



Unlock The Power of your Data

Information Management Officer – Bilal Naffaa

Agenda



- Open Science
- Data Management Plan
- Introduction to Data
- Metadata: Data About Data
- Data Storage: Zenodo

Open Science (OS)

- *“As Open as Possible, as closed as necessary”*
- Open Science is a **legal obligation** under [Horizon Europe](#) , [Flemish funder FWO](#), [VLAIO](#) and other Funding agencies
- Research Data are freely available to:
 - Reuse
 - Redistribute
 - Reproduce



Data Management Plan



Data Management Plan

Definition

A Data Management Plan, or DMP, is a document in which the researcher should outline how data will be handled throughout and after a project.

- **What is in a DMP?**

- Basic info
- Description of data
- Division of responsibilities
- Resource allocation



Why are Data management plans everywhere?

Introducing Open Science (EU Commission)

- **Open Science** (OS) policy strives to quickly spread knowledge
- Requires beneficiaries of research + innovation funding (**you**) to make **research outputs available**:
 - **Publications** in open access
 - **Data** as open as possible and as closed as necessary



You need to
have a plan

“Data Management Plan”

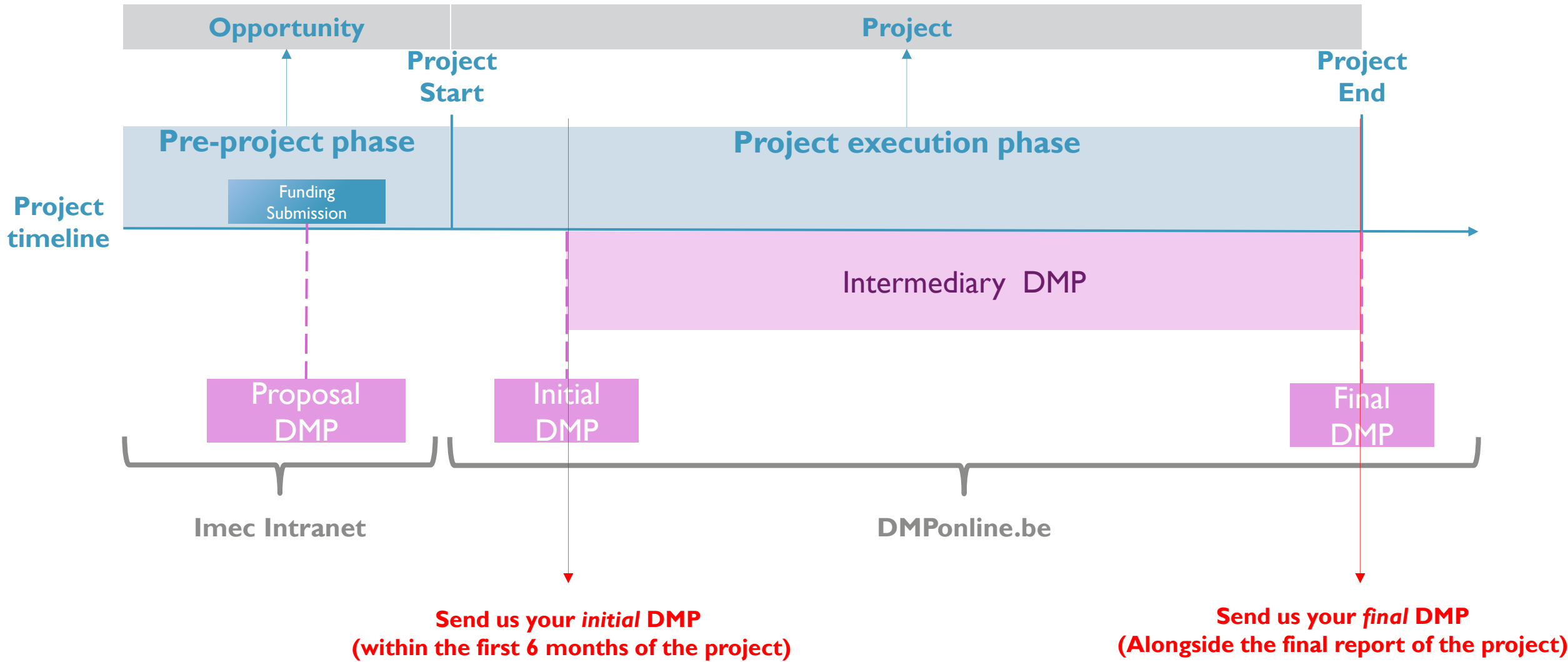
2 reasons to make a DMP

Funders require them, but they are good for you too ...

