



## Assessment Information

[CoreTrustSeal Requirements 2020–2025](#)

|                       |   |
|-----------------------|---|
| Repository:           | SND CARE                                  |
| Website:              | <a href="http://snd.se">http://snd.se</a> |
| Certification period: | March 20, 2025 - 19 March 2028            |
| Requirements version: | CoreTrustSeal Requirements 2023-2025      |

This repository is owned by: **Swedish national data service (SND)**

## SND CARE

### CORE TRUSTWORTHY DATA REPOSITORIES REQUIREMENTS

#### Background Information

##### Re3data Identifier

Please fill you Re3data identifier from the website: <https://www.re3data.org/>

##### Response:

<https://www.re3data.org/repository/r3d100010146>

##### Reviews

##### Reviewer 1:

##### Comments:

##### Reviewer 2:

##### Comments:

##### Repository type

Please select your repository type.

##### Response:

- Generalist repository

##### Reviews

##### Reviewer 1:

##### Comments:

##### Reviewer 2:

##### Comments:

##### Overview

**Provide a short overview of key characteristics of the repository, reflecting the repository type selected. This should include information about the scope and size of data collections, data types and formats. Further contextual information may also be added.**

##### Response:

The Swedish National Data Service (SND) [1] is a national data service for research, teaching, and learning. SND promotes data sharing and curates and disseminates digital research data for research and teaching purposes. SND serves both national and international users [2].

Work at SND is divided into three main tasks: Knowledge Hub, Networks & Collaborations, and Tools & Services. One of the subtasks in Tools & Services is SND CARE (CentrAI REpository). The repository manages research data from all research areas, however data from social sciences, health sciences, humanities, and earth and environmental sciences are most represented, and it is within these areas the SND main office has domain expertise. Data from other domains are, if necessary, checked in collaboration with domain experts within the SND network (see R06). The size of data that researchers usually deposit to SND CARE ranges from a couple of MB to several TB. This means that the size of the collection increases in varying degrees each year. Deposited data are of all types including for example audio, video, numeric, text etc., and in formats suited for the type of data deposited.

This application focuses on SND CARE. Currently SND CARE is the main repository for the SND Consortium and the network of Swedish higher education institutions (HEIs) (see R0 (7) Summary of significant changes). As independent repositories are built up at the different universities, SND CARE will take the role as one repository among a network of repositories working together. The goal is that all repositories within the network will be certified. One must be aware of that not all metadata descriptions in SND's web catalogue are connected to data deposited to SND CARE, therefore not all descriptions, documentation and/or data are at the same level of curation.

## SND CARE

### URLs:

[1] Swedish National Data Service (SND) website: <https://snd.se/en> (accessed 2024-05-07)

[2] SND website, What we do: <https://snd.se/en/about-us/what-we-do> (accessed 2024-05-07)

### Reviews

#### Reviewer 1:

#### Comments:

#### Reviewer 2:

#### Comments:

### Designated Community

**A clear definition of the Designated Community demonstrates that the applicant understands the scope, knowledge base, and methodologies—including preferred software/formats—of the group(s) of users at whom the curation and preservation measures are primarily targeted. The definition should be specific so that reviewers can assess whether that community is being served in the responses to other requirements.**

#### Response:

SND's primary Designated Community has for many years consisted of researchers from the social sciences, humanities, health sciences, and earth and environmental sciences. SND's predecessor Swedish Social Science Data Service (SSD) was established in 1980 as a social science data repository. In 2008 its scope was broadened to also cover the humanities and health sciences, which resulted in the creation of SND. Starting in 2016, data from the Environment Climate Data Sweden (ECDS) was merged in the organization (completed in 2019). In 2018, SND's mission was broadened to act as a national research infrastructure for all research areas resulting in the formation of the SND consortium and the SND network [1].

SND's designated community are researchers from all disciplines. They use SND's Data Organization and Information System (DORIS) [2], a system where they can describe and share research data, SND's web catalogue, but also other resources on SND's web portal. Another very important user group is the research data support staff working at the Data Access Units (DAU) within the SND network. This group is also using DORIS and other types of resources aimed at them. To make sure that these two groups are best served, SND staff are trained in several areas including standards, recommended/preferred file formats, legal questions etc. (see R06). SND staff produce guidelines and information material [3] covering these areas and train researchers and support staff in these topics. Almost all these resources are bilingual (Swedish and English).

#### URLs:

[1] SND website, The SND Network: <https://snd.se/en/about-us/snd-network> (accessed 2024-05-07)

[2] For more information on DORIS, see section on Summary of Significant Changes Since Last Application

[3] SND website, Manage data: <https://snd.se/en/manage-data> (accessed 2024-05-07)

### Reviews

#### Reviewer 1:

#### Comments:

#### Reviewer 2:

#### Comments:

### Levels of Curation

**Please fill you level(s) of curation.**

#### Response:

- B. Basic curation – e.g. brief checking, addition of basic metadata or documentation
- C. Enhanced curation – e.g. conversion to new formats during ingest, enhancement of documentation and metadata
- D. Data-level curation – as in C above, but with additional editing of deposited data

### Reviews

#### Reviewer 1:

## SND CARE

**Comments:**

**Reviewer 2:**

**Comments:**

### Levels of Curation - explanation

**Please add the description for your Level(s) of Curation.**

**Response:**

The level of curation depends on the quality of the deposited data and documentation as well as the metadata submitted to the DORIS system. Depending on agreement with the depositor's university some of the review and curation can be done by staff at the local DAU, while staff at SND still have the final word. For other data SND staff are responsible for all review and curation. However, due to legislation, the original data is kept by the depositor's university which also is responsible for keeping a copy of the data in an archival format. SND only holds a copy of the data. To aid researchers and local DAU's when depositing and reviewing research (meta)data, SND has produced the document SND Policy for Review of Data and Metadata [1] and the web page Describe and share data [2].

B. Basic curation – e.g. brief checking, addition of basic metadata or documentation:

Basic curation occurs in those cases where a university DAU has carried out the initial review and curation, and the curated data/documentation is deposited to SND. SND staff: Check of deposit form in DORIS and the submitted metadata and documentation. Some fields are mandatory and automatically checked for information, however they are still manually checked for content. The form requests information on intellectual rights on used material as well as whether the data include sensitive information. Data file(s) are manually checked (readability, sensitive information, file formats). If something is missing, data and/or documentation are sent back to DAU/researcher for completion.

