

Data Science and AI for Medicine Training School 2025

Preparation

Prepare Your Computer

Day 1

- Python basics
- Use of AI Assistant
- File handling with Python

Day 2

- Research Data Management in Medicine**

Research Data Management in Medicine

In this session we cover aspects of research data management (RDM) and open science as the RDM life cycle, FAIR principles, sharing data on Zenodo, rights and duties in the RDM context.


As exercise, we will download [Haase_MRT_tfl3d1.tif](#) from the [Zenodo sandbox](#) for practicing this.

You can download the slides [here \(PPTx on Zenodo\)](#).

Previous

- [Interactive processing of image files](#)
- [Introduction to Machine Learning](#)

By Matthias Täschner, Robert Haase
Last updated on 2025-09-23.
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MRI Dataset

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MRI Dataset

Haase, Robert^{1, 2} 

Show affiliations

Male volunteer,
30 years old

Files

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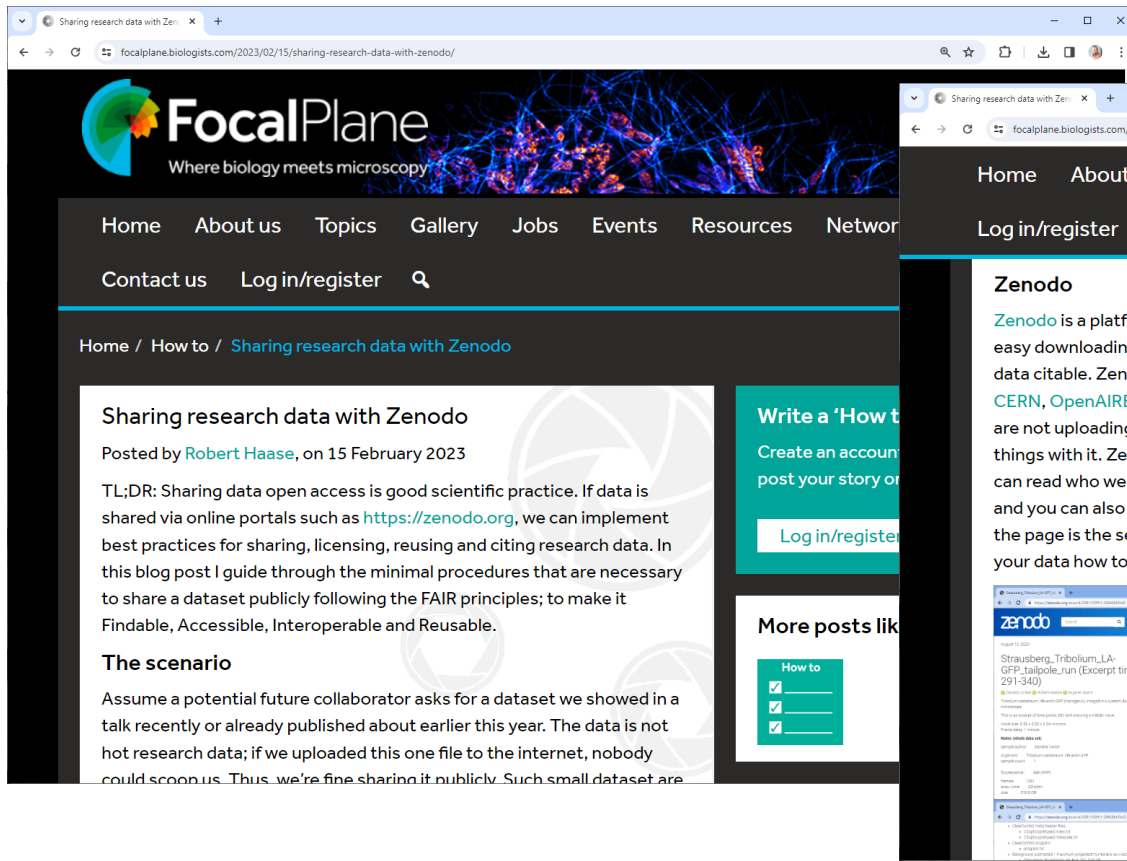


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- ... is easier than you think



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Home / How to / **Sharing research data with Zenodo**

Sharing research data with Zenodo

Posted by **Robert Haase**, on 15 February 2023

TL;DR: Sharing data open access is good scientific practice. If data is shared via online portals such as <https://zenodo.org>, we can implement best practices for sharing, licensing, reusing and citing research data. In this blog post I guide through the minimal procedures that are necessary to share a dataset publicly following the FAIR principles; to make it Findable, Accessible, Interoperable and Reusable.

