


# Data Management Planning

## NON-RCUK FUNDING APPLICANTS



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## Document History

Version	Date	Author	Detail/Reason for Change
<b>1-3</b>	02.09.2015	A. Burnham	Inclusion of RDM Principles, updates and corrections
<b>1-1</b>	20.02.2014	A. Burnham	Minor edit.
<b>First published version (1-0)</b> \UoL_DMP_NonRCUKGuide_v1-0.docx (.pdf)	15.07.2013	A. Burnham	First published version.
<b>Draft 4</b> \UoL_DMP_NonRCUKGuide_v0-4.docx	08.07.2013	A. Burnham	Final draft with minor edits.
<b>Draft 3</b> \UoL_DMP_NonRCUKGuide_v0-3.docx	06.06.2013	A. Burnham	Third draft.
<b>Draft 2</b> \UoL_DMP_NonRCUKGuide_v0-2.docx	07.06.2013	A. Burnham	Second draft for review by RCMG. Approved for release by PVC Research.
<b>Draft 1</b> \UoL_DMP_NonRCUKGuide_v0-1.docx	04.06..2013	A. Burnham/University of Bristol	First draft.



A requirement for greater research transparency lies at the heart of several influential and recently published reports including the UK government's Innovation and Research Strategy for Growth<sup>1</sup>.

Research funders encourage and expect fund-holders to follow policies and guidelines. This guide is designed to help applicants for non-RCUK funding, including Cancer Research UK (CRUK), the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), the National Institute for Health Research (NIHR), and the Wellcome Trust.

This document outlines expectations concerning the management and provision of access to research data and what applicants for funding and funded researchers will need to do in order to comply with those expectations.

## 1. Where to get help and information

Whatever your area of research and however it is to be funded there is support and advice available at the University.

Refer to the University research data website [www.le.ac.uk/researchdata](http://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](mailto:researchdata@le.ac.uk) at any time and as early as possible in the bid process. This will means specific queries or general request 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) DMPOnline<sup>2</sup> resource to create a data management plan (DMP) using the EPSRC template and requirements. As and when University of Leicester templates and specific guidance are created this will be confirmed on the RDM website<sup>3</sup>.

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<sup>1</sup> UK Government, Department for Business Innovation & Skills. Innovation and Research Strategy for Growth, [www.bis.gov.uk/innovatingforgrowth](http://www.bis.gov.uk/innovatingforgrowth)

<sup>2</sup> DMPOnline, <https://dmponline.dcc.ac.uk/>

<sup>3</sup> Data Management Planning, <http://www2.le.ac.uk/services/research-data/create-data/DMPlan>

In 2014 the University agreed its **RDM Principles**<sup>4</sup> which act to guide researchers and inform funders of the University approach. This can also be referred to:

*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.*

### **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.*

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<sup>4</sup> RDM Principles, [http://www2.le.ac.uk/services/research-data/documents/uol\\_rdmprinciples](http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples)

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.*

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)<sup>5</sup>.

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<sup>5</sup> IT Services, <http://www2.le.ac.uk/offices/ithelp/>

University-based research also now needs to recognise the requirement to provide assurance through the Information Governance Toolkit where NHS patient data is handled<sup>6</sup>. Within the College of Medicine, Biological Sciences and Psychology there is an Information Governance improvement programme, with a web presence<sup>7</sup>.

