# ESRC Data Management Plan Guidance

## Introduction

All applicants for ESRC funding planning to generate data as part of their award must include in their application a data management plan (DMP). Plans should be completed with reference to the ESRC Research Data Policy. The Policy includes guidance on what a DMP is expected to include. A maximum of three sides of A4 (using a minimum font size of 11) is allowed for the plan.

The plan should be formatted in sections using the headings prescribed by ESRC, which can be found in the UK Data Service ESRC Data Management plan and policy guide. The guide provides contextual links to relevant research data management guidance on the UK Data Service website, with information about obtaining consent from research participants and anonymising data for sharing, dealing with IPR in secondary data sources, storing and sharing data securely, how to organise and document data, suitable file formats; etc.

Applicants can also check their plan against the ESRC Guidance for peer reviewers. This document provides detailed information on what the reviewers of your application will looking for in the Data Management Plan.

You can draft your plan in a Word document or alternatively you can use DMPonline. This tool includes prompts and guidance to help you complete each section of the plan. Plans can be saved, shared with co-applicants, and exported for incorporation into the grant application.

All plans must be reviewed by the Research Data Manager prior to submission. Draft plans can be sent to the Research Data Manager directly or via your Research Development Manager and should be provided no later than 5 working days before the application deadline. General guidance on data management planning is available on the Research Data Management website. Contact the Research Data Manager if you require preliminary guidance on completing the plan.

**Contact**: Research Data Manager: researchdata@reading.ac.uk / 0118 378 6161

## What is required?

### *Data Collection (Je-S form)*

All applicants must complete the Data Collection section of the Je-S form. If the research will involve data collection or acquisition, you should indicate how existing datasets have been reviewed and state why currently available datasets are inadequate for the proposed research.

## *Data Management Plan (attachment)*

A maximum of three sides of A4 (using a minimum font size of 11) is allowed for the plan. The plan should use the headings specified by ESRC, as follows. ESRC guidance is reproduced, with some additional guidance in italics.

### Assessment of existing data

- An explanation of the existing data sources that will be used by the research project, with references.
- An analysis of the gaps identified between the currently available and required data for the research.

Where research grant applicants plan to create new data as part of their ESRC-funded proposal, they must demonstrate that no suitable data are available for re-use.

ESRC encourages the re-use of existing data and therefore encourages applicants and grant holders to consider the breadth of data available from various sources before committing to primary data collection.

When using existing data sources, consider copyright and Intellectual Property rights (IPR) of those data and the conditions of their use, to decide whether resulting derived data can be shared.

Data sources that can be consulted are:

- UK Data Service Data Catalogue, with over 7,000 collections of key economic, social and historical data spanning many disciplines and themes.
- UKRI Gateway to Research of past and present research grants and their outputs.

*It may be helpful to include URLs or DOIs for any data sources you intend to use. The data sources may be provided under licence or with terms of use, which may affect whether and how they or any data derived from them can be used and distributed. If you cannot find any terms of use or are unsure about what you will be permitted to do with the data, contact the provider to discuss what you propose to do. If you will need to secure permission to use the data, and this is likely to incur costs, you should indicate that you have planned for this, and include the costs in your budget.*

### Information on new data

Provide information on the data that will be produced or accessed by the research project:

- data volume
- data type
- data quality, formats, standards documentation and metadata
- methodologies for data collection and/or processing
- source and trustworthiness of third party data

Using standardised and interchangeable data formats ensures the long-term usability of data. Clear and detailed data descriptions and annotation, together with user-friendly accompanying documentation on methods and contextual information, makes data easy to understand and interpret and therefore shareable and with long-lasting usability.

Guidance on data formats

Guidance on documenting data

**Quality assurance of data**

Quality control of data is an integral part of a research process. The procedures for quality assurance that will be carried out on the data collected at the time of data collection, data entry, digitisation and data checking should be described.

For example this may include:

- Documenting the calibration of instruments.
- Taking duplicate samples or measurements.
- Standardised data capture, data entry or recording methods.
- Data entry validation techniques.
- Methods of transcription.
- Peer review of data.

Guidance on data quality control

**Security and backup of data**

Describe the data security and backup procedures that you will adopt to ensure the data and metadata are securely stored during the lifetime of the project. If your data is sensitive (e.g. detailed personal data) you should discuss appropriate security measures, which you will be taking. You may need to discuss your institution's policy on backups.

Guidance on storing, backup and security

Guidance on version control

*Data collected/held at the University should be stored using University-managed infrastructure, which will provide data security, replication in separate data centres, automated backup and file recovery. For the different options available read our data storage guidance. Storage costs are unlikely to apply in the majority of ESRC-funded research, which will have modest requirements.*

*If you will be collecting personal data or other confidential information you should discuss appropriate security measures. These might include:*

- *encrypting any hardware that will be used to store such data (such as audio-recording devices and laptops) and deleting data from these devices as soon as they have been transferred into the primary storage location. Storage on external devices should be avoided as much as possible and should always be temporary;*

- *digitising hard copy data, including consent forms, for secure digital storage, and destroying paper originals;*
- *storing hard copy data, including consent forms, in a locked cabinet in an office on University premises that is locked when not in use;*
- *storing participant records separately from research data in folders/areas accessible only to authorised users;*
- *de-identifying/pseudonymising/link-coding research data by removing direct identifiers and using a unique code to designate each participant that is linked to participants' details in a separate, secure link table;*
- *establishing protocols for sharing of data within the project team, covering secure transfer between locations as necessary. Use secure end-to-end encrypted methods of transfer wherever possible, e.g. OneDrive or Teams, or VPN connection to the University network; avoid less secure methods, e.g. email, and encrypt files if necessary.*

*Refer to the University's Encryption Policy for guidance on encryption.*

*Methods of version control might include: making raw data and files and milestone versions read-only to prevent overwriting; recording dates in ISO 8601 format (i.e. 20221103 or 2022-11-03) or version numbers in file names whenever a new version of a file is created; and including a version table in document headers.*

**Management and curation of data**

Outline your plans for preparing, organising and documenting data. A crucial part of making data user-friendly, shareable and with long-lasting usability, is to ensure they can be understood and interpreted by other users. This requires clear and detailed data description, annotation and contextual information, as well as well-structured and organised data files.