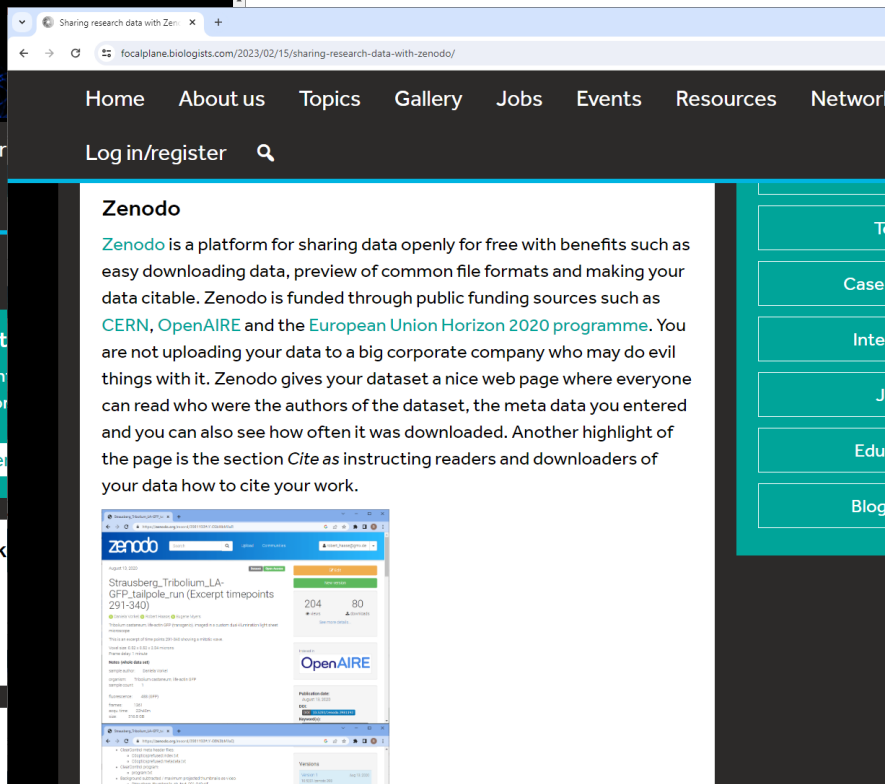
The scenario

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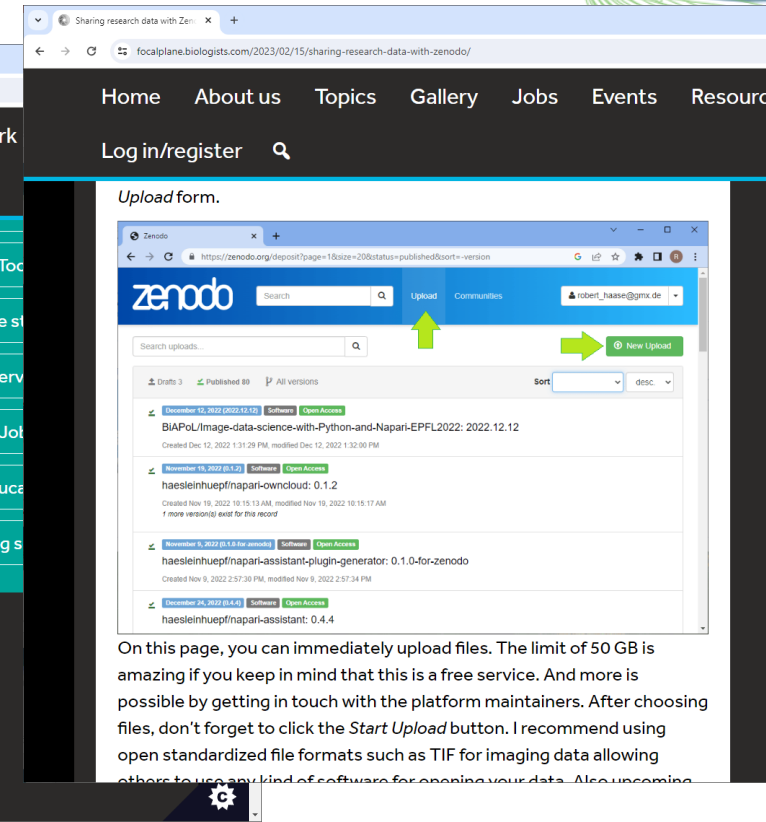
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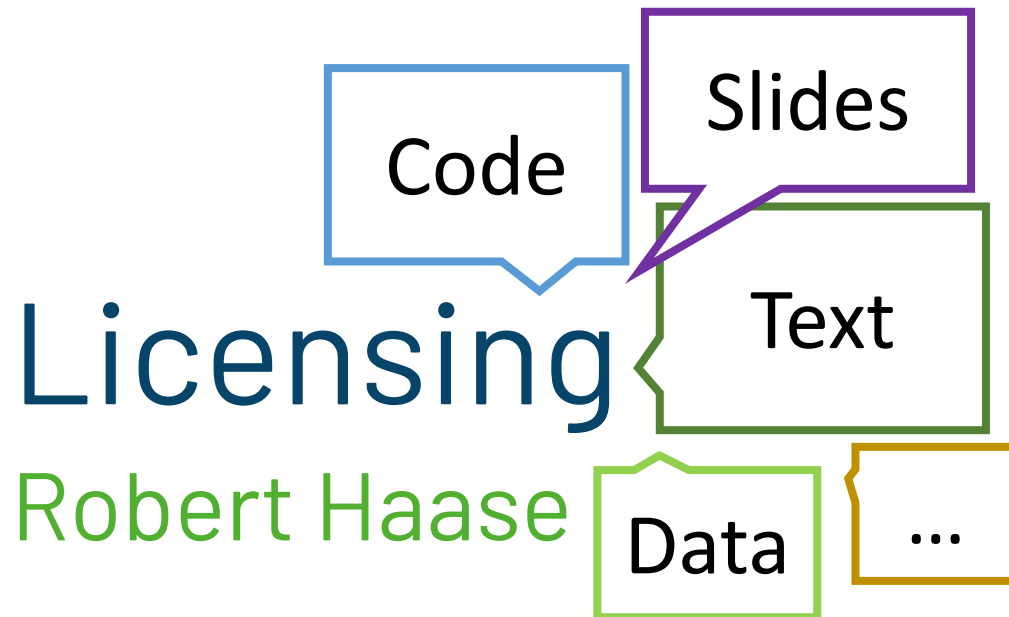
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Code

Slides

Text

Licensing

Robert Haase

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consequences of
this sentence?