## General Information

University Research Data Management Website	<a href="http://www.le.ac.uk/researchdata">www.le.ac.uk/researchdata</a>
University Research Data Management Support	<a href="mailto:researchdata@le.ac.uk">researchdata@le.ac.uk</a>
University Research Data Management Principles	<a href="http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples">http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples</a>
University Information Governance	<a href="http://www2.le.ac.uk/colleges/medbiopsych/research/information-governance-igt">http://www2.le.ac.uk/colleges/medbiopsych/research/information-governance-igt</a>
UK Data Archive – Managing and Sharing Data	<a href="http://www.data-archive.ac.uk/media/2894/managingsharing.pdf">http://www.data-archive.ac.uk/media/2894/managingsharing.pdf</a>
Digital Curation Centre Funder's Data resource	<a href="http://www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies">http://www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies</a>
Digital Curation Centre 'DMP Online' tool	<a href="https://dmponline.dcc.ac.uk/">https://dmponline.dcc.ac.uk/</a>
Digital Curation Centre DMP Checklist	<a href="http://www.dcc.ac.uk/resources/data-management-plans/checklist">http://www.dcc.ac.uk/resources/data-management-plans/checklist</a>
RCUK Joint Electronic Submission System (Je-S)	<a href="https://je-s.rcuk.ac.uk/JeS2WebLoginSite/Login.aspx">https://je-s.rcuk.ac.uk/JeS2WebLoginSite/Login.aspx</a>

<sup>6</sup> HSCIC IG Toolkit, <https://www.igt.hscic.gov.uk/>

<sup>7</sup> University Information Governance, <http://www2.le.ac.uk/colleges/medbiopsych/research/information-governance-igt>



## 2. Requirements for Cancer Research UK (CRUK)

Since 1 April 2009 all those seeking funding from CRUK have been required to comply with its Data Sharing and Preservation Policy<sup>8</sup>.

CRUK Cancer Research UK regards it good research practice for all researchers to consider at the research proposal stage how they will manage and share the data they will generate.

CRUK requires that applicants applying for funding provide a data management and sharing plan as part of their application. This plan will be reviewed as part of the funding decision.

Plans should address eight points:

1. A description of the data
2. Standards to be used
3. Metadata
4. Methods of sharing
5. Timescale for release
6. Preservation
7. Data sharing agreements
8. Restrictions on sharing.

### CRUK Data Sharing Guidelines<sup>9</sup>

**Data Sharing** - It is the policy of Cancer Research UK that all data generated as a result of its funding be considered for sharing and made as widely and freely accessible as possible whilst safeguarding intellectual property, the privacy of patients and confidential data

**Data Management and Sharing Plan** – All applicants are required to submit a plan, which should cover the following:

- The volume, type, content and format of the final dataset
- The standards that will be utilised for data collection and management
- The metadata, documentation or other supporting material that should accompany the data for it to be interpreted correctly
- The method used to share data
- The timescale for public release of data
- The long-term preservation plan for the dataset

<sup>8</sup> CRUK Data Sharing Policy, [http://www.cancerresearchuk.org/sites/default/files/data\\_sharing\\_policy.pdf](http://www.cancerresearchuk.org/sites/default/files/data_sharing_policy.pdf)

<sup>9</sup> CRUK Data Sharing Guidelines, <http://www.cancerresearchuk.org/funding-for-researchers/applying-for-funding/policies-that-affect-your-grant/submission-of-a-data-sharing-and-preservation-strategy/data-sharing-guidelines>

- Whether a data sharing agreement will be required
- Any reasons why there may be restrictions on data sharing, for example;
  - Development arrangements through Cancer Research Technology including intellectual property protection and commercialisation
  - Proprietary Data - restrictions due to collaborations with for profit organisations
  - International policies governing the sharing of data collected outside of the UK
  - Confidentiality, ethical or consent issues that may arise with the use of data involving human subjects.

**Intellectual Property Rights and Proprietary Data** - Data which might have the potential to be exploited commercially or otherwise to deliver patient benefit should be discussed with University Enterprise and Business Development and Cancer Research Technology prior to data sharing.

**Standards, Metadata and Documentation** - For data sharing to be a success it is important that data are prepared in such a way that those using the dataset have a clear understanding of what the data mean so that they can be used appropriately. To enable this, applicants are encouraged to include with the dataset all the necessary information (metadata) describing the data and their format

**Methods for Data Sharing** – Data can be shared under the auspices of the Principal Investigator, through a third party, using a data enclave, or through a combination of methods.