Guidance on documenting data

Guidance on transcribing qualitative data

Guidance on organising data

**Difficulties in data sharing and measures to overcome these**

Identify any potential obstacles to sharing your data and explain possible measures you can apply to overcome these. State explicitly which data may be difficult to share and why. If ethical issues could cause difficulties in data sharing, explain your strategies for dealing with these issues in the relevant section of the Je-S form, e.g. discussing data sharing with interviewees as part of consent discussions or anonymising data.

The ESRC supports the position that most data can be curated and shared ethically, provided researchers pay attention right from the planning stages of research to the following aspects:

- When gaining informed consent, include consent for data sharing.
- Where needed, protect participants' identities by anonymising data.

- Address access restrictions to data in the data management and sharing plan, before commencing research.

Guidance on ethical issues

Guidance on rights in data

Guidance on Data Protection Act

Guidance on other rights including Freedom of Information Act

*State here where you plan to deposit your final project dataset for long-term preservation and access. ESRC requires grant-holders to formally deposit all data created or repurposed during the lifetime of the grant with a responsible data repository within three months of the end of the grant. Data may be submitted to either the UK Data Service or 'an appropriate responsible digital repository such as an institutional repository' (ESRC Research Data Policy, p. 8).*

*Data can be deposited as open or safeguarded data with the UK Data Service ReShare repository and as open or restricted data with the University of Reading Research Data Archive. Either of these repositories can be used to meet ESRC requirements.*

*Most research data collected from research participants can be safely and ethically shared once they have been anonymised (i.e. identifying information has been removed), and it is often possible to redact information that is confidential for other reasons. It is not acceptable simply to state that research data cannot be shared for confidential reasons. If you do not intend to share data you must explain why they are not suitable for sharing.*

*Where data cannot be rendered safe for sharing as open data (for example, where identifying information is intrinsic to the data and cannot be removed, or where data can be anonymised, but may present a higher risk of reidentification through linkage to other information), it may still be possible to share them with authorised users on a restricted basis. Some data repositories provide controlled access procedures for managing safe access to confidential research data. For example:*

- *Anonymised data can be deposited in the UK Data Service ReShare repository as safeguarded data. These data would only be available in confidence to registered researchers, under the terms of an end-user licence.*
- *The University's Research Data Archive can offer a restricted dataset option. This is suitable for higher-risk anonymised data or identifiable data. A restricted dataset is held securely by the University and made accessible only if authorised by a Data Access Committee including the PI or nominated data steward and subject to a data access agreement between the University and a recipient organisation (which must be a research-performing organisation with which the researcher requesting access to the data is affiliated).*

*Further information about restricted archiving services can be found on the Where to archive data web page.*

*Consent is not required to share anonymised data, although as a matter of good practice research participants should always be informed of plans to make any data collected from them available to others.*

### Consent, anonymisation and strategies to enable further re-use of data

Make explicit mention of the planned procedures to handle consent for data sharing for data obtained from human participants, and/or how to anonymise data, to make sure that data can be made available and accessible for future scientific research.

If you are unsure of how issues of confidentiality are to be addressed to facilitate data sharing, please get in touch for advice.

Guidance on consent and ethics

Guidance on anonymising data

*You must ensure that your consent procedures inform participants correctly about data sharing intentions and do not preclude or unnecessarily limit sharing of research data, either as open data or on a restricted basis if necessary. Do not set a time limit on the retention of the data collected from participants, or state that all data will be destroyed at the end of the project, or undertake that data will not be shared outside of the project. Such undertakings are not required by data protection law or research ethics policy, and they will prevent you from making your research data accessible to others, even if they have been anonymised. If you are planning to share data as open data, do not say they will made available to certain groups of users only, e.g. researchers. Open data by their nature can be used by anyone.*

*A sample consent form, with consent formulae for sharing of anonymised open data, and for restricted sharing of data under safeguards, can be found on the IMPS website. The UK Data Service guidance on consent also includes a model consent form.*

### Copyright and Intellectual Property ownership

State who will own the copyright and IPR of any new data that you will generate.

Guidance on IPR

*In the absence of any contract stating otherwise, ownership of data created by employees of the University in the course of their employment will be vested in the University. It is standard in collaborations for each institution to own IPR in the data it has created. Where data are jointly created, IPR will be shared.*

### Responsibilities

Indicate who within your research team will be responsible for data management, metadata production, dealing with quality issues and the final delivery of data for sharing or archiving.

Provide this information within the Staff Duties section in the Je-S form and where appropriate in the Justification of Resources. If several people will be responsible, state their roles and responsibilities in the relevant section of the Je-S form.

For collaborative projects explain the coordination of data management responsibilities across partners in your Data Management Plan.

Guidance on data management roles and responsibilities

Guidance on how to cost data management