

Data Management Planning

AHRC FUNDING APPLICANTS



Arts & Humanities
Research Council

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Document History

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Draft 3 \UoL_DMP_AHRCGuide_v0-3.docx	06.06.2013	A. Burnham	Third draft for review by RCMG. Approved for release by PVC Research.
Draft 2 \UoL_DMP_AHRCGuide_v0-2.docx	24.05.2013	A. Burnham	Second draft for review by RCMG.
Draft 1 \UoL_DMP_AHRCGuide_v0-1.docx	15.04.2013	A. Burnham/University of Bristol	First draft using University of Bristol document as basis.



“The AHRC has a responsibility to ensure that the research which it funds is achievable and high quality, and that the outputs of the research will wherever appropriate be accessible to the community over the longer term.”¹

In line with other RCUK funding councils, the AHRC is committed to the principle that those who receive research funding should take responsibility for the duration, management, and exploitation of their digital outputs (which are equivalent to the term ‘research data’, a term used by the other research councils) for future use. The AHRC recognises the need to create digital outputs in accordance with appropriate standards and best practice, to maintain adequate documentation to ensure future usability and to handle data appropriately in the short term so it can be preserved in the long term.

This guide is designed to help all AHRC funding applicants, particularly those who are required to submit a Technical Plan with their Je-S application form, to plan the management of their data.

1. Summary of AHRC data requirements

- Digital outputs must be made available and accessible via an ‘appropriate repository’ for at least three years after the end of the funded project².
- The default expectation is that all access to these outputs will be free.
- If digital outputs are planned, a Technical Plan is submitted at the application stage. This must not exceed four pages. Suggested headings are prescribed by AHRC³.
- AHRC will cover “... *appropriate costs of preparation and ingest of digital outputs*” that are incurred within the funding period.

2. What you need to do – key data requirements

The AHRC has a number of specific expectations concerning funded research. Award holders are required to ensure that ‘any significant electronic resources or datasets’ are made available and accessible via an ‘appropriate repository’ for at least three years after the end of the funded project. Applicants explain how they will do this by completing a *Technical Plan* at the time of application, adding it to the Je-S form as an attachment. Your Technical Plan must cover the creation of, management of, and access to any significant electronic resources that result from your AHRC-funded research.

¹ AHRC Research Funding Guide, <http://www.ahrc.ac.uk/SiteCollectionDocuments/Research-Funding-Guide.pdf>

² Special considerations apply to archaeology, see Archaeology Data Service, <http://archaeologydataservice.ac.uk/>

³ University of Bristol Sample AHRC Technical Plan, <http://data.bris.ac.uk/files/2014/02/data.bris-AHRC-example-Technical-Plan.pdf>

If technical research issues such as these (often collectively known as Research Data Management) are entirely new to you, you may find it helpful to read our guide ‘*An Introduction to Managing Research Data*’⁴ before going any further, and see Section 4. below for detailed information and support.

3. What is a ‘significant electronic resource or dataset’?

The AHRC defines these as “... *digital outputs or digital technologies [which] are essential to the planned research*”. This excludes conventional, everyday software used for administrative purposes (such as standard email software or a word-processing software package) and simple websites containing only information *about* a project.

It may be that you aren’t planning to develop or create any digital outputs or digital technologies that meet this definition in the course of your research, in which case you don’t need to produce a Technical Plan at all. You should still consider carefully however, whether any digital material you expect to create might be of use to other researchers in the future, and so might be defined as a digital output.

As an example, transcripts might be created to meet your own immediate needs but could also be of use to secondary researchers after the end of the current project. Similarly, photographs might be produced for one purpose, but later be used by someone else for an entirely different purpose.

Demonstrating to the AHRC that you’ve identified these digital materials as having potential secondary uses suggests that they have added value, and this will provide extra incentive for AHRC to fund your research. If you believe you’ll be creating digital material with a very high reuse value (such as a unique database), it may be appropriate to undertake end-user consultation and end-user testing and to include in-depth user documentation as part of your research project.

The re-use value of digital outputs should be decided by the lead applicant on the basis of the significance of the outputs in the context of your current project, their potential value to the larger research community and the costs involved in creating and maintaining them.

