SFI Frontiers of the Future DMP webinar & clinic

Monday March 27, 2023, 11:00am – 12:00noon

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Further Reading: Writing a Data Management Plan

- DMPonline at UCD
- UCD Library Data Management Checklist
- Ten simple rules for creating a good data management plan
- DCC Example DMPs and guidance
- LIBER Data Management Plan Catalogue

SFI Data Management Plan Requirements (1/2)

DMPs will be evaluated by reviewers to ensure that they contain sufficient information on practices and standards as guided below; this assessment will be incorporated into the overall scoring criteria for the Research Programme section of the application. Although practices and standards vary across disciplines, SFI recommends the use of Science Europe DMP templates and guidelines.

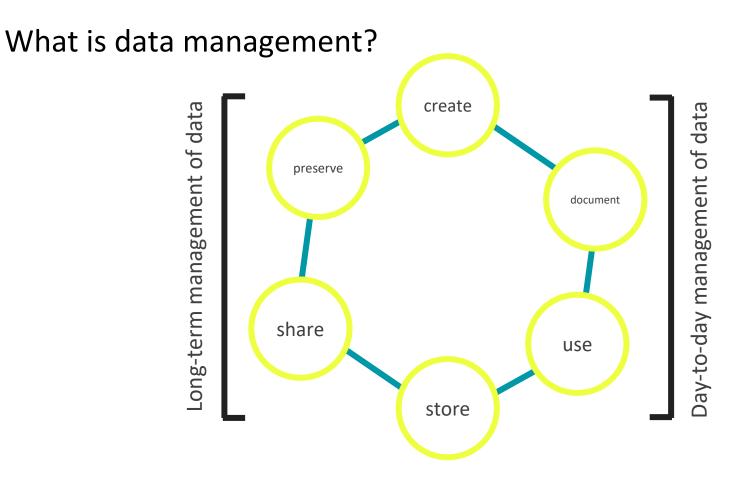
SFI Data Management Plan Requirements (2/2)

Each DMP (max 2 pages) should include the following as appropriate to the research programme:

- 1. Data description and collection or re-use of existing data
- 2. Documentation and data quality
- 3. Storage and backup during the research process
- 4. Legal and ethical requirements, codes of conduct
- 5. Data sharing and long-term preservation
- 6. Data management responsibilities and resources including institutional or project-specific resources dedicated to managing data and ensuring adherence with the FAIR principles (Findable, Accessible, Interoperable, Re-usable).

What are Research Data?

`research data' means documents in a digital form, other than scientific publications, which are collected or produced in the course of scientific research activities and are used as **evidence** in the research process, or are commonly accepted in the research community as necessary to validate research findings and results;



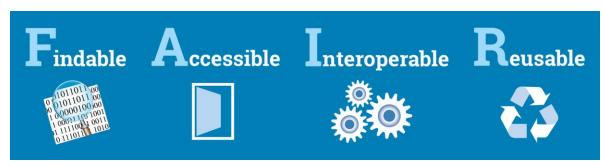
FAIR Data Principles

- Findable
- Accessible
- Interoperable
- Reusable

Wilkinson, M. D. et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci. Data 3:160018 doi: 10.1038/sdata.2016.18 (2016).

Steps towards FAIRer data

- Make data available in a data repository or archive
 - A persistent identifier (PID)
 - Rich metadata (elements which describe the data)
 - A clear licence



What is a Data Management Plan?

A data management plan or DMP is a formal document that outlines how data is to be handled both during a research project and after the project is completed.

Data description & 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 (e.g type; format; volume of data) will be collected or produced?
- **Suggested text**: It is anticipated that the project will generate the following types of data:

Type of data	How will data be collected	Purpose of data collection	File formats	Volume
E.g. Quant, qual, experimental, observational, images, text, numerical etc.	E.g. Interviews, microscope, observations, recordings etc./ Re-use of existing data from	E.g. To understand/ determine/ visualise	<i>Open, non- proprietary formats are preferred</i>	The amount of data you generate will have implications for the storage needs of the project

Documentation and data quality

- How will data be organised during the research project?
- What documentation will accompany the data?
- What metadata will accompany the data?
- What data quality control measures will be used?

Documentation

- Good quality documentation allows others to find and understand your data:
 - Interview protocol
 - Questionnaires & interviewer instructions
 - Codebook or data dictionary
 - Information sheets, Consent forms, Ethical approval
 - Database schemas
 - Methodology reports
 - Provenance information about sources of derived or digitised data

Metadata

- Metadata tells us a story about the data
- Structured metadata relies on international standards, e.g.
 - Dublin Core
 - Data Documentation Initiative (DDI)
- Research Data Alliance <u>Metadata Standards Directory</u>

Storage and backup during the research project

- How will data and metadata be stored and backed up during the research project?
- How will data security be taken care of during the research project?



UCD File Storage & Sharing Guide

"The University recommends the use of Google Drive and Novell Drive (NetStorage) to store files such as documents and spreadsheets. This includes files which contain personal data and confidential university information. Investment has been put into ensuring that these solutions meet a high standard of security and data protection and are continually monitored and managed."