- They help you keep track of **legal** and **security** issues.
 - Intellectual **P**roperty **R**ights?
 - **Contractual** agreements?
 - **Confidential** data?
 - **Dual-use** potential?
- They help you keep track of **your data**.
 - **Where** to store?
 - **Should** you store?
 - Where was that file **again**?
 - Is everyone working on the same **version**?

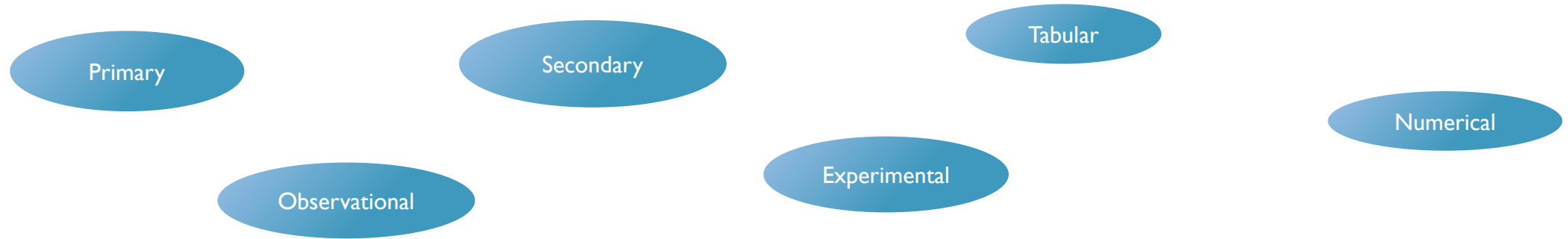


DMPs document how you handle your data

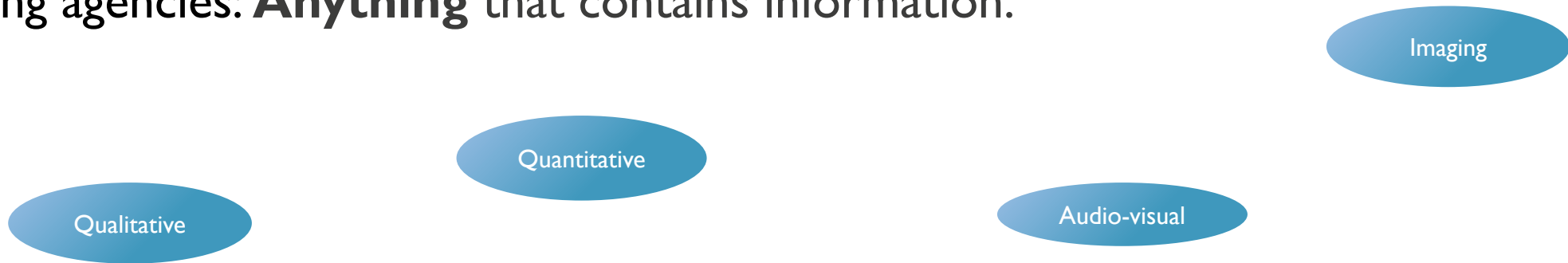


Introduction to Data

What is Data ?



- General Definition: Any **piece of information** that conveys details about states or events.
- Funding agencies: **Anything** that contains information.

