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| Project Name: |  | Funder: |  |
| Project Description: |  | | |
| Student: |  | Principal Investigator/ Supervisor: |  |
| Institution: | University of Strathclyde | Dept / School: |  |
| Date of First Version: |  | | |
| Date of Updates: |  | | |

This template is based on DCC (Digital Curation Centre). (2013). Checklist for a Data Management Plan. V.4.0. Edinburgh: Digital Curation Centre. Available online: <http://www.dcc.ac.uk/resources/data-management-plans>

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| **Data Collection** |
| **What data (file types) will you collect or create?** |

List all the research data (file types) that you will collect /generate as part of your project. Examples are included on the first three rows to help you get started, and there are links to relevant info, where indicated (i.e.Indicates that there is a hyperlink to further info).

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| Data type | Original format | Preservation format\* | Estimated volume | Intellectual Property Rights (IPR) owner [link to info about IP rights in the  research code of practice, at https://www.strath.ac.uk/media/1newwebsite/documents/Research_Code_of_Practice_(update_Nov_2021).pdf](https://www.strath.ac.uk/media/1newwebsite/documents/Research_Code_of_Practice_(update_Nov_2021).pdf) | Active storage location | Completed storage location |
| Experiment notes | .xlsx, .docx | .csv, .rtf | <10MB | UoS (University of Strathclyde) | i:drive | Pure[contains hyperlink to the Pure platform at https://pure.strath.ac.uk/admin/login.xhtml](https://strath.sharepoint.com/sites/rkes/SitePages/Pure.aspx) |
| Microscope images | TIFF | Original | ~5GB | Company X | OneDrive for Business | Pure |
| Paper notebook | Paper | PDF | ~400MB | UoS | Cabinet in dept. | Pure |
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\*Preservation formats should be easy to access without the need for specific proprietary software.

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| **How will the data be collected or created?** |

* How will you collect or generate data?
* How will you structure and name your folders and files?
* How will you handle versioning?
* What quality assurance processes will you adopt?

The University's Information Governance Unit have guidance on **file naming** and **version control** at <https://strath.sharepoint.com/sites/igu/SitePages/ManagingRecords.aspx>

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| **Documentation and Metadata** |
| **What documentation and metadata will accompany the data?** |

**What is data documentation?**Documentation may include details on the methodology used, analytical and procedural information, definitions of variables, vocabularies, units of measurement, description of instruments, software and hardware used, use conditions, and any assumptions made. For example, a survey questionnaire, or interview schedule is ‘data documentation’ because it **provides context to the data** collected from the survey and interviews.

Electronic Lab notebooks and readme files offer a mechanism for documenting data; as would a codebook, which lists and explains the variables and scales used when analysing data.

**What is metadata?**  
Metadata is effectively ‘data about data,’ often ‘intended for reading by machines, metadata helps to explain the purpose, origin, time references, geographic location, creator, access conditions and terms of use of a data collection' ([UK Data Service, Metadata](https://ukdataservice.ac.uk/learning-hub/research-data-management/document-your-data/metadata/)).

**Why are documentation and metadata important/ required?**Many research funders expect researchers to publish metadata to accompany research data as part of the terms and conditions of the grant award/funding. In addition, the University encourages the creation, capture, and publication of comprehensive documentation and metadata so that the data - associated with Strathclyde’s research projects and publications - is made findable, accessible, and assessable to the wider research community and to enable its reuse by others, for societal benefit.

Consider, **how will you capture and create documentation and metadata**; rich, and meaningful documentation and metadata enable dataset/s to meet the **FAIR**[https://force11.org/info/the-fair-data-principles/](https://force11.org/info/the-fair-data-principles/) **(Findable, Accessible, Interoperable, and Re-usable) data principles**. Data that are discoverable, and identifiable via a dataset DOI (Digital Object Identifier) are more easily re-usable and citable.

