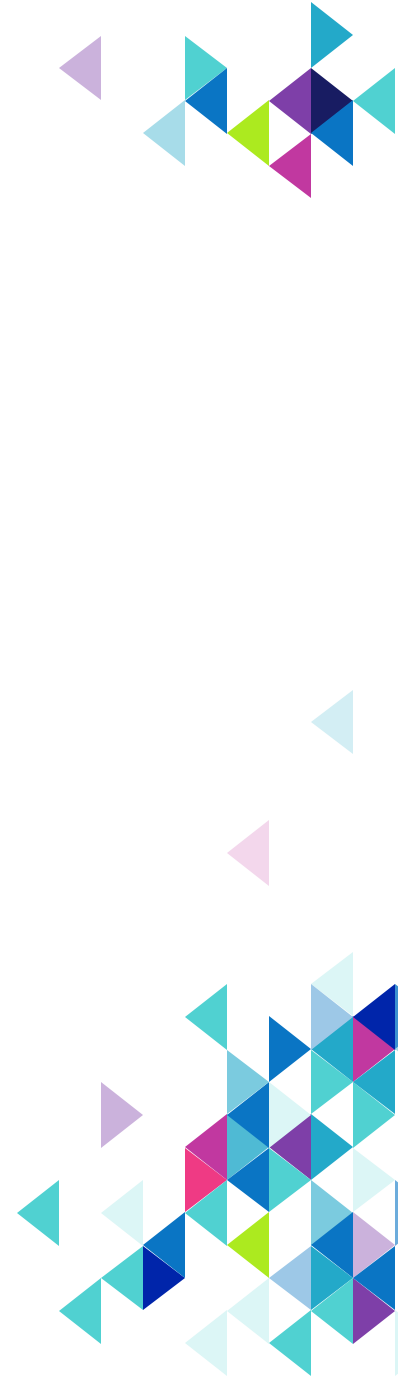# Data Management Plans

Daniela Hartmann & Dennis Friedl

27. November 2025

Research Data Management Contact Point

The Research Data Management Contact Point at the University of Paderborn

We

- are the first point of contact for RDM
- advice from application to publication
- provide training (methods, tools, etc.)
- provide services and tools

E-Mail: kontakt-fdm@imt.uni-paderborn.de

https://www.uni-paderborn.de/forschung/foerder-und-antragsberatung/forschungsdaten#ansprechpersonen

Our Workshops

- 30.10.2025: **Overview of Research Data Management Topics**

- 27.11.2025 **Data Management Plans**

- 11.12.2025 **Data Organization**

- 15.01.2026 **Archiving and Publishing Research Data**

- 05.02.2026 **Electronic Lab Notebooks, eLabFTW**

Team and Expertise

Dennis Friedl   Sina Gantenbrink   Dr. Daniela Hartmann   Daniel Röwenstrunk   Dr. Gabriel Simoneit

Expertise:

Data management plans, electronic laboratory notebooks, data organisation and backup, data publication and long-term availability, legal aspects and licences

Where can I find help?

- **Contact us**! The Contact Point Research Data Management at Paderborn University
  - Visit our website: https://www.uni-paderborn.de/en/research/research-service-and-consulting/research-data
  - E-Mail: kontakt-fdm@imt.uni-paderborn.de

- **forschungsdaten.info**
- **forschungsdaten.org**
- **Wiki of the ETH Zürich**: https://unlimited.ethz.ch/display/DD/FDD

- The **NFDI** and their consortia: https://www.nfdi.de/

"NFDI systematically indexes and networks valuable scientific and research data for the entire German scientific system and makes it available for sustainable and qualitative use."

https://www.nfdi.de/association/?lang=en

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Agenda

1. **Recap: What Is Research Data Management?**

2. **Data Management Plans**

3. **Requirements of Third-Party Funders**

4. **RDMO**

5. **Optional: Hands-On**

"Research data includes measurement data, laboratory values, audiovisual information, texts, survey or observation data, methodological test procedures and questionnaires. Compilations and simulations can likewise constitute a key outcome of academic research and are therefore also included under the term research data."