C. Enhanced curation – e.g. conversion to new formats during ingest, enhancement of documentation and metadata:

In those cases when there is no active DAU at the researcher's university. SND staff: as above however the contact is with the researcher only. If metadata is missing, suggestions/questions are made after which either the researcher or SND staff is adding the information. If the file format is not good for dissemination SND will convert the format to a better one. SND will also at this level create a preservation file.

D. Data-level curation – as in C above; but with additional editing of deposited data for accuracy:

Depending on what is missing with the data file, it is either sent back to the researcher or suggestions are made which after confirmation from the researcher is made by SND staff.

URLs:

[1] SND website, Regulatory documents: SND's policy for review of data and metadata, <https://snd.se/en/about-us/snd-consortium/regulatory-documents> (accessed 2024-05-07), or

<https://zenodo.org/records/6477041> (accessed 2024-05-07)

[2] SND Website, Describe and share data, <https://snd.se/en/describe-and-share-data> (accessed 2024-05-07)

### Reviews

**Reviewer 1:**

**Comments:**

**Reviewer 2:**

**Comments:**

### Cooperation and outsourcing to third parties, partners and host organisations

**Please describe any cooperation and outsourcing to third parties, partners and host organisations.**

**Response:**

SND is hosted by the University of Gothenburg (see R01).

The servers of SND are operated by the University of Gothenburg IT department (see R15, Hardware).

The Swedish University Computer Network, Sunet [1] provides SND CARE with secondary backup in a geographically distributed location, through their service Sunet Drive [2]. Sunet is a national e-infrastructure, and part of the Swedish research council, which fulfils the needs for data communication and IT services for Swedish HEI:s and other affiliated organizations. There is a SLA in place between University of Gothenburg and Sunet. The only agreement that exists between SND and University of Gothenburg is one that regulates the cost (since SND is hosted/part of University of Gothenburg).

URLs:

[1] The Swedish University Computer Network website: <https://sunet.se> (in Swedish, accessed 2024-05-07)

## SND CARE

[2] Sunet Backup: <https://www.sunet.se/services/molnbaseade-tjanster/backup> (in Swedish, accessed 2024-05-07)

### Reviews

#### Reviewer 1:

#### Comments:

Thanks for the explanation.

#### Reviewer 2:

#### Comments:

### Applicants renewing their CoreTrustSeal certification: summary of significant changes since last application.

Please fill this field when you are renewing your CoreTrustSeal Certification.

This field can be marked with not applicable (N.A.) if you are acquiring a CoreTrustSeal certificate for the first time.

#### Response:

The most significant changes since the last application are 1) the organizational change in 2018 and 2) the launch of the new Data Organization and Information System (DORIS) in 2020.

#### 1) The Consortium and the Network:

To meet future demands for open access to research data, SND has since 2018 been run by a consortium of 7 (expanded to 9 in 2019) Swedish universities and started its development into a distributed large-scale service in collaboration with a network of Swedish higher education institutions (HEIs).

The SND network consists of the HEIs and public research institutes that have agreed to create local units for managing research data (DAUs). The members of the network operate independently in creating their local functions for research data management but can ask SND for support and advice. SND has also developed a basic web-based training for DAU staff, BAS Online [1] (in Swedish only).

#### 2) DORIS:

DORIS is a tool to describe data that are to be shared through the SND research data catalogue and that can be used throughout the entire research data management process; from data description and uploading of research data, to publication. DORIS enables researchers and data support staff at the DAUs to update and edit existing data descriptions and to make them ready to be published in the SND research data catalogue.

#### URLs:

[1] SND website, BAS Online: <https://snd.se/en/manage-data/training-resources/bas-online> (in Swedish, accessed 2024-05-07)

### Reviews

#### Reviewer 1:

#### Comments:

#### Reviewer 2:

#### Comments:

## Organisational Infrastructure

### R1 Mission & Scope (R01)

**R01. The repository has an explicit mission to provide access to and preserve digital objects.**

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Response:

SND has a dedicated mission as a national research infrastructure with a mandate from the Swedish Research Council [1][2]. SND's primary role is to support accessibility, preservation, and reuse of data. SND CARE accepts research data from its designated community (see R0, Designated community), and data is preserved for future use.

# SND CARE

SND is placed as a National Unit at the University of Gothenburg [3].

SND is included in the Swedish Research Council's Guide to infrastructure 2023 [4] (and is also mentioned in earlier versions of the guide from 2006, 2008, 2012, 2016 and 2018).

## Links:

- [\[4\] The Swedish Research Council's guide to research infrastructure 2023](#)
- [\[3\] University of Gothenburg website, Research Infrastructure](#)
- [\[2\] Swedish Research Council website, Research Infrastructures](#)
- [\[1\] Swedish Research Council website, Research Infrastructures](#)

## Reviews

### Reviewer 1:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

### Reviewer 2:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

## R2 Rights Management (R02)

### R02. The repository maintains all applicable rights and monitors compliance.

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Response:

All data, and/or its corresponding documentation, accessible at SND CARE is owned by its producer (e.g. the depositor's home institution). The original data and documentation remain at the originating institution and SND CARE only holds a copy, in accordance with the "Service Agreement on Storage and Dissemination of Research Data" [5], but also due to the "Swedish Archives Act" [6]. Accessibility and availability via SND CARE to said data is stipulated by the data owner in DORIS [7] and based on legal regulations and other restrictions that may apply. Some data are provided under special restrictions, while other data are openly accessible for anyone [8].

In SND's catalogue [9] data users are informed about licenses and regulations applicable for the use of data, but also that they should comply with "Good research practice" by the Swedish Research Council [10] before downloading the data directly or after an accepted request [11]. If, by any chance, there is no contract between a depositor's organization and SND, the depositor must sign a similar contract before depositing any data to SND.

The agreements between SND and the depositor/depositor's organization regulate what SND is mandated to do with data and its corresponding documentation. Management of data/documentation is described in R07. In DORIS, there are checks that i.e. prevent publication of sensitive data openly, if there are any intellectual property rights to consider, and that also warns/prevents publication if level of accessibility is not set by data provider at all. Setting a licence like CC is not mandatory, due to other information provided when data is accessed.

If SND is notified about any kind of misuse, SND can notify the user's home organization and the research funder of the breach. After data has been delivered to the user, SND has no control of how it is used.

