

## **EPSRC Template DMPonline**

**Plan Name** EPSRC Data Management Plan

**Principal Investigator / Researcher** TUoS Researcher

**Funder** -

**Institution** University of Sheffield

### **Data Collection**

**What data will you collect or create?**

#### **EPSRC Policy Expectations**

Research data is defined by EPSRC as recorded factual material commonly retained by and accepted in the scientific community as necessary to validate research findings.

Although the majority of such data is created in digital format, all research data is included irrespective of the format in which it is created.

#### **DCC guidance on Existing Data**

Questions to consider:

- Are there any existing data or methods that you can reuse?
- Do you need to pay to reuse existing data?
- Are there any restrictions on the reuse of third-party data?
- Can the data that you create - which may be derived from third-party data - be shared?

Guidance:

Check to see if there are any existing data that you can reuse, for examples by consulting relevant repositories. When creating new data sources, explain why existing data sources cannot be reused. If purchasing or reusing existing data sources, explain how issues such as copyright and IPR have been addressed. A list of repositories is provided by [Databib](#) or [Re3data](#).

#### **The University of Sheffield: guidance on Existing Data**

Please see the University of Sheffield webpage on '[Finding and reusing data](#)' for guidance.

#### **DCC guidance on Data Volumes**

Questions to consider:

- Do you have sufficient storage?
- Do you need to include costs for additional managed storage?
- Will the scale of the data pose challenges when sharing or transferring data between sites?

Guidance:

Consider the implications of data volumes in terms of storage, backup and access. Estimate the volume of data in MB/GB/TB and how this will grow to make sure any additional storage and technical support required can be provided.

### **The University of Sheffield: guidance on Data Volumes**

Please see the University of Sheffield Corporate Information and Computing Services webpages on '[Research data storage](#)' and '[Storage options](#)' for guidance.

### **DCC guidance on Data Type**

Questions to consider:

- What types of data will you create?
- Which types of data will have long-term value?

Guidance:

Outline the types of data that are expected to be produced from the project e.g. quantitative, qualitative, survey data, experimental measurements, models, images, audiovisual data, samples etc. Include the raw data arising directly from the research, the reduced data derived from it, and published data.

### **The University of Sheffield: guidance on Data Type**

Please see the University of Sheffield webpage '[What is research data?](#)' for guidance.

### **DCC guidance on Data Format**

Questions to consider:

- What format will your data be in?
- Why have you chosen to use particular formats?
- Do the chosen formats and software enable sharing and long-term validity of data?

Guidance:

Outline and justify your choice of format e.g. SPSS, Open Document Format, tab-delimited format, MS Excel. Decisions may be based on staff expertise, a preference for open formats, the standards accepted by data centres or widespread usage within a given community. Using standardised and interchangeable or open lossless data formats ensures the long-term usability of data.

See UKDS Guidance on [recommended formats](#).

### **The University of Sheffield: guidance on Data Format**

Please see the University of Sheffield webpage on '[Organising your data: Choosing](#)

[data formats](#)' for guidance.

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

### **EPSRC Policy Expectations**

Plans should be in accordance with relevant standards and community best practice.

### **DCC guidance on Data Capture Methods**

Questions to consider:

- How will the data be created?
- What standards or methodologies will you use?
- How will you structure and name your folders and files?
- How will you ensure that different versions of a dataset are easily identifiable?

Guidance:

Outline how the data will be collected/generated and which community data standards (if any) will be used at this stage. 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 for the research team to find, understand and reuse.

### **The University of Sheffield: guidance on Data Capture Methods**

How will you organise your research data and handle version control? Please see the University of Sheffield webpage on '[Organising your data: Naming and organising files and folders](#)' for guidance.

### **DCC guidance on Data Quality**

Questions to consider:

- How will you control data capture to ensure data quality?
- What quality assurance processes will you adopt?

Guidance:

Explain how the consistency and quality of data collection will be controlled and documented. This may include processes such as calibration, repeat samples or measurements, standardised data capture or recording, data entry validation, peer review of data or representation with controlled vocabularies.

