

Leibniz Institute for Information Infrastructure

# **ADVANCING SCIENCE**



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#### Preamble

FIZ Karlsruhe - Leibniz Institute for Information Infrastructure promotes the careful and open handling of research data. Therefore, we create the best possible framework conditions for research data management (FDM). One building block is this policy, which provides binding orientation.

Our scientists have the responsibility to realize fundamental values and norms of scientific work in all their research activities. Preserving and archiving research data is part of good scientific practice (see also section "FIZ Karlsruhe is committed to the following papers"). Research data make it possible to make research traceable and verifiable. Likewise, they can form an important component for new research approaches. FIZ Karlsruhe promotes Open Science and therefore encourages its scientists to make the re-use of research data possible, taking into account potential legal and ethical restrictions.

FIZ Karlsruhe undertakes to continuously raise its employees' awareness for the topic of research data, to provide them with further training, and to support them in accordance with the rules of good scientific practice. We recognize the extra work that good research data management requires as an important part of their research performance. FIZ Karlsruhe also advocates a general recognition of corresponding achievements, e.g. in application procedures. We preserve relevant research data in the long term and make selected data accessible in suitable infrastructures such as repositories. We develop the necessary work processes for this and use both internal and disciplinary services on a national and international level. We document these transparently on the intranet.

#### Research data at FIZ Karlsruhe

FIZ Karlsruhe defines the term "research data" as does the Council for Information Infrastructure (RfII): "Research data are data that are generated in the course of scientific projects, e.g., through observations, experiments, simulations, surveys, interviews, source research, recordings, digitization, evaluations. "<sup>1</sup> In addition, we explicitly include algorithms and (research) software and in this respect expand the definition of the RfII from 2016.

Research data management begins with the planning of a project and ends only after the eventual deletion of the data after an appropriate holding period.

<sup>1</sup> Report of the editorial committee to the RfII (RfII Berichte No. 1), Göttingen 2016, 31 S. <u>urn:nbn:de:101:1-201607146410</u>, last access Aug 22, 2022.

## Aims of FIZ Karlsruhe's research data management

Where legally and ethically possible, research data underlying a scientific publication should be published in suitable repositories and offered for subsequent use for reasons of transparency, traceability, and connectivity of research. FIZ Karlsruhe supports the FAIR and CARE principles in this regard. FAIR stands for "Findable, Accessible, Interoperable, Re-Usable", CARE for "Collective Benefit, Authority to Control, Responsibility, Ethics". The scientists at FIZ Karlsruhe structure and describe their research-relevant data in such a way that they fulfill the respective disciplinary requirements for FAIR research data. If necessary, suitable data management plans must be drawn up in advance and updated during the course of the project.

#### Measures to reach these aims

#### Storing, re-using, and publishing data

- The scientists at FIZ Karlsruhe store research data and results as well as the research software used in an adequate manner and for an appropriate period of time, following the standards of the respective discipline and the recommendation of the DFG (at least 10 years). If there are comprehensible reasons for not storing certain data, the scientists disclose this.
- Implementing the FAIR principles is an important goal when data are published. In particular: o subject-specific requirements are taken into account (standards, formats, metadata description, etc.),
  - o research data intended for re-use should be citable and persistently identifiable (e.g., via DOIs) whenever possible,
  - o the research data intended for re-use should be provided with the respective legally and ethically justifiable license; ideally, these data should be available through open access.

#### Research data infrastructure

- FIZ Karlsruhe provides the technical infrastructure for research data management or commissions trusted third parties to do so.
- A data management plan (DMP) is made for projects whose subject-specific context makes this necessary. This plan shows which data are generated in the project and which of them are to be stored and how. For this purpose, the scientists can use, for example, the RDMO service on the platform forschungsdaten.info.
- Archiving and publication of the research data takes place either in recognized (disciplinary)
  data centers or via FIZ Karlsruhe's research data repository RADAR. The research data must be
  secured against subsequent manipulation.

<sup>&</sup>lt;sup>2</sup> <a href="https://www.go-fair.org/fair-principles/">https://www.go-fair.org/fair-principles/</a> last access Aug 22, 2022.

<sup>&</sup>lt;sup>3</sup> https://www.gida-global.org/care last access Aug 22, 2022.