## Links:

- [\[11\] SND website, Using data via SND](#)
- [\[10\] Swedish Research Council website, "Good research practice"](#)
- [\[9\] SND website, catalogue](#)
- [\[8\] SND website, Access levels](#)
- [\[7\] SND website, DORIS \(login required\)](#)

## SND CARE

- [\[6\] Swedish Archives Act \[Arkivlagen, 1990:782\] \(in Swedish only\)](#)
- [\[5\] SND website, Regulatory documents](#)

### Reviews

#### Reviewer 1:

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Comments:

#### Reviewer 2:

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Comments:

### R3 Continuity of Service (R03)

#### R03. The Repository has a plan to ensure ongoing access to and preservation of its data and metadata.

##### Compliance level:

In Progress: the repository is in the implementation phase - 0

##### Response:

The functions and services offered by SND CARE are described in the "Service Agreement on Storage and Dissemination of Research Data" [5] between SND and the research principal.

SND's operations are financed in periods of 4-5 years. Just over a year before a new funding period starts, the outcome of the application is announced and a contract between the Swedish Research Council and University of Gothenburg is negotiated. This makes it possible to adapt to the budget in good time. This contract is divided in several sections describing shortly how the university is to manage the funding, SND's mission (see R1), consortium members (see R5), annual reporting of SNDs operations including KPI's, and SND's governance (see R5).

The contract also states that the university shall have a "Termination Plan" [5] for SND. The plan states that if the funding for SND is withdrawn there should be a two-year period for closing operations. Furthermore, it contains detailed instructions on how to manage an orderly transfer of data to other actors. It states, among other things, that an investigation into possible relocation of staff and resource management to other institutions will start in the first year.

The funding application and the contract between the Swedish Research Council and the University of Gothenburg form the basis for the business plan for the application period. The business plan then serves as a basis for the more detailed annual plans.

As stated in R02, SND CARE only holds copies of research data, and the original must be archived at the originating institution according to the "Swedish Archives Act" [Arkivlagen, 1990:782] [6].

##### Links:

- [\[6\] Swedish Archives Act \[Arkivlagen, 1990:782\] \(in Swedish only\)](#)
- [\[5\] SND website, Regulatory documents](#)

### Reviews

#### Reviewer 1:

##### Compliance level:

In Progress: the repository is in the implementation phase - 0

##### Comments:

#### Reviewer 2:

# SND CARE

## Compliance level:

In Progress: the repository is in the implementation phase - 0

## Comments:

### R4 Legal & Ethical (R04)

**R04. The repository ensures to the extent possible that data and metadata are created, curated, preserved, accessed and used in compliance with legal and ethical norms.**

## Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

## Response:

SND's system for describing and sharing data (DORIS) has a structured approach to ensure that legal and ethical standards are met.

Depositors are asked whether data include personal data and/or other protected information. There are follow-up questions about type of personal data, whether a code key exists, whether the data contain sensitive personal data, type of protected data, and any licensing or copyright issues concerning the data set.

Ethical review requirements are also addressed. Research on humans must be carried out in accordance with the "Act Concerning the Ethical Review of Research Involving Humans (SFS 2003:460)" [1] and research involving animal experiments with "The Animal Protection Act (2018:1192)" [2] and the "Code of Statutes of Swedish Board of Agriculture (SJVFS 2019:9)" [3].

SND provides information and support to depositors regarding data management and choice of an appropriate data access level. SND's "Manage Data" webpages [15] include advice about personal data; sensitive personal data; ethical review requirements; re-identification; personal data in audio, image and video material; and protection measures. Data shared by SND can be either freely accessible or restricted. SND's review process includes an assessment of which access level is most appropriate. SND can provide feedback to DAU and the researcher for clarification.

SND CARE can accept research data containing personal data when there is a personal data processing agreement (internal document in Swedish only, available on request) between SND and the research principal or when the University of Gothenburg is the research principal [Since the University of Gothenburg is the host organization, SND is considered to be a part of that organization and does therefore not need a personal data processing agreement to be legally allowed to handle personal data]. The personal data processing agreement outlines SND's responsibilities regarding deposition, storage and dissemination of data and metadata containing personal data. Research data containing personal data (including sensitive personal data) is stored using a secure storage service for information with a high protection value (see also R16). The service requires multi-factor authentication.

SND's "Privacy Policy" [16] informs users of the SND website that SND treats all personal data in accordance with the "General Data Protection Regulation" (GDPR) and related legislation.

All users are advised to comply with "Good research practice" by the Swedish Research Council [10]. Data management and dissemination are conducted in accordance with the "Regulations for IT Security" at University of Gothenburg (only available for employees at UGOT).

Knowledge of and compliance with national and international law, such as GDPR, "Act containing supplementary provisions to the EU General Data Protection Regulation (SFS 2018:218)" [17], and the "Swedish Public Access to Information and Secrecy Act" (Offentlighets- och sekretesslagen 2009:400) [18] is ensured by internal training.

SND has access to legal advisors in-house (90% FTE).

## Links:

- [\[18\] Swedish Public Access to Information and Secrecy Act \(SFS 2009-400\) \(Offentlighets- och sekretesslagen\) \(in Swedish only\)](#)
- [\[17\] Act containing supplementary provisions to the EU General Data Protection Regulation \(SFS 2018:218\) \(Lag \(2018:218\) med kompletterande bestämmelser till EU:s dataskyddsförordning\)](#)
- [\[16\] SND website, Privacy policy](#)
- [\[15\] SND website, Manage data](#)
- [\[14\] Code of Statutes of Swedish Board of Agriculture \(SJVFS 2019:9\) \(Statens jordbruksverkets föreskrifter och allmänna råd om försöksdjur\) \(in Swedish only\):](#)
- [\[13\] The Animal Protection Act \(SFS 2018:1192\) \(Djurskyddslagen\) \(In Swedish only\):](#)
- [\[12\] Act Concerning the Ethical Review of Research Involving Humans \(SFS 2003:460\) \(Etikprövningslagen\) \(in Swedish only\):](#)
- [\[10\] Swedish Research Council website, "Good research practice"](#)



# SND CARE

## Reviews

### Reviewer 1:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

### Reviewer 2:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

## R5 Governance & Resources (R05)

**R05. The repository has adequate funding and sufficient numbers of staff managed through a clear system of governance to effectively carry out the mission.**

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Response:

SND is funded by Vetenskapsrådet (Swedish Research Council) [19] and a consortium of nine Swedish universities [20]. The consortium is in close collaboration with, as of today, 28 higher education institutions and public research institutes in Sweden (the SND Network) that have agreed to create local units (Data Access Units, DAU) for managing research data.[21]

SND has received continuous funding from the Swedish Research Council since 2008, and the current funding period covers 2023-2026. The funding grant has usually covered 4-5 years at a time. For each funding period SND must make a renewed application to the Swedish Research Council with information on how SND plans to fulfil obligations and demands for the funding period. The funding for the current period consists of grants from the Swedish Research Council and from the University of Gothenburg along with in kind contribution from the universities in the consortium as shown in the "SND Annual Report" [22]. The budget covers all aspects of the repository's activities, including ongoing training and skills development of the staff.

