



# Guidelines for Research Data Management<sup>1</sup>

These guidelines were finalised by the Faculty Board on the 2<sup>nd</sup> of December 2020 and take effect on the same date.

Registration number HS 2021/381

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<sup>1</sup> This is a translation of the Swedish version (Riktlinjer för hantering av forskningsdata, registration number HS 2020/1035). In the event of any discrepancy, the Swedish version of this document shall prevail.

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# 1 Introduction

The Government's goal is for all Swedish, publicly funded research data to be openly accessible by 2026, unless there are legal, security-related, ethical, or commercial obstacles. The purpose is to increase the quality, dissemination, impact, and innovation power of research<sup>2</sup>.

As part of this work, the Association of Swedish Higher Education Institutions, (SUHF) has recommended that the higher education institutions develop policy documents concerning research data management<sup>3</sup>.

In order to include the University of Skövde (the University) in a national infrastructure for making research data accessible, the University has a collaboration agreement with the Swedish National Data Service (SND)<sup>4</sup>. The University has established a cross-department function, a so-called Data Access Unit (DAU), whose task is to support and guide the University's researchers in issues concerning research data management.

The guidelines that are presented here aim to provide support for the handling of digital research data, such as text, audio, film, images, and numerical data, and for making it accessible.

## 2 The FAIR principles and accessibility

The University's ambition is to meet the so-called FAIR principles<sup>5</sup>. To improve opportunities to reuse research data, various parties – academia, trade and industry, funding agencies, and scientific publishers – have reached a joint agreement on fifteen principles divided into four categories: **F** for Findable, **A** for Accessible, **I** for Interoperable, **R** for Reusable. The purpose is to create conditions for mechanical retrieval and reusing of data wherever possible.

As part of the open science promotion, the University's researchers are encouraged to make their research data openly accessible in connection with the publication (or other mode of presentation) of research results. Research data shall be made accessible in accordance with the principle as open as possible, as closed as necessary.

Even when the accessibility of research data must be limited due to legal, security-related, ethical, commercial, or other obstacles, it is recommended

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<sup>2</sup> Ministry of Education and Research, Swedish National Roadmap for the European Research Area 2019–2020. Annex to Government decision, decision 18-04-2019, registration number U2019/01576/F

<sup>3</sup> SUHF, Recommendation Concerning Policy Documents for Research Data, Rec 2019:3

<sup>4</sup> Collaboration agreement between the Swedish National Data Service (SND) at the University of Gothenburg, and the Authority Accountable for the Research, University of Skövde, 2020

<sup>5</sup> Swedish Research Council. Criteria for FAIR Research Data: Presentation of Government commission to develop assessment criteria for following the road towards an open science system, Stockholm: Swedish Research Council, 2018

that metadata, standardised description of research data, is made freely accessible. It is proposed that metadata be made accessible in SND's research data catalogue.

### **3 Data management plans**

The use of data management plans<sup>6</sup> is part of work with promoting good data management, which is important to ensure that research data can be used, quality-assessed, retained, and, when possible, made openly accessible.

A data management plan outlines how data is to be handled. The use of a data processing plan has two overall aims, both to structure researchers' handling of research data, and to make the research material FAIR. The data management plan shall thus provide benefits both for the individual researcher, and for the surrounding society. When funding agencies request it, a data management plan shall be established, but the use of a data management plan is recommended in other cases as well. The plan is not to be viewed as a finished product. Instead, it should be a document that is connected to the research process, requiring updates and changes.

### **4 Interoperability**

Interoperability requires research data to be represented in formats that are technically, legally and financially operable with several independent software products, and the presence of independent variations of the format that can read, write and reuse the research data regardless of the software and systems that were originally used to represent it. In addition, interoperability for research data requires 'making it possible for systems, organisations, or operational processes to work together and communicate with each other, as agreed upon rules are followed<sup>7</sup>.'

Good administration and archiving of data from research projects require the projects to use open file formats for which there is open source software that can be administrated and reused across several decades. Making data from research projects accessible as open data also requires the use of open file formats and open standards that have been made operable with open source software.

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<sup>6</sup> Swedish Research Council. Producing a data management plan. <https://www.vr.se/soka-finansiering/krav-och-villkor/ta-fram-en-datahanteringsplan.html> [Downloaded 18-11-2020].

<sup>7</sup> Swedish Government Official Reports (SOU) 2015;91. The Transformative Power of Digitalisation – a choice for the future: final report from the Digitalisation Commission. Stockholm: Wolters Kluwer, p. 154.