### **The University of Sheffield: guidance on Data Quality**

Please see the UK Data Service webpage on [data quality assurance](#) for guidance.

## **Documentation and Metadata**

### **What documentation and metadata will accompany the data?**

## **EPSRC Policy Expectations**

Sufficient metadata should be recorded and made openly available to enable other researchers to understand the potential for further research and re-use of the data.

EPSRC recommends that appropriately structured metadata is published (normally within 12 months of the data being generated) and made freely accessible on the internet. In each case the 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.

Where the research data referred to in the metadata is a digital object, it is expected that the metadata will include use of a robust digital object identifier (For example as available through the [DataCite organisation](#)).

Published research papers should include a short statement describing how and on what terms any supporting research data may be accessed.

Think about how much time/effort will be needed to create appropriate supporting documentation/metadata prior to depositing retained data, and ensure you have the resources to cover this aspect.

## **DCC guidance on Metadata**

Questions to consider:

- How will you capture / create the metadata?
- Can any of this information be created automatically?
- What metadata standards will you use and why?

Guidance:

Metadata should be created to describe the data and aid discovery. Consider how you will capture this information and where it will be recorded e.g. in a database with links to each item, in a 'readme' text file, in file headers etc.

Researchers are strongly encouraged to use community standards to describe and structure data, where these are in place. The DCC offers a [catalogue of disciplinary metadata standards](#).

## **The University of Sheffield: guidance on Metadata**

Metadata is a structured form of documentation that identifies and describes your data. Researchers should use community standards, where they exist: see the DCC webpage on [Disciplinary metadata standards](#).

Please see the University of Sheffield webpages on '[Describing your data](#)' and '[Metadata](#)' for guidance.

## **DCC guidance on Documentation**

Questions to consider:

- What metadata, documentation or other supporting material should accompany

the data for it to be interpreted correctly?

- What information needs to be retained to enable the data to be read and interpreted in the future?

Guidance:

Describe the types of documentation that will accompany the data to provide secondary users with any necessary details to prevent misuse, misinterpretation or confusion. This may include information on the methodology used to collect the data, analytical and procedural information, definitions of variables, units of measurement, any assumptions made, the format and file type of the data.

### **The University of Sheffield: guidance on Documentation**

**Note:** Documentation and metadata describe the context, content and structure of your data and are essential for understanding and reusing them. See the University of Sheffield webpage '[Describing your data](#)' for more information.

**Example text:** *"Methods and SOPs will be stored electronically in Microsoft Word documents (.doc) with the spreadsheets containing data"*

*"Explanation of the experimental and analytical methods used will be provided in text documents, stored alongside the data"*

*"Data documentation will accompany datasets submitted to the ... repository at the end of the research"*

### **Ethics and Legal Compliance**

#### **How will you manage any ethical issues?**

#### **EPSRC Policy Expectations**

EPSRC recognises that there are legal, ethical and commercial constraints on release of research data. To ensure that the research process (including the collaborative research process) is not damaged by inappropriate release of data, research organisation policies and practices should ensure that these constraints are considered at all stages in the research process.

### **DCC guidance on Ethical Issues**

Questions to consider:

- Have you gained consent for data preservation and sharing?
- How will sensitive data be handled to ensure it is stored and transferred securely?
- How will you protect the identity of participants? e.g. via anonymisation or using managed access procedures

Guidance:

Investigators carrying out research involving human participants must ensure that consent is obtained to share data. Managing ethical concerns may include:

anonymisation of data; referral to departmental or institutional ethics committees; and formal consent agreements. Ethical issues may affect how you store data, who can see/use it and how long it is kept. You should show that you're aware of this and have planned accordingly.

See UKDS guidance on [consent for data sharing](#)

### **The University of Sheffield: guidance on Ethical Issues**

For guidance on ethical and legal issues please see the University of Sheffield webpage on '[Regulatory requirements](#)'.

See also the UK Data Service webpages on '[Legal and ethical issues](#)'.

