

### Data Management Plans

*Tips and advice to COALESCE and Laureate awardees on updating their DMPs*

These tips have been compiled based on a review of the DMPs submitted by Irish Research Council Laureate and COALESCE awardees. They are designed as general guidelines, some of which you might already be implementing. In addition, we advise you to consult your institution's own Data Management Policy, as well as the National Open Research Forum's (NORF) [National Framework on the Transition to an Open Research Environment](#).

#### General remarks:

- Remember that DMPs are not just a bureaucratic requirement from funders and HEIs. **The consideration of data management requirements at the start and, indeed, during the project ensures research integrity and reproducibility.** It increases research efficiency, saving time and effort in the long run.
- In the context of a DMP, data is '*most commonly referred to as information in a digital format that has been collected, used, or produced during the research process*'.
- When thinking about the type of data to include, consider a broad definition of what data is; it may include (and is not limited to):
  - Statistics and measurements
  - Audio/video recordings
  - Results of experiments, or simulations and models
  - Observations/notes from fieldwork
  - Survey results
  - Sources used to create corpora
  - Recorded interviews/transcripts
  - Images from cameras or scientific equipment
  - Literature review data (descriptive, correlational, etc.)
- Update the DMP regarding how the data **is currently** being handled; use the future tense only for activities/actions that have not yet commenced.
- View the DMP as a live document and adopt an incremental approach when updating it, e.g. add an '**update**' section under each action already described, reflecting on the original or latest version, rather than starting afresh each time.

#### 1. Data description and collection or re-use of existing data

- Consider the difference between how the data is *produced* (i.e. transcriptions, surveys, experiments...) and how it is *saved and stored* (in section 3).
- Rather than wordy descriptions, consider listing the types of data in a table, with the corresponding work packages (as per your application form), and the source, format & size of the data:

WP	Type of data	Source, format and size of data
1		
2		
3		

- Consider the file format your data is saved under: does it require proprietary software to access? Can it be exported to a more convenient format for long term storage/access?

## 2. Documentation and data quality

- Metadata is a set of data that describes and gives information about other data.
- Reflect on the type of metadata that could be included when saving/storing your research data, as applicable to your discipline.
- Consider consulting the Metadata Standards Directory, a community-maintained directory hosted by the Research Data Alliance: <http://rd-alliance.github.io/metadata-directory/standards/>

## 3. Storage and backup during the research process

- Consider including a table listing the same types of data as in section 1, and, for each, outline the storage/backup used and information relating to data security and protection:

Type of data	Storage & backup	Data security & protection

## 4. Legal and ethical requirements, codes of conduct

- If applicable, consider including a similar table as above listing the type of data and the associated information on compliance with legislation on personal data/data security, intellectual property rights/ownership, and ethical issues/codes of conduct, as applicable to the research.

## 5. Data sharing and long-term preservation

(Re)-familiarise yourself with the FAIR data principles - <https://www.go-fair.org/fair-principles/>

- Note the difference between research data collected, used, or produced during the research process, and research outputs such as publications/dissemination activities.
- Reflect on what will happen to the 'raw' research data collected, used, or produced during the research process (as described in section 1): Can it and will it be made publicly available? Will it be stored in a digital repository?
- Consider the 'raw' data that underpins figures reported in publications; check what length of time the publication may require you to retain this 'raw' data.
- If you haven't already, think about where the data could be preserved in the long term, such as in an institutional digital repository. The Registry of Research Data Repositories (<https://www.re3data.org/>) provides a good starting point, noting disciplines, standards, content types, certification status and more.
- In cases where data is sensitive, it may not be possible to share it but it is still important that the *metadata* (that is the set of data that describes the data) be made available through a repository system.

- Consider using another table, listing for each type of data how it will be shared and preserved for the long-term.

#### **6. Data management responsibilities and resources**

- As well as noting that the PI be responsible for the overall data management, please try to specify the role and responsibilities of each team member, perhaps in a table also.
- If your project runs across several research organisations, consider agreeing on a common DMP to standardise approaches and to maintain consistency.

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