

Saxion Guidelines for Research Datamanagement

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A. Introduction

1. The preparation and retention of appropriate research data is an essential component of all research.
2. Saxion and its researchers have a shared responsibility to ensure that research data are appropriately recorded, archived for the required length of time, and made available for review under appropriate and legal conditions.
3. At a minimum, research data must be stored:
 - a) to address possible questions regarding integrity that can arise with respect to the propriety of research conduct.
 - b) to ensure the possibility of reproducing research thereby validating it.
4. Furthermore,
 - a) research data are of themselves of great value and valuable assets for reuse,
 - b) funders and publishers may demand storing and sharing of research data,
 - c) research data can be required for the protection of intellectual property rights.
5. The execution of these Guidelines is the responsibility of the Saxion researchers, and will be audited by Data Steward(s).

B. Legal Issues

1. Ownership.
 - a) Clarification of ownership and rights associated with research data should be determined early in the research project planning.
 - b) Documentation of these details should be stored with the research data to ensure appropriate management and access to the research data associated with the project.
 - c) In particular, it is preferable that, where research is undertaken in accordance with a contractual agreement or under (commercial) sponsorship the ownership of the research data and responsibilities be determined prior to commencement of the research contract. It should be specified in the research contract.

2. Copyright

- a) Under the current law and the hbo Collective Agreement (cao hbo) for any work created by employees of Saxion University of Applied Sciences the intellectual property rights are owned by Saxion. Work includes (non-exhaustive list) datasets, articles, books, musical compositions, publications or any digital or electronic version of these works that contains material created by any member of staff.
- b) The ownership of intellectual property rights of works created by freelance researchers is governed by law. Any changes in ownership must be stipulated in a written contract.
- c) The ownership of intellectual property rights of works created by students is governed by law. Any changes in ownership must be stipulated in a written contract.
- d) For further information concerning Intellectual property please see the [Saxion IP rules and regulations](#).

3. Privacy

- a) Researchers who are collecting information from or about individuals for their research should be aware of the requirements and implications of privacy legislation. They must also be aware of any privacy policy of any other relevant organization. This may affect the data collection, storage, use and disclosure of the information they wish to collect. Please see the Saxion privacy officer for more information.
- b) Researchers are required to implement the [Code of Conduct Applied Research for Higher Professional Education \(VH\)](#) for all research projects.

4. Researchers should:

- a) Include clear documentation within the research (data management) dossier about:
 - the nature of any private, sensitive or confidential information collected
 - non-disclosure agreements and any restrictions on use of the data;
 - consequences/penalties for breaches of confidentiality, and,
 - steps taken to safeguard privacy and confidentiality.
- b) Ensure that participants have a full description of the project in language they can understand, of the nature of their participation and of the implications in terms of risks and benefits of participating in the research. This includes information about what will

happen to their information, how it will be used, stored and when it will be disposed of. A standard consent form is available following discussion with Saxion's legal team .

- c) Ensure that participants are dually informed prior to consent and that consent is freely given.
- d) Ensure that the signed consent forms and the information sheet are correctly filed together in the research repository of Saxion as proof of the process of informed consent and as evidence that the consent to participate was freely given before the participants participation in the research.
- e) Ensure identifiable personal data is stored in a separate file apart from the corresponding research data. The personal data and research data should be linked by an identifier.
- f) Ensure the contents of the personal data are destroyed when they are no longer required to reach the aims of the project.

5. Confidentiality

- a) Research data generated or compiled in research projects may be confidential. Please see the Saxion privacy officer for more information. Examples of confidential material include, but are not limited to:
 - Research data which link individual human participants to the research and may be held for a period of time for a follow up study. For example signed consent forms or master lists of names and addresses. Personal information is protected under Privacy legislation.
 - Research data which are sensitive. For example, highly personal data, data which may be incriminating either to the provider of the data or to a third party, data that although not directly related to an individual is in such a form that identification the subject can still be made (for example photographs, videotape, audiotape).
 - Research data that may cause harm to a third party should it be released.
 - Research data protected by a contract of secrecy or non-disclosure. The research may be considered 'commercially valuable' or 'trade secret'.
- b) Research material of a sensitive or confidential nature, which has possible patent, trademarks or Intellectual Property implications is considered confidential for commercial purposes. Information about relevant documents and contracts relating to these agreements should be stored with the data.

- c) Confidential research data should be stored securely, with controlled access. The signed consent forms for a particular project should be stored separately from the collected research data for that project.
- d) Breach of confidentiality agreements and requirements must be reported to the Saxion privacy officer as soon as the knowledge of the breach occurs. A breach is considered to have occurred when:
 - Disclosure of research information with imposed confidentiality restrictions has happened.
 - A formal confidentiality or non-disclosure agreement has been broken.
 - Confidential data has entered the public domain.