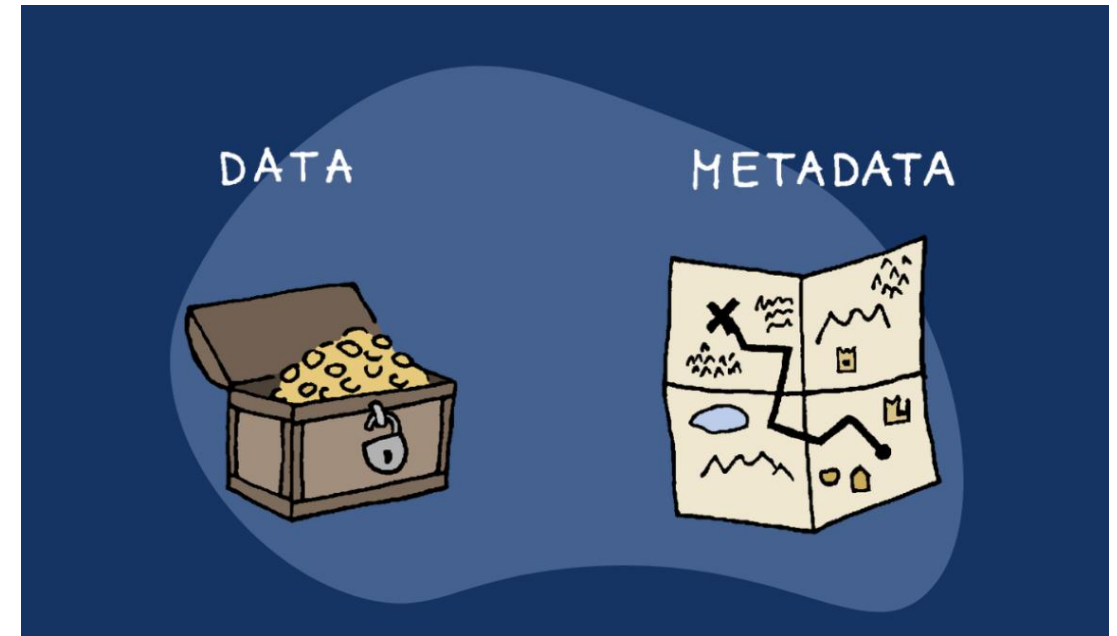


Data About Data: Metadata within imec

Into the Data: Metadata

Data About Data

- Metadata are crucial for making your data **FAIR**. They should be added continuously throughout your project, not just at the start or end. From a **FAIR** perspective, metadata are more important than the data itself, as they are always openly available and link research data and publications on the Internet of FAIR Data
- Metadata is the interface that provides better descriptions for improved discovery of archives and special collections.¹
- The effect of metadata on end-users may be reflected in exclusive data, like the 90% boost in discoverability achieved through investment in semantic technology.²



¹ Schaffner, J. & OCLC Research. (2009). *The Metadata is the Interface: Better Description for Better Discovery of Archives and Special Collections*, Synthesized from User Studies. OCLC Research.
<https://www.oclc.org/content/dam/research/publications/library/2009/2009-06.pdf>

² Conrad, L. Y. (2024, September 24). *The Experience of Good Metadata: Linking metadata to research Impacts - The Scholarly Kitchen*. The Scholarly Kitchen.
<https://scholarlykitchen.sspnet.org/2021/09/30/the-experience-of-good-metadata-linking-metadata-to-research-impacts/>