It is strongly advised that the person responsible for technical research activity should **contribute directly** to your Technical Plan.

“Applicants who claim to be able to draw upon considerable expertise, but are unable to show that they have worked closely with the relevant project participants in completing the Technical Plan, will not be viewed favourably by Technical Reviewers. It is unacceptable to state that these participants will address technical issues during the course of the project and then fail to provide sufficient technical detail in the Technical Plan.”⁵

Refer to technical IT Services e.g. central Research File Storage, and support available, and consult with these people as you write your plan.

⁴ Introduction to Managing Research Data – For Researchers and Students, <http://www2.le.ac.uk/services/research-data/advice-and-support/internal>

⁵ AHRC Research Funding Guide, <http://www.ahrc.ac.uk/SiteCollectionDocuments/Research-Funding-Guide.pdf>

Your Technical Plan will be reviewed in the context of your proposal as a whole. Technical reviewers will comment on the feasibility of your proposal and a technical review will be forwarded to the Principal Investigator as part of the PI response stage.

4. Where to get help and information, and Technical Plan content

Refer to the University research data website www.le.ac.uk/researchdata where specific funder related information and the latest data management advice will be included.

The range of appropriate contacts includes:

- IT Services
- Library
- Research Support Office
- Leicester Learning Institute
- Information Assurance Services
- Enterprise and Business Development

A single point of contact is also available: email researchdata@le.ac.uk at any time and as early as possible in the bid process. This will mean specific queries or general requests for assistance can be directed to the right place(s). You can also request assistance with development of a data management plan via this email address.

It is also recommended that you use the Digital Curation Centre (DCC) DMPOnline⁶ resource to create a data management plan (DMP) using the AHRC template and requirements. As and when University of Leicester templates and specific guidance are created this will be confirmed on the RDM website⁷.

In 2014 the University agreed its **RDM Principles**⁸ which act to guide researchers and inform funders of the University approach (see 7. below).

Specific research IT services available include Research File Storage, high performance computing, Wiki, 'LAMP' stack (a general purpose, Linux, relational database and web hosting service, based around open source software- Linux, Apache, MySQL and PHP), file transfer (FileDrop) and source code control (Subversion SVN)⁹.

AHRC and general Information

AHRC Technical Plan (from 01.12.2012)	http://www.ahrc.ac.uk/Funding-Opportunities/Research-funding/RFG/Application-guidance/Pages/Technical-Plan.aspx
AHRC Data Protection Policy	http://www.ahrc.ac.uk/About-Us/Policies,-standards,-and-forms/Data-Protection-Policy/Pages/Data-Protection-Policy.aspx
AHRC Research Funding Guide	http://www.ahrc.ac.uk/SiteCollectionDocuments/Research-Funding-Guide.pdf

⁶ DMPOnline, <https://dmponline.dcc.ac.uk/>

⁷ Data Management Planning, <http://www2.le.ac.uk/services/research-data/create-data/DMPPlan>

⁸ RDM Principles, http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples

⁹ IT Services, <http://www2.le.ac.uk/offices/ithelp/>

University Research Data Management Support	researchdata@le.ac.uk
University Research Data Management Principles	http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples
Archaeology Data Service	http://archaeologydataservice.ac.uk/
Jisc Digital Media	http://www.jiscdigitalmedia.ac.uk/ http://www.jiscdigitalmedia.ac.uk/guides/a-z
Digital Curation Centre AHRC Funder's Data resource	http://www.dcc.ac.uk/resources/policy-and-legal/research-funding-policies/ahrc
Digital Curation Centre 'DMP Online' tool	https://dmponline.dcc.ac.uk/
Digital Curation Centre DMP Checklist	http://www.dcc.ac.uk/resources/data-management-plans/checklist
RCUK Joint Electronic Submission System (Je-S)	https://je-s.rcuk.ac.uk/JeS2WebLoginSite/Login.aspx
Sample AHRC Technical Plan (University of Bristol)	http://data.bris.ac.uk/files/2014/02/data.bris-AHRC-example-Technical-Plan.pdf

