Data Management Checklist

Use this checklist as a guide to help you develop a research data management plan for your research project. Not all sections or questions will be relevant to your project, simply use this document as a starting point to help you structure your planning process.

An abbreviated checklist is available for student research projects. For more information please refer to the Research Data Management guide at: libguides.ucd.ie/data

**Project Description**
Provide information such as name of applicant, project number, funding programme, version of DMP.

**Data Description**
What data will be collected or produced?

» Give details on the kind of data:
  for example numeric (databases, spreadsheets), textual (documents), image, audio, video, and/or mixed media.

» What data formats will be used:
  for example pdf, csv, 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.

» Give details on the volumes (they can be expressed in storage space required (bytes), and/or in numbers of objects or files).

How will new data be collected or produced and/or how will existing data be re-used?

» Are there special tools or software needed to create / process / visualise the data?

» Will existing data be used? If so, from where.

**Documentation, Metadata and Data Quality**
What metadata and documentation will accompany the data?

» How will metadata (structured descriptive information about your research data) be captured, created and managed?

» Indicate which metadata standards will be used:
  for example Dublin Core, DDI, TEI, MODS, EML, Darwin Core, VRA Core.

» Use community metadata standards where these are in place.

» Indicate how the data will be organised during the project, mentioning for example naming conventions, version control and folder structures.

Consistent, well-ordered research data will be easier to find, understand, and re-use.

» What other documentation and contextual information will be available in order to help others understand the data?
  e.g. information on the methodology used to collect the data, analytical and procedural information, definitions of variables, units of measurement.

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.

**Storage, Backup & Security**
How will data and metadata be stored and backed up during the research?

» Describe where the data will be stored and backed up during research activities and how often the backup will be performed.

It is recommended to store at least at three copies of your data.

How will data security and protection of sensitive data be taken care of during the research?
» Explain who will have access to the data during the research and how access to data is controlled, especially in collaborative partnerships or where your data is sensitive, for example containing personal data, politically sensitive information or trade secrets.

» Consider encrypting your data.

Legal & Ethical Requirements

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

» Ensure that when dealing with personal data data protection laws (for example GDPR) are complied with:
  o Gain informed consent for preservation and/or sharing of personal data.
  o Consider anonymisation of personal data for preservation and/or sharing (truly anonymous data are no longer considered personal data).
  o Explain whether there is a managed access procedure in place for authorised users of personal data.

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

» Explain who will be the owner of the data, meaning who will have the rights to control access. Consider the use of data access and re-use licenses.

» 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 there are any restrictions on the re-use of third-party data.

Data Sharing & Long-term Preservation

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

» Explain how the data will be discoverable and shared:
  for example by deposit in a trustworthy data repository, use of a secure data service, requests handled directly or use of another mechanism.

» Outline the plan for data preservation and give information on how long the data will be retained.

» If data can’t be shared this should be justified. Explain what action will be taken to overcome or to minimise restrictions.

» Indicate whether potential users need specific tools to access and (re-)use the data. Consider the sustainability of software needed for accessing the data.

» Persistent identifiers should be applied so that data can be reliably and efficiently located and referred to.
  Persistent identifiers also help to track citations and re-use. Typically, a trustworthy, long-term repository will provide a persistent identifier.

Data Management Responsibilities and Resources

» Who will be responsible for data management?

» How often will your plan be reviewed and updated?

» 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)?

Help at UCD

UCD Library, Data Manager
UCD Library’s Data Manager is available to provide a one-to-one review of your Data Management Plan. See below for contact details.

Data Storage, Backup and Security
Contact the Research IT team at: researchit@ucd.ie
www.ucd.ie/itservices/ourservices/

Intellectual Property
Contact Caroline Gill, Innovation Education Manager: caroline.gill@ucd.ie
www.ucd.ie/innovation/researchers/

Research Ethics
Contact the Office of Research Ethics: research.ethics@ucd.ie
www.ucd.ie/researchethics/

Contact: Jenny O’Neill, Data Manager,
UCD Library
email: jenny.oneill@ucd.ie
website: libguides.ucd.ie/data
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