### **How will you manage copyright and Intellectual Property Rights (IPR) issues?**

#### **EPSRC Policy Expectations**

EPSRC expects those it funds to maximise the impact of their research for the benefit of the UK, including (but not limited to) the efficient recognition, protection and exploitation of intellectual property. Collaboration in EPSRC-funded research by private sector organisations is particularly important in this regard.

EPSRC expects that research organisations will make appropriate use of the provisions available in the legislation to guard against inappropriate release of research data which might damage the collaborative research process, and work against the national interests of the UK. In this regard, EPSRC views the use of appropriate confidentiality agreements and publication plans as essential elements of research management strategy.

### **DCC guidance on IPR Ownership and Licencing**

Questions to consider:

- Who owns the data?
- How will the data be licensed for reuse?
- If you are using third-party data, how do the permissions you have been granted affect licensing?
- Will data sharing be postponed / restricted e.g. to seek patents?

Guidance:

State who will own the copyright and IPR of any new data that you will generate. For multi-partner projects, IPR ownership may be worth covering in a consortium agreement. If purchasing or reusing existing data sources, consider how the permissions granted to you affect licensing decisions. Outline any restrictions needed on data sharing e.g. to protect proprietary or patentable data.

See the DCC guide: [How to license research data](#).

### **The University of Sheffield: guidance on IPR Ownership and Licencing**

Please see the University of Sheffield webpage on '[Regulatory requirements](#)' for guidance on IPR and data licensing.

The UK Data Service provides guidance on '[Rights relating to research data](#)' including [licensing](#).

The Digital Curation Centre provides guidance on '[How to license research data](#)'.

## **Storage and Backup**

### **How will the data be stored and backed up during the research?**

#### **EPSRC Policy Expectations**

When considering where to store your data, please bear in mind that all reasonable steps should be taken to ensure that publicly-funded data is not held in any jurisdiction where the available legal safeguards provide lower levels of protection than are available in the UK.

### **DCC guidance on Storage and Backup**

Questions to consider:

- Where will the data be stored?
- How will the data be backed up? i.e. how often, to where, how many copies, is this automated...
- Who will be responsible for storage and backup?
- Do you have access to enough storage or will you need to include charges for additional services?

Guidance:

Describe how the data will be stored and backed-up to ensure the data and metadata are securely stored during the lifetime of the project. Storing data on laptops, computer hard drives or external storage devices alone is very risky. The use of robust, managed storage with automatic backup, for example that provided by university IT teams, is preferable.

See UKDA guidance on [data storage and backup](#).

### **The University of Sheffield: guidance on Storage and Backup**

**Note:** Storing data on laptops, computer hard drives or external storage devices alone is not recommended. The use of robust, managed storage with automatic backup is preferred by the University and by funders.

Data and definitive project documentation should be stored on centrally provisioned University of Sheffield virtual servers and [research data storage infrastructure](#) throughout the lifetime of the project. Both Windows and Linux Virtual Servers with up to 10TB of storage are made available to research projects. Access control is by authorised University computer account username and password. Off-site access is facilitated by secure VPN connection authenticated by University username and remote password. By default, two copies of data are kept across two physical

plant rooms, with a 28 day snapshot made of data and backed up securely offsite at least daily. This service is maintained by the University's Corporate Information and Computing Services.

[Google Drive](#) may be used for more flexible collaborative working but only where non personal-sensitive information is involved. Where Google Drive is used, copies of complete and definitive documents should be transferred to the main project repository on the University research storage infrastructure.

Please see the University of Sheffield webpage on '[Keeping your data safe](#)' for further guidance.

### **Faculty of Medicine, Dentistry & Health: guidance on Storage and Backup**

All requests for research data storage in the Faculty of Medicine, Dentistry and Health should be made to the Faculty IT Hub in the first instance ([med-it@sheffield.ac.uk](mailto:med-it@sheffield.ac.uk)). They will work with you to create an appropriate folder structure and give access to authorised users.