The main office of SND is a National Unit at the University of Gothenburg (UGOT). The graphic at the top of the page [23] shows National Units as directly accountable to the University Management. Descriptions of the National Units, including SND, can be found by scrolling further down that page. Work at the main office is divided into three main tasks: Knowledge hub, Networks & Collaborations, and Tools & Services [see R0 (3)].

The SND Steering Group has overall responsibility for SND's operations. The Steering Group meets four times a year. As of 2023, SND also has a Council of Parties made up of representatives from the consortium universities. The Steering Group consult with the Council of Parties regarding the annual budget, strategic plan [5], and significant changes to SND's operations.

The purpose of the DAU Council is to be a link between the SND Consortium and the various national activities, but also to strengthen the collaboration within the SND Consortium. Each of the consortium universities is represented by one council member and SND by two. [20].

Currently the staff at the SND office in Gothenburg consists of 29 people representing 27.9 FTE, all employed on a permanent basis. In addition, each of the consortium universities provides, as their co-financing of the infrastructure, either time-limited flagship-projects that should support open access to research data in the broadest sense, or experts in a range of scientific domains. These domain specialists are a national resource for Sweden's universities and offer expertise on specialized aspects of research data and Open Science for the research community [24].

#### Links:

- [\[20\] SND website, The SND Consortium](#)
- [\[24\] SND website, Staff](#)
- [\[21\] SND website, The SND Network](#)
- [\[22\] SND website, SND Annual Report 2023](#)
- [\[5\] SND website, Regulatory documents](#)
- [\[19\] Swedish Research Council website](#)
- [\[23\] University of Gothenburg website, Organization](#)

# SND CARE

## Reviews

### Reviewer 1:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

### Reviewer 2:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

## R6 Expertise & Guidance (R06)

**R06. The repository adopts mechanisms to secure ongoing expertise, guidance and feedback-either in-house, or external.**

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Response:

Training of the staff is conducted through:

- In-house training, including introductory training, covering different aspects of data management and curation, in which all staff are encouraged to participate.
- External training, including a range of courses for staff offered at the University of Gothenburg, as well as training activities provided by CESSDA ERIC, but also training at summer schools, workshops in connection with conferences, auscultations at other data archives, etc.
- SND staff activities in international organizations such as DDI Alliance, RDA, IASSIST.

Besides the internal expertise, SND CARE has access to a wide range of Domain specialists within the consortium, that meet once a month. They also act as representatives for their designated communities [25][20]. Access to a wider group of expertise is available through the SND Network (DAU, IT forum, Legal network, as well as several working groups [26]), which serves as a knowledge exchange hub [21][27]. A number of network meetings and webinars, dealing with different aspects of data management and data sharing, are held each year [28].

Important sources for expert guidance are also found within the collaboration with other actors working in the field to promote and enhance open science and the reuse of scientific data. SND and its staff are members of a number of international organizations and networks like RDA [29] and IASSIST [30]. The staff also take part in international projects (see R0). Through these channels SND improves and shares knowledge.

The knowledge, skills, and expertise acquired by the SND staff together with experts from the consortium, network, and international collaborations is shared via network meetings, documents, but also the SND web [15].

SND's management team constantly monitors which new competences are needed and the need for new hires in relation to the internal training of existing staff.

#### Links:

- [\[20\] SND website, The SND Consortium](#)
- [\[27\] SND website, Forums and network groups](#)
- [\[26\] SND website, Forum and network groups](#)
- [\[25\] SND website, Domain specialists](#)
- [\[21\] SND website, The SND Network](#)
- [\[15\] SND website, Manage data](#)
- [\[30\] IASSIST website](#)
- [\[29\] RDA website](#)
- [\[28\] SND website, Events](#)

## Reviews

### Reviewer 1:

# SND CARE

## Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

## Comments:

## Reviewer 2:

## Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

## Comments:

## Digital Object Management

### R7 Provenance and authenticity (R07)

#### R07. The repository guarantees the authenticity of the digital objects and provides provenance information.

## Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

## Response:

The workflows at SND CARE follow the OAIS Reference Model [31]. Research Data Advisors at SND process SIPs (Submission Information Packages) into AIPs (Archival Information Packages) and DIPs (Dissemination Information Packages) following workflows described in the "DAU Handbook" (available in Swedish). Access to the files is restricted to the data managers. If questions are raised about (meta)data or documentation and corrections need to be made, changes are proposed to the data producers for approval or adjustment.

All changes to incoming data and metadata made at SND CARE are documented. Information about each data file, corresponding documentation, and metadata, as well as change logs and additional administrative metadata, is stored in SND's Data Organization and Information System (DORIS).

For backtracking purposes, all incoming data, metadata and other documentation are saved in their submitted formats, as well as in standard preservation formats. Recommended practice for data management including information on file formats can be found on SND's website [32].

Apart from the deposited files and their archival format, all published versions of data and documentation are saved. Version changes of data and/or documentation are automatically logged in SND's management system and assigned a new DOI when published. Solely editing metadata (which can be done by the depositor, DAU, as well as SND staff) does not trigger a version change. Versions are numbered using sequential integers (1, 2, ...).

Before publication of data, different formats of the same data file (for example dta and sav or gml and shp) are compared to each other. This includes comparing the original deposited file with the curated file, and in the case an archival format is created, that is also checked. If any of these comparisons show discrepancies, the data curator will identify and trace back changes until all discrepancies are accounted for and remedied.

By default, SND provides access to the most recent version of the dataset. For openly accessible data, earlier versions can also be directly downloaded [33], however for data with restricted access users can send a data request via the catalogue post.

The version number of the dataset is, depending on citation format, part of its citation [34]. The catalogue post includes the version history and serves as the landing page for the DOI [35].

Relations to other datasets, studies or publications are described and are part of the metadata on the DOI's landing page (catalogue post).

All metadata is documented in DDI [36] and can be accessed in, for example, DataCite metadata schema, DCAT-AP-SE 2.0, DDI 2.5, DDI 3.3 and JSON-LD.

When data and metadata are submitted to SND CARE via DORIS, the identity of the depositor is checked against the Swedish Academic Identity Federation (SWAMID).

