Example answers to DMP from TU Delft

A Data Management Plan created using dmponline

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Project abstract:

This is a Horizon 2020 DMP template filled in with the example answers provided by the Delft University of Technology.

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Example answers to DMP from TU Delft

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 reused?

There is no data available addressing this issue yet. As such, new data will be collected through both quantitative and qualitative surveys.

What data (for example the kinds, formats, and volumes) will be collected or produced?

Types and formats	Survey data: .csv format. Interviews and metadata: .txt format
Expected size of the data	Less than 5GB

Documentation and data quality

What metadata and documentation (for example the methodology of data collection and way of organising data) will accompany data?

There are no agreed disciplinary standards and vocabularies in quantum nanoscience. In order to facilitate data interoperability to the highest possible extent despite the lack of disciplinary standards, we will:

- All datasets and metadata will be published in 4TU.ResearchData
 (https://data.4tu.nl/info/en/). 4TU.ResearchData use Dublin Core Metadata Initiative
 (DCMI) as the standard for metadata. Dublin Core is used worldwide. As a result, it
 is easy to link metadata to other files and automatically search through them,
 which increases the interoperability of the data.
- A data dictionary of all terms used in our datasets will be created. This data dictionary will be publicly shared together with all the datasets at the end of the project
- All documentation included in the datasets is provided as a README file in plain text format (.txt)

What data quality control measures will be used?

4TU.ResearchData (where the datasets will be deposited) ensures data quality and curation (manual curation at the time of deposition, and automated curation and checks for data integrity after the deposit). Research data will be available for at least 15 years from the time of data deposition.

All data files will be named using the following elements in the file name:

- Date: YYYYMMDD
- Descriptive file name
- Initials of the person who last modified the file

In order to ensure that datasets are appropriately versioned from the start, all datasets will be stored in a dedicated Subversion repository, provided and managed by TU Delft.

Storage and backup during the research process

How will data and metadata be stored and backed up during the research process?

During the course of the research project, all data will be stored on local servers maintained and automatically backed up by TU Delft ICT. Every night the data will be automatically backed up. The data will be replicated over multiple sites/data centers. Data can be recovered with the help of TU Delft ICT services in the event of an incident.

How will data security and protection of sensitive data be taken care of during the research?

Only team members have access to the designated server, limited to the principal investigator of the project (Prof. X), and also Y and Z. The storage security is ensured by TU Delft ICT services.

The Faculty Data Steward will provide additional advice, as needed, on data storage during the research project.

Legal and ethical requirements, codes of conduct

If personal data are processed, how will compliance with legislation on personal data and on data security be ensured?

If processing personal research data:

During this project, we will be interviewing human participants and therefore working with personal research data. Details of all the steps undertaken to ensure appropriate levels of data protection are outlined in the dedicated ethics section of the DoA and

ethics deliverables.

If not processing personal data:

This project will not lead to the creation of any personal data and therefore this question does not apply.

How will other legal issues, such as intellectual property rights and ownership, be managed? What legislation is applicable?

All datasets will be licensed under a CC-BY licence which requires attribution/credit for the original creation, while at the same time ensures broadest possible re-use.

How will possible ethical issues be taken into account, and codes of conduct followed?

N/A

Data sharing and long-term preservation

How and when will data be shared? Are there possible restrictions to data sharing or embargo reasons?

Datasets will be made publicly available at the time of the publication of corresponding research papers resulting from this study.

Situations where all data can be shared publicly (no confidential information):

All data created in this project will be made openly available through the 4TU.ResearchData repository.

Situations where not all data is suitable for public sharing because they contain personal data:

All raw data (surveys, videos and transcripts) will be retained for at least ten years on TU Delft servers for the purposes of validation. Survey data and transcripts will be anonymized and made publicly available through the 4TU.ResearchData repository.

Situations where not all data is suitable for public sharing because they contain commercially-sensitive information:

All data created in this project will be made openly available through the 4TU.ResearchData repository. All datasets will be accompanied by README files providing all necessary information about the access to the software needed to access the data. The software itself cannot be publicly shared because it belongs to the commercial project partner. However, the commercial partner agreed to make the code available on request for research purposes (details on access request through the commercial partner will be outlined in the README file accompanying the dataset).

How will data for preservation be selected, and where will data be preserved long-term (for example a data repository or archive)?

The data will be preserved on 4TU.ResearchData, where it will be available for at least 15 years from the time of data deposition.

What methods or software tools will be needed to access and use the data?

All datasets will be accompanied by README files providing all necessary information about the access to the software needed to access the data.

How will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured?

Every dataset will be also assigned a Digital Object Identifier (DOI), to make them citable and persistently available.

Data management responsibilities and resources

Who (for example role, position, and institution) will be responsible for data management (i.e. the data steward)?

The dedicated data manager hired in the project (see the project proposal and staff allocation) will be responsible for data management in the project.

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)?

4TU.ResearchData is able to archive 1TB of data per researcher per year free of charge for all TU Delft researchers. We do not expect to exceed this and therefore there are no additional costs of long term preservation.

The dedicated data manager hired in the project (see the project proposal and staff allocation) will be responsible for data management in the project.