LUND UNIVERSITY
Joint Faculties of Humanities and Theology

Working committee of the Faculty Board

Guidelines concerning research data storage at the Faculties of Humanities and Theology

Lund University is a public authority and is therefore obliged to preserve, organise and maintain all public documents from the University's activities (Swedish Archives Act 1990:782, section 3). As documents resulting from research at the Faculties of Humanities and Theology are increasingly digital, it is of the utmost importance to establish procedures to ensure that the data will remain available in a way that corresponds to the current paper documents.

The long-term goal of introducing these new procedures is to promote:
- open research
- good research practice and good data management in the research process
- good regulatory compliance
- future access to research data.

Research data[1] refers to all types of research documents defined in Lund University's document management plan[2], i.e. both those to be preserved and those to be disposed of after a specified retention period. Any disposal must be in accordance with the Swedish National Archives' regulations. The rules that apply can be found in the document "Gallrings- och bevarandeplan för forskningshandlingar inom de Humanistiska och teologiska fakulteterna" (Disposal and preservation plan for research documents at the Faculties of Humanities and Theology), reg. no V 2019/2171. Storage of research data should also take into account current rules regarding e.g. information and IT security, personal data processing and ethical principles.

Doctoral students' research documents are considered part of Lund University's portfolio of public documents and are therefore also covered by these guidelines.

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[1] There are other definitions , such as *"Research data* refers to objects treated as potential evidence for one or several claims about phenomena; and that can be shared with others."
Leonelli S. (2015) "What Counts as Scientific Data? A Relational Framework." *Philosophy of Science* 82: 810–21. Horizon 2020, https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm: "Research data is information (particularly facts or numbers) collected to be examined and considered, and to serve as a basis for reasoning, discussion or calculation."
[2] https://www.staff.lu.se/support-and-tools/legal-and-record-management/records-management

When the term "researcher" is used below, it refers all research staff, regardless of the type of employment, and thus also all research students.

The short-term goal of introducing these procedures is to clarify the organisation's requirements and expectations of researchers, and to:
- support researchers in their data management by providing storage space for research data during and after the project period
- ensure that the faculty's research data can always be found, without help from the researcher
- prepare for the possibility of somewhat automatically transferring data and metadata to a planned e-archive at Lund University, without requiring each researcher to participate in the process

In addition to having a clearly identified location for research project data[3], we need to be able to distinguish between active data and archived data. We also need to organise the data in a structured manner. Long-term preservation must take place in open file formats that make the data accessible even in the long term.

The legal rights and obligations apply, irrespective of the choice of storage solution. The same rules apply as long as the document is stored with the public authority – regardless of where or how it is stored.

Bear in mind that there are other requirements that apply to research data, in addition to these storage guidelines. If, for example, the project processes personal data, this must be reported via the PULU[4] form. Ethical review may also be required, etc.

By following the research data storage procedures below, we also:
- satisfy the Swedish Archives Act's requirement to preserve and keep research documents organised
- are able to link research projects in LUCRIS to their research data
- enable secure storage during the project period and prepare for e-archiving
- ensure that research data remains at LU, even after the researcher's employment has terminated
- enable responding, if necessary, to suspicions of research misconduct by being able to produce evidence in the form of preserved research data
- facilitate the creation of well-organised data sets that can easily be cited, shared and re-used by the researcher or others to answer new research questions, if needed.

Research data storage procedures at the Faculties of Humanities and Theology
The procedures apply to all researchers working at the Faculties of Humanities and Theology and to all research projects that have their main residence at one of the faculty organisations. In brief, this means that the research data during the project period *should*, and at the end of the project *must*:

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[3] Same definition of research projects that LUCRIS uses. See also "Riktlinjer för Humanistiska och teologiska fakulteterna gällande inläggning av forskningsinformation i LUCRIS" (Dnr STYR 2017/1889). How the project is financed does not matter.
[4] https://pulu.adm.lu.se/

- be stored in a project folder associated with the applicable storage solution
- be organised according to the standard structure
- contain metadata about the project and its data
- contain the necessary documentation
- be stored in open file format
- be given file names that facilitate understanding of the content
- be disposed of[5], if possible, at the end of the retention period.

The research project manager in charge is also responsible for ensuring that the project's research data is stored securely throughout the project period and that the right people have access to the project data. You must also ensure that the necessary decisions on disposal/preservation are taken no later than at the end of the project (see below).

Below are more detailed descriptions of the requirements and related comments.

During the project period, the project data must be stored in a work folder specifically intended for the project, in the storage solution provided by the IT unit.