## Links:

- [\[32\] SND website, Guides](#)
- [\[31\] OAIS Reference Model](#)
- [\[36\] DDI Alliance website](#)
- [\[35\] SND website, version history example: see tab "Versions" at](#)
- [\[34\] SND website, data citation example, see "Citation" at](#)
- [\[33\] SND website, Dataset for SOU 2023:18 The Wind's Value - Compensation, Incentives and Planning for a Continued Sustainable Wind Power Development](#)

# SND CARE

## Reviews

### Reviewer 1:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

The provided examples are very helpful.

### Reviewer 2:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

## R8 Deposit & Appraisal (R08)

**R08. The repository accepts data and metadata based on defined criteria to ensure relevance and understandability for users.**

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Response:

SND's "Collection Policy" [5] states that SND accepts data from anyone who represents a research principal, i.e. a governmental authority or a natural or legal person responsible for the research. Higher education institutions, public research institutes, or county councils are all research principals for the research conducted under their remit. In addition, data have to fulfil legal, quality and technical criteria within their designated communities. The conditions under which SND can refuse data are outlined in the collection policy. It is important that there is a dialogue with the researcher and, where relevant, the DAU. The decision must be authorized by the Research Data Services Section Manager or, in some cases, the SND Management Team. All necessary metadata to ensure future reusability are collected via DORIS [7][37]. The metadata profiles (see R11) contain a number of mandatory fields. Controlled vocabularies are used to ensure correct metadata vocabulary.

SND provides a list of preferred and accepted formats [38]. Other formats might be accepted, and if so, converted to a suitable format.

All incoming data/metadata are checked for usability and understandability. SND's "DAU Handbook" contains a "Guide to Incoming Data", including procedures, checklists and tips for ensuring that data and metadata meet SND's "Policy for Review of Data and Metadata" [5] and "Requirements and recommendations for data and metadata in SND's research data catalogue" [5]. It also addresses how data and metadata can be enhanced, where necessary. There is specific information relating to personal data, documentation and various types of data (for example, documents and text, pictures (raster) and digital video). For more information on the DAU Handbook, see R11.

The "SND Policy for Persistent Identifiers (PID) on Research Data" [5] defines procedures in relation to withdrawal of data (see R09).

A "Service Agreement" [5], and where necessary an additional "Personal Data Processing Agreement" (internal document in Swedish only, available on request), between the depositing organization and SND regulate respective responsibilities with regard to the storage and deposition of data at SND (see also R02).

#### Links:

- [\[38\] SND website, List of preferred and accepted formats](#)
- [\[37\] SND website, Describe and share data](#)
- [\[7\] SND website, DORIS \(login required\)](#)
- [\[5\] SND website, Regulatory documents](#)

## Reviews

### Reviewer 1:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

## SND CARE

### Comments:

Good to see the availability of a collection policy.

### Reviewer 2:

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Comments:

### R9 Preservation plan (R09)

**R09. The repository assumes responsibility for long-term preservation and manages this function in a planned and documented way.**

### Compliance level:

In Progress: the repository is in the implementation phase - 0

### Response:

Research data at SND CARE are preserved and managed with the aim of being usable now and in the future and they receive the same level of preservation. The document "Preservation and management of research data at the Swedish National Data Service" [5] gives a brief description of the measures taken to ensure this, as well as the division of responsibility between SND and the research principal.

SND staff regularly monitor changes relevant for SND CARE within the designated communities (see R0, section 4) as well as developments in software and digital preservation, and format choices made in other data repositories.

Data preservation approaches, workflows and decisions are documented in the DAU Handbook and the FDR Handbook. See also R11 for more details about the processes.

Data can be withdrawn for several reasons, including but not restricted to: Intellectual property rights; legal requirements and proven violations; research integrity; and privacy/confidentiality/ethical concerns. Data can be withdrawn on request from the researcher, the DAU or by SND. The reasons for withdrawal are documented in DORIS. SND follows DataCite's recommendations [39] regarding withdrawal of data and a so-called tombstone page for data is saved [40]. It is always SND that manually removes the data.

Due to SND's expanded remit (see R0, section 4 and 7), the document "Preservation and management of research data at the Swedish National Data Service" is to be reworked and updated in good time for the next application.

### Links:

- [\[40\] SND website, example of deleted data](#)
- [\[39\] Datacite website, Best practices: Tombstone pages](#)
- [\[5\] SND website, Regulatory documents](#)

### Reviews

### Reviewer 1:

### Compliance level:

In Progress: the repository is in the implementation phase - 0

### Comments:

Thank you for this revision and the commitment to rework and update the document "Preservation and management of research data at the Swedish National Data Service" for the next application.

### Reviewer 2:

### Compliance level:

In Progress: the repository is in the implementation phase - 0

### Comments:

# SND CARE

## R10 Quality Assurance (R10)

**R10. The repository addresses technical quality and standards compliance, and ensures that sufficient information is available for end users to make quality-related evaluations.**

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Response:

At the Pre-Ingest phase, when the depositor fills in the chosen profile in DORIS, metadata is automatically controlled. The control ensures that all metadata fields required by the metadata profiles are filled in, and a validation of the information is also made.

The SND metadata profile contains approximately 100 fields, and from it (as of Mars 2024) ten subject specific metadata profiles and one general profile are created [41], however more and/or updated versions will be produced in accordance with community needs and standards. The metadata profiles vary in terms of metadata elements, controlled vocabularies, and ontologies. All metadata profiles have 16 mandatory elements in common, that are considered the minimal level of metadata. Depending on metadata profile, they then have a varying number of extra mandatory fields. The SND metadata profiles are developed together with experts from different research domains, and with considerations from FAIR, standards and ERIC requirements.

Manual checks are made to ensure that data are suitable for Ingest and that the quality of the metadata, documentation, and the data files themselves are sufficient. The checks are described in "SND's policy for review of data and metadata" [5] [See also R0 (5) Level of Curation]. If needed, the data and/or metadata description is returned to the data provider for rectification until the quality demands are met. If documentation is missing or, in combination with the metadata, is insufficient more/better documentation is requested. This ensures that all data ingested into the repository has the correct format and contains sufficient metadata/documentation to be fully understood by the designated community. Several guides [42] and recommendations [43] are published on SND's website that will aid researchers with file formats and file management.

Metadata collected during Ingest [7] can be accessed via the SND catalogue for assessment [44]. Controlled vocabularies and terminology are used and are based on well accepted guidelines for the different domains. The data provider (and SND) can update the public catalogue information with both metadata and technical data and provide new versions of datasets (see R07).