5. The AHRC Technical Plan

Your Technical Plan must not exceed four pages, and may be considerably shorter for projects with simple electronic outputs (such as a single spreadsheet). The content of your Technical Plan should also be reflected in other relevant parts of your application. For instance, the Project Management section (in the Case for Support) should take into account the technical aspects of the project and provide an assessment of any technical risks (for example, the unavailability of a key technical person). Copyright, intellectual property and ethical issues relating to digital outputs (see below) should also be dealt with in the Case for Support. Parts of your Technical Plan (especially Section 4: Preservation, Sustainability and Use) may also connect with your plans for wider research dissemination and the Pathways to Impact section.

Information presented in the Technical Plan is arranged under headings prescribed by the AHRC and each of these is explored below. They are:

- Section 1: Summary of Digital Outputs and Digital Technologies
- Section 2: Technical Methodology
 - o 2a: Standards and Formats
 - o 2b: Hardware and Software
 - o 2c: Data Acquisition, Processing, Analysis and Use
- Section 3: Technical Support and Relevant Experience
- Section 4: Preservation, Sustainability and Use
 - o 4a: Preserving Your Data

o 4b: Ensuring Continued Access and Use of Your Digital Outputs

Section 1. Summary of Digital Outputs and Digital Technologies

This summary section should provide an overview of what you intend to achieve technically, to enable reviewers to assess whether the plans for accomplishing this are realistic. Consider using a table to list digital outputs/technologies. Columns headings might be used to explain: '*Purpose*' (i.e. relationship to your research question/s, why it is being made), '*Source*' (for example, where images to be digitised will come from), '*Content*' (for example, what a database that you are intending to create will consist of once completed), '*Functionality*' (for example, how a software program will work/what it will do), '*Access arrangements*' (for example, 'will be made available via the Archaeology Data Service').

Not all of these headings will apply to every digital output. Tailor them and add any you think are required to suit your own needs, mentioning every significant digital output you intend to create but restricting detailed description to the following sections.

Section 2a. Technical Methodology: Standards and Formats

This is a particularly important part of the Technical Plan for any future user of your digital outputs. You should state which standards or file formats you intend to use (e.g. Open Document Format, CSV file or Excel spreadsheet) and explain why.

A significant barrier to sharing any research digitally, and one you should address in your Technical Plan, is the widespread use of highly specialised file formats. In order to use any digital file, a number of digital technologies must be available, which are known as technological 'dependencies'. These may be fairly common technologies such as a desktop PC, the Windows 7 operating system and Adobe Reader 9 software, or the technology required might be rare and hard to acquire or even unique (for example Windows 95 or any software package made by a single vendor).

You should address this problem by minimising the number of technological dependencies involved in using your digital output/technology as much as possible.

Where dependencies are inevitable you should favour 'open' technologies rather than proprietary ones. Proprietary technologies are owned by a vendor or group of vendors. Commercial pressures may lead to the withdrawal of a particular piece of commercial hardware or software, in favour of a new and possibly incompatible replacement. In contrast, 'open' technologies are supported by a community of users and do not have the same commercial vulnerabilities.

When selecting a file format, your own research needs must come first. If you find you need to use an unusual or non-standard format (one that isn't widely used) you should consider converting it into a more widely re-usable format, once you have finished using the data yourself. If you're unsure which file formats are 'open' and/or widely used, the UK Data Archive publishes a list of the deposit formats¹⁰ that they are prepared to accept. This list should give you an insight into which file formats are likely to have longevity.

¹⁰ UK Data Archive File Formats Table, www.data-archive.ac.uk/create-manage/format/formats-table.
See also Jisc Digital Media, <http://www.jiscdigitalmedia.ac.uk/>

In this section you should also provide an approximate figure for the volume of data you expect to create (i.e. total file sizes). Although this may be only a rough estimate, you should also provide the reasoning behind your calculations.

The decisions you make to ensure that your digital outputs/technologies are fit for others to reuse should also be mentioned in Section 4 of your Technical Plan: Preservation, Sustainability and Use (see below).