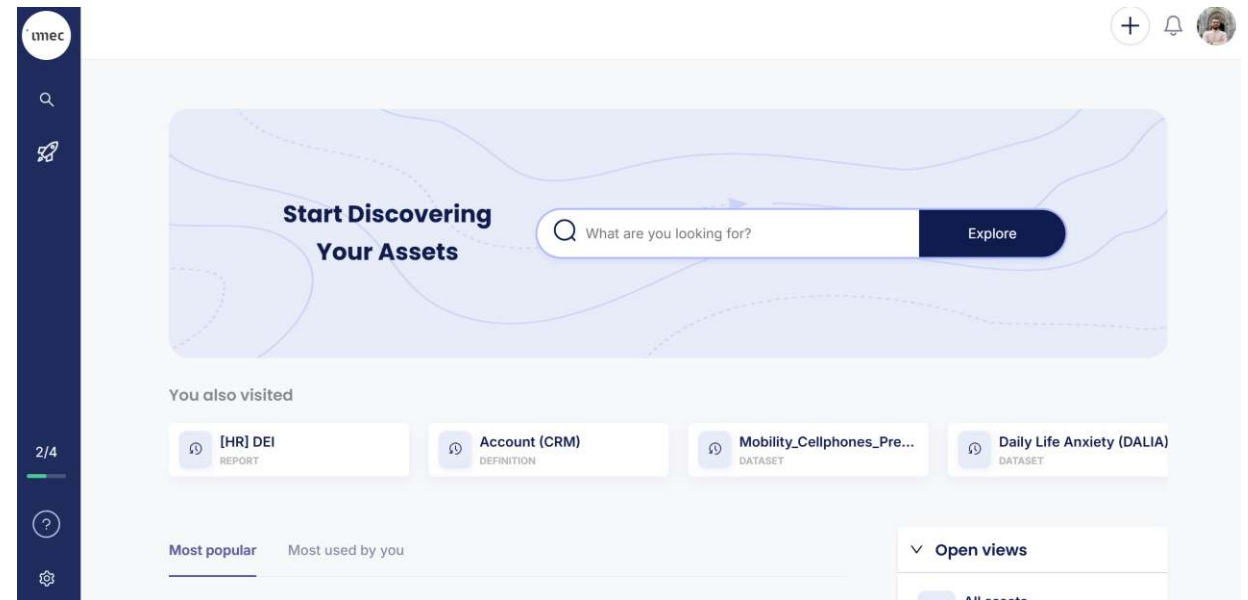
Importance for Researchers and Science

- How can researchers and science benefit from metadata?

Researchers	Science
More Visibility and Citation	Facilitates data finding and reuse
Opportunities for collaborations	Enables new research and insights into the data.
Career recognition	Valuable data is protected
Decrease of non-compliance risks (legal, ethical, institutional and funders' policies).	Supports research integrity and reproducibility.

Where is the Metadata located within imec ?

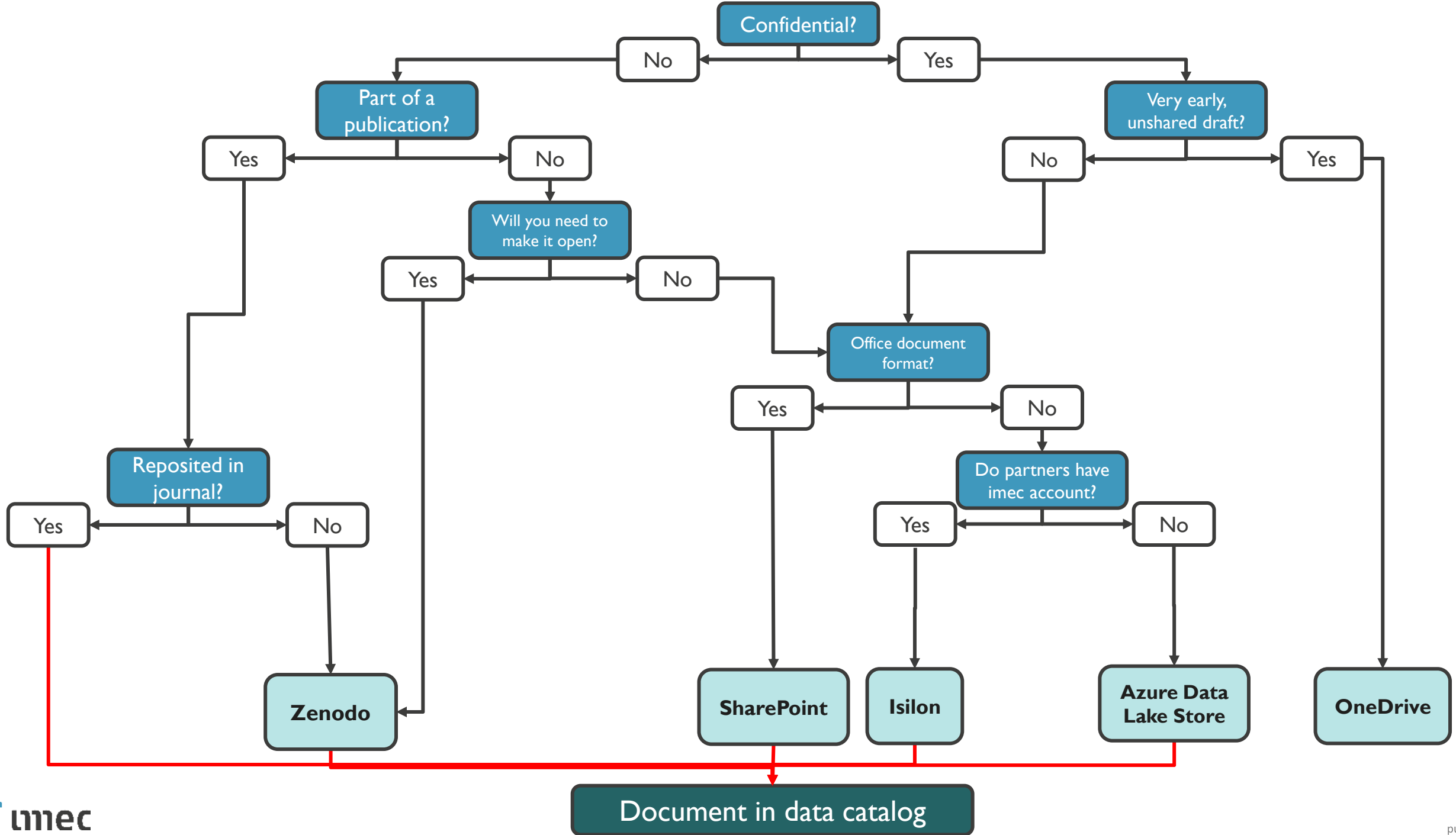
- Dscribe
- Dscribe (data catalog) serves as a centralized database that stores and manages metadata within imec
- How to Use DataCatalog:
The imec Catalog