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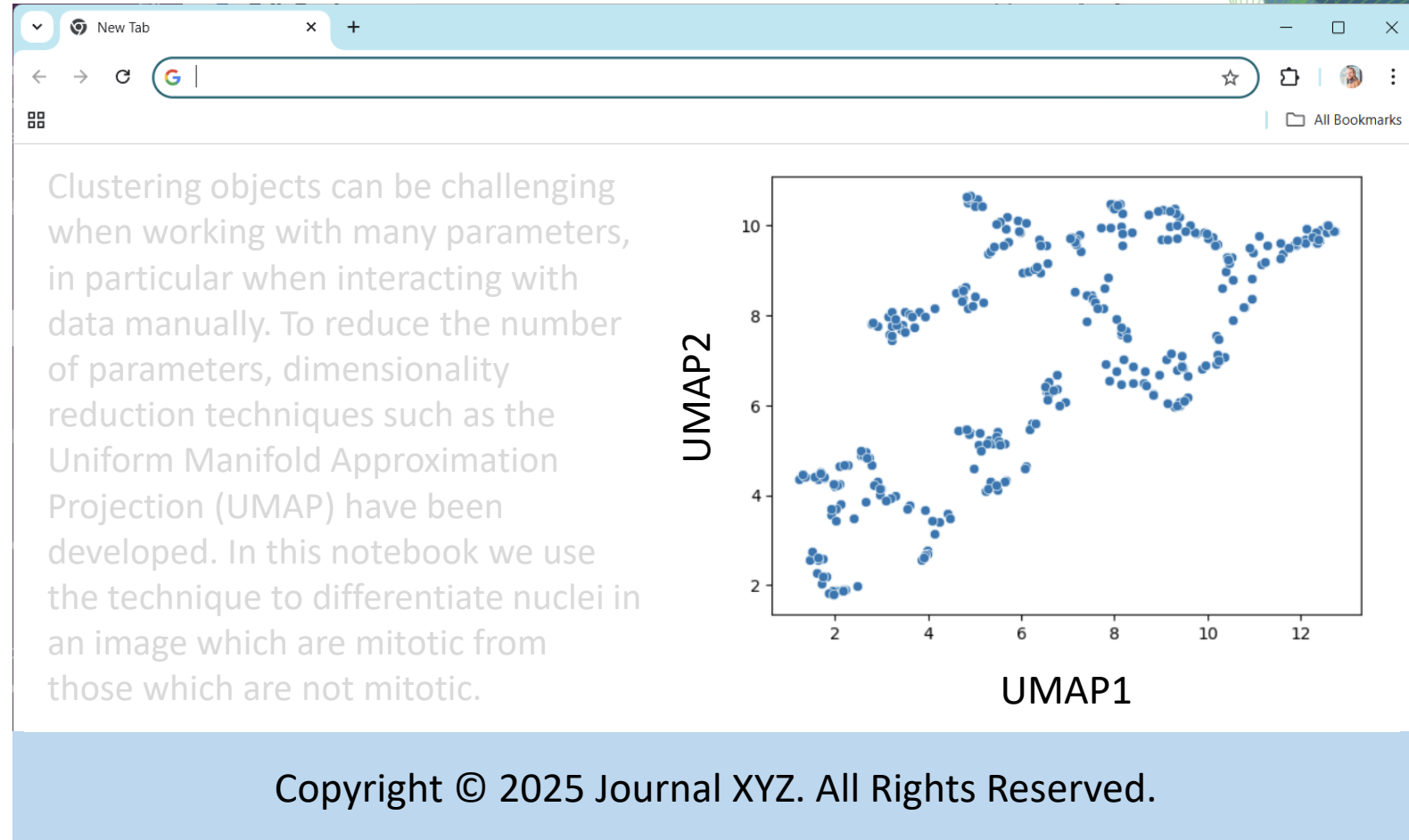


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Quiz

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CLIJ: GPU-accelerated image processing for everyone

Robert Haase, Loic A. Royer, Peter Steinbach, Deborah Schmidt, Alexandr Dibrov, Uwe Schmidt, Martin Weigert, Nicola Maghelli, Pavel Tomancak, Florian Jug, Eugene W. Myers

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Now published in *Nature Methods* doi: [10.1038/s41592-019-0650-1](https://doi.org/10.1038/s41592-019-0650-1)

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Abstract

Graphics processing units (GPU) allow image processing at unprecedented speed. We present CLIJ, a Fiji plugin enabling users with entry level experience in programming to benefit from GPU-accelerated image processing. Freely programmable workflows can speed up image processing in Fiji by factor 10 and more using high-end GPU hardware and on affordable mobile computers with built-in GPUs.

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Figure 1: Performance comparison of CLIJ GPU-accelerated image processing.

a CPU vs GPU architecture diagram. CPU: few general purpose processing units. GPU: many specialised graphics processing units.

b Performance graphs for GaussianBlur3D and Minimum3D. Y-axis: Processing time / s. X-axis: Size / MB (0-125) and radius (2.5-15.0).

c Relative speedup compared to Laptop GPU. Table:

Operation	GPU	CPU	GPU
AddImagesWeighted2D	3	0.8	8
AddImagesWeighted3D	4	0.7	28
AddScalar2D	6	0.5	10
AddScalar3D	3	0.8	18
AutoThreshold2D	2	0.7	2
AutoThreshold3D	3	0.8	6
BinaryAnd2D	2	0.7	4
BinaryAnd3D	4	1.0	29
Erode2D	11	0.7	19
Erode3D	2	0.5	12
FixedThreshold2D	2	0.7	5
FixedThreshold3D	4	0.9	32
Flip2D	17	0.5	37
Flip3D	16	0.6	110
GaussianBlur2D	3	0.8	9
GaussianBlur3D	3	0.3	33
MaximumZProjection	0.1	0.8	38
Mean2D	0.06	0.6	11
Mean3D	0.07	4	172
Median2D	0.5	2	36
Median3D	2	4	42
Minimum2D	7	1.0	19
Minimum3D	25	4	196
MultiplyScalar2D	11	0.9	22
MultiplyScalar3D	6	1.0	38
RadialReslice	17	0.9	48
Rotate2D	3	0.5	32
Rotate3D	1.0	0.5	15

