**FWF Data Management Plan (DMP)
Guidance and Template**

These guidelines are intended to be used as a guidance in the creation of a data management plan for an approved FWF project. This document is based, with minor changes, on the [RDM Guidance for Researchers](https://www.scienceeurope.org/our-priorities/research-data/research-data-management/) of Science Europe.

Please answer all the questions in the second column and address the items in the third column. The DMP template can be found at the end of these guidelines, and further information is available in the [DMP Evaluation Rubric](https://www.fwf.ac.at/en/about-us/what-we-do/open-science/research-data-management).

 **Guidance**

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| **I General Information** |
| **I.1 Administrative information**  | Provide information such as name and email address of the principal investigator, FWF project number, and version of DMP | * Provide the relevant information.
* Consider regular updates of the DMP.
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| **I.2 Data management responsibilities and resources**  | Who (for example, role, position, and institution) will be responsible for data management?What resources will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?  | * Indicate who (name and email address) is responsible for implementing the DMP, and for ensuring it is reviewed and, if necessary, revised.
* For collaborative projects, explain the co-ordination of data management responsibilities across partners.
* Explain how the necessary resources (for example, time) to prepare the data for sharing/preservation have been costed in. Carefully consider and justify any resources needed to deliver the data. These may include storage costs, hardware, staff time, and repository charges.
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| **II Data Characteristics** |
| **II.1 Data description and collection or re-use of existing data** | How will new data be collected or produced and/or how will existing data be re-used?What data (types, formats, and volumes) will be collected or produced? | * Explain which methodologies or software will be used if new data are collected or produced.
* State any constraints on re-use of existing data if there are any.
* Explain how data provenance will be documented.
* Give details on the kind of data: for example, numeric (databases), textual (documents), image, audio, or video.
* Give details on the data format: the way in which the data is encoded for storage, often reflected by the filename extension (for example, pdf, xls, doc, txt, or rdf).
* Justify the use of certain formats. For example, decisions may be based on a preference for open formats, standards accepted by data repositories, widespread usage within the research community, or on the software or equipment that will be used.
* Give preference to open and standard formats as they facilitate sharing and long-term re-use of data (several repositories provide lists of such ‘preferred formats’).
* Give details on the volumes (they can be expressed in storage space required (bytes), and/or in numbers of objects/files).
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| **III Documentation and Data Quality**  |
| **III.1 Metadata and documentation**  | What metadata and documentation (for example, the methodology of data collection and way of organising the data) will accompany the data?  | * Indicate which metadata will be provided to help others identify and discover the data.
* Use community metadata standards where these are in place (see [Digital Curation Center](http://www.dcc.ac.uk/resources/metadata-standards/list) or [RDA Metadata Directory](http://rd-alliance.github.io/metadata-directory/standards/)).
* Consistent, well-ordered research data will be easier to find, understand, and re-use. Indicate how the data will be organised during the project, mentioning for example conventions, version control, and folder structures.
* Consider what other documentation is needed to enable re-use. This may include information on the methodology used to collect the data, analytical and procedural information, definitions of variables, units of measurement, and so on.
* Consider how this information will be captured and where it will be recorded for example in a database with links to each item, a ‘readme’ text file, or lab notebooks.
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| **III.2 Data quality control** | What data quality control measures will be used? | * Explain how the consistency and quality of data collection will be controlled and documented. This may include processes such as calibration, repeated samples or measurements, standardised data capture, data entry validation, peer review of data, or representation with controlled vocabularies.
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| **IV Data Storage, Sharing, and Long-Term Preservation** |
| **IV.1 Data storage and backup during the research process** | How will the data and metadata be stored and backed up during the research process?How will data security and protection of sensitive data be taken care of during the research? | * Describe where the data and metadata will be stored and backed up during research activities and how often the backup will be performed. It is recommended to store data in least at two separate locations.