## 5 Storage

Storage means both storage of data over the course of the project, and accessible final storage. Final storage shall be adequate and secure, regardless of whether the research data is to be made openly accessible or not. When research data is published, it can be made accessible through established repositories (data platforms).

## 6 Information security

Information security is about creating and maintaining appropriate protection for information. The protection applies regardless of how the research data is stored, processed, and communicated. The goal is for all research data to be protected so that only those authorised to access the information can reach it. Information security comprises three aspects: confidentiality, accuracy, and accessibility<sup>8</sup>.

The University's management system for information security (LIS) uses the Swedish Civil Contingencies Agency's Method Support, which, among other things, provides support for the classification of the protection value that information has, and the protection that the information requires with regards to its sensitivity<sup>9</sup>.

## 7 Research ethics and processing personal data

When research is performed on humans, human tissue, and sensitive personal data, an application for an ethical review must be sent to the Swedish Ethical Review Authority (Etikprövningsmyndigheten). If the research is being performed on animals, the application for an ethical review is to be sent to the regional Ethics committee on animal experiments. Over the course of the project, research data is to be processed in accordance with the ethical review permit.

The basic principles of The General Data Protection Regulation must be met when personal data is processed. When personal data is to be processed, the University shall ensure, and be able to demonstrate, that the processing meets the requirements for lawfulness, fairness and transparency, purpose limitation, data minimisation, accuracy, storage limitation, integrity and confidentiality, as well as accountability<sup>10</sup>.

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<sup>8</sup> Informationssäkerhet.se, About Information Security.  
<https://www.informationssakerhet.se/om-informationssakerhet2/vad-ar-informationssakerhet> [Downloaded 18-11-2020]

<sup>9</sup> Swedish Civil Contingencies Agency, Method Support for Systematic Information Security Work <https://www.informationssakerhet.se/metodstodet> [Downloaded 28-09-2020]

<sup>10</sup> Regulation EU 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and of the free

For more information, see the University's guidelines for the processing of personal data<sup>11</sup>, and guidelines for the processing of personal data in research projects, degree projects and student projects<sup>12</sup>.

## 8 Archiving

As early as at the beginning of a research project, a decision should be made as to how documents within the project are to be processed; e.g. what should be retained, what should be removed, and how documents are to be stored. This is particularly important when documents within a project contain sensitive personal data, or sections that are covered by confidentiality. Research data is largely comprised of public documents.

For more information, see the University's guidelines for the retention and removal of documents for research operations<sup>13</sup>, and the University's guidelines for the retention of electronic documents<sup>14</sup>.

## 9 Division of roles and responsibilities

The University is responsible for:

- creating the conditions necessary for researchers and research projects to live up to the requirements concerning research data set by funding agencies and other interested parties,
- supplying the infrastructure for storage and administration of data, and for sharing research data over the course of the project.

The responsibility is described in the University's rules of procedure, the Vice-Chancellor's delegation of authority, and other delegations of authority.

The researcher and the research project are responsible for:

- adhering to the relevant legislation, and ethical, contractual, and confidentiality-related responsibilities concerning research data,

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movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), article 5

<sup>11</sup> University of Skövde, Guidelines for the Processing of Personal Data at the University of Skövde [Riktlinjer för behandling av personuppgifter vid Högskolan i Skövde].

<sup>12</sup> University of Skövde, Guidelines for the Processing of Personal Data in Research Projects, Degree Projects, and Student Projects [Riktlinjer för behandling av personuppgifter i forskningsprojekt och examens- och studentarbeten]

<sup>13</sup> University of Skövde, Guidelines for the Retention and Disposal of Documents for Research Operations at the University of Skövde [Riktlinjer för bevarande och gallring av handlingar för forskningsverksamhet vid Högskolan i Skövde]

<sup>14</sup> University of Skövde, Guidelines for the Retention of Electronic Documents [Riktlinjer för bevarande av elektroniska handlingar]

- creating a data management plan when so required by funding agencies, or when relevant in the research project,
- sharing metadata and research data as openly as possible.

The University's DAU is responsible for:

- providing researchers and research projects with conditions for good data management by offering guidance,
- providing support for describing, retaining, and making research data accessible,
- providing support for researchers in the work with data management plans, and information about funding agencies' guidelines for open access to research data.

## **10 Taking effect**

These guidelines take effect on the 2<sup>nd</sup> of December 2020.