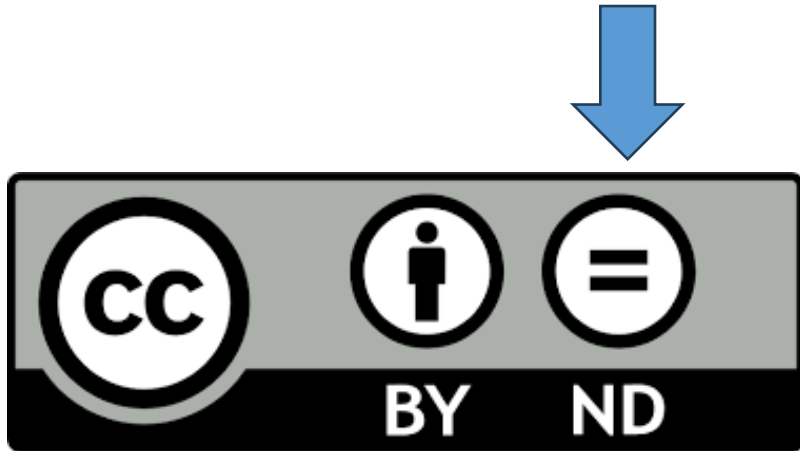
Relative speedup compared to Laptop GPU

GPU Laptop Workstation

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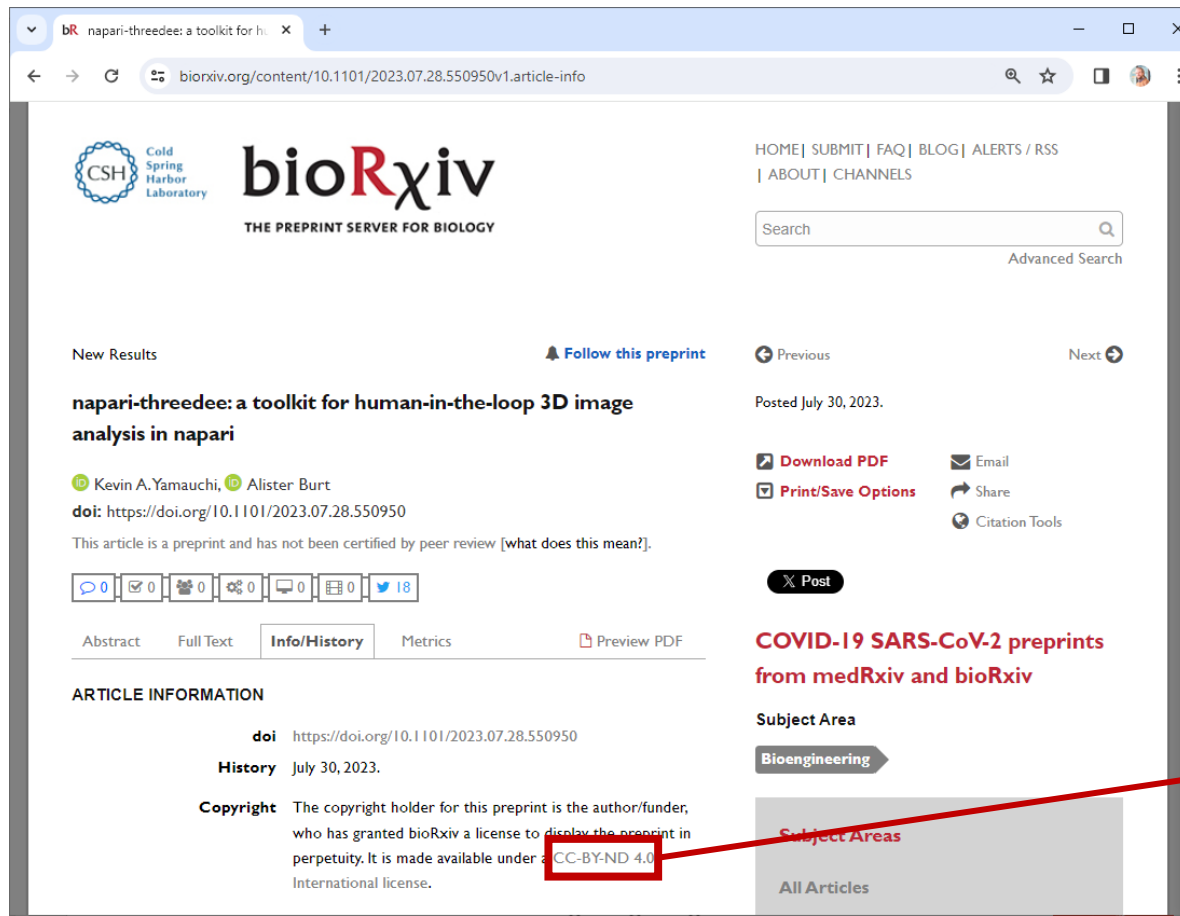
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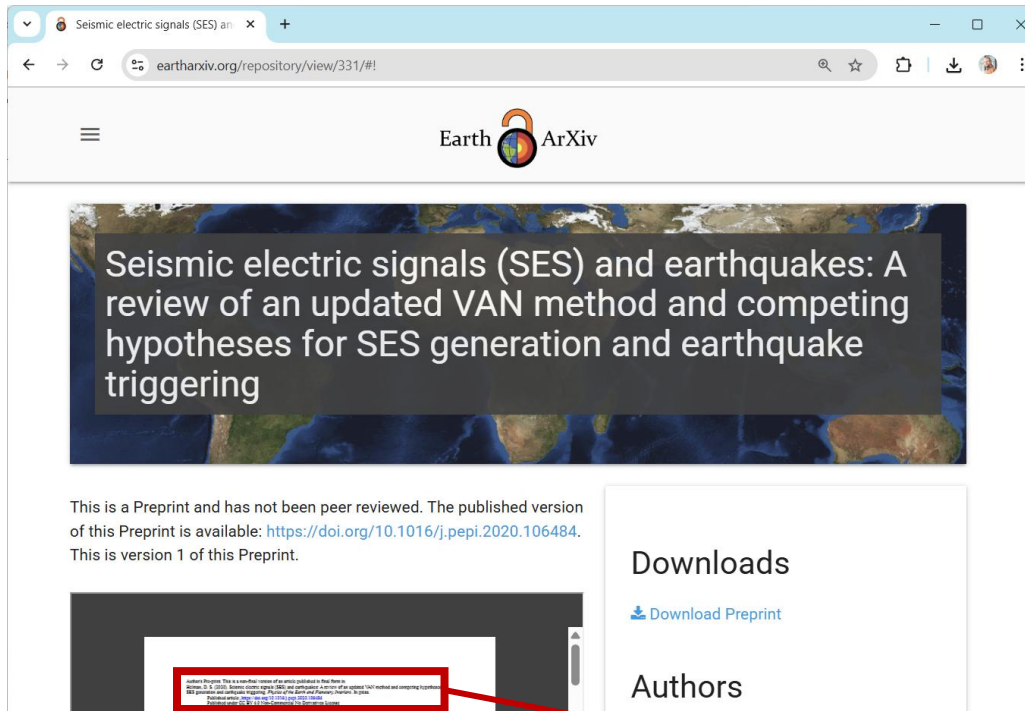
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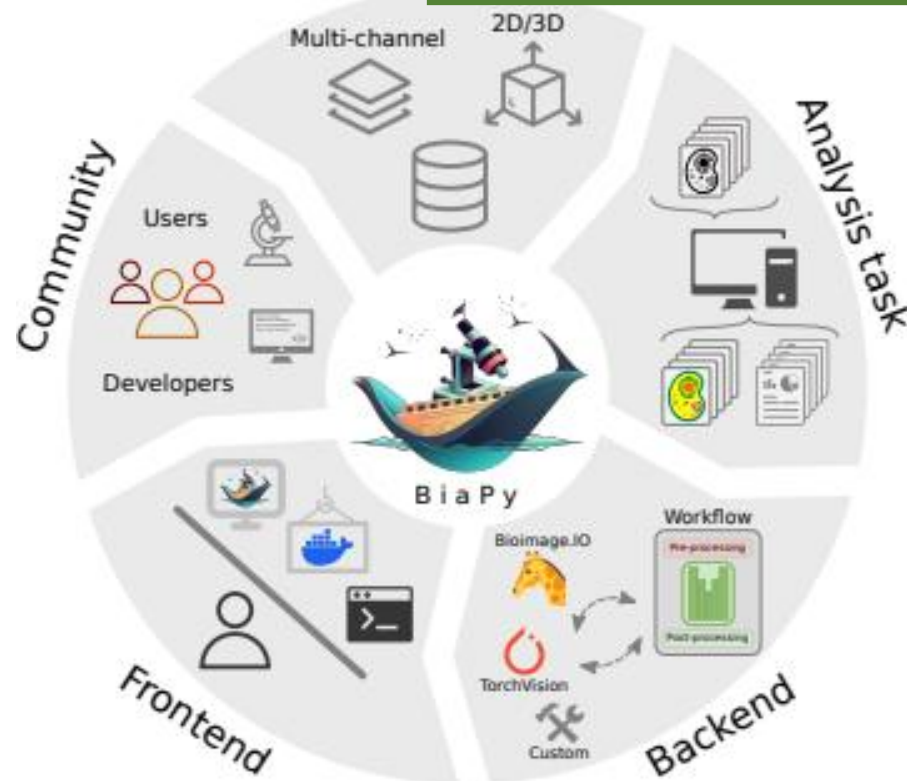
Bad for the progress of science