### **How will you manage access and security?**

#### **EPSRC Policy Expectations**

Where research data is subject to restricted access, research organisations should implement and manage appropriate security controls.

### **DCC guidance on Data Security**

Questions to consider:

- What are the risks to data security and how will these be managed?
- Will you follow any formal standards?

Guidance:

If your data is sensitive (e.g. detailed personal data, politically sensitive information or trade secrets) you should discuss any appropriate security measures that you will be taking. Note the main risks and how these will be managed. Identify any formal standards that you will comply with e.g. ISO 27001.

See DCC Briefing Paper on [Information Security Management - ISO 27000](#).

See UKDS guidance on [data security](#).

### **The University of Sheffield: guidance on Data Security**

**Note:** Data security is needed to prevent unauthorised access or disclosure and changes to or destruction of data. Please see the University of Sheffield webpage '[Keeping your data safe](#)' for guidance.

All staff and researchers must complete the online training at <https://infosecurity.shef.ac.uk>. This training will be particularly helpful when filling this part of the DMP. If you require assistance please contact the University's

Information Security team at <https://www.shef.ac.uk/cics/infosec>.

The University has [policies relating to information security](#) requiring its users to adhere, as a minimum, to the following security standards: [Information Security Policy](#), [Data Protection Policy](#). More secure system policies may be defined where necessary, for example where patient data is involved. University Departments may have established their own policies regarding information security, e.g. [ScHARR Information Governance Policy](#).

The University of Sheffield is not an accredited ISO 27001 institution. The University provides email, Contacts and calendaring services, Google Drive and Google Sites through the Google Apps for Education suite. Google Apps for Education (and the data centres that support the service) are SSAE 16 / ISAE 3402 Type II SOC 2 audited and have achieved ISO 27001 certification. The University is satisfied that personal data is being processed appropriately in accordance with UK Data Protection Law and the University's own privacy policies, and that the security controls put in place by Google are [sufficient to protect University data](#).

**Example text for high-risk data:** *"We will comply with the Data Protection Act and the University's own [Information Security](#) and [Data Protection](#) Policies. The project is governed by Department of Health and so we will comply with the [NHS IGT](#)."*

**Example text for high-risk data:** *"We recognize that this data is highly confidential and is critical to the clinical treatment of patients. Therefore a project specific security policy has been developed in conjunction with the University's Information Security Team [[link to policy](#)]"*.

**Suggested text for low-risk data:** *"The data will will not include personal data relating to human participants. The University's [Information Security Policies](#) will be abided by at all times."*

## **Faculty of Medicine, Dentistry & Health: guidance on Data Security**

Some Faculty of Medicine, Dentistry and Health Departments have established their own policies regarding information security, e.g. [ScHARR Information Governance Policy](#).

### **Selection and Preservation**

**Which data are of long-term value and should be retained, shared, and/or preserved?**

#### **EPSRC Policy Expectations**

Data with acknowledged long term value should be preserved and remain accessible and useable for future research.

Such research data should be securely preserved for a minimum of 10 years from the date that any researcher 'privileged access' period expires or, if others have accessed the data, from last date on which access to the data was requested by a third party.

### **DCC guidance on Data Selection**

Questions to consider:

- Which data are of long-term value and should be shared and/or preserved?
- How will you decide what to keep?

Guidance:

Indicate which data you intend to preserve beyond the period of funding. This should be based on what has long-term value and is economically viable to keep. Consider how long you wish to keep the data and what will happen to it e.g. deposit in a data repository to enable reuse.

See the DCC guide: [How to appraise and select research data for curation](#).

### **The University of Sheffield: guidance on Data Selection**

Most funders now expect data underlying published papers, plus data of particular long-term value, to be made available to other researchers at the end of a project. Please see the University of Sheffield webpage on '[Preserving your data](#)' for guidance on data selection. Check your funder's policy on the University of Sheffield webpage '[Research funder policy summaries](#)'.

The Digital Curation Centre provides useful advice about [data selection and appraisal](#). The [NERC data value checklist](#) provides guidance on determining long-term value.