This ensures secure storage of data during the project period. If another storage solution is chosen, for example, if an equivalent solution is provided by another IT provider, an assessment of information security must be made. In cases where the research data is of such a sensitive nature that the storage solution does not meet all the information security considerations or ethical principles, another storage solution must be chosen[6].

The project folder shall contain the following four main subfolders:
- *Administration*
- *Method*
- *Data*
- *Research output*

Only research documents that are <u>not</u> suitable for LUCRIS may be added to the Research output folder.

The requirement applies primarily to the archived project folder, but in order to avoid further work in connection with the archiving process, we recommend that you apply this structure in the project folder already during the project period. The research project manager is free to determine the organisation of the data within these folders, but consideration should be given to making the structure understandable and logical for other researchers.

Metadata on the project and its data shall be stored in the Data folder.

At least one README file shall be placed at the top of the folder. The text should explain what can be found in the folder, how different files relate to each other, etc. in order for other researchers to understand and possibly utilise the research data.

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[5] Disposal = permanently destroy data
[6] Feel free to discuss your choice of storage solution with the IT unit.

The minimum requirement for project metadata is based on the "OpenAIRE guidelines for Data Archives"[7], which in turn are based on the Dublin Core[8]. Metadata is important for future indexing, searching and possibly also statistics. Text elements that are part of the metadata structure must be written in either Swedish or English. The libraries at the Faculties of Humanities and Theology provide a template for this. The template includes requirements for a link to the project in LUCRIS.

If necessary, additional README files or other information documents may be added to the structure if deemed necessary by the research project manager.

Required documentation in addition to metadata.
Other documentation that is necessary for an outside researcher to understand and interpret the contents of the folder may be e.g. method descriptions, field journals and manuals for applied software or hardware.

The files in the folder must be stored in open file format.
The choice of file format for digital documents is very important in order to ensure that the data will remain accessible in the future. Non-proprietary *open formats* shall be used as far as possible. The choice of format shall be based on the Swedish National Archives' regulations and general advice on technical requirements for electronic documents[9].

File names that facilitate understanding of the content shall be used.

The choice of file name is important, but what constitutes a good file name depends on the context. Use names that make the content understandable as well as logical to external researchers.

On completion of the project, the project data shall be stored in a designated project folder in the archived storage solution provided by the IT unit. The data to be preserved shall be kept separate from the data deemed eligible for disposal.

The research project manager is responsible for archiving any documents in the project folder that are to be preserved and that a decision on possible disposal is taken no later than at the end of the project period – which does not necessarily coincide with the termination of funding. Decisions on disposal must always be taken in accordance with current regulations (see "Gallrings- och bevarandeplan för forskningshandlingar vid de Humanistiska och teologiska fakulteterna" (Disposal and preservation plan for research documents at the Faculties of Humanities and Theology), reg. no V 2019/2171)[10], i.e. disposal of documents requires approval from the head of department.

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[7] https://guidelines.openaire.eu/en/latest/data/index.html

[8] https://www.dublincore.org

[9] https://riksarkivet.se/rafs?item=106 (RA-FS 2009:2). See also https://riksarkivet.se/medium-och-formatval.

[10] https://www.staff.lu.se/support-and-tools/legal-and-record-management/record-management/archiving/weeding-documents; special rules regarding research documents: https://www.staff.lu.se/support-and-tools/legal-and-record-management/record-management/archiving/research-documents

For research ethical reasons, research data shall be stored for at least 10 years after publication, in order to enable critical review of the research findings.

If the project processes personal data, this must be reported to the data protection officer at the end of the project, as the register (the PULU system) must only contain ongoing processing of personal data.

Data eligible for disposal are automatically disposed of at the end of the retention period.

After assessing the preservation value, which is done in consultation between researchers and the head of department (see above), the IT unit transfers the documents deemed disposable after the retention period by the head of department to the corresponding folder at the intermediate archive of the Faculties of Humanities and Theology. The documents will automatically be disposed of at the end of the retention period. The documents that are to be preserved remain in the project folder, which is then transferred in its entirety to the storage solution for archived material.

Further information in related instructions
For more detailed instructions on how to apply these procedures in practice, for example, which files to store and which file formats are approved, see the Instructions for research data storage at the Faculties of Humanities and Theology ("Anvisningar för forskningsdatalagring vid HT-fakulteterna"). The research support offered by the faculty libraries, in collaboration with the IT unit, also includes support with regard to research data storage and the procedures laid down in the present guidelines.