"Handling of Research Data", DFG, 2023
https://www.dfg.de/en/research-funding/funding-initiative/research-data

What is Research Data Management?

*"Research data management encompasses the processes of transforming, selecting and storing research data with the common goal of keeping it **accessible, reusable and verifiable in the long term, regardless of the individuals involved**. To this end, structured measures can be taken at all points in the **data life cycle** that are suitable for preserving the scientific significance of research data, maintaining its accessibility by third parties for evaluation and analysis, and securing the chain of evidence."*

Translated from: https://forschungsdaten.info/themen/informieren-und-planen/was-ist-forschungsdatenmanagement/

FAIR Data

Findable

In order for research data to be reused, it must first be findable (by both humans and machines).

Accessible

The data can be retrieved using a standardised communication protocol.

Interoperable

The data must be interoperable with other programmes, domains and methods. It should be possible to integrate it into other data sets.
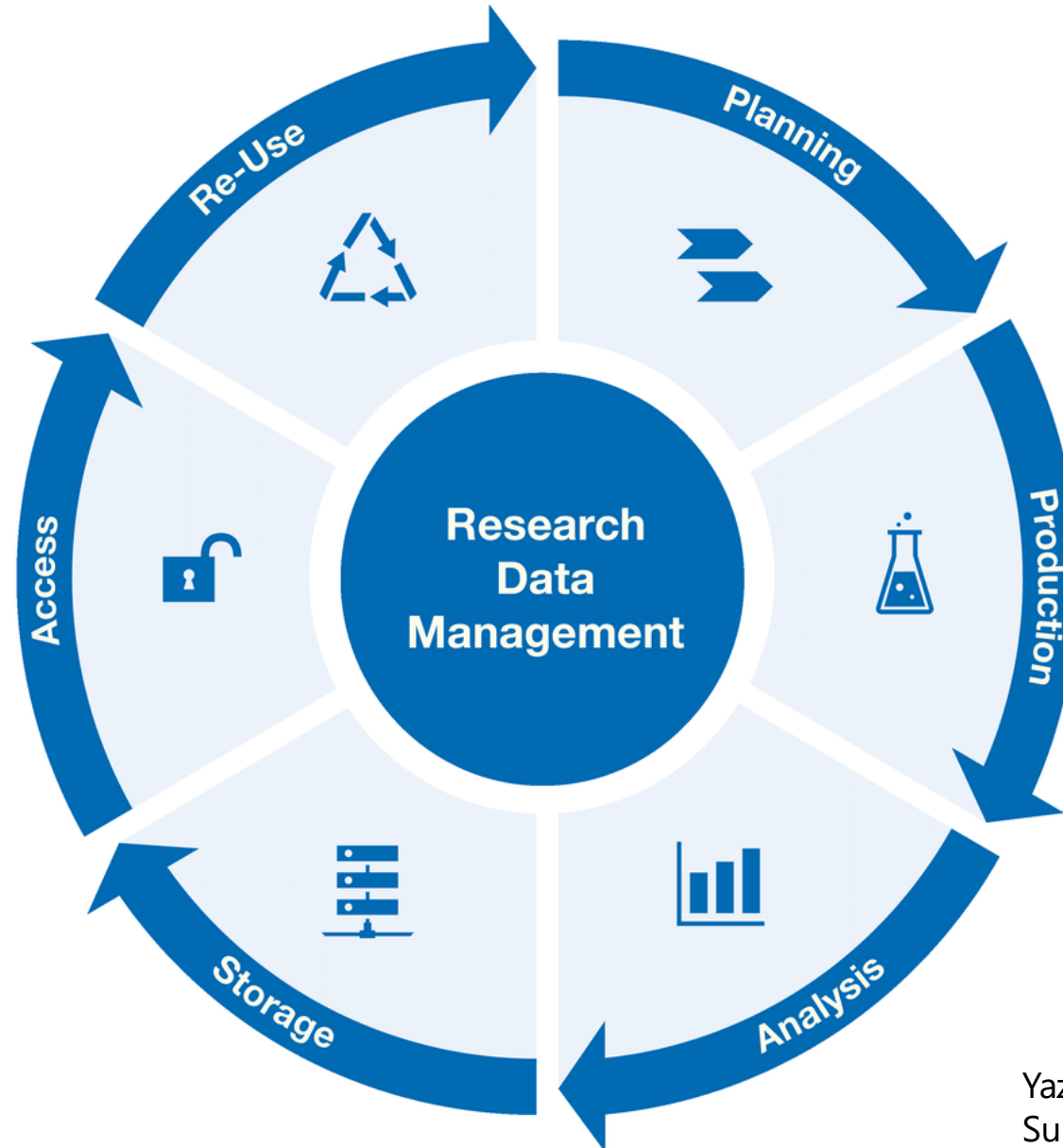
Reusable