In particular in the context of training

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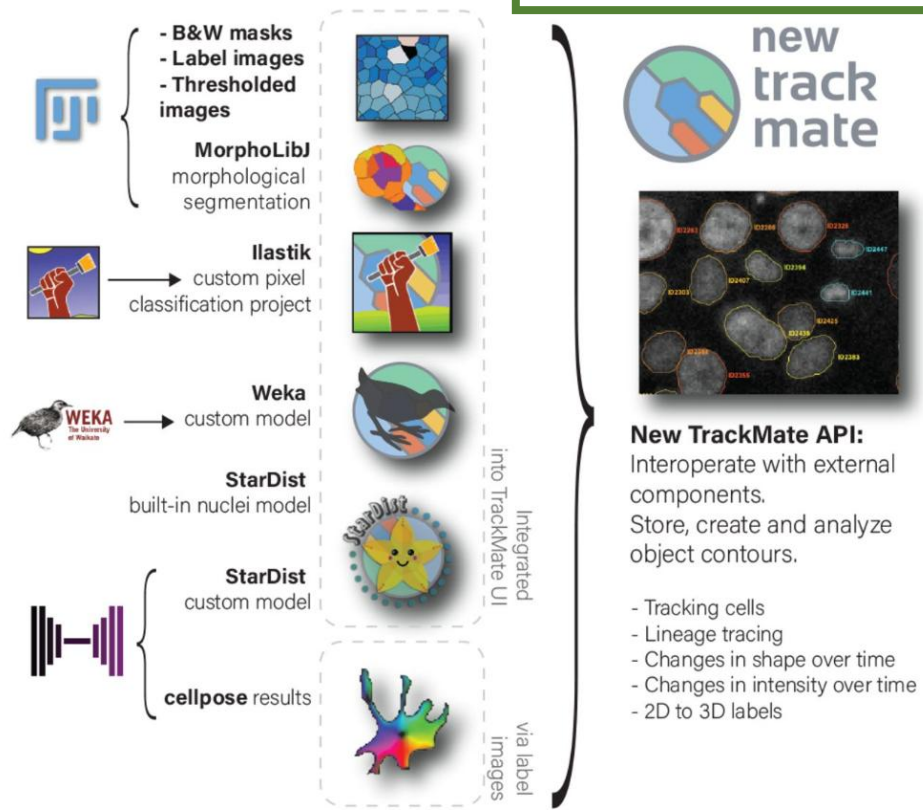