Publications associated with the data, as well as other related resources, can be added to the metadata in the catalogue.

### Links:

- [\[42\] SND website, guides on fileformats](#)
- [\[7\] SND website, DORIS \(login required\)](#)
- [\[43\] SND website, Choosing a file format](#)
- [\[5\] SND website, Regulatory documents](#)
- [\[41\] SND's Zenodo community, "SND metadata profile":](#)
- [\[44\] Example of SND catalogue entry](#)

## Reviews

### Reviewer 1:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

Great to see that the comment about automation of metadata control has been followed up and is now part of the process.

### Reviewer 2:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

# SND CARE

## R11 Workflows (R11)

**R11. Digital object management takes place according to defined workflows from deposit to access.**

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Response:

Workflows at SND CARE follow the OAIS Reference Model (see R07) and the DDI research data life cycle model [45]. The "DAU Handbook" [46] contains detailed descriptions of the workflows covering incoming data, review of metadata and data, DORIS, publication in the SND catalogue, updates/new versions, withdrawal of datasets and data requests (for summary in English see further down).

SND's Research Data Advisors are responsible for the review of incoming data descriptions and data. Workflow related questions are continuously monitored and discussed at the monthly Data Management Forum. The forum can include discussion of types of data, updates to routines, and the need for staff training. The "FDR Handbook" (internal document, Swedish only. For summary in English see further down) documents internal routines, exceptions, and decisions.

The review of data and metadata is tailored accordingly for different types of data as outlined in the "DAU Handbook" [47] and SND "Guides" [32], for example the guides "Documents and digital texts", "Databases and spreadsheets" and "Raster images". SND also has in-house knowledge regarding the review of additional material that complements data such as, for example, scripts.

The transfer of data to storage areas after publication is restricted to a small number of SND staff with clearance (see R16). The process is documented by the SND CARE Storage Group.

Information relevant for the different data curation levels (see R0) is provided in a status summary (internal document, Swedish only) for SND's collaboration with different universities.

SND has a number of internal working groups that provide input on various issues relating to these workflows including Metadata, File Format, DORIS, Catalogue, and DAU Support Group.

SND provides guidance about data management for researchers and depositors [15]. To inform depositors about the process and handling of data, SND has general descriptions on the SND webpage "Share Data Step by Step" [48] and in more detail in SND's "Policy for Review of Data and Metadata" [5].

Short summary of the DAU Handbook:

The DAU-handbook is a wiki containing resources, available for Data Access Units within the SND network. The purpose of the handbook is to give support to DAUs rather than researchers, when establishing a DAU unit.

It contains resources on:

- how to manage data and metadata submitted by researchers to the SND catalogue (Guide for incoming data).
- how to guide DAU personnel when giving support to researchers regarding data production, data handling and data publication (Support to researchers and Training) These resources include training materials for both DAUs and researchers with advice and information on software programs, data management plans and data journals.
- relevant technical documentation for DAUs regarding common data types, metadata standards and tools.
- relevant information on topics like sensitive data, word lists and abbreviations.

The DAU handbook is continually changing while adding information and instructions is encouraged. Most resources in the book are open for editing by DAU personnel.

Table of content with a short summary:

1 Welcome to the DAU Handbook

1.1 The SND Network

Information about the SND network and DAU establishment can be found here.

- Read more about the SND network on SND's website
- The SND network uses Basecamp as a communication platform
- In our Document Collection you will find documents that can be useful in the DAU work
- Roadmap for DAU is a compilation of activities and functions linked to the establishment of a local work with data management
- Skills4EOSC is an EU-funded pan-European project for education in open science

1.2 Review data and metadata

This section provides information on how to review data and metadata. There is also information about different data types and tips on software that can be used for data management/curation.

- Reviewing data and metadata
- Checklists: review metadata and data
- Mandatory fields and metadata profiles in DORIS
- Why is documentation necessary?

## SND CARE

- My pages
- Workflows in DORIS
- SND's guides for handling different data types
- More information about different data types (sound, image, text, etc.)
- List of analysis/curation tools
- Quick guides to analysis tools

### 1.3 DORIS

DORIS is SND's Data ORganization and Information System.

- Read more about DORIS [here](#)
- You can reach DORIS via the following link: <https://doris.snd.gu.se>
- A description of how to use DORIS can be found in [Using DORIS](#)
- There is also a [Guide to Data Requests in DORIS](#)
- List of DAUs connected to DORIS can be found [here](#)
- Registering data

### 1.4 Support for researchers

A number of examples of how a DAU could support researchers are listed [here](#).

- Support for researchers
- What should be made available?
- When will the data be made available?
- Data management plans
- The FAIR principles
- Introduction to laws pertaining to research data
- Technical documentation
- Data Journals

### 1.5 Education

Here are resources that are useful for DAUs to gain a basic understanding of what data management is all about.

- Education
- BAS Online – a resource for DAUs with short video sessions and reading material
- The data management pages – resources for researchers on SND's website
- Data Management Plan Checklist – SND's checklist to help researchers write a data management plan relevant to their particular project

### 1.6 Legal Matters

This section provides brief information on legal regulations for research data.

- Introduction to law pertaining to research data
- Research ownership and copyright
- Public documents and the principle of public access to information
- Public Access to Information and Secrecy Act
- Personal data in research - generally about the data protection regulation
- The Ethical Review Act and ethical review permit
- Checklist for legal aspects relevant to research

Short summary of the FDR Handbook:

The FDR Handbook is an internal resource for SND's Research Data Advisors, which details the core routines and decisions relevant to their role. The handbook is updated regularly as and when new routines and decisions are adopted.

Summary of Contents:

The role of FDR (Research Data Advisor).

- Areas of responsibility.
- Participation in working groups (Network and collaboration / Research data services / IT).
- Collaboration/communication tools (Sharepoint / Teams / JIRA).
- Supporting Data Access Units (DAUs) at Swedish universities.

Work processes:

- Reviewing data and metadata ( SND's policy for reviewing data and metadata / Requirements and recommendations for data and metadata in SND's research data catalogue / Procedure for review of data descriptions / Distribution of incoming data descriptions / Review and double review / Review level / Procedures for pre-booking DOIs / Data for articles under closed review / Data with personal data / Procedures for reviewing data based on individuals / Management team decisions / Solutions and routines for special cases).
- SND's metadata (Controlled Vocabulary management at SND / PIDs / Metadata retrieval/harvesting / Character coding in DORIS / Sharing script along with data).
- Publication of datasets (also Withdrawal of datasets / Republication of withdrawn datasets / Creating and updating collections /Updating published catalogue posts / Change of research principal.
- File management and long-term storage (SND CARE, SND's repository) / DORIS (SND's Data ORganization and Information System) / Data in via SFTP-server / File management at SND /



## SND CARE

Storage and access / The SND archive/storage area  
- Dissemination of data (Data requests / Routines / Statistics).

