Definitions and FAQ to the RDM Policy of the University of Vienna

Definitions of key terms and frequently asked questions (FAQ) in relation to the University of Vienna's Research Data Management Policy can be found here. The definitions cover the key terms used in the Policy, and the FAQ provide further detail and examples of its implementation in everyday research practice. Where necessary, differences between disciplines are also addressed. If you have any further queries, suggestions for new entries, corrections or amendments, please e-mail us at rdm@univie.ac.at.

Definitions

Archiving: Submitting research data and related records to a repository for the purpose of storing those research data for a limited period of time or for the long term. This includes preparatory activities before the actual archiving of data such as preparing data for improved reuse, ensuring data and their provision comply with the FAIR Principles, adding metadata and research documentation, as well as regulating access and the terms of use.

Related records: All types of records that are related to the research process and the context of the research project and that connect with the research data such as, for example, laboratory records, code books, descriptions of the methods used.

Code of Conduct: The Code of Conduct supplements existing mandatory rules of law (laws, articles of associations, regulations, works agreements, etc.) and applies to all academic and administrative staff at the University of Vienna. All University of Vienna staff are required and/or contractually obliged to adhere to the Code of Conduct.

Data: A formalised representation of information suitable for communication, interpretation or processing. Examples of data include a sequence of bits, a table of numbers, the characters on a page, the recording of sounds made by a person speaking (cf. Reference Model for an Open Archival Information System, pp. 1-10; see also Research data)

Data management plan: A data management plan (DMP) describes how research data should be handled, and is therefore a tool for research data management. The plan explains which data are collected or generated during a research activity and specifies what needs to be done during the data lifecycle, i.e. the whole data process (storage, publication, citation, long-term availability, pseudonymisation, anonymisation, reuse, deletion, etc.). Funders and various organisations offer templates for this type of plan.

Data protection: See the University of Vienna's Data Protection Guideline for further information.

GDPR: See the GDPR section on the Intranet for further information.

Personal data: See the Personal data section on the Intranet for further information.

EOSC: The European Open Science Cloud (EOSC) is an environment for hosting and processing research data to support EU science.[1]

FAIR Principles: The FAIR Principles are guidelines for making research data FAIR, i.e. findable, accessible, interoperable and reusable. They are intended to prepare research data in a way that enhances their reusability, with FAIRness being considered in research data management and when drawing up DMPs. FAIR does not automatically mean that these research data are available without any restrictions. However, if restrictions apply, reasons for these should be given (Guidelines on FAIR Data Management in Horizon 2020 , Force11).

CARE Principles: To complement the existing FAIR Principles, the Global Indigenous Data Alliance (GIDA) drew up the CARE Principles as an important guide to the processing of indigenous research data. These Principles should help emphasise Indigenous Peoples' rights and interests more strongly and facilitate increased data sharing while considering power differentials and historical contexts. Indigenous data include data embedded in the languages, history, culture, ways of living and territories of the respective group of people. CARE means:

- Collective Benefit
- Authority to Control
- Responsibility
- Ethics

Research data: Research data refers to all information (irrespective of its form or presentation) that supports or validates research activities (development, results, observations or findings, including contextual information). Research data comprise all materials that are created in the course of academic work, including records, source research, experiments, measurements, surveys and interviews, as well as software and code. Research data may take on various different forms: during the lifespan of a research activity, data may exist as gradations from raw data to processed data (and even include negative and inconclusive results).

Research data management: Given the heterogeneous nature of research data, research data management (RDM) may include different aspects depending on the relevant discipline. In general, RDM covers all research data during the entire research process, e.g. planning and generating data, documentation, data administration, secure storage, access management, as well as reuse, (long-term) archiving and access regulation. RDM should ensure that research data are effectively managed during the research project and that they are securely archived and made reusable after project completion (see also Personal data).

Long-term archiving: The act of storing research data and making that data available on a long-term basis. This not only covers technical measures to ensure appropriate storage but also includes maintaining the

[1] European Open Science Cloud (EOSC) | EU-Kommission (europa.eu).

digital resources to enable use after a fixed or indefinite period of time. Appropriate organisational solutions such as repositories are needed to be able to react to technological changes or new target groups.

Licence: The use of research data may be regulated by licensing, with the rights holder granting the relevant licences. Examples are the licence models at PHAIDRA and AUSSDA.

Open licences: The general public is given the right to use someone else's work free of charge under certain conditions. To make the use of free licences easier for copyright holders, standards such as the Creative Commons licences have been established. These may also be used to make research data and results openly and freely available (see also the Berlin Declaration or the article Free Knowledge thanks to Creative Commons Licences).

Scientific use licences: These are granted to enable data to be reused for scientific purposes. In contrast to Creative Commons licences, they are not based on standardised contracts but are a type of licence in their own right. Contract design may vary greatly, which is why the actual licensing text should be closely scrutinised. One example of such a licence is AUSSDA's licence for use for scientific purposes.