**Timeframe for Data Sharing** - Cancer Research UK expects data to be released no later than the acceptance for publication of the main findings from the final dataset.

**Research involving human participants** - Investigators carrying out research involving human participants must ensure that consent is obtained to share information.

**Data Sharing Requests** – You may ask the requestor to provide a brief research proposal on how they wish to use the data.

**Data Sharing Agreements** - To ensure that data are used appropriately investigators may consider implementing a data sharing agreement that indicates the criteria for data access and conditions for research use.

**Data Acknowledgement** - As a minimum, researchers using shared data are expected to acknowledge the investigators who generated the data upon which any published findings are based.

**Data Preservation** - Once the funding for a project has ceased researchers should preserve all data resulting from that grant to ensure that data can be used for follow-up or new studies. Cancer Research UK expects that data be preserved and available for sharing with the science community for a minimum period of five years following the end of a research grant.



CRUK does not run its own data centre or prescribe where or how researchers should preserve and share data. Publications are to be made freely accessible via PubMed Central<sup>10</sup>.

### Open Access

CRUK released an Open Access Policy in March 2007<sup>11</sup> requiring that publications are made freely available via PubMed Central (PMC).

It is a condition of funding that Cancer Research UK funded researchers deposit in the Europe PMC database an electronic copy of the author's final version of papers accepted for publication. This should happen as soon as possible and no later than 6 months after publication. This requirement applies to research supported in whole, or in part, by Cancer Research UK which is published from 1 June 2007.

### Information to support CRUK applications

CRUK Website	<a href="http://www.cancerresearchuk.org/home/">http://www.cancerresearchuk.org/home/</a>
CRUK Data Sharing Policy	<a href="http://www.cancerresearchuk.org/prod_consump/groups/cr_common/@fre/@gen/documents/generalcontent/cr_016308.pdf">http://www.cancerresearchuk.org/prod_consump/groups/cr_common/@fre/@gen/documents/generalcontent/cr_016308.pdf</a>
CRUK Data Sharing Guidelines	<a href="http://www.cancerresearchuk.org/science/funding/terms-conditions/funding-policies/policy-data-sharing/data-sharing-guidelines/">http://www.cancerresearchuk.org/science/funding/terms-conditions/funding-policies/policy-data-sharing/data-sharing-guidelines/</a>
CRUK Data Sharing FAQs	<a href="http://www.cancerresearchuk.org/funding-for-researchers/applying-for-funding/policies-that-affect-your-grant/submission-of-a-data-sharing-and-preservation-strategy/data-sharing-faqs">http://www.cancerresearchuk.org/funding-for-researchers/applying-for-funding/policies-that-affect-your-grant/submission-of-a-data-sharing-and-preservation-strategy/data-sharing-faqs</a>
CRUK Open Access Policy	<a href="http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/RCUKOpenAccessPolicy.pdf">http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/RCUKOpenAccessPolicy.pdf</a>
CRUK Open Access Policy – FAQs (May 2013)	<a href="http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/OpenaccessFAQs.pdf">http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/OpenaccessFAQs.pdf</a>
National Cancer Research Institute Cancer Research Database	<a href="http://www.ncri.org.uk/what-we-do/research-database/">http://www.ncri.org.uk/what-we-do/research-database/</a>
Europe PubMed Central	<a href="http://europepmc.org/">http://europepmc.org/</a>
Digital Curation Centre CRUK page	<a href="http://www.dcc.ac.uk/resources/policy-and-legal/funders-data-policies/cancer-research-uk">http://www.dcc.ac.uk/resources/policy-and-legal/funders-data-policies/cancer-research-uk</a>

<sup>10</sup> Europe PubMed Central, <http://europepmc.org/> (known as UK PubMed Central until 1 November 2012)

<sup>11</sup> CRUK Open Access Policy, <http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/RCUKOpenAccessPolicy.pdf>



### 3. Requirements for the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs)

The NC3Rs Guidance for Applicants confirms that all applications must be submitted via the RCUK joint electronic submission system (Je-S). Applicants should refer to the “Applicant and Grant Holder Handbook”<sup>12</sup>.