### Links:

- [\[48\] SND website, Share Data Step by Step](#)
- [\[47\] SND website, DAU Handbook, Data types \(only in Swedish\)](#)
- [\[46\] SND website, DAU Handbook \(only in Swedish\)](#)
- [\[45\] DDI website, DDI-Lifecycle](#)
- [\[5\] SND website, Regulatory documents](#)
- [\[32\] SND website, Guides](#)
- [\[15\] SND website, Manage data](#)

### Reviews

#### Reviewer 1:

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Comments:

Thank you for the English summary of the DAU handbook.

#### Reviewer 2:

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Comments:

### R12 Discovery and Identification (R12)

**R12. The repository enables users to discover the digital objects and refer to them in a persistent way through proper citation.**

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Response:

Metadata from DORIS are published in the SND Catalogue [49]. The catalogue includes fields required by, among others, national and international infrastructures. The SND Catalogue offers both simple and advanced search. The SND website, the catalogue, and metadata are available both in Swedish and English. Machine-readable metadata is also provided in DataCite, DDI 2.5, DCAT-AP-SE 2.0, JSON-LD (Schema.org), CLS (citation), and DC.

OAI harvesting is available. Metadata from SND CARE is harvested by for example DataCite and the CESSDA Catalogue [50]. SND also provides metadata to other portals, like the ARIADNE portal [51].

SND is included in the Registry of Research Data Repositories (Re3data) [52].

Every dataset that is deposited with and made accessible through SND receives a persistent identifier (PID) in the form of a Digital Object Identifier (DOI), this also includes new versions [53]. If a dataset is withdrawn, a tombstone page is created to which the DOI is redirected (see R09). How PIDs are handled at SND is described in the document "SND Policy for Persistent Identifiers (PID) on Research Data" [5]. How data can be cited is exemplified in accordance with several standards on each catalogue post. These data citations can be downloadable for use in publications [54].

### Links:

- [\[5\] SND website, Regulatory documents](#)
- [\[54\] Example of SND catalogue entry](#)
- [\[53\] SND website, PID services \(DOI, ePic\)](#)
- [\[52\] SND at Re3data website](#)

## SND CARE

- [\[51\] ARIADNE portal, in the filter for Publisher, search for Swedish National Data Service](#)
- [\[50\] CESSDA catalogue, search for SND:](#)
- [\[49\] SND catalogue](#)

### Reviews

#### Reviewer 1:

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Comments:

#### Reviewer 2:

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Comments:

### R13 Reuse (R13)

**R13. The repository enables reuse of the digital objects over time, ensuring that appropriate information is available to support understanding and use.**

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Response:

Extensive metadata are collected and stored to ensure the usability of data. All metadata in SND's web catalogue is provided in formats such as DataCite, DCAT-AP, DDI Codebook 2.5, JSON [55], pdf, and under a CC0 1.0 allowing reuse for any purpose [56]. The metadata content varies depending on which metadata profile has been used (see R10).

In combination with metadata, there has to be sufficient documentation (i.e. codebooks, method reports, variable lists, etc.) provided so that a user can understand, assess feasibility, and reuse data, without having to find and use other sources. This is in accordance with "Requirements and recommendations for data and metadata in SND's research data catalogue" [5]. Documentation is provided in PDF/A, txt, and similar open formats.

SND uses migration strategies for providing long-term preservation of the SND data holdings. The data formats that SND uses for storing the data are chosen with long-term preservation in mind, avoiding proprietary, closed or rarely used file formats. Data is disseminated in formats that the Designated Community typically uses and varies depending on discipline [57].

Developments and progress in technologies are followed closely by involvement in national and international organizations working with research data sharing and preservation. When needed, file formats that became outdated will be transformed into newer formats.

##### Links:

- [\[56\] SND website, Licenses and marks on the website](#)
- [\[55\] SND website, download metadata](#)
- [\[5\] SND website, Regulatory documents](#)
- [\[57\] SND website, Request data \(textbox "In which file formats are the data delivered?"\):](#)

### Reviews

#### Reviewer 1:

##### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

##### Comments:

# SND CARE

## Reviewer 2:

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Comments:

## Information Technology & Security

### R14 Storage & Integrity (R14)

**R14. The repository applies documented processes to ensure data and metadata storage and integrity.**

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Response:

All relevant processes are described in the "DAU Handbook" (only in Swedish, see summary in section R11) [58]. All actions taken are documented in SND's data management system (DORIS) via designated metadata fields and internal logs and notetaking functionality.

Access to archive storage is limited to designated data managers and authorized IT staff. Data can only be deleted by a limited number of approved SND staff, and the process is logged in the SND management system, and a so-called tombstone page is created (see R09).

To ensure the integrity of the data, checksums are run, and data formats are monitored to identify potential preservation issues.[59]

The long-term storage of SND CARE is managed by the University of Gothenburg IT Unit and Sunet (See R16) and includes backups, recovery, security (secure server rooms, fireproof backup storage, etc.).

### Links:

- [\[59\] DAU Handbook \(only in Swedish\), File management at SND](#)
- [\[58\] DAU Handbook \(only in Swedish\), Guide for incoming data.](#)

## Reviews

### Reviewer 1:

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Comments:

### Reviewer 2:

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Comments:

### R15 Technical Infrastructure (R15)

**R15. The repository is managed on well-supported operating systems and other core infrastructural software and hardware appropriate to the services it provides to its Designated Community.**

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Response:

# SND CARE

## Standards:

SND's Data Organization and Information System (DORIS) [60] is compliant with various metadata standards dependent on the research domain of the research data being described. Examples of metadata standards used are Data Documentation Initiative (DDI) [36], an international standard for describing data in the social, behavioural, and health sciences, Meta-Share for language technology, and ISO 19115 for geospatial data. Other examples of standards supported are Dublin Core, MARC-XML, DataCite, DIF, schema.org and DCAT-AP.

SND implements an OAI-PMH endpoint to make the metadata in the catalogue harvestable.

The ISO standard OAIS (ISO 14721:2012 [61]) is used as a reference for the daily SND operations and work. Instructions on OAIS, metadata standards, and software use are described in the "DAU Handbook".

