

WG Research Data Management



HANDOUTS FROM THE WORKING GROUP RESEARCH DATA MANAGEMENT

REPOSITORIES AND RESEARCH DATA CENTRES

Exposée

Options for archiving and publishing research data | Subject-specific repositories and research data centres | Generic repositories

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Background

If you wish to enhance the visibility of your research data, you should, whenever possible, publish it in an established, **subject-specific repository or data centre**. The recognition of the repository within the scholarly community increases the likelihood of your research data being reused and strengthens the verifiability of your scientific findings.

If your research discipline does not yet have a quality-assured subject-specific repository, you can choose an interdisciplinary, **generic repository**, where research data from various scientific fields is archived and/or published. In such repositories, general rather than subject-specific metadata standards are typically applied.

When selecting a publication platform, consider quality standards, server locations in relation to applicable legal requirements, and adherence to the <u>FAIR principles</u>. According to these principles, data should be findable, accessible, interoperable – meaning technically capable of interaction – and reusable.

Additionally, you should account for the costs associated with archiving and publishing your research data at the beginning of your research project and incorporate them into a third-party funding application.

Subject-specific repositories and research data centres (selection)

Humanities and cultural studies

DARIAH-DE Repository

DARIAH-DE stands for **Digital Research Infrastructure for the Arts and Humanities** and is part of the European network DARIAH-EU. The repository provides a platform for securing and publishing research data in the fields of humanities and cultural studies in Germany. Data import is carried out via the <u>DARIAH-DE Publikator</u>, with a current upload limit of 4 GB per file. In addition, the repository offers various services and resources, including tools for data analysis and visualisation, as well as the organisation of workshops and training sessions.

IANUS [content in German]

The **IANUS Research Data Centre for Archaeology and Classical Studies** is a project supported by the German Archaeological Institute (DAI) in Berlin. Research data can be stored and published there. Data availability is guaranteed for 10 years. Metadata is assigned at three levels: project-specific, file-specific, and method-specific.

ARACHNE IDAI.objects

Arachne is the central object database of the <u>German Archaeological Institute</u> and the <u>Institute of Archaeology of the University of Cologne</u>. Furthermore, it is also part of <u>iDAI.world</u>. Within this platform, a wird range of datasets with associated metadata from the fields of archaeology and classical studies can be accessed. The use of the database is free of charge.

Propylaeum

The **Propylaeum** of the specialised information services (FID) for Classical Studies is a project of the University of Heidelberg aimed at making research data from Classical Studies accessible and archiving it. Research materials such as images, audio and video data, or multimedia objects can be stored via the platform <u>heidICON</u> or integrated into the digitisation system DWork. Additionally, datasets and codes are available in <u>Propylaeum@heiDAT</u>A. At the Computing Centre and the University Library of Heidelberg, the long-term archival system heiARCHIVE is currently under development.

arthistoricum.net

In the repository **arthistoricum.net**, which is operated by the University Library of Heidelberg and supports the specialised information service (FID) for Art - Photography - Design, art historical research data can be published and linked to publications. Research materials such as images, audio and video data, or multimedia objects can be stored via the <u>heidICON</u> platform or integrated into the digitisation system DWork.

Additionally, datasets and codes are available in <u>arthistoricum.net@heiData</u>. At the Computing Centre and the University Library of Heidelberg, the long-term archival system heiARCHIVE is currently under development.

TextGrid Repository

The **TextGrid Repository** is a component of the virtual research environment TextGrid and serves as a digital long-term archive for humanities research data (in particular digital edition projects, XML/TEI-encoded texts and images). The project is part of the Humanities Data Center (HDC) alongside the DARIAH-DE Repository and is aligned with the <u>open access strategy of the University of Göttingen</u>.

<u>Text+</u>

Text+ is a consortium of the <u>National Research Data Infrastructure</u> (NFDI). It serves as a hub for text- and language-based research data, aiming to collect, preserve, and ensure the long-term availability of resources such as text corpora, editions, and lexical datasets. Data storage is managed by one of the Text+ data centres, which function as partner institutions and, ins some cases, specialise in specific domains. The services are available to researchers with an academic affiliation.

CLARIN-Centres

The centres, often specialised in specific data types, offer services for the storage of research data from the humanities, cultural and social sciences that focus on **language data**. <u>CLARIN-D</u> (Common Language Resources and Technology Infrastructure - Germany) is the German partner organisation of <u>CLARIN</u>. CLARIN-D facilitates access to language resources and technologies and supports researchers by providing data and analysis tools.