Section 2b. Technical Methodology: Hardware and Software

Within this section you should highlight any additional or exceptional (compared with standard institutional provision) hardware or software that you intend to use in the course of your research. Any software or hardware listed here that has a cost should also be mentioned in your 'Justification of Resources' (and cross-referenced if there is an associated budget line). You should write 'Not applicable' in this section if you do not intend to use any additional or exceptional hardware or software.

Section 2c. Technical Methodology: Data Acquisition, Processing, Analysis and Use

This section should explain how the standards and formats described in section 2a and the hardware and software described in section 2b relate to each other. This section should also correspond to the timetable outlined in your 'Case for Support', as the Technical Reviewer will assess the co-ordination of technical development with other project activities. You must show that you have considered how you will achieve your aims relating to digital output in practice, addressing any timetabling issues.

Consider also providing a simple timeline for each digital output – from creation/collection, through research use, to its deposition in an appropriate repository.

If relevant, this section should include information about storage, quality control and documenting data: these are explored in more detail below.

Data storage:

It is recommended that, as you create data, you should store it in the University's **Research File Storage** facility (RFS or R: Drive), managed by IT Services¹¹. All those with research storage needs are able to register for this service in order to be allocated a storage allocation appropriate to the project. Researchers are not charged for this service (unless requirements are extremely large), it offers peace of mind (for the researcher and research funder) and reduces researcher IT responsibilities, being managed by IT Services as a secure service, backed-up daily. The back-up procedures, policies and controlled access arrangements used by the RFS are of a high standard and a description of them can be provided for your application. If you do not intend to make use of RFS, your data storage provider's back-up procedures should be described instead.

Your Technical Plan should also briefly describe how you'll keep your data safe *before* it's deposited in a secure storage facility (such as RFS). This is particularly important if you're conducting field research. As a minimum, try to ensure that at all times more than one copy of the data exists, that

¹¹ Research File Storage, <http://www2.le.ac.uk/offices/ithelp/services/rfs>

every copy can easily be accounted for and located, if required, and that encrypted devices are used for temporary storage e.g. a digital voice recorder.

Quality control:

Your Technical Plan should describe how you'll ensure the quality of your digital output. Quality control should be considered whenever digital information is created or altered, for instance at the time of data collection, data entry or digitisation. It may be appropriate to nominate someone within the team and describe the procedures they'll use to ensure data quality (such as allocating time to checking a percentage of the data manually, entering values into prepared databases or ensuring that templates are used).

Documenting data:

Metadata¹² is 'data about data' or 'cataloguing information' that enables data users to find and/or use a digital output. In your Technical Plan you should outline plans for documentation, both to meet your own needs (i.e. to ensure that you can find what you want, when you need it) and those of later users.

In attempting to organise and document your digital output, it may help to imagine another user attempting to make sense of your output in your absence. If presented only with a digital output, they may be faced with the difficult task of 'unpicking' it. So, for example, how would they make sense of file and folder naming conventions? Has any special software been used in the creation of an output that must also be available in order to use it?

Section 3. Technical Support and Relevant Experience

In this section you should provide information about the technical expertise of anyone who will be part of your proposed project. Identify the responsibilities of key individuals if possible (for example, "*The Research Assistant will be responsible for ensuring the video recordings are copied to RFS storage as soon as possible after they have been made*"). Also mention any technical support services or individuals that you intend to call on. This may include input from IT Services and/or University Library.

Section 4. Preservation, Sustainability and Use

The AHRC's definitions of *Preservation* and *Sustainability* are:

- *Preservation* means the **storage** of a project's digital outputs beyond the end of funding
- *Sustainability* refers to the plans for ensuring that digital outputs remain **publicly accessible** and **usable** beyond the end of funding

You should clearly indicate in this section which of your digital outputs will be *preserved*, which *sustained* and which discarded. It may be that not everything can or should be preserved, as there is a cost in doing so (and a greater cost in doing so sustainably) but you should justify any decision to discard a digital output.