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| 1. **Ethics and Legal Compliance** |
| **How will you manage any ethical issues?** |

Where a project/study involves working with people, or animals, there will be ethical considerations to address. If you are carrying out research involving human participants, you must consider whether consent is required to allow the data you collect to be archived, shared, and reused. Consider the following:

* Have you gained consent for data preservation and sharing from participants?
* How will you protect the identity of participants if required? For example, via anonymisation.
* How will sensitive data be handled to ensure it is stored and transferred securely and appropriately?

If collecting **personal data,** you must ensure it is managed in line with **data protection laws**. Ethical issues affect how you store data, who can see/use it, and how long it is retained.

Managing ethical concerns may include: anonymisation of data; referral to departmental or institutional ethics committees; and formal consent agreements. It is prudent to identify any issues and plan accordingly.

The University has templates for **Consent forms**, **Participant info sheets**, and **Privacy notices**, as well as a Code of Practice on Investigations Involving Human Beings accessible from <https://www.strath.ac.uk/ethics/>

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| **How will you manage copyright and IPR issues?** |

The default **licence applied to datasets** currently deposited in the University’s institutional data repository is CC BY 4.0. Anyone who uses a dataset with this licence must 'must give appropriate credit, provide a link to the license, and indicate if changes were made'. **Researchers can request a different licence be applied to their dataset**, by arrangement, as best fits any contractual or ethical agreements pertaining to the research/study.

**Where data have been generated using existing and/or secondary data sources**, researchers must factor-in, and adhere to, relevant third-party licence and/or re-use agreements.

Please consider the following points:

* How will the data be licensed for reuse?
* Are there any restrictions on the reuse of third-party data?
* Will data sharing be postponed/restricted e.g., to publish or seek patents?
* Do the IPR owners have any reason to restrict data sharing?

Open data is typically made available under a **CC-BY licence**, meaning that anyone can reuse the data for any purpose, as long as they cite the source of the data.

Commercially sensitive data should be restricted accordingly[https://www.strath.ac.uk/media/ps/comms/documents/IP_&_Commercialisation_Policy.pdf](https://www.strath.ac.uk/media/ps/comms/documents/IP_&_Commercialisation_Policy.pdf)

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| 1. **Storage and Backup** |
| **How will the data be stored during research, and how will you manage access and security?** |

The **University offers a number of secure file storage and sharing platforms**[https://www.strath.ac.uk/professionalservices/it/saveandshare/](https://www.strath.ac.uk/professionalservices/it/saveandshare/) which are **automatically backed-up throughout the day**. A comparison of these platforms is available from the **Compare file storage options** web page at <https://www.strath.ac.uk/professionalservices/is/help/indepth/comparefilestorage/>

**Research data** **which are confidential, sensitive, and/or contain protectable IP (intellectual property)** **must not be stored on unencrypted storage**. Researchers are encouraged to use the University’s own systems over less secure storage platforms/methods.

When **working off campus**, or **if working with external project partners**, **arrangements can be made to facilitate joint/collaborative working via shared project folders** on the University’s network/storage platforms, as outlined on the [Compare file storage options](https://www.strath.ac.uk/professionalservices/is/help/indepth/comparefilestorage/) web page.

Please refer to the [**Compare file storage options**](https://www.strath.ac.uk/professionalservices/is/help/indepth/comparefilestorage/) web page and consider the following:

* Will the data you create/collect/generate be stored on the University’s network/storage platforms?
* How will data be transferred to the University’s network/storage platforms if it originates from another location?
* How will you ensure that collaborators, supervisors, or participants can access your data securely?
* Will data be stored on H: drive; i: drive; OneDrive for Business; Teams; SharePoint, or elsewhere?