Social, behavioural and economic sciences

FDZ Bildung

The **Research Data Centre for Education (FDZ Bildung)** is a central hub for empirical educational researchers and educational scientists. It is responsible for qualitative data in the fields of school and instructional research, as well as quantitative survey instruments such as tests and scales. It is a service of the DIPF | Leibniz Institute for Research and Information in Education, accredited by the German Data Forum (<u>RatSWD</u>). The data archive collaborates with the **German Network of Educational Research Data** (<u>VerbundFDB</u>).

FD-LEX [content in German]

The **Research Data Centre for Lerner Texts** (FD-LEX) is a data archive created by the Mercator Institute for Language Development and German as a Second Language at the University of Cologne. It provides datasets from writing research projects and learner texts. The data archive collaborates with the **German Network of Educational Research Data** (VerbundFDB).

FDZ-DZHW

At the **Research Data Centre for Higher Education Research and Science Studies (FDZ-DZHW)**, quantitative and qualitative research data from higher education research and science studies can be archived and published. The FDZ-DZHW is based at the German Centre for Higher Education Research and Science Studies (<u>DZHW</u>) and collabroates with the **German Network of Educational Research Data** (<u>VerbundFDB</u>).

GESIS

GESIS - Leibniz Institute for the Social Sciences serves as a central infrastructure facility, offering various data services for archiving and publishing of quantitative empirical social research, including data, scripts, measurement instruments, and publications. The service <u>Archiving Package BASIC</u> is free of charge. GESIS collaborates with the **German Network of Educational Research Data** (<u>VerbundFDB</u>) and hosts several <u>Research Data Centres (RDC)</u>.

The **Consortium for the Social, Behavioural, Educational and Economic Sciences** is part of the NFDI. Together with the **German Data Forum** (<u>RatSWD</u>), it develops infrastructure and services for processing, securing, and publishing research data in these disciplines. KonsortSWD is part of a extensive network that currently includes 39 <u>Research Data Centres</u> (as of January 2025).

<u>ZBW</u>

The **ZBW** - Leibniz Information Centre for Economics is a research-based information infrastructure for the economic sciences and participates in various consortia, including <u>KonsortSWD</u>. Together with GESIS, it operates the non-commercial registration agency <u>da</u> ra, where social and economic science research data and objects can be made permanently identifiable with a DOI name. Furthermore, researchers can publish economic publications as open access in the <u>EconStar</u> repository.

BERD Data Portal

This is the repository of the **NFDI Consortium for Business, Economic, and Related Data** (BERD@NFDI). <u>BERD@NFDI</u> is working on the development of a research data infrastructure with the aim of efficiently managing unstructured data, such as images, videos, audio, and text files from the economic and social sciences, free of charge. To achieve this, they provide researchers with a range of services and tools.

Qualiservice

The Data Service Centre for Qualitative Social Science Research Data, accredited by the **German Data Forum** (<u>RatSWD</u>), enables the archiving and reuse of qualitative, thematically independent social science research data from various disciplines, particularly interview studies, for academic research and teaching purposes. However, no data from Qualiservice is published. Fees apply for data submission and processing.

Research Data Center (RDC) at ZPID (formerly PsychData) / PsychArchives

The Research Data Center at the **Leibniz Institute for Psychology (ZPID)** provides a platform for discovering and reusing psychological research data from various fields of psychological research. **PsychArchives** is a discipline-specific repository for psychology, operated by the RDC at ZPID, which archives a wide range of digital research objects spanning 20 different publication types, including preprints, primary and secondary publications, research data, tests, pre-registrations, multimedia, and codes. It is certified by the **German Data Forum** (RatSWD), and up to 1 GB of data can be submitted free of charge.

Natural sciences and computer science

GFZ Data Services

GFZ Data Services serves as a platform for archiving and publishing research data, as well as scientific software in the fields of geosciences and related disciplines. It is a repository of the **GFZ Helmholtz Centre for Geosciences**, which also assigns IGSN (International Generic Sample Numbers), a persistent identifier for physical samples. Additionally, GFZ Data Services can be accessed through the <u>Specialised Information Ser-</u> <u>vice for Geosciences (FID GEO)</u>.

Pangaea

Pangaea is a free repository for archiving and publishing research data from in the geosciences, particularly georeferenced data from Earth system research and georeferenced observation and experimental data. Submitted files must not exceed 15 GB per file, and datasets are limited to a maximum of 20 files. Pangaea is operated by the <u>Alfred Wegener Institute</u>, Helmholtz Centre for Polar and Marine Research and the Center for Marine Environmental Sciences (<u>MARUM</u>) at the University of Bremen.

MaRDI Portal

The MaRDI Portal is the central hub for services and resources related to mathematical research. Its <u>source</u> <u>code repositories</u> and the <u>detailed technical documentation</u> are freely accessible. The portal is part of the Mathematical Research Data Initiative (<u>MaRDI</u>), the NFDI Consortium of Mathematical Science.