Where funding is acquired to create a digital output that has explicit re-use value, **AHRC requires a minimum of three years after the end of project funding for both preservation and sustainability**, though AHRC also points out that in many (possibly most) cases a longer period will be appropriate

¹² Metadata, <http://www2.le.ac.uk/services/research-data/organise-data/metadata>

for such an output. It is important to describe in outline how the costs of doing this (incurred after the end of the grant) will be funded, as AHRC awards cannot cover preservation or sustainability beyond the lifetime of your project.

AHRC awards can, however, be used to cover “... *appropriate costs of preparation and ingest of digital outputs*” that are incurred **within** the funding period. Therefore, in practice preservation and sustainability are often achieved by depositing the digital material in an archive (or similar agency) during the project. Realistic depositing charges made by the archive can be directly costed into your grant application. Remember that such charges must be paid *within* the lifetime of the project and not *after* it has finished.

Section 4a. Preserving Your Data

Preservation should be considered under four headings for each of your named digital outputs: *what, where, how* and for *how long*. If you don't intend to preserve your data yourself, you should also add '*who*'.

In cases where digital outputs are preserved but not sustained, the expectation is that they should still be freely available on request.

Section 4b Ensuring Continued Accessibility and Use of Your Digital Outputs

Sustainability should be considered in five ways: *what, where, how, for how long*, and *how the cost will be covered*. Again, if you're not intending to do this alone, add '*who*' and name any individuals or organisations that will be helping you achieve sustainability. There are costs to ensuring sustainability and these are greater than those of simple preservation alone.

For each digital output which is to be sustained, consider the costs involved and the expertise required to maintain and provide access beyond the end of the project (for example, issues relating to maintenance or updates to technology). There may also be a need to update the intellectual content (for example, information within a database) in addition to the technical infrastructure (for example, the format of a database).

Explain how each cost will be met and by whom. For example, the Library, or another University service, might provide a firm commitment to sustain and provide access to your output for a specified period.

The AHRC expects any digital outputs that are preserved and sustained also to be made **freely available** (i.e. with open public access for data and open-source status for any software that you develop). If you propose to charge users for access, you will have to justify this, as the default expectation is that all access will be free.

In this section it may be appropriate to refer back to your choices concerning standards, formats and documentation (which you described in Section 2a 'Technical Methodology: Standards and Formats') in cases where these make your outputs easier to preserve and/or sustain (for example, by using open formats rather than proprietary ones).

Archaeology Data Service:

Award holders in archaeological disciplines should deposit outputs with the Archaeology Data Service (ADS). The ADS should be consulted before the start of the proposed research to discuss the form and extent of electronic materials to be deposited, as there will be a charge for this deposit.

Any significant archaeological resources or datasets funded by the AHRC (together with documentation) must be offered for deposit with the ADS within three months of the end of the project.

Leicester Research Archive:

Managed by the Library on behalf of the University, Leicester Research Archive (LRA) is a digital archive of Leicester's research outputs. Most of the UK research councils, and some major grant making bodies now mandate (require) grant holders to make resulting publications available via open access. For some this means using a repository like the LRA¹³.

Intellectual property and ethical issues:

Intellectual property and ethical issues relating to digital outputs should primarily be dealt with in the 'Case for Support'. However, if these issues affect your ability to provide ongoing access to your digital outputs, they should also be mentioned in this section.

You must take account of the consequences of intellectual property, copyright and ethical issues during the period in which the digital output will be publicly accessible. The AHRC will expect you, as award holder, to deal with any copyright issues that concern your research. Examples are ensuring that 'release forms' are signed for interviewees or ensuring that copyright permissions are provided with any video documentation that you produce as part of your project. Bear in mind that if you are planning to use existing data as part of your research, that data may be subject to copyright or other restrictions which could prevent you from sharing any new outputs you derive from it. You should inform the AHRC if this is the case.

Unless stated otherwise, the ownership of intellectual property lies with the organisation carrying out the research. However if you plan to collaborate with an external partner, copyright and intellectual property rights issues may need to be clarified in a formal agreement. While this isn't required as part of your application, it should be mentioned that such an agreement will be created if the application is successful. Enterprise and Business Development (EBD)¹⁴ can advise further on collaborative research agreements and other intellectual property rights issues.