The NC3Rs has adopted the Medical Research Council (MRC) policy on Data Management and Research Data Sharing<sup>13</sup> and so reference should be made to this policy and the University document supporting MRC applicants<sup>14</sup>.

All applications are required to include a Data Management Plan (DMP) as an attachment to their application on Je-S. The DMP should comply with the MRC’s policy on research data sharing. The DMP should demonstrate how the applicant will meet, or already meets their responsibilities for research data quality, sharing and security. It should refer to any institutional and study data policies, systems and procedures and be regularly reviewed throughout the research cycle. The DMP is reviewed by peer reviewers alongside the Case for Support.

To produce a DMP to accompany a research proposal, applicants can use the MRC data management plan template<sup>15</sup>. If it is not used, then the applicant should ensure that all the topics listed on the template are addressed:

- Description of the data
- Data collection / generation
- Data management, documentation and curation
- Data security and confidentiality of potentially disclosive personal information
- Data sharing and access
- Responsibilities
- Relevant institutional, departmental or study policies on data sharing and data Security

The length of the DMP will be dependent on the complexity of the data collected, but should be between half a page and a maximum of 3 pages.

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<sup>12</sup> NC3Rs Applicant and Grant Holder Handbook, <http://www.nc3rs.org.uk/sites/default/files/documents/Funding/Handbook.pdf>

<sup>13</sup> MRC policy on Data Management and Research Data Sharing, <http://www.mrc.ac.uk/research/research-policy-ethics/data-sharing/policy/>

<sup>14</sup> Data Management Planning: MRC funding applicants, <http://www2.le.ac.uk/services/research-data/documents/data-management-planning-mrc-funding-applicants-v1-1>

<sup>15</sup> MRC Template for a Data Management Plan, v01-00, 1 May 2012, <http://www.mrc.ac.uk/research/research-policy-ethics/data-sharing/data-management-plans/>

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## Information to support NC3Rs applications

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NC3Rs website	<a href="http://www.nc3rs.org.uk/">http://www.nc3rs.org.uk/</a>
NC3Rs Project and Pilot Study Grant Schemes: Guidance for Applicants	<a href="https://www.nc3rs.org.uk/funding/pilot-study-grants">https://www.nc3rs.org.uk/funding/pilot-study-grants</a>
NC3Rs Applicant and Grant Holder Handbook 2014	<a href="http://www.nc3rs.org.uk/sites/default/files/documents/Funding/Handbook.pdf">http://www.nc3rs.org.uk/sites/default/files/documents/Funding/Handbook.pdf</a>
MRC Policy on Research Data-sharing	<a href="http://www.mrc.ac.uk/research/research-policy-ethics/data-sharing/policy/">http://www.mrc.ac.uk/research/research-policy-ethics/data-sharing/policy/</a>
MRC DMP template	<a href="http://www.mrc.ac.uk/research/research-policy-ethics/data-sharing/data-management-plans/">http://www.mrc.ac.uk/research/research-policy-ethics/data-sharing/data-management-plans/</a>
Digital Curation Centre MRC Funder's Data resource	<a href="http://www.dcc.ac.uk/resources/policy-and-legal/research-funding-policies/mrc">http://www.dcc.ac.uk/resources/policy-and-legal/research-funding-policies/mrc</a>
Digital Curation Centre guidance on MRC data planning	<a href="http://www.dcc.ac.uk/resources/policy-and-legal/mrc-data-plan-faqs">http://www.dcc.ac.uk/resources/policy-and-legal/mrc-data-plan-faqs</a>

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## 4. Requirements for the National Institute for Health Research (NIHR)

The NIHR commissions and funds NHS, social care and public health research essential for delivering responsibilities in public, health and personal social services. Its role is to develop the research evidence to support decision making by professionals, policy makers and patients, make this evidence available, and encourage its uptake and use.