Are you a project lead for a publicly funded project?
If so, you need to upload your metadata to describe

- **Please keep the following important remarks in mind:**
 - It is mandatory to upload your metadata as part of applying open science principles, ensuring it is sent to the publicly funded agencies especially at the end of the project.
 - If you have a valid dataset during the project, please ensure its metadata is uploaded.
 - It is recommended to upload at least one metadata for the project.
 - Keep your metadata up to date. For example, if you change the name of the project or if a new colleague joins the project, etc..

Unlocking The Data Storage With Metadata



What is Zenodo ?

Definition

- Zenodo is a general-purpose research repository designed to facilitate the sharing, preservation, and dissemination of research outputs across all scientific disciplines. Launched in 2013 by the CERN, Zenodo offers researchers and institutions a user-friendly space to deposit and archive various types of scholarly content, including datasets, software, presentations, publications, and more.

Searching for our community

The screenshot shows the Zenodo website's 'Communities' section. At the top is the Zenodo logo and a menu icon. Below the logo is a search bar containing the text 'imec'. A callout box with the text 'Type "imec" here' has an arrow pointing to the search bar. To the right of the search bar is a magnifying glass icon. Further right is a green button with a plus sign and the text 'New community'. Below the search bar and button is a section titled 'Featured communities'. A second callout box with the text 'Click here to search for the imec community' has an arrow pointing to the magnifying glass icon.

zenodo

Type "imec" here

Communities

Created and curated by Zenodo users.

imec

+

New community

Featured communities

Click here to search for the imec community

Where should you go?

The screenshot shows the Zenodo website's 'Communities' section. At the top, the Zenodo logo is on the left and a menu icon is on the right. Below the header, the word 'Communities' is centered, with a green '+ New community' button to its right. A search bar contains the text 'imec' and has a magnifying glass icon on the right. Below the search bar, a 'Sort by' dropdown menu is set to 'Best match'. The search results are displayed below. The first result is the 'imec' community, which is partially obscured by a callout box. The second result is the 'Imec Open Data Community', which is highlighted by a blue arrow pointing from the callout box. The callout box contains the text: 'Click here to enter the imec community. It will be the **second** search result.'

zenodo

Communities

+ New community

imec

Sort by Best match

imec Imec

Imec Open Data Community


This community aims to unite all assets that are uploaded to Zenodo and has been (partially) contribut...