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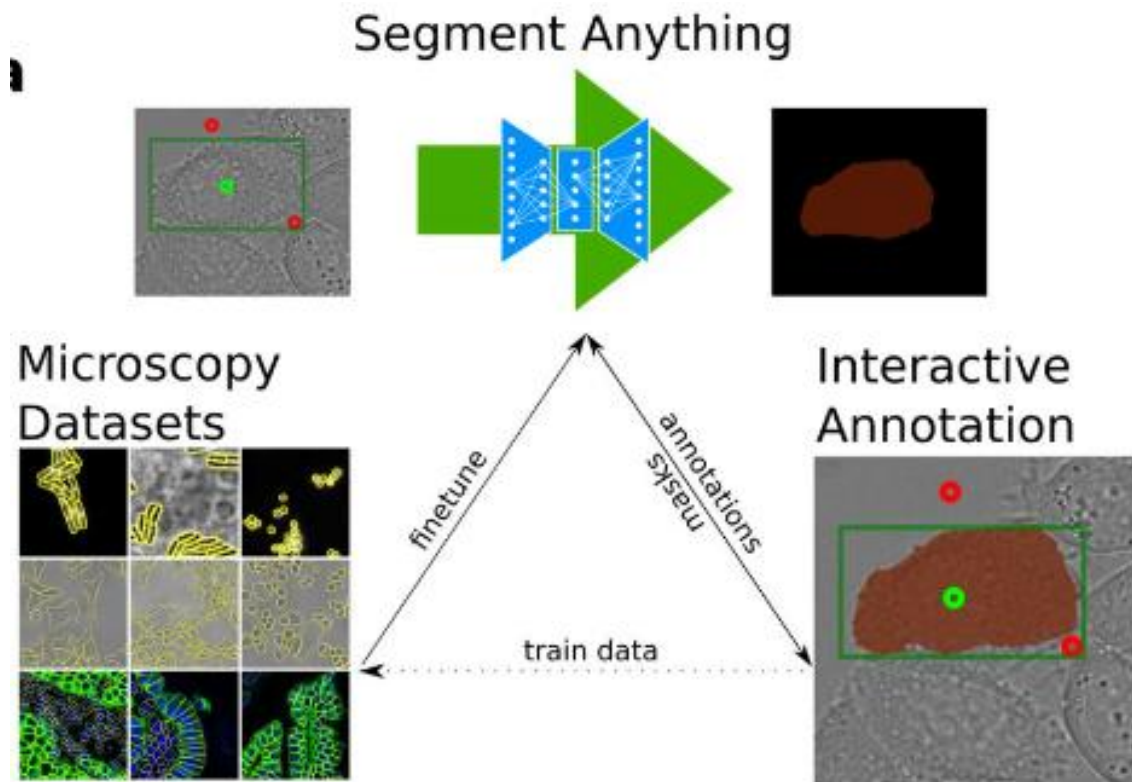
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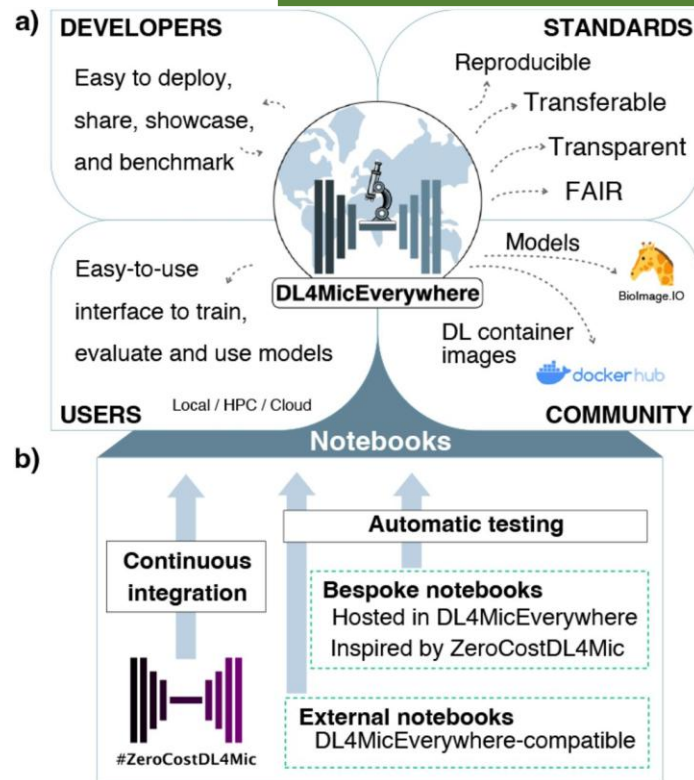
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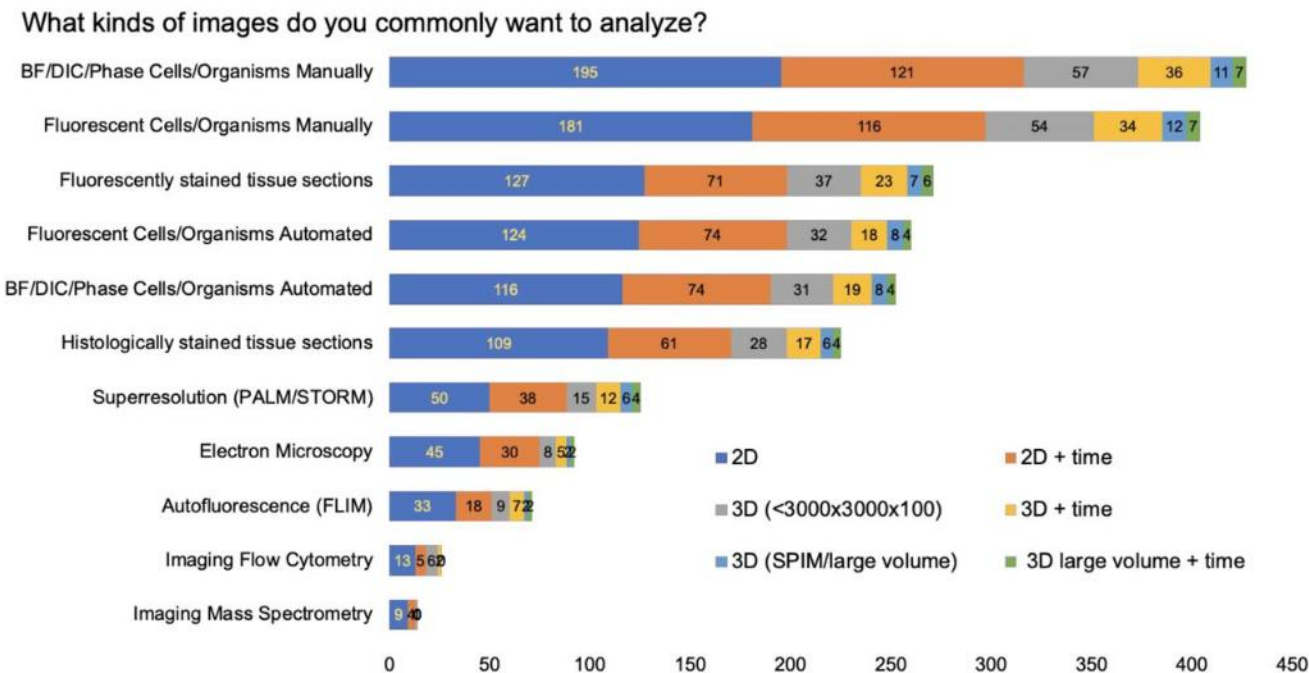


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Nasim Jamali, Ellen TA Dobson, Kevin W. Eliceiri, Anne E. Carpenter, Beth A. Cimini

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Subject Area Bioinformatics

Subject Areas All Articles

- Animal Behavior and Cognition
- Biochemistry
- Bioengineering
- Bioinformatics

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Example

Look at this great figure! It's taken from M. Hartley et al.