Its key objective is to improve the quality, relevance, and focus of research in the NHS and social care by distributing funds in a transparent way after open competition and peer review.

### NIHR Applications

Since 1 April 2009, all applications to NHS Research Ethics Committees have been made using Integrated Research Application Service (IRAS)<sup>16</sup> which was launched in January 2008.

**IRAS** is a single online system for applying for permissions and approvals for health and social care/community research in the UK. It streamlines the process for seeking relevant approvals, as researchers no longer need to enter the details for a single project in separate application forms.

The IRAS form can be accessed via the 'myresearchproject' website<sup>17</sup>.

The Integrated Research Application System (IRAS):

- Is a single system for applying for the permissions and approvals for health and social care / community care research in the UK.
- Enables you to enter the information about your project once instead of duplicating information in separate application forms.
- Uses filters to ensure that the data collected and collated is appropriate to the type of study, and consequently the permissions and approvals required.
- Helps you to meet regulatory and governance requirements.
- Retains familiar aspects of the NRES form system.

### Data issues within the IRAS form

Unsurprisingly management of confidential data is a critical theme of the IRAs form, issues including:

- Storage and use of personal data during the study.
- Physical security arrangements for storage of personal data during the study.
- Ensuring the confidentiality of personal data.

<sup>16</sup> Integrated Research Application Service (IRAS), <http://www.hra.nhs.uk/resources/applying-for-reviews/integrated-research-application-system-iras/>

<sup>17</sup> IRAS form, <https://www.myresearchproject.org.uk/>

- Policy and procedures for ensuring confidentiality, e.g. anonymisation or pseudonymisation of data.
- Whether identifiers will be held in the same database as the clinical data, or in a separate database.
- Who will have access to participants' personal data during the study.
- Storage and use of data after the end of the study.
- Where the data generated by the study will be analysed and by whom.
- Who will have control of and act as the custodian for the data generated by the study.
- How long personal data will be stored or accessed after the study has ended.
- For how long research data generated by the study will be stored.
- Long term arrangements for storage of research data after the study has ended.
- Whether identifiable patient data will be accessed outside the care team without prior consent at any stage of the project.
- Review of the statistical aspects of the research.
- The methods of analysis (statistical or other appropriate methods, e.g. for qualitative research) by which the data will be evaluated to meet the study objectives.
- If using identifiable personal data, how anonymity will be maintained when publishing the results.
- Informing participants of results.

With such an emphasis on all aspects of data management it is advisable to create a data management plan early in order to inform the IRAS submission and for on-going support of the conduct of research.

IRAS captures the information needed for the relevant approvals from the following review bodies:

- Administration of Radioactive Substances Advisory Committee (ARSAC)
- Medicines and Healthcare products Regulatory Agency (MHRA) – for CTIMPs and devices
- NHS / HSC R&D offices – across the UK
- NRES / NHS / HSC Research Ethics Committees
- 'National Information Governance Board (NIGB)' – application now goes to the Confidentiality Advisory Group (CAG), part of the HRA
- National Offender Management Service (NOMS)
- National Social Care Research Ethics Committee

### Open Access to research

NIHR encourages initiatives that increase the potential for quality research to be widely disseminated and freely accessed. They support the principle of Open Access to research as set out in its Policy on Open Access for funded research<sup>18</sup>.

### Transparent and accurate reporting of research

The NIHR part-funds the EQUATOR Network<sup>19</sup>, which aims to enhance the reliability of medical research literature by promoting transparent and accurate reporting of health research.