IEEE DataPort

IEEE DataPort is a commercial repository coverin areas such as artificial intelligence, image processing, power and energy, biomedical and health sciences, sensors, and signal processing. Researchers can utilise up to 2 TB of storage free of charge, though open-access publications are not permitted. If an institute licences IEEE DataPort, up to 20 open access publications with a total of 10 TB of storage are available.

NFDI4DataScience

The **NFDI Consortium for Data Science and Artificial Intelligence** aims to develop, establish, and maintain a national research data infrastructure at the intersection of computer science, mathematics, and application domains. The consortium supports all stages of the research data lifecycle, including collecting, processing, analysing, archiving, publishing, and reusing resources.

NFDIxCS

The **National Research Data Infrastructure for and with Computer Science** aims to establish an organisational, technical, collaborative, and interoperable infrastructure for the research data management of complex domain-specific data objects across the breadth of computer science. Its aim is to enable open access to research data and software in accordance with the FAIR principles by integrating relevant services and stakeholders from and for the field of computer science.



Generic repositories (selection)

Zenodo

Zenodo is one of the best-known generic repositories. It allows free storage of research data, publications, software, presentations, videos, and other resource types of up to 50 GB. It is managed and maintained by the <u>OpenAIRE</u> consortium and <u>CERN</u>. Additionally, Zenodo facilitates collaborative work, enabling researchers to store, share, and manage their projects and data collectively within a community.

B2SHARE-EUDAT

B2Share is a free service provided by the EU's <u>EUDAT</u> project for interdisciplinary research data. It utilises the same underlying software as Zenodo. With B2Share, datasets of up to 20 GB and individual files of up to 10 GB can be stored. The system allows for the use of subject-specific metadata, which is predefined based on the selected research community.

RADAR

The WG Research Data Management will be happy to advise you on data storage in the **REsearch DAta repository**, which is operated by the <u>FIZ Karlsruhe</u> - Leibniz Institute for Information Infrastructure. Researchers at the University of Passau can archive and publish research data from various disciplines through the university repository **RADAR Passau**. It is possible to have data packages reviewed before publication and to set an embargo. Furthermore, a Digital Object Identifier (DOI) is assigned, ensuring that the data publication remains permanently accessible and citable.

<u>GitHub</u>

GitHub can be used for both the publication and archiving research data, as well as for version control and collaboration on software projects and data management plans (DMPs). In public or private repositories, multiple project collaborators can work simultaneously, storing code, files, and revision histories.

<u>OSF</u>

The **Open Science Framework** (OSF) is an open-source project management tool developed and maintained by the Center for Open Science, based in the USA. Private projects have a storage limit of 5 GB, while public projects can store up to 50 GB. OSF provides both a platform for storing and reusing research materials and a space for researchers to connect more easily with their projects and collaborators.

Dryad

Dryad is a paid open access platform that enables the publication of research data across various disciplines. All research data on Dryad are published under a <u>CCO license</u>, ensuring they are freely available for reuse. Dryad is based in the USA and is operated by the California Digital Library.

figshare

Figshare is a web-based, commercial data storage service provided by Springer Nature, allowing research data from various disciplines to be published under Creative Commons licences. It can be used by individuals, institutions, and publishers. All figshare.com accounts include 20 GB of free private storage, while higher storage capacities (up to 5 Tb) and special regulations can be obtained through <u>Figshare plus</u> for a fee.

Additional Hints

<u>KonsortSWD</u> offers a directory of research data centres specializing in social, behavioural, and economic research.

<u>Psychologie.de</u> [content in German] provides an overview of research data repositories relevant to psychology.

NFDI4Culture curates a list of both subject-specific and generic repositories from institutions within NFDI4Culture, focusing on material and immaterial cultural assets in various media formats.

NFDI4Earth maintains an extensive list of specialised repositories, related data infrastructures, and data sources for the geosciences and related disciplines.

NFDI4memory [content in German], as consortium within NFDI, aims to improve the research data management infrastructure for historical research disciplines.

The other **<u>NFDI consortia</u>** also provide overviews of corresponding specialised repositories and data archives.

There are various ways to find suitable research data repositories and reusable research data. One of the largest directories worldwide is <u>re3data</u> (Registry of Research Data Repositories). You can

find an overview of useful platforms on the Research Data Management website.



Enquiries

If you are interested in archiving or publishing research data in the university repository, please feel free to send us an enquiry to <u>forschungsdaten@uni-passau.de</u> at any time.

Please provide us with the following information:

- Your full name
- Your responsible institution at the university (chair, professorship, etc. ...)
- Information about your project (project title, third-party funder, duration)
- How much data volume in RADAR Passau you need for your project

See also the handouts and information sheets from the Working Group Research Data Management