CC0 1.0 Universal Public Domain Dedication: This is a way to release works, e.g. metadata, into the public domain by waiving all rights under copyright law and related rights, to the extent allowed by law. The work may be copied, modified, distributed and performed, even for commercial purposes, without the need for further permission.

Metadata: Metadata are used to describe managed resources in a unique and structured manner. The unique structure enables users to search for, find and select relevant resources. Metadata are a means of communication between producers and users of research data, and are crucial for making data findable. The Dublin Core Metadata Initiative is a useful standard for all academic disciplines. In addition, standards for specific disciplines are also available, e.g. the Data Documentation Initiative.

Persistent identifiers: A persistent identifier is a unique and long-lasting registration number for a digital resource, enabling that resource to be found and cited in the long term irrespective of where it is stored (e.g. DOI, Handle, URN). The Digital Object Identifier (DOI) is one of several persistent identifiers that the University of Vienna assigns to digital objects. See the DOI Service section on the University of Vienna's website for more information.

Repositories/archiving systems: These are places maintained by universities and research institutions for the storage and reuse of digital research data. The Vienna University Library uses PHAIDRA for all data that need to be made available in the long term. AUSSDA, the Austrian Social Science Data Archive, offers the same service for social science data.

Processing: Includes any activities or operations involving research data such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or other provision, alignment or combination, restriction, deletion or destruction. Personal and non-personal research data, related records and metadata may all be processed.

Frequently asked questions (FAQs)

1) Does research data have to be archived?

   It is up to the researcher to decide whether to archive their research data. However, funder guidelines or journal requirements must be adhered to. The Policy also recommends storing and making research data available in a suitable repository or archiving system; this may be an established repository for a specific discipline (e.g. AUSSDA for social sciences), an institutional repository (e.g. PHAIDRA at the University of Vienna) or another free generalist repository. In order to prevent research data getting lost, to enable intended use and to prevent undesired use, research data should be properly managed.

2) Who decides on access to archived research data?

   Researchers at the University of Vienna may decide for themselves who gets access to their research data and may also continue to use their own data. Researchers who are considering publishing research data or using the services of repositories for the first time should always seek appropriate advice in advance. To prevent data loss, research data should preferably be stored in a repository. Access terms vary depending on the repository or archive. The University of Vienna's institutional repository PHAIDRA offers a variety of options for managing access: open access (as recommended by the University of Vienna's Open Access Policy), access for the entire University of Vienna or for individual organisational units, access for defined individuals or groups of persons, restricted access (see PHAIDRA groups and authorisations). AUSSDA, the Austrian Social Science Data Archive also offers various access and licensing options: open access, access for scientific purposes, restricted access (see the AUSSDA Access Policy).

3) How can I make sure that my data are citable?

   Data that have been archived with AUSSDA are automatically assigned a Digital Object Identifier (DOI). Research data archived in PHAIDRA are automatically assigned a handle-ID, and a DOI if needed, which can be requested before or after uploading, see also DOI Service of the University of Vienna.

4) Who is entitled to use research data? How are ownership rights and rights of use regulated in employment contracts?

   Employment contracts may regulate various rights such as ownership rights, rights of use, intangible rights, employee inventions, rights of publication, etc. These regulations may be contained in the contract sections 'Specific rights and duties' or 'Rights to work results'. They are attributed individually, which is why there is no general answer applicable to all. A possible provision used in employment contracts might be:

   "The employee hereby grants the employer all ownership rights and intangible rights in relation to any work created as part of the employee's contractual duties, while at the same time according the

employer exclusive and irrevocable rights that are unrestricted in terms of duration, territory and content should a title transfer not be legally possible."

5) What should be considered when drawing up a contract for third-party data use?

   If the primary right to use research data is held by a third party outside the University of Vienna (e.g. commissioned research contracts), it is important to ensure that the University of Vienna is granted at least those rights of disposal of research data that it needs to meet its statutory obligations (e.g. record-keeping obligations). Furthermore, if possible, the University of Vienna should be granted a contractual right to use the raw data and results generated through research activities for non-commercial research and teaching, and this right should be granted free of charge.

6) What is the recommended type of licence if funders ask for a 'free licence' or open access? What type offers broad reuse options?

   Research data arising from projects funded by third parties should, if so requested by funders, be awarded a free licence (e.g. international Creative Commons licences, 4.0 International) or released into the public domain (e.g. by means of a CC0 1.0 Universal Public Domain Dedication) and made openly available for reuse unless legal, contractual, ethical or other documented reasons prohibit it (e.g. data protection rights, personal rights, trademark rights, patent rights, other statutory obligations or rights of disposal or ethical considerations).

   The appropriate licence should be chosen taking into account the type of research data, thereby marking the data and promoting further use. For source code a General Public Licence (GPL) may be appropriate, for research data a CC0 1.0 Universal Public Domain Dedication. If legal, contractual, ethical or other documented reasons prohibit the use of research data under a 'free licence' or open access, funders usually agree to restricted licences (e.g. CC BY-NC 3.0 AT, CC BY-ND 3.0 AT or scientific use licences with use being restricted to scientific purposes, possibly with controlled access).