<sup>18</sup> NIHR Policy on Open Access for funded research, <http://www.nihr.ac.uk/policy-and-standards/nihr-policy-on-open-access-for-its-funded-research.htm>

<sup>19</sup> EQUATOR Network, <http://www.equator-network.org/>

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## Information to support NIHR applications

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NIHR Website	<a href="http://www.nihr.ac.uk/research">http://www.nihr.ac.uk/research</a>
NIHR Policy on Open Access for funded research	<a href="http://www.nihr.ac.uk/policy-and-standards/nihr-policy-on-open-access-for-its-funded-research.htm">http://www.nihr.ac.uk/policy-and-standards/nihr-policy-on-open-access-for-its-funded-research.htm</a>
Integrated Research Application Service (IRAS)	<a href="http://www.hra.nhs.uk/resources/applying-for-reviews/integrated-research-application-system-iras/">http://www.hra.nhs.uk/resources/applying-for-reviews/integrated-research-application-system-iras/</a>
IRAS form	<a href="https://www.myresearchproject.org.uk/">https://www.myresearchproject.org.uk/</a>

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## 5. Requirements for the Wellcome Trust

The Wellcome Trust published a policy and policy statement on data management and sharing in January 2007 and this was revised in August 2010<sup>20</sup>.

This states that all funded researchers should maximise access to their research data with as few restrictions as possible. It requires applicants whose proposed research will generate data that hold significant value as a resource for the wider research community to submit a data management and sharing plan as part of the application process.

The Wellcome Trust policy is aligned with others including MRC, BBSRC, the US National Institutes of Health and the NCRI Cancer Informatics initiative (refer to University data management guides regarding MRC and BBSRC<sup>21</sup>).

### Data management and sharing plan

All applicants for funding should refer to the Trust's guidance on developing a data management and sharing plan<sup>22</sup>.

Wellcome Trust requires that all funded researchers maximise the availability of their research data with as few restrictions as possible. When applying via the biomedical sciences or medical humanities funding streams and the proposed research will result in data holding significant value as a resource for the wider research community, then you will be required to submit a data management and sharing plan **prior** to an award being made

### When is a Data management and sharing plan required?

Plans are required in situations where the data outputs form a resource from which researchers and other users would be able to generate additional benefits, where the primary goal is to create a database resource and other research generating significant datasets that could be shared for added value e.g. where the data has clear utility for research questions beyond those that the data generators are seeking to address.

Examples of applications requiring a data management and sharing plan would include large-scale genetic association studies of common diseases; genome-wide or large-scale functional genomic studies in a specific organism; and longitudinal studies of patient and population cohorts.

For studies generating small-scale and limited data outputs, a data management and sharing plan will **not** normally be required

### Data management and sharing plan content

There is **not** a set format for data management and sharing plans.

<sup>20</sup> Position statement on data management and sharing, <http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTX035043.htm>

<sup>21</sup> University Data Planning documents, <http://www2.le.ac.uk/services/research-data/advice-and-support/internal>

<sup>22</sup> Guidance on developing a data management and sharing plan, <http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Guidance-for-researchers/index.htm>

They should be proportionate, both to the scale of the datasets generated and their likely level of value to the research community.

Questions to address concern how data outputs will be managed and shared:

- *What data outputs will your research generate and what data will have value to other researchers?*  
Researchers should maximise access to research datasets of value to the wider research community in a timely and responsible manner in accordance with recognised data standards and providing appropriate metadata.
- *When will you share the data?*  
All plans must state clearly the timescales over which datasets of value will be shared. Researchers have a right to a reasonable (but not unlimited) period of exclusive use for the research data that they produce but all grant holders must ensure as an absolute minimum that the data underpinning research papers are made available to other researchers on publication.
- *Where will you make the data available?*  
Researchers should generally deposit data in recognised data repositories where these exist for particular data types.
- *How will other researchers be able to access the data?*  
Data should be made available to other researchers with as few restrictions as possible. Depending on the study, it may be appropriate to establish a graded access procedure in which less sensitive data e.g. anonymised and aggregate data, are made readily available, whereas applications to access to more sensitive datasets are subject to a more stringent assessment process.
- *Are any limits to data sharing required - for example, to either safeguard research participants or to gain appropriate intellectual property protection?*
- *How will you ensure that key datasets are preserved to ensure their long-term value?*  
Researchers must consider how datasets that have long-term value will be preserved and curated beyond the lifetime of the grant.
- *What resources will you require to deliver your plan?*  
This includes people and skills, technical infrastructure and tools.



