FCT Data Management Plan Template[1]

The following template and guidance is to assist in preparing Data Management Plans (DMP) for this FCT Project Call.

1	**What data will be collected or produced, and what existing data will be re-used?**	
1.1	Which existing data you will re-use and under which terms of use.	Explain which existing data you will re-use and state any constraints on re-use of existing data if there are any.
1.2	If new data will be produced: describe the data you expect your research will generate and the format and volumes to be collected or produced.	Explain which methodologies or software will be used if new data are collected or produced. Give details on the kind of data: for example numeric (databases, spreadsheets), textual (documents), image, audio, video, and/or mixed media. 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 staff expertise within the host organisation, 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' .
1.3	How much data storage will your project require in total?	☐ 0 – 10 GB ☐ 10 – 100 GB ☐100 – 1000 GB ☐ >1000 GB

2	**What metadata and documentation will accompany the data?**	
2.1	Indicate what documentation will accompany the data.	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.

[1]This template is based on Science Europe's "Core Requirements for Data Management Plans" and an adaption of the NWO's (Dutch Research Council) Form Data Management Plan.

		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, file headers, code books, or lab notebooks. Indicate how the data will be organised during the project, mentioning for example conventions, version control, and folder structures. Consistent, well-ordered research data will be easier to find, understand, and re-use.
2.2	Indicate which metadata will be provided to help others identify and discover the data.	To be findable, accessible, interoperable and reusable, data must be accompanied with descriptive information in the form of metadata. - Where these are in place, researchers are advised to use community metadata standards. The Research Data Alliance maintains a Directory of Metadata Standards. - Depositing data in a certified or trustworthy repository will typically involve providing information about the data according to a metadata standard scheme (typically Dublin Core or DataCite Metadata Schema). If this is the case for the data described in this plan, that can be specified here. Contact your university library and/or other institutional RDM support staff for further advice on metadata.

3	**How will data and metadata be stored and backed up during the research?**	
3.1	Describe where the data and metadata will be stored and backed up during the project.	☐ Institution networked research storage ☐ Other (please specify)
	Explanation:	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. Some research institutions have networked research drives, which offer ample storage space and data security for most purposes. Please specify if you make use of other storage solutions for storage and backup of research data during the project, in addition to or instead of the institutional research drive.
3.2	How will data security and protection of sensitive data be taken care of during the research?	☐ Not applicable (no sensitive data) ☐ Default security measures of the institution networked research storage ☐ Additional security measures (please specify)
	Explanation:	Consider data protection, particularly if your data is sensitive – for example, containing personal data, politically sensitive information or information relating to religion and health, trade secrets or

		national security information. Describe the main risks and how these will be managed. Explain how the data will be recovered in the event of an incident. Explain who will have access to the data during the research and how access to data is controlled, especially in collaborative Partnerships. Explain which institutional data protection policies are in place.

4	**How will you handle issues regarding the processing of personal information and intellectual property rights and ownership?**	
4.1	Will you process and/or store personal data during your project?	☐ Yes ☐ No
	If yes, how will compliance with legislation and (institutional) regulation on personal data be ensured?	If yes, FCT strongly recommends that you seek advice from specialised support staff (DPO or equivalent) at your institution. 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 of personal data for preservation and/or sharing (truly anonymous data are no longer considered - personal data). - Consider pseudonymisation of personal data (the main difference with anonymisation is that pseudonymisation is reversible). - Consider encryption which is seen as a special case of pseudonymisation (the encryption key must be stored separately from the data, for instance by a trusted third party). - Explain whether there is a managed access procedure in place for authorised users of personal data.
4.2	How will ownership of the data and intellectual property rights to the data be managed?	Explain who will be the owner of the data, meaning who will have the rights to control access. Make sure to cover these 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, sui generis rights) 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.

5	**How and when will data be shared and preserved for the long term?**	
5.1	How will data be selected for long-term preservation?	☐ All data resulting from the project will be preserved for at least ___years (for example 10 years) ☐ Other (please specify)
	Explanation:	Indicate what data must be retained or destroyed for contractual, legal, or regulatory purposes. Indicate how it will be decided what data to keep. Describe the data to be preserved long-term.
5.2	What data will be made available for re-use?	☐ All data resulting from the project will be made available ☐ Other (please specify)
	Explanation	Indicate what data will be made available for re-use. This selection may differ from the data that is preserved, when the data are so large that it is unfeasible to deposit the data in a repository in its entirety, or if there are reasons that prohibit making data available for re-use. If there are any restrictions on the re-use of the data, or if it is necessary to restrict access to certain parts of the data or to apply a data sharing agreement, explain how and why. Explain what actions will be taken to overcome or to minimize restrictions As much as possible, research data should be made publicly available for re-use. **As a minimum, FCT requires that the data underpinning research papers should be made available to other researchers at the time of the article's publication, unless there are valid reasons not to do so.** The guiding principle here is 'as open as possible, as closed as necessary.' Due consideration is given to aspects such as privacy, public security, ethical limitations, property rights and commercial interests.
5.3	When will the data be available for re-use, and for how long will the data be available?	☐ Data available as soon as archived in repository ☐ Data available as soon as article is published ☐ Data available upon completion of the project ☐ Data available after completion of project (with embargo)
	Explanation	Explain when the data will be made available. Indicate the expected timely release. Explain the reason and duration of any embargo periods. Explain whether exclusive use of the data will be claimed and if so, why and for how long. Indicate whether data sharing will be postponed or restricted for example to publish, protect intellectual property, or seek patents. **As a minimum, FCT requires that the data underpinning research papers should be made available to other researchers at the time of the article's publication, unless there are valid reasons not to do so.**
5.4	In which repository will the data be archived and made available for re-use, and under which license?	- Indicate where the data will be deposited and made available for re-use. Repository Finder can help you find an appropriate repository to deposit your research data.

		- Indicate whether a persistent identifier will be pursued. Typically, a trustworthy, long-term repository will provide a persistent identifier. - Indicate under which license the data may be re-used. Check the commonly used Creative Commons licenses. - Indicate whether the repository is certified. In case no such repositories can be found or are suitable, FCT advises adherence to the following minimum selection criteria: provision of persistent and unique identifiers; use of metadata standards that are broadly accepted by the scientific community; provision of information that is publicly available; enabling access to data under well-specified conditions and following open and standard access protocols; provision of information about licenses and permissions; ensuring persistence of data and metadata.
5.5	Describe your strategy for publishing the analysis software that will be generated in this project.	Indicate whether potential users need specific tools or software (e.g. specific scripts, codes or algorithms developed during the project) to access, interpret and (re-)use the data. Indicate how these items will be made available. Consider the sustainability of software needed for accessing and interpreting the data. Check the Five Recommendations for FAIR Software.

6	**Data management responsibilities and resources**	
6.1	Who (for example role, position, and institution) will be responsible for data management?	Outline the roles and responsibilities for data management/stewardship activities for example data capture, metadata production, data quality, storage and backup, data archiving, and data sharing. For collaborative projects, explain the coordination of data management responsibilities across partners. Indicate who is responsible for implementing the DMP, and for ensuring it is reviewed and, if necessary, revised. Consider regular updates of the DMP
6.2	What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?	Explain how the necessary resources (for example time) to prepare the data for sharing/preservation (data curation) have been costed in. Consider and justify any resources needed to deliver the data. These may include storage costs, hardware, staff time, costs of preparing data for deposit, and repository charges. Indicate whether additional resources will be needed to prepare data for deposit or to cover any charges from data repositories. If yes, explain how much is needed and how such costs will be covered. Please elaborate on the budget in your FCT grant application, if appropriate.