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Release Date: 31 May 2021

The glucosylceramide synthase inhibitor PDMP causes lyso-somal lipid accumulation and mTOR inactivation

Pia Hartwig¹, Doris Höglinger¹

¹ Heinrich Heine University

Accession S-BIAD144

Description We investigated subcellular sphingolipid distribution using a functionalized sphingosine analogue (pacSph) by confocal microscopy in control, PDMP and NB-DNJ (Miglustat) treated WT and SGPL1 knock-out cells (experimentA_11_WT_Miglustat.czi, experimentA_12_SGPL1_PDMP.czi, experimentA_13_SGPL1_PDMP.czi)

Data files

Name	Size	Section	staining	cells	labelling	treatment	Channel 1	Channel 2	timepoint
experimentA_11_WT_Miglustat.czi	1.6 MB	Study Component	click chemistry and IF	WT	pacSph	50 µM NB-DNJ (Miglustat)	pacSph	Lamp1	continuous labelling
experimentA_12_SGPL1_PDMP.czi	1.6 MB	Study Component	click chemistry and IF	SGPL1-/-	pacSph	20 µM PDMP	pacSph	Lamp1	continuous labelling
experimentA_13_SGPL1_PDMP.czi	1.6 MB	Study Component	click chemistry and IF	SGPL1-/-	pacSph	20 µM PDMP	pacSph	Lamp1	continuous labelling

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The Biolmage Archive - building a home for life-sciences microscopy data

Matthew Hartley, Gerard J. Kleywegt, Ardan Patwardhan, Ugis Sarkans, Jason R. Swedlow, Alvis Brazma

doi: <https://doi.org/10.1101/2021.12.17.473169>

Now published in *Journal of Molecular Biology* doi: 10.1016/j.jmb.2022.167505

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doi <https://doi.org/10.1101/2021.12.17.473169>

History February 11, 2022.

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Subject Areas

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- Bioengineering
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Incentives

The system is changing currently towards more openness (thankfully)

Career goal:	Open Science	Open Training
Research PI / Professor	✓	✓
Lecturer*	✓	✓
Academic staff scientist	✓	✓
Industry engineer	✗	✗



In industry, secrecy plays a key role because of \$\$

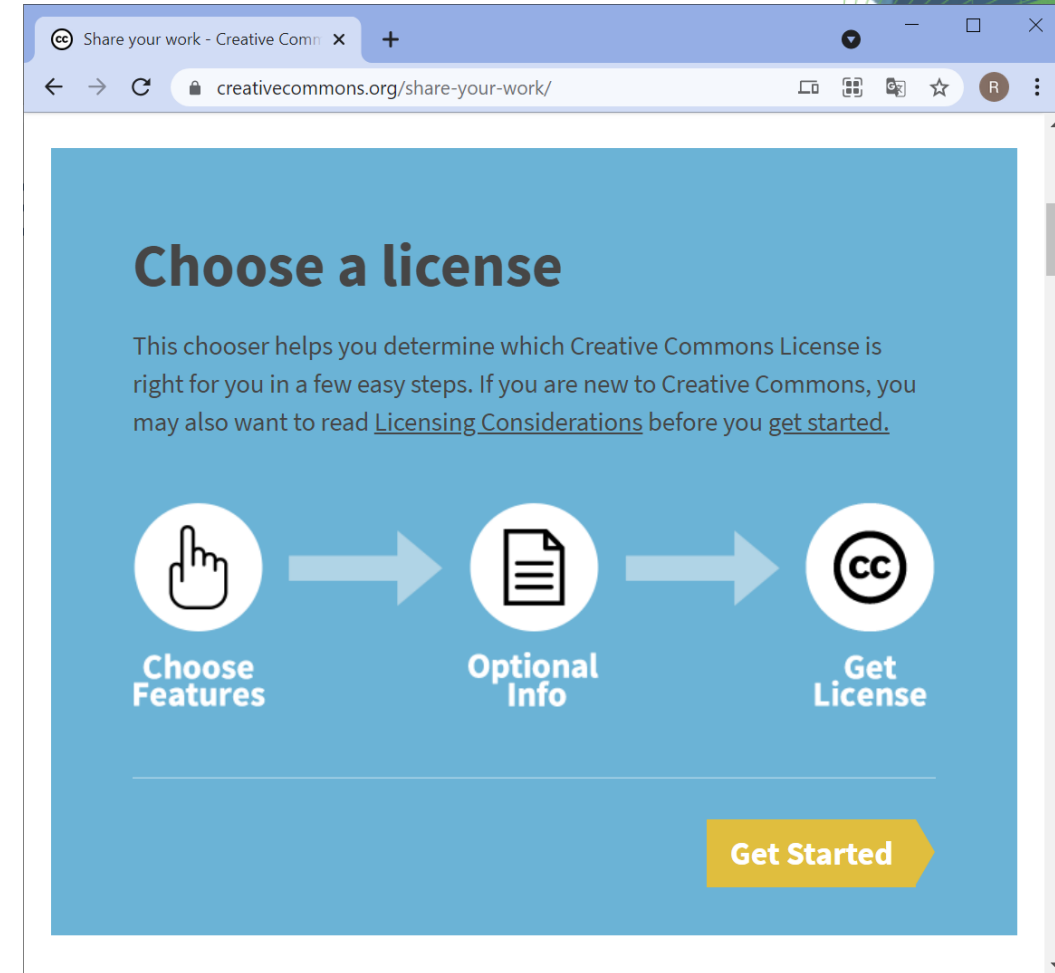
Also this seems to be changing thanks to new business models...

* Note: this may differ depending on the country. In the US, lecturer is a career path, in Germany not really.