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## Information to support Wellcome Trust applications

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Wellcome Trust Website	<a href="http://www.wellcome.ac.uk/index.htm">http://www.wellcome.ac.uk/index.htm</a>
Wellcome Trust Policy on data management and sharing	<a href="http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTX035043.htm">http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTX035043.htm</a>
Guidance for researchers: Developing a data management and sharing plan	<a href="http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Guidance-for-researchers/index.htm">http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Guidance-for-researchers/index.htm</a>
FAQs - Position on data management and sharing	<a href="http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Data-management-and-sharing/WTX035045.htm">http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Data-management-and-sharing/WTX035045.htm</a>
Open Access policy	<a href="http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002766.htm">http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002766.htm</a>
Policy on Intellectual property and patents	<a href="http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002762.htm">http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002762.htm</a>
Guidelines on good research practice	<a href="http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002757.htm">http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002757.htm</a>
Requirements for publishing Wellcome Trust-funded research papers	<a href="http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/wtp053977.pdf">http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/wtp053977.pdf</a>

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## 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](http://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><b>Have you...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>fully understood your research funders' data management requirements?</b> Government and funders require that publicly funded research is made available for reuse – are you up to date with their latest policies? Your future funding might depend on it!</li> <li><input type="checkbox"/> <b>written a data management plan?</b> Your funder may already require this but build it in from the proposal stage to avoid headaches in the future.</li> <li><input type="checkbox"/> <b>gained ethics approval/consent?</b> Writing a data management plan with all planning and help you to navigate ethics and governance requirements.</li> <li><input type="checkbox"/> <b>protected your intellectual property?</b> Licensing intellectual property considerations for a range like could have you appropriate credit, safeguarding career prospects and perhaps your financial future too!</li> </ul>	 <p><b>Are your research files and data...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>clearly described, in terms of content (using standardised nomenclature)?</b> All research has a shelf life. It'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 reuse?</li> <li><input type="checkbox"/> <b>clearly labelled with versions and dates?</b> How will you remember which was the definitive version and which added new results to previous research outcomes?</li> <li><input type="checkbox"/> <b>logically structured and named?</b> Once you've remembered how you generated data, can you all find the relevant files?</li> <li><input type="checkbox"/> <b>have provided against broken links, using persistent identifiers?</b> The persistent identification of digital research can play a vital role in enabling that accessibility and availability over time using recommended data standards.</li> </ul>	 <p><b>Do you know...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>how to restrict access to your research data to the right people?</b> Have you consulted with university or data centre experts to that only the right people have access to your research?</li> <li><input type="checkbox"/> <b>which data to keep and which data to discard?</b> Managing research data effectively means being selective: which data to discard and when, and what to keep and for how long?</li> <li><input type="checkbox"/> <b>how securely your data is stored?</b> What happens if your storage media fail? How robust is it? Could it get left on the train and could somebody else misuse it?</li> <li><input type="checkbox"/> <b>how your data is backed-up?</b> Have you made use of university and/or external research to back up data in that you have multiple copies in case of loss or theft?</li> </ul>	 <p><b>Do you know how to...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>find existing information resources related to your research?</b> Where can you find research data that you can reuse or combine with your own to produce new research?</li> <li><input type="checkbox"/> <b>share data with your collaborators securely and effectively?</b> Whether building a collaborative proposal, generating results for others to comment on or sharing the final outputs of your research – how will you live with your colleagues' views on data sharing?</li> <li><input type="checkbox"/> <b>deposit your research data and outputs in an open repository?</b> Is there an appropriate discipline or institutional repository and what do you need to do to deposit your research output? Your data is your research.</li> <li><input type="checkbox"/> <b>publish your research, and get it cited as well?</b> Institutions and data centres must make research data available to others while protecting credit to the researchers who did the work. Your future career could depend on it!</li> </ul>

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