In addition, all recipients of research grants must adhere to the Data Protection Act 1998. If you plan to handle sensitive, personal data, extra security measures must be considered. The University Information Assurance Service¹⁵ can provide more advice on observing data protection legislation.

¹³ Leicester Research Archive, <https://lra.le.ac.uk/>

¹⁴ Enterprise and Business Development, <http://www2.le.ac.uk/offices/ebd>

¹⁵ Information Assurance Service, <http://www2.le.ac.uk/offices/ias>

6. Citing research data in research outputs

All journal articles and conference proceedings submitted for publication after 1 April 2013 which are the result of RCUK funded research must be made available for anyone to read without charge (made available on ‘open access’). Open access means that anyone with an internet connection can read your research paper or conference proceeding without the frustration of hitting a subscription or publisher paywall. The benefits in terms of wider dissemination, greater openness and transparency, and speeding up of discovery are considerable.

This requirement includes providing a means by which third parties can access any underpinning research datasets. This may be a reference (such as a unique URL or DOI) printed in a paper, which will lead an enquirer to a specific web page where the data is available. The enquirer might be directed to a page which displays the contact details of a custodian of the data, whom they are asked to email in order to gain access to the data.

Given the extended timescales involved in this process (possibly extending beyond the mandatory three years mentioned above), it is strongly recommended that the authors of published academic outputs *do not provide their current contact details* as a means of accessing underpinning research data, as these details will change over time. If you plan to use an established data repository service, ask this service for a unique reference identifier which could be included in the publication instead. If you’re not planning to use an established data repository service, contact researchdata@le.ac.uk or the Library for further guidance.

7. University RDM Principles

In 2014 the University agreed its **RDM Principles**¹⁶ which act to guide researchers and inform funders of the University approach and should be referred to in funding proposals.

Research data are defined as any material created or collected for the purposes of analysis to generate and validate original research results, irrespective of the format of data. Research data may be digital, paper based or in other forms. Examples of different types of research data include datasets, images, text (such as transcripts of interviews), audio and video recordings, and computer scripts.

Scope

1. *These principles apply to all research conducted at the University, regardless of funding source. They do not imply additional compliance where good practice and relevant research funders’ requirements are already being followed.*

¹⁶ RDM Principles, http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples

Research inception and planning

2. *Data management planning is an integral, essential and dynamic component of the research process from inception and should include provision for the selective long term custodianship of research data.*
3. *Research proposals should include all possible recovery of direct costs of research data management where the funder allows this.*

During the research: management and storage of data

4. *During the research process, data are an asset which needs to be appropriately managed and stored: to meet legislative, funder, information governance and University requirements; to facilitate data security (confidentiality, integrity, availability); to facilitate appropriate access, collaboration and sharing of data and results.*
5. *Data can be actively managed throughout, following and updating the data plan, recognising that storage and its funding is not infinite, with ongoing decisions regarding retention and destruction.*

After the research: retention, sharing, publishing, citation, re-use

6. *When the research has been completed, research data (including websites) of long term value, or data required by funders or the University must be selected for retention, then preserved and curated for as long as appropriate.*
7. *Data retained in these circumstances must be offered to funder or discipline repositories and/or to the UK Web Archive as appropriate. If such repositories are unavailable or unsuitable, data must be stored in a University repository. Data deposited with external repositories or unsuitable for making open access must be registered with the University.*
8. *There is a presumption of open access to data held in a University or other public repository. However, access may be restricted, subject to a time embargo or not permitted for legal (i.e. intellectual property, data protection, confidentiality, contractual requirements), ethical or commercial reasons.*
9. *Data should not be deposited with any organisation that does not commit to appropriate access and availability for re-use and exclusive rights to re-use or publish research should not be handed to commercial publishers, unless this is a condition of funding.*
10. *The re-use or sharing of data that are made available should not be unnecessarily restricted by licences or terms of use.*
11. *All research outputs must cite data produced and/or used during research as appropriate, detailing access to that data.*