### **What is the long-term preservation plan for the dataset?**

#### **EPSRC Policy Expectations**

EPSRC expects Research Organisations to ensure that researchers have access to and use appropriate research data storage facilities, which may be directly owned and managed by the research organisation, or by a third party, or by a combination of the two, and may be generally known as either an institutional or a subject-based data repository.

### **DCC guidance on Preservation Plan**

Questions to consider:

- What is the long-term preservation plan for the dataset? e.g. deposit in a data repository
- Will additional resources be needed to prepare data for deposit or meet charges from data repositories?

Guidance:

Researchers should consider how datasets that have long-term value will be preserved and curated beyond the lifetime of the grant. Also outline the plans for preparing and documenting data for sharing and archiving.

If you do not propose to use an established repository, the data management plan should demonstrate that resources and systems will be in place to enable the data to be curated effectively beyond the lifetime of the grant.

## The University of Sheffield: guidance on Preservation Plan

**Note:** For guidance see the University of Sheffield webpages on '[Preserving your data](#)' and '[Data repositories](#)'.

Long term preservation and access may be best managed by using a specialist data repository. Some funders specify a data repository to use, such as [UK Data Service ReShare](#), [NERC Data Centres](#) or [Archaeology Data Service](#). To find an appropriate repository, look in

- [re3data.org](#)
- [Wellcome Trust - Data repositories and database resources](#)
- [BBSRC supported resources](#)

If no suitable repository is available you may [deposit data in ORDA](#), the University of Sheffield data repository. Alternatively, if you need to regulate users' access through 'Data sharing agreements', data may be retained in the University's research storage infrastructure and [registered in ORDA](#).

**Suggested text in all cases:** *"Data will be archived in line with the University of Sheffield's Research Data Management Policy, which is a component of the University's Policy on Good R&I Practices (the 'GRIP' Policy)."*

**Where data is in paper format:** *"Data collected in paper form will be routinely digitised and the paper form disposed of / stored for at least 10 years at our universities in secured areas."*

**For data deposited in external data repositories:** *"Research data selected for long-term preservation and sharing will be deposited in [name of repository/weblink]. The [name of repository] is openly accessible and searchable and will guarantee preservation of these data for ten years or more. Metadata records describing these data will be created in ORDA, the University of Sheffield research data registry and repository"*

**Where some research data are being deposited in ORDA:** *"Data that are not deposited in [name of repository/weblink] will be deposited in ORDA, a repository and registry of research data produced at the University of Sheffield, which will preserve data for ten years or more."*

**Where data is deposited in ORDA only:** *"Data selected for long-term preservation and sharing will be deposited in ORDA, a repository and registry of research data produced at the University of Sheffield, which will guarantee preservation for ten years or more."*

**Where data is being retained locally, but not made 'openly' accessible:** *"Data selected for long-term preservation and sharing will be stored on centrally provisioned University of Sheffield virtual servers and research storage infrastructure (<https://www.sheffield.ac.uk/cics/research>) for at least ten years. Records of these data will be published in ORDA, a registry of research data produced at the University of Sheffield."*

## DCC guidance on Data Repository

Questions to consider:

- Where (i.e. in which repository) will the data be deposited?

Guidance:

Most research funders recommend the use of established data repositories, community databases and related initiatives to aid data preservation, sharing and reuse.

An international list of data repositories is available via [Databib](#) or [Re3data](#).

## The University of Sheffield: guidance on Data Repository

**Note:** For guidance see the University of Sheffield webpages on '[Publishing and sharing your research data](#)' and '[Data repositories](#)'.

Long term preservation and access may be best managed by using a specialist data repository. Some funders specify a data repository to use, such as [UK Data Service ReShare](#), [NERC Data Centres](#) or [Archaeology Data Service](#). To find an appropriate repository look in

- [re3data.org](#)
- [Wellcome Trust - Data repositories and database resources](#)
- [BBSRC supported resources](#)

If no suitable repository is available you may [deposit data in ORDA](#), the University of Sheffield data repository. Alternatively, if you need to regulate users' access through 'Data sharing agreements', data may be retained in the University's research storage infrastructure and [registered in ORDA](#).

