RDM guidelines for institute/ working group/ research project XYZ[1]

Title, version and last modified date

Introduction or preamble

- Validity: Define who the policy should apply to, when, and under what circumstances. Also indicate which data is considered research data for the purposes of the policy.
- Description of the motivation, aim and purpose of the policy. Please also refer to relevant higher-level regulations, e.g. DFG guidelines such as the guidelines for ensuring good scientific practice or the research data guidelines of the TU Braunschweig.
- Information about support offers: Point out contact points if you have questions about the implementation of the principles. This can be a research data officer from the institute/ working group/ project, but also the employee responsible for research data management at the university library at TU Braunschweig.

Main part: Principles for handling research data

§ 1 Planning the handling of research data and required resources

- Develop data management plans (if possible before data collection begins), use a uniform template (e.g. Core DMP, or use of RDMO)
- Obtain required resources (hardware: e.g. S3 storage, software)

§ 2 Subsequent use of existing data

- Research relevant data
- Check whether existing data can be reused sensibly

§ 3 Compliance with existing standards and documentation

- Obligation to adequately document data collection and data processing
- Determine the type of documentation and technical aids to be used (e.g. electronic laboratory notebooks, wikis, file management software, self-created databases, etc.)
- Observe existing standards for files, metadata or methods of data processing and analysis, if necessary set minimum standards (e.g. mandatory metadata).

§ 4 Naming and storage of files

- Specify preferred storage locations (e.g. a server of the institute/ project)
- Storage of data in specific periods (quarterly, half-yearly)
- Regular review of stored data and cleanup if necessary (e.g. meeting on Friday afternoon once a month, control for completeness, consistency of file naming)
- Agree on naming conventions for files and folders (e.g. <YYYY-MM-DD>_<Project name>_<Topic>.file extension)

[1]Edited and translated according to: Service Team Forschungsdaten der Leibniz Universität Hannover (2019). Interne Richtlinien zum Umgang mit Forschungsdaten erstellen - Empfehlungen zu Abläufen, Aufbau und Inhalten, Eine Handreichung für Datenbeauftragte in Instituten und Verbundprojekten, Version 3.0. Reachable at: https://www.fdm.uni-hannover.de/fileadmin/fdm/Documents/191212_Hinweise_Erstellung_Strategie_Neufassung_v03.pdf, last accessed May 22, 2024.

§ 5 Protection against data loss

- Do not save original data without backup
- Use the 3-2-1 rule: At least 3 copies, on 2 different media, 1 of which is in a different location

§ 6 Protection against data misuse

- Encrypt data storage media containing sensitive data
- Set access rights, use secure passwords
- Establish adequate knowledge and awareness of data security among all stakeholders

§ 7 Data selection for archiving/ publication

- Retain data based on published research results for at least 10 years
- Retain unique, non-reproducible or difficult-to-reproduce data
- Delete redundant and incorrect data
- Document failed attempts etc., even if data is deleted
- If necessary, archive instructions for reproducing data if the data itself cannot be retained

§ 8 Long-term archiving and publication of research data

- Prepare and store data according to the FAIR principles
- Archive relevant data for at least ten years
- Aim for free, non-proprietary file formats; the following file formats are best suited for archiving: PDF/A, TXT, CSV, TIFF
- If legally permissible, publish relevant data in suitable repositories (e.g. Leopard from the TU Braunschweig) under the most open license possible and with the assignment of a persistent identifier (e.g. a DOI).
- Publish metadata if data itself cannot or may not be published
- Attach a README file with information about each data set, use a uniform template (e.g. README template of TU Braunschweig)
- Who is the contact person for the archived/ published data beyond the duration of the project?

§ 9 Implementation of the directive

- Responsible persons should be appointed for each principle listed to ensure compliance with them at regular intervals
- Appointment of a data manager who can provide support in the individual implementation of the standards
- Compliance with the standard for file storage should be seen as a team activity; the institute/ team management supports the project and provides appropriate incentives