Responsibilities

12. *Primary accountability for research data management lies with the most senior University researcher associated with the work or project. Responsibility for research data management may be delegated.*
13. *During the research process, researchers are responsible for adherence to legal requirements such as Data Protection and for the creation of metadata and other documentation that enables data to be discoverable, understandable and re-useable.*
14. *After the deposit of data with a repository, the repository is responsible for the on-going management of that data in accordance with legal, technical and other requirements.*
15. *The University will be responsible for providing a Research Data Management service led by the Library to include training, advice, guidance and data curation.*
16. *The University will secure sustainable solutions that meet the requirements for long term data storage and re-use as set out in these principles.*

The Managing Research Data guide series comprises:

- An Introduction to Managing Research Data – For Researchers and Students
- Data Management Planning – AHRC funding applicants
- Data Management Planning – BBSRC funding applicants
- Data Management Planning – EPSRC funding applicants
- Data Management Planning – ESRC funding applicants
- Data Management Planning – MRC funding applicants
- Data Management Planning – NERC funding applicants
- Data Management Planning – STFC funding applicants
- Data Management Planning – Non-RCUK funding applicants

They are part of a range of RDM material produced by the University, all available via www.le.ac.uk/researchdata.

University of Leicester

What would you do if you lost your research data tomorrow?
Take the research data health check... and find help to secure, share and exploit your valuable research.

Chances are you could use some helpful pointers in all of these!

Create	Organise	Keep	Find & Share
 <p>Have you...</p> <ul style="list-style-type: none"> <input type="checkbox"/> fully understood your research funders' data management requirements? Consent and transfer require that publicly funded research is made available for reuse – or you up to date with their latest policies? Your future funding might depend on it! <input type="checkbox"/> written a data management plan? Your funder may already require this for health & safety from the proposed stage to avoid headaches in the future. <input type="checkbox"/> gained ethics approval/consent? Writing a data management plan will aid planning and help you to manage ethics and governance requirements. <input type="checkbox"/> protected your intellectual property? Seeking intellectual property considerations for a range of conditions and appropriate ones, safeguarding your projects and perhaps your financial future too! 	 <p>Are your research files and data...</p> <ul style="list-style-type: none"> <input type="checkbox"/> clearly identified, in terms of content, format, standard, metadata? Are you sure? Honestly? If there's a danger of data being lost! Will you be able to remember how you generated your data, and will you or anyone else be able to find it in the future when you wish to reuse and share? <input type="checkbox"/> clearly labelled with versions and dates? How will you remember which was the definitive version and which dataset was used in producing a given research outcome? <input type="checkbox"/> logically structured and named? Once you've generated how you generated data, can you still find that the research tool? <input type="checkbox"/> future proofed against broken links, losing persistent identifiers? The persistent identification of digital resources can play a vital role in enabling their accessibility and usability over time using recommended data standards. 	 <p>Do you know...</p> <ul style="list-style-type: none"> <input type="checkbox"/> how to restrict access to your research data to the right people? Have you considered with authority or data centre experts to that only the right people have access to your research? <input type="checkbox"/> which data to keep and which data to discard? Managing research data effectively means being selective, which data to discard and when as well as what to keep and to share long! <input type="checkbox"/> how securely your data is stored? What happens if your storage media fail? How robust is it? Can't get it all on the tape and make sure it's secure? <input type="checkbox"/> how your data is backed-up? Have you made use of university and/or external resources to back up data so that you have multiple copies in case of loss or theft? 	 <p>Do you know how to...</p> <ul style="list-style-type: none"> <input type="checkbox"/> find existing information resources related to your research? Where can you find research data that you can re-use or combine with your own to produce new research? <input type="checkbox"/> share data with your collaborators securely and effectively? Whether building a collaborative project, generating results for others to re-use or sharing the final results of your research, how can you share your data with your colleagues (and of wider sharing)? <input type="checkbox"/> deposit your research data and outputs in an open repository? Is there an appropriate disciplinary or institutional repository and what do you need to do to deposit your research output? Your choice is good for sharing. <input type="checkbox"/> publish your research, and get it cited as well? Institutions and data centres must make research data available to others who providing credit to the researchers who did the work. Your future career could depend on it!

To find information, support, advice and training, as well as links to external resources, go to www.le.ac.uk/researchdata or email: researchdata@le.ac.uk



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