Organization <https://www.imec-int.com/en>

IMEC ROR, Imec the Netherlands ROR, Interuniversitair Micro-Electronica Centrum


Upload your information assets


zenodo






Imec
embracing a better life


Imec Open Data Community

 <https://www.imec-int.com/en>

 Organization


 IMEC ,


Imec the Netherlands , Interuniversitair Micro-Electronica Centrum

 New upload

Click here to upload a new information asset to Zenodo!

Q Records

 Members



Uploading your assets (basic information)

Files

Storage available 0 out of 100 files 0 bytes out of 50.00 GB

Drag and drop files - or - Upload files

Basic information

Digital Object Identifier

Do you already have a DOI for this upload? Yes No

Copy/paste your existing DOI here...

A DOI allows your upload to be easily and unambiguously cited. Example: 10.1234/foo.bar

Resource type

Title

+ Add titles

Publication date

2024-04-02

In case your upload was already published elsewhere, please use the date of the first publication. Format: YYYY-MM-DD, YYYY-MM, or YYYY. For intervals use DATE/DATE, e.g. 1939/1945.

Creators

+ Add creator

Save or preview your draft here

Draft

Save draft Preview

Submit for review

Visibility

Files only

Public Restricted

Public

The record and files are publicly accessible.

Options

Apply an embargo

Record or files protection must be restricted to apply an embargo.

Drag and drop your information asset in here!

Write the asset title here

Add other versions of the title here

Write the date of publication here

Copy the authors as creators (affiliation: IMEC). DO NOT select a role!

Select the type of resource to upload!

Select visibility here. If you pick "restricted" the metadata will be visible to everyone, but the asset itself will only be shared with people you select.

Uploading your assets

Basic information

Add a short description of your asset here

Add additional descriptions here

If you have not paid for a CC-BY license, remove this field. Otherwise, write your license here.

Description

Paragraph

B *I*

+ Add description

Licenses

Creative Commons Attribution 4.0 International

The Creative Commons Attribution license allows re-distribution and re-use of a licensed work on the condition that the creator is appropriately credited. [Read more](#)

+ Add standard

+ Add custom

Edit

Remove

umec

23

public

Uploading your assets (recommended information)

Recommended information

Add contributors here

+ Contributors

+ Add contributor

Add people or organizations here

Add names and surnames here

Add researchers' identifiers here

Add researchers' affiliations here

You can add the entity's role here (but don't! It will result in a very long list)

Add contributor

☒ Person ☐ Organization

Search for persons by name, identifier, or affiliation...

Family name

Family name

Given names

Given names

Identifiers

e.g. ORCID, ISNI or GND.

Affiliations

Search or create affiliation

Role *

Select role

Role *

Contact person

Contact person

Data collector

Data curator

Data manager

Distributor

Editor

Hosting institution

Other

✕ Cancel

✓ Save and add another

✓ Save

Uploading your assets (recommended information)

Add keywords here

Keywords and subjects

Suggest fromAllSearch for a subject by name

Add languages here

Languages

Search for a language by name (e.g "eng", "fr" or "Polish")

Add relevant asset dates here

Dates

What happened?

Date *YYYY-MM-DD or YYYY-MM-DD/YYYY-MM-DD

Type *

Description

Format: DATE or DATE/DATE where DATE is YYYY or YYYY-MM or YYYY-MM-DD.

Add more dates here

+Add date

Add the current version here

Version

Mostly relevant for software and dataset uploads. A semantic version string is preferred see [semver.org](#), but any version string is accepted.

Add the publisher here

Publisher

Zenodo

The publisher is used to formulate the citation, so consider the prominence of the role.

Accepted

Available

Collected

Copyrighted

Created

Issued

Other

Submitted

Updated

Valid

Withdrawn

Accepted

Uploading your assets (funding, IDs, related works, references, software)

IMPORTANT!

Only valid if there is an acknowledgement of funding in the publication!
If **H2020 grant** → add grant number/acronym.
It will get you to the funded project and link to all necessary information.