* Give preference to the use of robust, managed storage with automatic backup, such as provided by IT support services of your home institution. Storing data on laptops, stand-alone hard drives, or external storage devices such as USB sticks is not recommended.
* Explain how the data will be recovered in the event of a technical incident.
* Explain who will have access to the data during the research and how access to data is controlled, especially in collaborative projects.
* Explain which institutional data protection policies are in place.
* Consider data protection (e.g., default technical security measures of the home institution), particularly if your data is sensitive (for example, containing personal data or politically sensitive information). Describe the main risks and how these will be managed during the project.
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| **IV.2 Data sharing and long-term preservation**  | How and when will the data be shared? Are there restrictions to data sharing or embargo reasons?In which repository will the data be archived and made available for re-use? What persistent identifier (e.g., DOI) and which usage licence (e.g., CC BY) will be used?What methods and software tools are needed to access and use the data?How will data for preservation be selected, and where will the data be preserved long-term? | * Explain how and when the data will be shared. Consider the [FWF’s Open Access policy on research data](https://www.fwf.ac.at/en/about-us/what-we-do/open-science/open-access-policy/open-access-policy-for-research-data). Immediate open access to research data is mandatory for data underpinning research papers, unless there are legal, ethical, or other reasons not to do so. Explain such reasons where applicable.
* Explain how the data will be discoverable and made available for re-use, addressing the choice of repository, the persistent identifier (e.g., DOI), and the licence to use (see "[How to License Research Data](https://www.dcc.ac.uk/sites/default/files/documents/publications/reports/guides/How_To_License_Research_Data.pdf)"). When choosing a repository, follow the [Science Europe Criteria for the selection of trustworthy repositories](https://portal.fwf.ac.at/workspaces/Strateg-Dok/Dokumente/OpenAccess/05_Open_Data/Data_Policy/02_Update-DMP-2021/Science%20Europe%20Criteria%20for%20the%20selection%20of%20trustworthy%20repositories) and use <http://www.re3data.org/> to search for repositories.
* Indicate who will be able to use the data. If it is necessary to restrict access or to apply a data sharing agreement, explain how and why. Explain what actions will be taken to overcome or to minimise restrictions.
* Describe whether potential users need specific tools to access, interpret, and (re)-use the data (e.g., codes, algorithms). Consider the sustainability of software needed for accessing the data.
* Indicate what data must be retained or destroyed for contractual, legal, or regulatory purposes.
* Outline how it will be decided what data to keep and what data not to keep. Describe the data to be preserved long-term and give information on how long and where the data will be retained.
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| **V Legal and Ethical Aspects** |
| **V.1 Legal aspects** | How will legal issues, such as intellectual property rights and ownership, be managed? What legislation is applicable?If personal data are processed, how will compliance with legislation on personal data and on security be ensured?  | * Explain who will be the owner of the data, meaning who will have the rights to control access.
* Make sure to cover the matters of rights to control access to data for multi-partner projects and multiple data owners, in the consortium agreement.
* Indicate whether intellectual property rights (for example, Database Directive) are affected. If so, explain which and how will they be dealt with.
* Indicate whether there are any restrictions on the re-use of third-party data.
* Ensure that when dealing with personal data, data protection laws (for example, GDPR) are complied with:
* Gain informed consent for preservation and/or sharing of personal data.
* Consider anonymisation, pseudonymisation, or encryption of personal data for preservation and/or sharing (truly anonymous data are no longer considered personal data).
* Explain whether there is a managed access procedure in place for authorised users of personal data.
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| **V.2 Ethical aspects** | What ethical issues and codes of conduct are there, and how will they be taken into account? | * Consider whether ethical issues can affect how data are stored and shared, who can see or use them, and how long they are kept. Demonstrate awareness of these aspects and respective planning.
* Follow the national and international codes of conducts and institutional ethical guidelines, and check if ethical review (for example, by an ethics committee) is required for data collection in the research project.
* Consider “[Ethics for researchers](http://ec.europa.eu/research/participants/data/ref/fp7/89888/ethics-for-researchers_en.pdf)” published by the European Commission or “[The European Code of Conduct for Research Integrity](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/european-code-of-conduct-for-research-integrity_horizon_en.pdf)”.
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