7) Which guidelines are there on research integrity?

   To ensure research integrity and good scientific practice, it is necessary to record and document the research process and results, allowing third parties to reproduce the work (see the Austrian Agency for Research Integrity Guidelines for Good Scientific Practice, p. 8, § 2(1)(1)). Good scientific practice also includes the archiving of research data, see also the Guideline of the Ombuds Office for Ensuring Compliance with Good Academic Practice.

8) How long do research data have to be retained?

   The minimum retention period for research data and records is usually 10 years from assignment of a persistent identifier or publication of a related work following project completion, whichever is later. Other periods may apply in accordance with statutory provisions (e.g. patent law), funder requirements, guidelines by the Rectorate or good scientific practice. Deviations from the 10-year retention period for research data may make sense in the following cases, for example: 12 months for some process data,

15 years for clinical studies, permanent long-term archiving in a dedicated data archive for research data of social or cultural value. The period should ideally be stated with an exact end date.

9) 9. Are there deletion or retention periods for research data?

Research data management does not specify any retention or deletion obligations. Data may be retained permanently in a long-term archive, provided no agreements reached with funders or clients, or statutory provisions prohibit it.

10) May I stipulate an embargo period?

Yes, embargo periods are admissible unless contractual arrangements with the funder, for example, prohibit them. Periods may depend on, for example, project reports (project deliverables) or publications, see also: Making documents openly accessible in repositories.

11) How can I find a suitable repository?

The decision on a trustworthy repository should primarily be based on criteria relevant to the academic discipline. An established national or international repository set up for specific disciplines is the preferred option, as also recommended by OpenAIRE (AUSSDA, for example, being the repository of choice for social sciences). Second choice would be an institutional repository (PHAIDRA at the University of Vienna) and third a generalist repository. With all of these options, the various criteria to assess the repository's quality should be considered. Since evaluation of the quality criteria can be a highly complicated and costly process, it is advisable to choose a repository that has already been certified. A highly recommendable certificate is the CoreTrustSeal with a large number of certified repositories.

Vienna University Library repositories:

PHAIDRA: University of Vienna's institutional repository, all disciplines, long-term archiving if preferred formats are used, persistent citation, data versions possible, each object is automatically assigned a persistent identifier, DOI allocation possible, access rights per object possible, embargo periods possible.

AUSSDA: the Austrian Social Science Data Archive is a repository set up specifically for the social science community at the University of Vienna, long-term archiving, persistent citation, data versions possible, DOI allocation, access rights per object possible, embargo periods possible.

Further information on repositories:

Registry of Research Data Repositories (re3data.org)

Practical Guide to the International Alignment of Research Data Management

CoreTrustSeal Requirements

How to select a data repository?

Open Research Data and Data Management Plans (Information for ERC grantees)

Generalist Repository Comparison Chart

12) Should I make research data available in a University of Vienna repository if that data are already accessible through another repository?

If research data have already been made available in the long term and for free via another suitable repository, additional archiving at the University of Vienna is not necessary. What is important is whether research data can be accessed by other people at the University of Vienna in the long term and for free. If you acquired a licence to use data for a fee or for free and these data are also available to other people by the same route, you do not need to archive them at the University of Vienna. However, archiving that data might make sense for other reasons, always provided the licence allows it.

13) Are data automatically deleted from the repository when the 10-year retention period expires?

No, most repositories do not automatically delete data; it depends on their individual design. PHAIDRA and AUSSDA do not delete automatically, as their primary goal is to make data available for the long term. Researchers should choose a repository with options that suit their funder requirements or discipline. Such an option can be long-term archiving (i.e. permanent archiving without the intent to delete).

14) Can I make sure that research data are not passed on without my consent?

Some repositories offer technical and organisational procedures to ensure that requested data have to be released by the data provider in the first instance. However, there are several reasons why a release should not depend on a data provider's reaction (e.g. they might not be permanently available, changed e-mail address, relocation, death, etc.). There are other more sensible alternatives that combine quick availability with the data provider's objectives.

Data in PHAIDRA that have been blocked will never be passed on without the consent of the person who archived them. You may have your data blocked and provide a contact address, which interested parties may use to request access. Licences that regulate data reuse may also be granted.

Data in AUSSDA are shared following certain criteria and in accordance with stipulated access provisions. AUSSDA does not offer the option of having data providers give their consent. To ensure that research data are provided according to the FAIR Principles, access should be independent of individuals.

15) Can I use a repository to archive interim results or to share data within a research group?

Repositories may also be used to archive interim results. PHAIDRA allows version numbering for these results. Services offered by the Vienna University Computer Centre may be used to store and share data within a research group, e.g. online storage space, a University-wide Wiki, ACOnet FileSender, share file servers, cloud or temporary storage space for sharing large amounts of data in the short term (see also the Vienna University Computer Centre's website on Store and share data).