- Expand these sections to add:
- Other ways to identify the asset.
 - Related works.
 - References

Add here the repository in which related software is preserved

Add here the programming language in which related software is preserved

Add here the software's status

Funding

Awards

+ Add award

+ Add custom

Alternate identifiers

Related works

References

Software

Repository URL

URL or link where the code repository is hosted.

Programming language

e.g. Python ...

Repository's programming language.

Development Status

Repository status

Repository current status.

Wip

Wip

Active

Inactive

Moved

Abandoned

Concept

Unsupported

Suspended

Add the journal's ISSN

Add the journal's title

Add the volume,
issue and pages of
your publication

If you have published
a book or report,
write here its name
and ISBN

Add the place of publication and the pagination of your contribution

If you are publishing your thesis, add the awarding university

Uploading an asset (conference papers)

The form is titled "Conference" in a dark blue header bar. It contains several input fields for conference details. Instructional callouts in rounded rectangles with arrows point to specific fields: "Write here the name of the conference" points to the Title field; "Write here where and when the conference took place" points to the Place and Dates fields; "Add here the conference's website" points to the Website field; "Add the session within the conference" points to the Session field; and "Add the part within the session" points to the Part field. An additional callout "If the conference has an acronym, write it here" points to the Acronym field.

Conference ▼

Title

Acronym

Place

Location where the conference took place.

Dates
e.g. 21-22 November 2022.

Website

Session
e.g. VI
Session within the conference.

Part
e.g. 1
Part within the session.

Write here the name of the conference

Write here where and when the conference took place

Add here the conference's website

Add the session within the conference

Add the part within the session

If the conference has an acronym, write it here

Uploading an asset

Domain specific fields

+ Add field

Add domain specific fields

in: All domains

Basis of record

The specific nature of the data record, e.g., PreservedSpecimen, Observation.

Biodiversity: dwc

Multiple value field

Text field

Catalog number

An identifier for the record within the catalog or collection.

Biodiversity: dwc

Class

The taxonomic class of the organism.

Biodiversity: dwc

Collection code

A unique identifier assigned to the collection from which the record was obtained.

Biodiversity: dwc

Country


Cancel


+ Add field and continue


+ Add field and close

Uploading an asset


Draft ⓘ


 Save draft


 Preview

 Submit for review

Draft ⓘ

 Save draft

 Preview

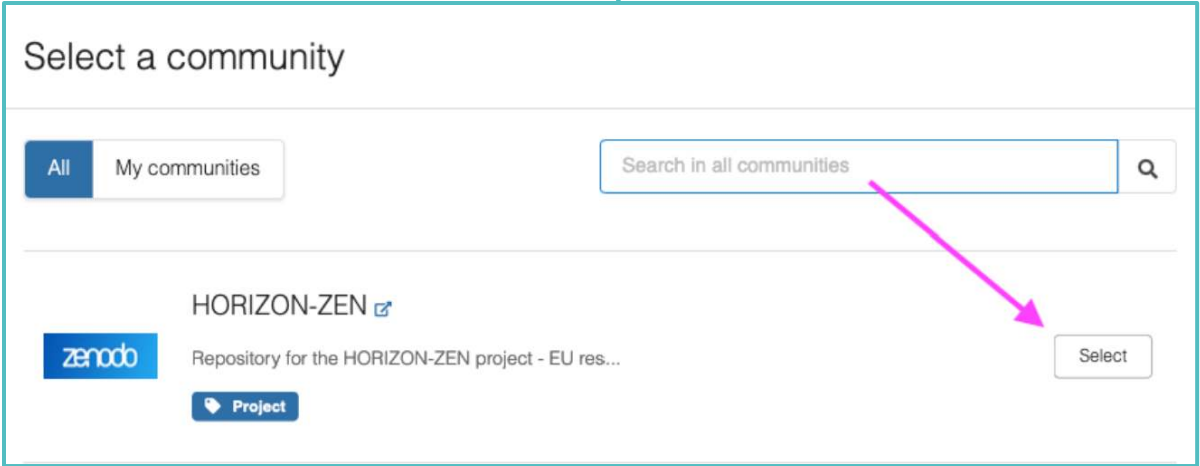
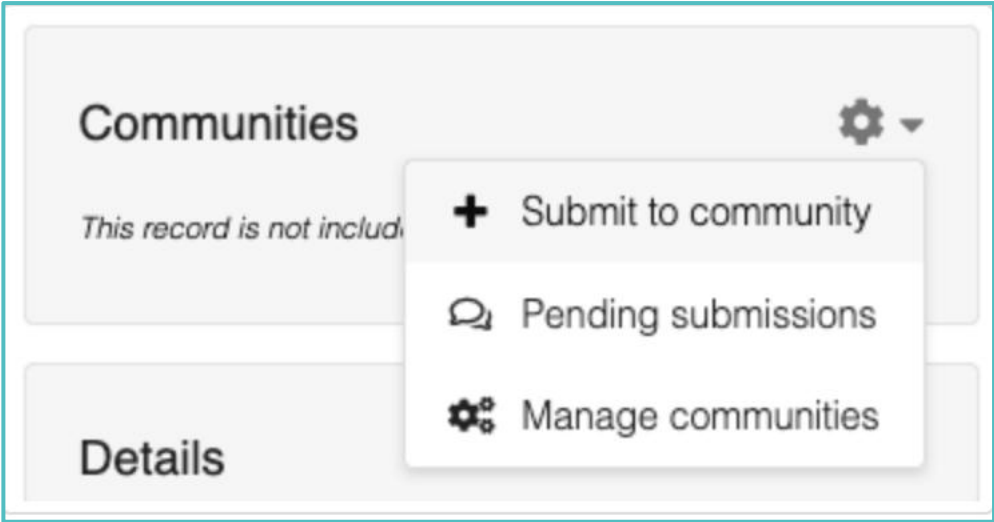
 Publish