The reusability of data should be ensured wherever possible and the conditions for this should be clearly defined.

What is Research Data Management?

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Research Data Management cycle: Planning → Production → Analysis → Storage → Access → Re-Use

Yazdi, M.. (2020). Enabling Operational Support in the Research Data Life Cycle.

What Should Be Considered During the Planning Phase?

- Establish an overall overview of the future research data management at this early stage

- It is easier to begin the project with a well-designed concept

- Familiarize yourself with the requirements of the funding agencies

- Prepare a data management plan
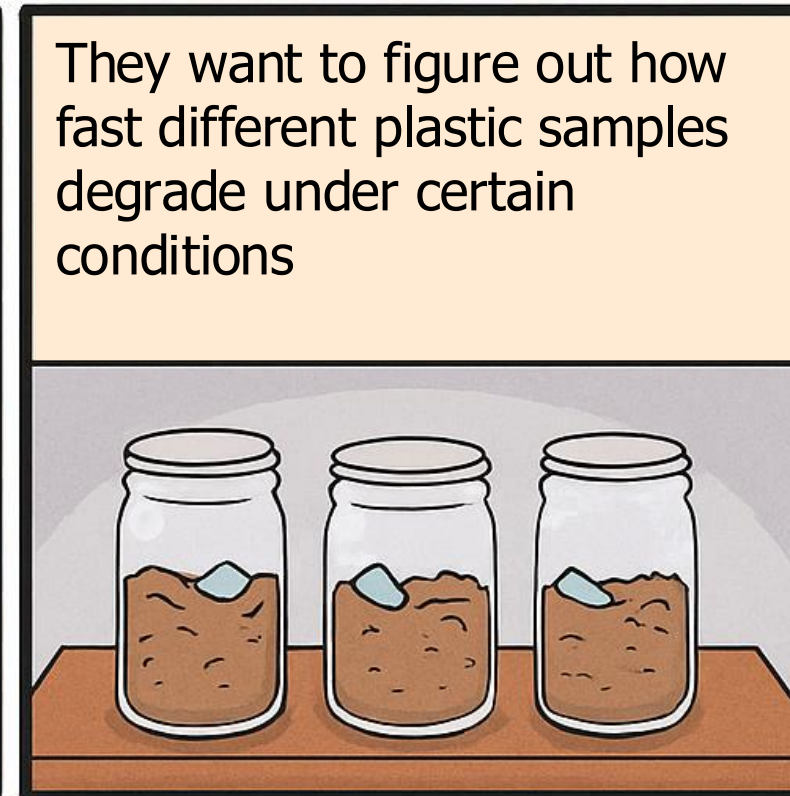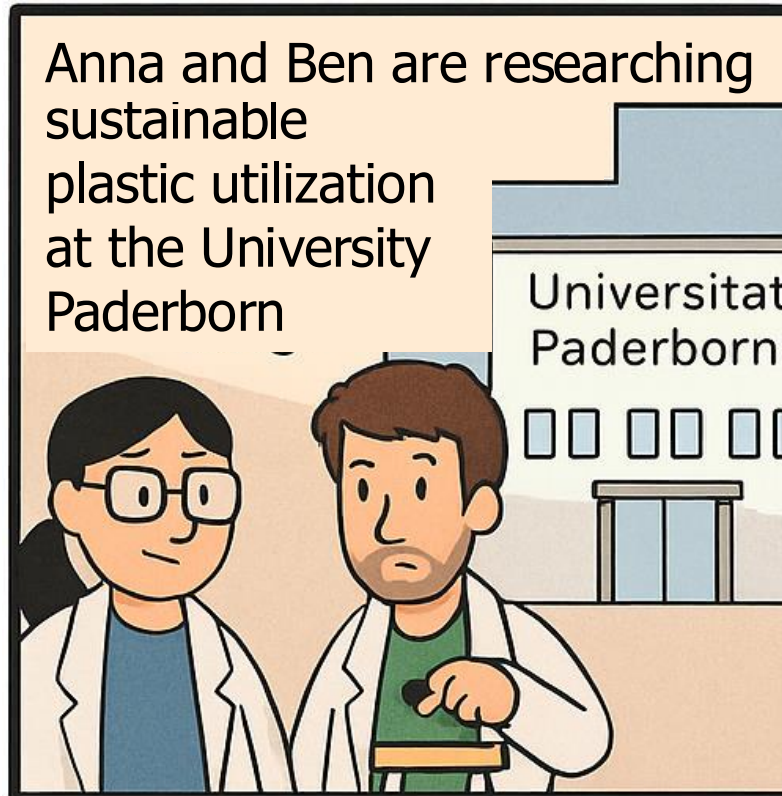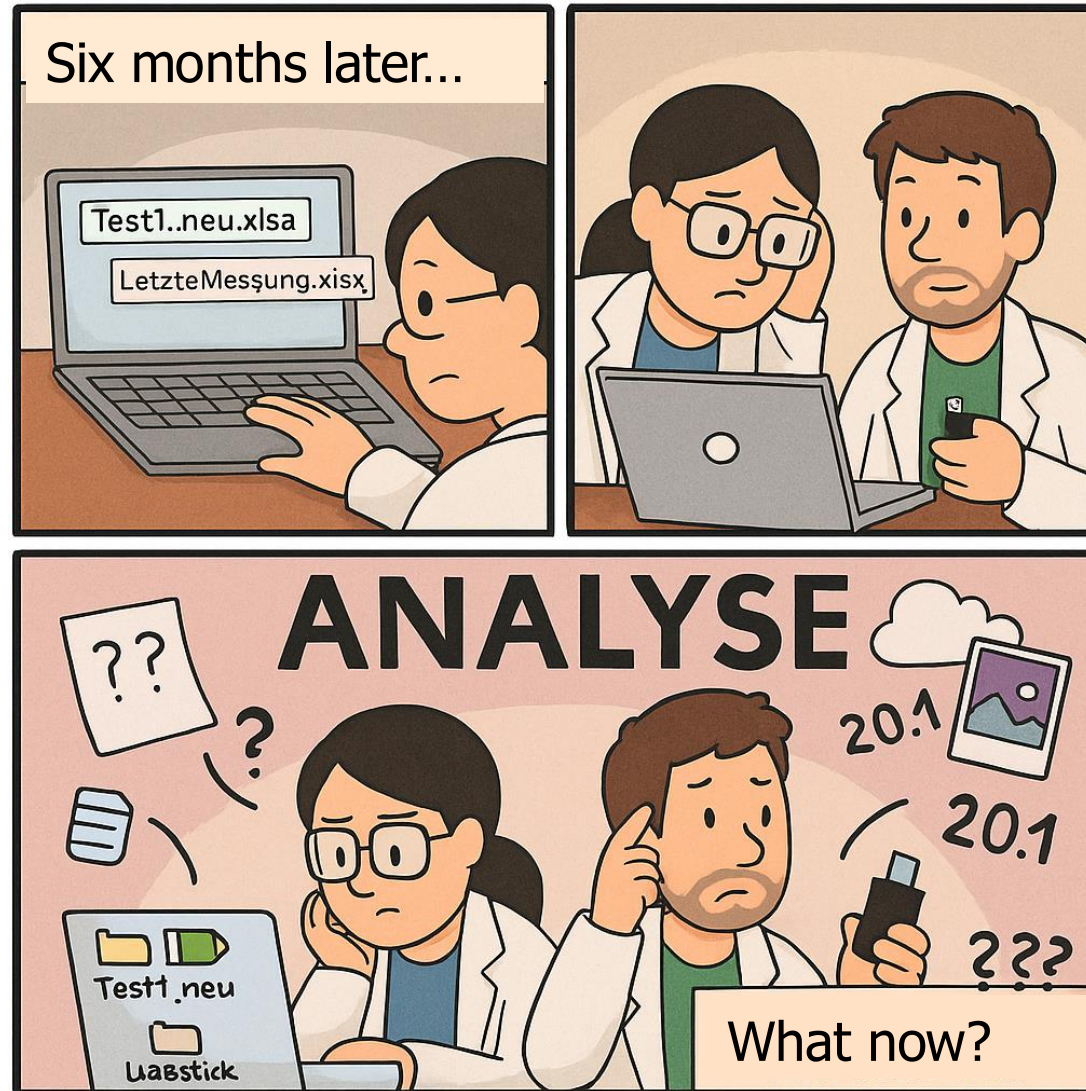
Data management plan (DMP)