## Infrastructure Development Plan:

The technical infrastructure of SND is under constant improvement and consists of resources for both data and metadata management.

The software used by SND is a combination of in-house developed tools and open-source software, as well as proprietary software. An overview plan of the development of the infrastructure is included in the application for funding [62]. More details are available in the in-house annual plans (in Swedish only, available on request).

Documentation of the in-house software and server configuration is maintained in Bitbucket [63] and issues are tracked using JIRA [64].

## Hardware:

The main servers of SND are operated by the University of Gothenburg IT department using a virtual server cluster. The servers run Red Hat Linux and software is maintained using Ansible [65] for automation and Supervisor [66] for process monitoring. Nagios [67] is also used for process, endpoint, and hard drive allocation monitoring. Some services also run in an OpenShift [68] local cloud environment also operated and provided by the University of Gothenburg IT department.

SND adheres to the University of Gothenburg (UGOT) "Policy for IT security" and "Rules for IT security" (only available for employees at UGOT).

SND assesses its technical infrastructure on a regular basis to ensure a high level of security and service to the research community.

## Software:

Common programming languages such as C#.NET Core, PHP and TypeScript are used to develop in-house utility tools for data and metadata management.

DORIS is developed with a backend API developed in C#.NET and with a PostgreSQL database. The frontend of DORIS is developed using TypeScript and the Vue.js [69] framework.

The SND discovery platform is built on common open-source software such as Drupal [70] and elasticsearch [71].

System documentation on these systems is available for internal use. Common proprietary software such as SPSS, Stata, ArcGIS and StatTransfer are used for data and metadata management.

Risk analyses exist for all software products and storage and are revisited and revised continuously. These risk analyses follow university procedures on risk assessments and cover both technical and other kinds of risks. In addition to this, the organization and all software systems have documented phase out plans for either data migration, organization or software discontinuation.

## Links:

- [\[64\] JIRA](#)
- [\[63\] Bitbucket](#)
- [\[62\] Application Swedish National Data Service 2023-2026:](#)
- [\[61\] ISO 14721:2012 \(OAIS\)](#)
- [\[60\] DORIS updates](#)
- [\[71\] Elasticsearch](#)
- [\[70\] Drupal](#)
- [\[69\] Vue.js](#)
- [\[68\] OpenShift](#)
- [\[36\] DDI Alliance website](#)
- [\[67\] Nagios](#)
- [\[66\] Supervisor](#)
- [\[65\] Ansible](#)

## Reviews

### Reviewer 1:

### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

### Comments:

## SND CARE

### Reviewer 2:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

### R16 Security (R16)

**R16. The repository protects the facility and its data, metadata, products, services, and users.**

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Response:

Gothenburg University:

SND has existing security measures on several levels and works continuously on minimizing risks. SND adheres to the University of Gothenburg "Policy for IT security" and "Rules for IT security". All SND employees must agree and adhere to the "Rules for use of university IT resources". These documents are only available for employees at the university. University of Gothenburg has a central IT security function that coordinates, support and steer the directions of the university in terms of IT security. The University also have a Data Protection Group whom to report IF there has been a personal data breach. SND can utilize both resources and have thus no employees with roles specifically related to security (e.g. security officers).

Any known incidents regarding IT security are routinely reported in the university incident reporting system. All incidents reported are investigated and followed up by the university's Incident Response Team. Affected software, processes and procedures will be evaluated to investigate if any amendments are needed.

User accounts for software, storage, and servers are managed by local university accounts and are connected to an Identity federation through SWAMID [72]. All access credentials to software and storage are routinely checked and updated.

The long-term storage of bit-level data is managed by the University of Gothenburg IT unit. Storage is divided between open access data and sensitive data.

Open access data is stored in the university's research data storage service. Sensitive data is stored in the Safe Storage service. All storage servers are maintained at a high availability facility with multiple backbone connections and electricity backup generators. All storage media components are monitored and replaced on any sign of deterioration. The information stored is backed up daily. A tertiary backup is stored in a geographically different site (more than 400km distance) at Sunet, using their Sunet Backup service. Sunet Backup is a storage based on IBM Tivoli Storage Manager [73].

Access to long term storage is only granted to SND personnel with special clearance. These approved users log in using their SWAMID account. Sensitive data is stored with an additional layer of security, in a separate storage cluster requiring multifactor authentication using Freja eID+ [74] for access.

Recovery plans on data, metadata and other software data are documented and available for employees when needed.

#### Links:

- [\[72\] Swedish Academic Identity Federation](#)
- [\[74\] Freja eID](#)
- [\[73\] Tivoli Storage Manager](#)

### Reviews

#### Reviewer 1:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

#### Comments:

#### Reviewer 2:

#### Compliance level:

Implemented: the requirement has been fully implemented by the repository - 1

# SND CARE

**Comments:**

## **Applicant feedback**

### **R17 Applicant Feedback**

**We welcome feedback on the CoreTrustSeal Requirements and the Certification procedure.**

**Compliance level:**

Implemented: the requirement has been fully implemented by the repository - 1

**Response:**

2025-02-13 Update from SND

R3: More information/summary of the agreement between University of Gothenburg (SND host organization) and the Swedish Research Council added. The link to the termination plan did not work at the previous submission which is now sorted, i.e. anyone can read it online. There is however a short content description in the text.

R3, Compliance level: SND does not have any agreement with any possible successor organization that will take over the repository, its catalogue and other services. This is the reason to why the compliance level is set to "In progress..." There is, as described in the document, agreements with the separate universities that IF SND cease to exist all data/documentation/metadata is to be transferred back to the owner organization. It is stated in our termination plan that if we are to be terminated, there will be an investigation to see if there is a possible successor.

R11 + R14. Summary and short content descriptions of the two handbooks are now added to the text in R11. In R14 there is a reference to R11 for further reading.

Due to unforeseen circumstances the application we submitted in 2021 was removed from the system. Mail from Lisa de Leeuw 2024-02-18:

Your application has been removed from the system as we did not receive any reaction to the emails we sent in November 2022 and early 2023.

We have moved to new requirements and a new tool in January 2023 and you are welcome to submit a new application in the tool at no extra costs.

You will have 3 turns left out of the original 5 as you used 2 turns in the old tool.

**Links:**

## **Reviews**

**Reviewer 1:**

**Compliance level:**

Implemented: the requirement has been fully implemented by the repository - 1

**Comments:**

I suggest the board to accept this application.

**Reviewer 2:**

**Compliance level:**

Implemented: the requirement has been fully implemented by the repository - 1

**Comments:**