## Data Sharing

**How will you share the data?**

### EPSRC Policy Expectations

Researchers are expected to facilitate data preservation and sharing.

Publicly-funded research data that is not generated in digital format should be stored in a manner to facilitate it being shared in the event of a valid request for access to the data being received.

## DCC guidance on Method For Data Sharing

Questions to consider:

- How will you make the data available to others?
- With whom will you share the data, and under what conditions?

Guidance:

Consider where, how, and to whom the data should be made available. Will you share data via a data repository, handle data requests directly or use another mechanism?

The methods used to share data will be dependent on a number of factors such as the type, size, complexity and sensitivity of data. Mention earlier examples to show a track record of effective data sharing.

## **The University of Sheffield: guidance on Method For Data Sharing**

**Note:** At the end of your research project, your funder may require you to make your research data available for sharing with as few restrictions as possible. Data may be shared by being published in:-

- a Repository or Data Centre - see the University of Sheffield webpage on '[Research data repositories](#)' for guidance
- a journal as an article's supplementary material
- a data journal as a data paper.

Wherever data is published, a metadata record should be [registered in ORDA](#), the University of Sheffield data repository.

**Suggested text for use when data will be placed in a repository:** *“Data will be made available through shared research platforms [insert repository / platform relevant to project] with the relevant permissions in place.”*

**Suggested text for use when data will not be placed in a repository:** *“The lead PI and project team [including collaborators if applicable] will review applications to access experimental data and make the decision on whether to supply research data to potential applicants. Data will then be released on a case by case basis.”*

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

### **EPSRC Policy Expectations**

EPSRC-funded researchers are entitled to a limited period of privileged access to the data they collect to allow them to work on and publish their results. The length of this period will depend on the scientific discipline and the nature of the research.

Where access to the data is restricted, the published metadata should give the reason and summarise the conditions which must be satisfied for access to be granted. For example ‘commercially confidential’ data, in which a business organisation has a legitimate interest, might be made available to others subject to a suitable legally enforceable non-disclosure agreement.

## **DCC guidance on Restrictions on Sharing**

Questions to consider:

- Are any restrictions on data sharing required? e.g. limits on who can use the data, when and for what purpose.
- What restrictions are needed and why?

- What action will you take to overcome or minimise restrictions?

Guidance:

Outline any expected difficulties in data sharing, along with causes and possible measures to overcome these. Restrictions to data sharing may be due to participant confidentiality, consent agreements or IPR. Strategies to limit restrictions may include: anonymising or aggregating data; gaining participant consent for data sharing; gaining copyright permissions; and agreeing a limited embargo period.

### **The University of Sheffield: guidance on Restrictions on Sharing**

**Note:** At the end of your research project, your funder may require you to make your research data available for sharing with as few restrictions as possible. Restrictions on the release of data may be allowed, to protect confidentiality and for other ethical and legal considerations:-

- Does your data include confidential and sensitive information?
- Have participants given consent for their data being shared?
- Consider what can be done to make sensitive data openly sharable - can these data be anonymised?
- If different parts of your research data require different access conditions, separate them and deposit them separately, applying different access conditions.

See the University of Sheffield '[Regulatory requirements](#)' webpage and the UK Data Service '[Legal and ethical issues](#)' webpages for more information.

**Suggested text if no restrictions are foreseen:** *“At present we do not foresee any delays in data sharing following publication of the main research findings.”*

**Suggested text for patient-based studies:** *“Patients will be made aware of our data sharing procedures at the time of consent.”*

### **DCC guidance on Timeframe For Data Sharing**

Questions to consider:

- When will you make the data available?

Guidance:

Data (with accompanying metadata) should be shared in a timely fashion. It is generally expected that timely release would be no later than publication of the main findings and should be in-line with established best practice in the field. Researchers have a legitimate interest in benefiting from their investment of time and effort in producing data, but not in prolonged exclusive use. Research funders typically allow embargoes in line with practice in the field, but expect these to be outlined up-front and justified.