Describes:
- What data are generated (e.g. interview data, measurements, laboratory records)
- How they are documented (e.g. electronic lab notebook)
- How they are stored (e.g. university servers)
- How they are archived (e.g. repository)
- What possibilities exist for data reuse (e.g. data publication)

Serves as a guideline:
- For the course of the project (particularly relevant for collaborative projects)
- For the handling of data after the end of the project

Why developing a DMP?

- Structure and overview

- Efficiency

- Traceability and transparency

- Long-term usability

- Requirement of funders

Requirements of third-party funders

Funder	Information about DM is...	Submission of a DMP is...	Templates
EU	Mandatory	Mandatory	Horizon Europe: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/report/data-management-plan_he_en.docx
DFG	Mandatory	Not Mandatory	DFG-Checklist: https://www.dfg.de/resource/blob/174732/3c6343eed2054edc0d184edff9786044/forschungsdaten-checkliste-de-data.pdf
Bund	(Mandatory) Inconsistent	Inconsistent	-
Land	(Mandatory) Inconsistent	Inconsistent	-

ERC OPEN RESEARCH
DATA MANAGEMENT PLAN (DMP)

European Research Council
Established by the European Commission

Project Acronym	Project Number

Template for the ERC Open Research Data Management Plan (DMP). The following sections should describe how you plan to make the project data Findable, Accessible, Interoperable and Reusable (FAIR). Each of the following five issues should be addressed with a level of detail appropriate to the project.

SUMMARY *(dataset[1] reference and name; origin and expected size of the data generated/collected; data types and formats)*

[1] *Several datasets may be included into a single DMP.*

ERC-Data-Management-Plan.docx

DATA MANAGEMENT PLAN

(To be filled in and uploaded as deliverable in the Portal Grant Management System, at the due date foreseen in the system (and regularly updated).
⚠ *The template is recommended but not mandatory. If you do not use it, please make however sure that you comply with the research data management requirements under Article 17 of the Grant Agreement.)*

PROJECT	
Project number:	[project number]
Project acronym:	[acronym]
Project name:	[project title]

DATA MANAGEMENT PLAN	
Date:	[dd/mm/yyyy]
Version:	[DMP version]

1. Data Summary

Will you re-use any existing data and what will you re-use it for? State the reasons if re-use of any existing data has been considered but discarded.

What types and formats of data will the project generate or re-use?

What is the purpose of the data generation or re-use and its relation to the objectives of the project?

What is the expected size of the data that you intend to generate or re-use?

What is the origin/provenance of the data, either generated or re-used?

To whom might your data be useful ('data utility'), outside your project?

2. FAIR data

2.1. Making data findable, including provisions for metadata

Will data be identified by a persistent identifier?

Will rich metadata be provided to allow discovery? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how.

Will search keywords be provided in the metadata to optimize the possibility for discovery and then potential re-use?