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| 1. **Data Curation and Open Access to Data** |
| **How will data preservation and open access to data be managed?** |

**At, or near to project completion, or following publication,** **upload the data** associated with your project/s, publications, theses, etc. **to the University’s institutional data repository in** [**Pure**](https://pure.strath.ac.uk/admin/login.xhtml), so that it can be catalogued, preserved, and made **openly accessible from the** [**KnowledgeBase**](https://pureportal.strath.ac.uk/en/datasets/) **Research Information Portal**[https://pureportal.strath.ac.uk/](https://pureportal.strath.ac.uk/)

If you are **planning to upload the data to an external data repository** (e.g., UK Data Service; GitHub) you must **create a registry record (with metadata and a persistent link, e.g., DOI) in** [**Pure**](https://pure.strath.ac.uk/admin/login.xhtml), so that the University can record compliance with any funder mandate and keep track of the data. Instructions and guidance, on uploading data to [Pure](https://pure.strath.ac.uk/admin/login.xhtml) is available on the [Data deposit](https://www.strath.ac.uk/research/researchdatamanagementsharing/datadeposit/) web page, and from RDMS (Research Data Management & Sharing) staff.

Researchers should consider the following when selecting data for curation and preservation:

* What data must be retained &/or destroyed for contractual, legal, or regulatory purposes?
* How will you decide what other data to keep (e.g., that which does not underpin a publication)?
* What data will be shared openly?
* When will you make the data available?
* How will data be preserved and shared?
* How will completed datasets be organised?

Outputs (publications, theses, etc.) arising from public funding should contain **data (access /availability) statements,** to direct readers to the data which underpins and supports the research findings. **Data statements should include persistent links (e.g., a DOI/Digital Object Identifier)** to the data source. Placeholder DOIs (Digital Object Identifier) are available in advance of final manuscript submission from RDMS staff. Further info, including example statements, is available from the [Data access statements web page](https://www.strath.ac.uk/research/researchdatamanagementsharing/dataaccessstatements/).

**In addition to uploading data, many research funders expect structured metadata - describing the research data** **- to be published.** Metadata must be sufficient to allow others to understand what research data exists; why, when, and how it was generated; and how to access it. This expectation can be met by creating a dataset record in Pure and including the relevant details.

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| **Are any restrictions on data sharing required?** |

* What restrictions are required on data sharing?
* How can these restrictions be minimised? (e.g., temporary embargo, partial sharing, one to one sharing, non-disclosure agreements)

**Explain any necessary restrictions on sharing** (e.g., commercial, privacy, or security reasons). If data cannot be shared, a dataset record should still be created in [Pure](https://pure.strath.ac.uk/admin/login.xhtml) so that the data can be catalogued and preserved long-term. In such cases, data can be uploaded to [Pure](https://pure.strath.ac.uk/admin/login.xhtml) but the data (files) restricted**,** whilst a record, containing metadata only, can be made publicly visible. The record should explain why the data is not accessible; the circumstances under which access may be granted; and who to contact for information about the dataset.   
**NB. If data relates to a patent application it should not be uploaded to Pure, or any other data repository, nor shared**, until such times as clearance has been given by the project PI and/or [IP & Commercialisation staff](https://www.strath.ac.uk/workwithus/innovationindustryengagement/meettheteam/).

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| 1. **Responsibilities and Resources** |
| **Who is responsible for data management?** |

* Who is responsible for implementing the plan, and ensuring it is reviewed and revised?
* Who will be responsible for each data management activity?
* How will responsibilities be split across partner sites in collaborative research projects?
* Will data ownership and responsibilities for research data management be part of any consortium agreement or contract agreed between partners?

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| **What resources will you require to deliver your plan?** |

* Is additional specialist expertise (or training for existing staff) required?
* Do you require hardware or software which is additional to existing institutional provision?

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| [Write your answer here] |

NB. Draft DMPs (Data Management Plans) can be uploaded to the [DMP Inbox](https://forms.office.com/e/QxMFbk101p) for review and feedback. Ideally, they should be treated as ‘living’ documents and reviewed over the course of a project/study.