Submit to community

Go to the record you want to submit to a community and click the cog-wheel icon to open the communities menu.

The screenshot shows a Zenodo record page for a presentation. The record is titled "HORIZON-ZEN presentation at EOSC Symposium 2023" and was published on September 19, 2023. The authors listed are Nielsen, Lars Holm and Cancio Melio, German. The record has 0 views and 0 downloads. A file named "eosco-symposium.pdf" (4.3 MB) is attached. The file preview shows a slide with the Zenodo logo, "HORIZON-ZEN", and logos for the European Union and CERN. On the right sidebar, there are buttons for "Edit", "New version", and "Share". Below these are sections for "Versions" (showing version v1), "External resources" (indexed in OpenAIRE), and "Communities". The "Communities" section shows that the record is not included in any communities yet, with a cog-wheel icon next to it. A pink arrow points from the text instruction to this cog-wheel icon. The top navigation bar includes the Zenodo logo, a search bar, and links for "Communities" and "My dashboard".

Select a Community



Finally..

Finally, click the blue submit to community button

Submit to community

⚠ Before submitting to community, please read and check the following:

☐ The 'HORIZON-ZEN' curators will have access to **view** and **edit** your upload's metadata and files.

Message to curators (optional)

Cancel

Submit to community

FAQ

- Where do researchers submit their DMPs ?

- Colleagues should follow the instructions provided by the funders to submit their DMPs on the designated portal.

- Who has the authority to reject a DMP?

- The ultimate responsibility of a DMP quality falls on the researcher(s). The information management team do not have any policing power to reject DMPs. We only provide feedback and give support. DMPs get reviewed and can eventually be rejected by the Project Officer of the funders.

- Do I need a final DMP ?

- You should check the funder requirements. For FWO, the final and updated DMP must be submitted with the final report of the project and submitted to FWO via the e-portal. The DMP will be checked by the evaluation panel during the final evaluation of the project. The final dmp will be considered as incomplete in the absence of a details DMP. It is always good practice to keep the DMP updated.

- What is different in the final DMP ?

- At this stage, your DMP should list all the research materials used and produced during the project and describe them comprehensively. It should focus on clearly describing the preservation strategy and indicating where data/materials and documentation are accessible for whom are these accessible and under which conditions.

Agenda



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- Data Management Plan
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- Metadata: Data About Data
- Data Storage: Zenodo



mec

embracing a better life