Will metadata be offered in such a way that it can be harvested and indexed?

2.2. Making data accessible

Repository:

Will the data be deposited in a trusted repository?

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/report/data-management-plan_he_en.docx

1. Data description

In what ways will there be new data generated in your project? Will existing data be reused? What types of data, in terms of data formats (e.g. image data, text data, or measurement data), will be produced in your project and how will they be further processed? What is the expected volume or scale of data to be generated?

- *Eye-tracking data will be generated in the research project using the Tobii Eye Tracker 5.*

- *To the best of our knowledge, there are no comparable datasets available for reuse, so new data will be collected.*

- *The raw data produced in the project will be stored via the Tobii Pro Lab system as .tsv files, which can be opened and processed with various common programs (e.g. Microsoft Excel, R, SPSS, MATLAB).*

- *For each participant, a dataset of approximately 1 MB will be generated; with a targeted sample size of 120 participants, this corresponds to an estimated total data volume of 120 MB.*

2. Documentation and data quality

What approaches are used to ensure the data is described in a transparent and comprehensible way (e.g. use of existing metadata or documentation standards, or ontologies)? What measures are taken to ensure high data quality? Are there any quality control procedures in place and if so, how are they implemented? What digital methods and tools (e.g. software) are required to make use of the data?

- ✓ *The metadata standards of the Data Documentation Initiative Alliance (DDI Alliance) are used as the basis for data description.*

- ✓ *Immediately after collection, the data is entered into the electronic lab notebook 'eLabFTW'.*

- ✓ *Any special occurrences during data collection are also recorded there, so that any anomalies in the data can be traced later if necessary*

Metadata Standards Catalog: https://rdamsc.bath.ac.uk/

NFDI Consortia: https://www.nfdi.de/consortia/?lang=en

3. Storage and technical security during the project duration

How are the data stored and secured during the project period? How is the security of sensitive data ensured during the project duration (access and usage management)?

- *The data are stored on the UPB network storage. A clustered file system is used here, with the data redundantly stored on at least three different hard drives. Even if two hard drives fail, access to the data is not compromised. Regular snapshots of the data on the network storage are created to protect the data from accidental deletion and overwriting. Additionally, an automatic backup is performed every night.*

- *Only age, gender, and socioeconomic status of the individuals are collected. The data are stored in a pseudonymized form and fully anonymized after the data collection is completed.*

- *The data processing is carried out by project staff at the University of Paderborn who commit to complying with data protection regulations according to the GDPR as well as adhering to the guidelines for ensuring good scientific practice set by the DFG.*

3. Storage and technical security during the project duration

How are the data stored and secured during the project period? How is the security of sensitive data ensured during the project duration (access and usage management)?

- Are my data particularly sensitive : Microsoft Word - 20200702_Schutzbedarf_Informationsklassen_v1.docx

- If they are, do not use Sciebo or comparable providers: 20200702_Richtlinie_Sciebo_v1.pdf

- If they are only moderately sensitive, encrypt your data and share them on Sciebo: *https://hilfe.upb.de/Nutzung_des_Sciebo-Clients#:~:text=Sciebeo%20bietet%20keine%20integrierte%20Ende-zu-Ende-%20Verschl%C3%BCsselung.%20Dies%20muss,Eine%20Anleitung%20hierzu%20finden%20Sie%20unter%20Sciebo%20beantragen*

4. Legal obligation and framework conditions

What legal specificities exist in connection with the handling of research data in your project? Are any impacts or restrictions expected regarding the subsequent publication or accessibility? How are usage and copyright aspects as well as ownership issues taken into account? Are there important scientific codes or professional standards that should be considered?

- ✓ *There are no copyright aspects that need to be considered for the publication.*

- ✓ *In accordance with the guidelines for handling research data at UPB and the FAIR principles, the data should be published in a suitable repository after the project is completed.*

UPB guidelines für handling research data:
https://www.uni-paderborn.de/forschung/foerder-und-antragsberatung/forschungsdaten#downloads

5. Permanent accessibility of the data.

Which data are particularly suitable for reuse in other contexts? According to which criteria are research data selected to be made available for reuse by others? Do you plan to archive your data in a suitable infrastructure? If yes, how and where? Are there embargo periods? When will the research data be usable by third parties?