### **The University of Sheffield: guidance on Timeframe For Data Sharing**

**Note:** At the end of your research project, your funder may require you to make your research data available for sharing with as few restrictions as possible. Most funders allow a delayed release to allow researchers to have exclusive use of their data and to exploit the results of their research. See the University of Sheffield ['Research funder policy summaries'](#) webpage to determine when you need to make your data available.

**Suggested text in all cases:** *“The project group (including collaborators) will have exclusive use of the data until the main research findings are published or patent applications have been filed [if potentially relevant to project]” and/or “...or for a period of x months/years.”*

**Suggested text if delays are foreseen:** *“Delays in sharing data may arise through a delayed ability to analyse or publish the research findings.” and/or “Delays in sharing data may arise due to IPR and if this is a factor, advice will be sought from the University’s Research & Innovation Services.”*

**Optional additional text:** *“Following publication, data will be made available on request or shared through the [relevant research platforms].”*

## **Responsibilities and Resources**

### **Who will be responsible for data management?**

#### **EPSRC Policy Expectations**

Research organisations should ensure that effective data curation is provided throughout the full data lifecycle, with ‘data curation’ and ‘data lifecycle’ being [as defined by the Digital Curation Centre](#).

The full range of responsibilities associated with data curation over the data lifecycle should be clearly allocated within the research organisation.

### **DCC guidance on Responsibilities**

Questions to consider:

- Who is responsible for each data management activity?
- How are responsibilities split across partner sites in collaborative research projects?

Guidance:

Outline the roles and responsibilities for all activities e.g. data capture, metadata production, data quality, storage and backup, data archiving & data sharing. Individuals should be named where possible. For collaborative projects you should explain the co-ordination of data management responsibilities across partners.

See UKDS guidance on data management [roles and responsibilities](#).

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

#### **EPSRC Policy Expectations**

It is appropriate to use public funds to support the preservation and management of publicly-funded research data. To maximise the scientific benefit which can be gained

from limited budgets, the mechanisms for managing and providing access to research data should be both efficient and cost-effective in the use of such funds.

Research organisations could allocate resources from within their existing public funding streams, whether received from Research Councils as direct or indirect support for specific projects or from higher education funding councils as block grants.

Researchers may need to discuss with their research/finance office about how best to ensure the anticipated costs of RDM for their project are met.

The EPSRC, together with other UK research funders, provided clarifications on [including RDM-related costs in grant proposals](#).

## **DCC guidance on Resourcing**

Questions to consider:

- What additional resources are needed to deliver your plan?
- Is additional specialist expertise (or training for existing staff) required?
- Do you have sufficient storage and equipment or do you need to cost in more?
- Will charges be applied by data repositories?
- Have you costed in time and effort to prepare the data for sharing / preservation?

Guidance:

Carefully consider any resources needed to deliver the plan. Where dedicated resources are needed, these should be outlined and justified. Outline any relevant technical expertise, support and training that is likely to be required and how it will be acquired. Provide details and justification for any hardware or software which will be purchased or additional storage and backup costs that may be charged by IT services.

Funding should be included to cover any charges applied by data repositories, for example to handle data of exceptional size or complexity. Also remember to cost in time and effort to prepare data for deposit and ensure it is adequately documented to enable reuse. If you are not depositing in a data repository, ensure you have appropriate resources and systems in place to share and preserve the data.

See UKDS guidance on [costing data management](#).

## **The University of Sheffield: guidance on Resourcing**

The University of Sheffield [research data storage facility](#) allocates 10TB storage free to research groups during the lifetime of a project. If a larger quota is required then this will involve charges. Long-term archiving of data may involve charges also. Get in touch with CiCS to discuss your requirements and get a quote at <https://www.sheffield.ac.uk/cics/support/help>.

[ORDA](#), the University of Sheffield research data repository is free to use. You should enquire about charges made by other data repositories you intend to use.