When in doubt over whether or not a breach has occurred please contact that Saxion Privacy officer.

6. Patents ([Please see IP rules and regulations](#))

- a) Where a patent has been granted all research data must be retained for the life of the patent.
- b) In the cases of commercially exploitable research, and research data that concern a patent application filed by the University, it is necessary for original research data to be retained at the University.
- c) All correspondence, deeds and contracts associated with the commercial exploitation of the patent must be retained within the repository of the University.
- d) Researchers are required to disclose inventions to the University. This will provide a means of assessing the potential value of the intellectual property.

7. Sponsored research

- a) Funding bodies may have specific requirements for retention of research data. Researchers should be aware of the conditions of any awarded funding or contracts supporting their research.

8. Discipline specific practices or codes

- a) Researchers should be aware of, and adopt, the relevant practices or codes within their research discipline that establish norms or best practice for the retention of research data and records researchers in discussion with the Saxion Data Librarian.

C. Documenting, Storing and Archiving Research Data

1. Data Documentation

- a) Research data need to be documented with metadata when archiving research data. Metadata is a subset of core standardized and structured data documentation that explains and enables the requirements of A. 3 and 4 to be met.
- b) Researchers are expected to provide provenance and contextual information for the data so that it can be understood in the future. This information includes metadata on both file and data level

Metadata on file level:

- The context of data collection: project history, aim, objectives and hypotheses
- Data collection methods: sampling, data collection process, instruments used, hardware and software used, scale and resolution, temporal and geographic coverage and secondary data sources used
- Dataset structure of data files, study cases, relationships between files
- Data validation, checking, proofing, cleaning and quality assurance procedures carried out
- Changes made to data over time since their original creation and identification of different versions of data files
- The legal implications of the research including privacy
- Information on access and (re) use conditions or data confidentiality
- The retention (periods) and disposal of (parts of) the dataset

Metadata on Data-level:

- Names, labels and descriptions for variables, records and their values
 - Explanation or definition of codes and classification schemes used
 - Definitions of acronyms used
 - Codes of, and reasons for, missing values
 - Derived data created after collection, with code, algorithm or command file
- c) Data level descriptions are preferably embedded within a data file itself. Should this not be possible a separate file with the required information should be linked to the data file. Many data analysis software packages have facilities for data annotation and description, as variable attributes (labels, codes, data type, missing values), data type definitions, table relationships, etc.
- d) Researchers are expected to use the Saxion metadata set. This is based on existing international metadata standards or schemes.
- e) Some disciplines develop and adopt their own metadata standards and/or practices for the management of their research data. Researchers may use the metadata standards that are prevalent within their discipline. This in discussion with the Saxion Data Librarian.

2. Data storage during the research process

- a) During the research process, researchers are responsible for:
- compiling, analyzing and reworking their research data in a secure way
 - storing their research data in a secure way
 - storing the corresponding metadata and data documentation as described under C.1
 - the use of a secure data transfer between data storage and data processing devices if no use is being made of the official Saxion ICT infrastructure.
 - making backups of the research data. If use is being made of official Saxion storage facilities backups are made automatically
- b) Research data may only be stored on Saxion certified and authorized hard- and software infrastructures

c) Researchers can make use of secure storage facilities offered by Saxion

3. Data Archiving after completion of the research

a) Upon completion of the research, researchers are expected to:

- Archive the final version of their research data (with their corresponding metadata) used for creating their scholarly output.
- Archive the measured or collected raw research data (with their corresponding metadata).
- Decide which other research data to archive and for how long. Archive these data (with their corresponding metadata).
- All research data archiving should be in accordance with the Saxion overview of [preferred and acceptable formats](#) unless otherwise discussed with the Saxion Data Librarian.
- Uniquely identify files using a systematic naming and categorization convention

b) Researchers are expected to use the Saxion repository for long-term preservation of research data or the repository that is used as commodity for long-term preservation within their specific discipline. Data deposited in other repositories are required to register the deposit in the Saxion index of research data sets.

c) The library is responsible for the management of the long-term preservation of research data.

D. Data Management Plan

a) Researchers are obliged to hand in a Data Management Plan together with their project proposal.

b) Funding bodies, like NWO and the EU, have specific requirements and data management plans. Researchers should be aware of the conditions of any awarded funding or contracts supporting their research.

c) If a funding body does not request a specific Data Management Plan, the [Saxion Data Management Plan](#) must be used.