For long-term archiving, the data should be stored in a suitable repository where the data are automatically assigned a DOI to ensure their findability (e.g., Zenodo).

With the exception of personal data (except age and gender), there are no restrictions on the publication of the raw data. The data are intended to be published immediately after the completion of the project, and no embargo periods apply.

6. Responsibilities and resources.

Who is responsible for the proper handling of the research data (description of roles and responsibilities within the project)? What resources (costs, time, or others) are required to implement proper research data management within the project? Who is responsible for curating the data after the project duration has ended?

✓ Both Pis are responsible for the proper handling of the research data as well as for curating the data.

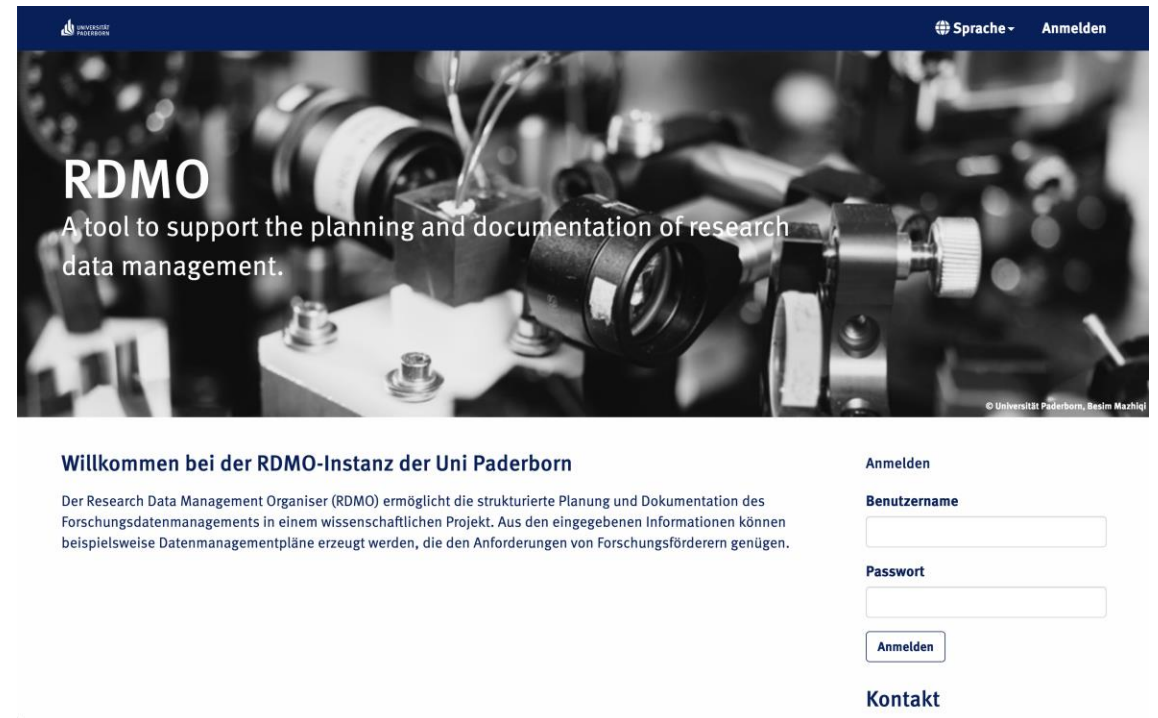✓ *To prepare the data for publication, the necessary work resources have been planned within work package 7.*

Research Data Management Organiser (RDMO)

- **Data Management Plans**
- **Software Management Plans**

https://rdmo.uni-paderborn.de

HilfeWiki: https://hilfe.uni-paderborn.de/RDMO

UNIVERSITÄT PADERBORN

Kontaktstelle Forschungsdatenmanagement

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Web https://www.uni-paderborn.de/forschungsdaten