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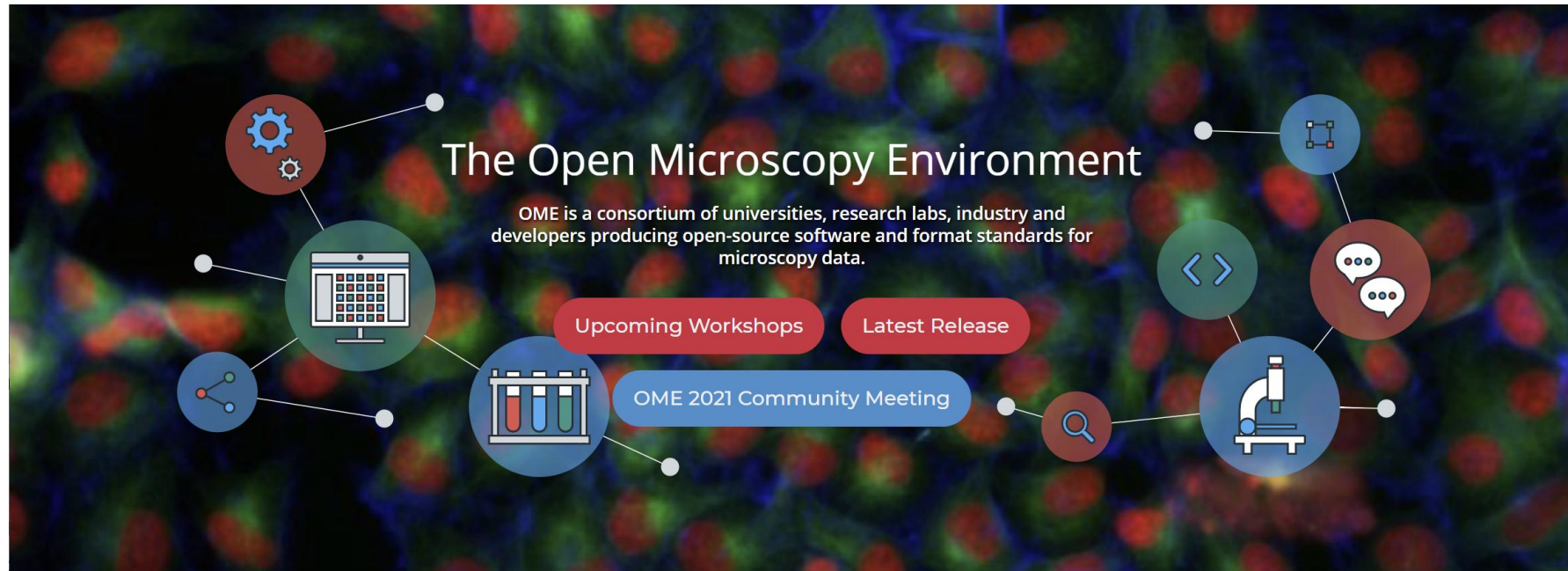
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Example



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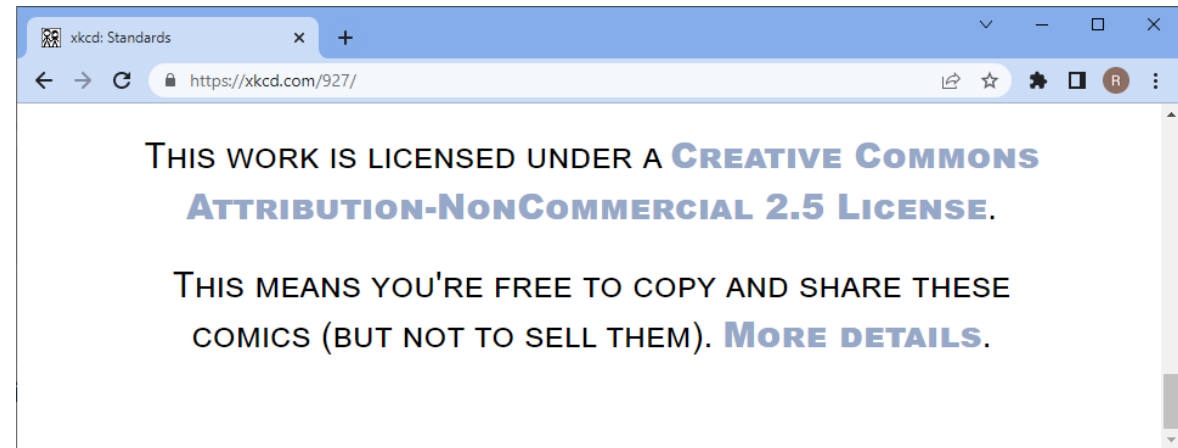
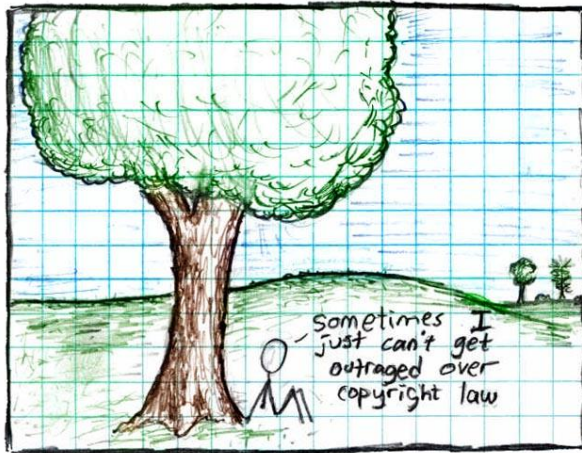
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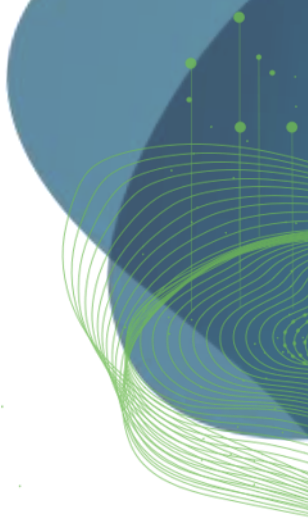


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