Data security

- IT Services policies and procedures
- UCD Password Protection Policy
- Information Security Awareness Online Course
- <u>Top security tips</u>

Legal and ethical requirements, codes of conduct

- If personal data are processed, how will compliance with legislation on personal data and protection of sensitive data be ensured?
- How will other legal issues, such as intellectual property rights and ownership, be managed? What legislation is applicable?
- What ethical issues and codes of conduct are there, and how will they be taken into account?



Dealing with personal data

- Online 'UCD Data Privacy & Security Training'
- UCD Data Protection 'PASSPORT' for Research Projects Practical tips for UCD researchers
- Managing Risk in Personal Data Processing, includes a link to low risk assessments & DPIAs
- Consider full anonymisation of personal data for preservation and/or sharing



Intellectual Property

- UCD Intellectual Property Policy
- NovaUCD Knowledge Transfer Supports
- NovaUCD (Intellectual Property)
- UCD Research and Innovation Signing contracts and agreements

Research Ethics

"Where possible, researchers are encouraged to archive their data in an anonymized state for future use. However, it is important to remember that an individual's permission is required to anonymize their personal data, as this usually means they are kept far longer than the duration of the project they were collected for. If archiving data, researchers must ensure that the archive used is appropriate to the nature of the personal data and that consent to archive the data for such future use is sought from participants at the consenting stage of their study." UCD Code of Good Practice in Research with Humans and Animals, 2019

Data sharing and long-term preservation

- How will data for preservation be selected?
- How and where will data be shared? Are there possible restrictions to data sharing or embargo reasons?
- What methods or software tools are needed to access and use data?



How will data for preservation be selected?

- Underlying data needed to validate the results presented in scientific publications should be made available at the time of publication or as soon as possible. Many journals also require that underlying data be shared at the time of publication.
- Any other data, for example curated data not directly attributable to a publication, should be shared before the end of the project.

"as open as possible, as closed as necessary"

- Explain how the data will be discoverable and shared.
 - Data should be submitted to discipline specific, community recognised repositories where possible, or to a general, multidisciplinary repositories if no suitable discipline specific repository is available.
- If data can't be made available this must be justified
- If data can't be made available, metadata and documentation describing the data and research process should still be made available, in compliance with the FAIR Data principles.
- Indicate who will be able to use the data. If it is necessary to restrict access to certain communities you may be able to deposit your data with a restricted access data archive.

Data management responsibilities and resources

- Indicate who is responsible for implementing the DMP, and for ensuring it is reviewed and, if necessary, revised. Your DMP is not designed to be a static document and should be updated periodically:
 - If there are any major changes to your research project
 - If you are generating any new data
 - Before any reporting period to your funder
- Explain how the necessary resources (for example time & people, storage & computation, creation & reuse of data and deposition & preservation) to prepare the data for sharing/preservation (data curation) have been costed in.
- Carefully 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.

DMPonline at UCD (1/2)

University College Dublin An Collaiste Ollscolle, Balle Atha Cliath Home Public DMPs

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Welcome to DMPonline at UCD

DMPonline at UCD helps you to create, review, and share data management plans (DMPs) that meet institutional and funder requirements. UCD Library have created a data management guide with advice and suggested text tailored specifically for UCD researchers.

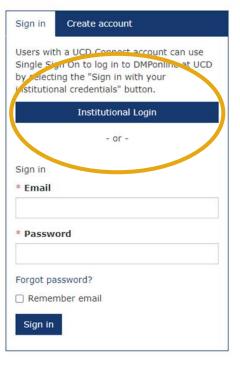
UCD recognises that the management of research data is fundamental to both high quality research and academic integrity.

Writing a data management plan:

- · Helps you make informed decisions for your data from the beginning of your research project
- · Helps to create awareness and agreement on data procedures within a research group
- Helps ensure compliance with legal, statutory, ethical, contractual and intellectual property
 obligations, and the requirements of funding bodies and publishers

Users with a UCD Connect account can use Single Sign On to log in to DMPonline at UCD by selecting the "Sign in with your institutional credentials" button.

For expert support contact Jenny O'Neill, UCD Library Data Manager at jenny.oneill@ucd.ie.





DMPonline at UCD (2/2)



Test2

Project Details	Contributors	Plan overview	Write Plan	Share	Request feedback	Pownload
* Project title						
Test2					Select Guidance	
mock project for testing, practice, or educational purposes					To help you write your plan, DMPonline can sho you guidance from a variety of organisations.	
Project abstract B $I \coloneqq \neg \vDash \mathscr{O} \boxplus \neg$]		Select up to 6 organisations to see their guidance.	
						Digital Curation Centre
						Find guidance from additional organisations below
			2			See the full list
Project Start		Project End				Save
dd/mm/yyyy		dd/mm/yyyy				



Questions?

rdm@ucd.ie

DMPonline at UCD dmp.ucd.ie

libguides.ucd.ie/data



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