#### Responsibilities

- The management of FIZ Karlsruhe is responsible for establishing and updating this research data policy and ensures sufficient funding for research data management (HR and technical infrastructure).
- The management of FIZ Karlsruhe appoints an FDM team, to which each program unit delegates a research data management officer. The FDM team reports directly to the management. It supports the scientists in implementing the measures by providing training and advice on research data management.
- The management of FIZ Karlsruhe, together with the department heads, is responsible for raising the staff's awareness for the topic of research data and for ensuring that both the requirements of this policy and the ethical and legal framework are complied with.
- The respective project managers as well as all individual researchers are responsible for the implementation of and compliance with the research data policy from planning (data management plan) to data transfer (incl. rights clearance). Funding of project-specific costs for the FDM is to be taken into account as far as possible when submitting the application.
- In the case of cooperative projects with third parties, this policy applies at least to the part of the project for which FIZ Karlsruhe is responsible, unless similar regulations apply to the project as a whole. FIZ Karlsruhe will make every effort to convince its cooperation partners to apply this policy in the spirit of Open Science.
- In cases of suspected scientific misconduct in the handling of research data, the ombudsperson for good scientific practice is to be called in, who will clarify the facts as far as possible and report to the management. The "Guideline for Good Scientific Practice at FIZ Karlsruhe" is authoritative in this regard.
- The management of FIZ Karlsruhe promotes and supports the exchange of information on research data management on a national and international level and the participation in corresponding workgroups and initiatives.

#### Qualification and consulting; tasks of the FDM team

- FIZ Karlsruhe offers its employees training on the subject of FDM. This can be conducted internally by the FDM team or by external lecturers.
- In coordination with the program units, the FDM team develops guidelines and recommendations for handling research data throughout their entire data life cycle (i.e., from creation to deletion) and their transparent documentation (e.g., file naming, file formats, and descriptive metadata).
- The FDM team offers advice and support to individual projects from project planning to data transfer to archives and repositories.
- The FDM team advises on legal issues related to data publications and on appropriate licenses.

#### Contacts for questions regarding research data management

- FDM team and FDM officer within the program units
- Ombudsperson for good scientific practice

## FIZ Karlsruhe is committed to the following papers

- DFG codex "Directions for securing good scientific practice"
   https://www.dfg.de/download/pdf/foerderung/rechtliche rahmenbedingungen/gute wissenschaftliche praxis/kodex gwp.pdf
   last access Aug 22, 2022
- Leibniz codex good scientific practice

https://www.leibniz-

gemeinschaft.de/fileadmin/user upload/Bilder und Downloads/%C3%9Cber uns/Gute wissenschaftliche Praxis/ Leibniz-Kodex gute wissenschaftliche Praxis.pdf last access Aug 22, 2022

 Guideline for good scientific practice within the Leibniz Association https://www.leibniz-

gemeinschaft.de/fileadmin/user upload/Bilder und Downloads/%C3%9Cber uns/Gute wissenschaftliche Praxis/ Leitlinie gute wissenschaftliche Praxis 2019.pdf last access Aug 22, 2022

 Guideline for handling research data within the Leibniz Association <a href="https://www.leibniz-">https://www.leibniz-</a>

gemeinschaft.de/fileadmin/user upload/Bilder und Downloads/Forschung/Open Science/Leitlinie Forschungsdat en 2018.pdf last access Aug 22, 2022

• Open access policy of the Leibniz Association

https://www.leibniz-

gemeinschaft.de/fileadmin/user upload/Bilder und Downloads/Forschung/Open Science/Open Access Policy w <a href="mailto:eb.pdf">eb.pdf</a> last access Aug 22, 2022

 Alliance of the scientific organizations: principles for handling research data of the scientific organizations

https://doi.org/10.2312/ALLIANZOA.019 last access Aug 22, 2022

- Alliance of the scientific organizations: request to use open licenses in science <a href="https://gfzpublic.gfz-potsdam.de/pubman/item/item\_2875895">https://gfzpublic.gfz-potsdam.de/pubman/item/item\_2875895</a> last access Aug 22, 2022
- Berlin declaration on open access to scientific knowledge
   https://openaccess.mpg.de/68053/Berliner Erklaerung dt Version 07-2006.pdf last access Aug 22, 2022
- FAIR Principles

https://www.go-fair.org/fair-principles/ last access Aug 22, 2022

• CARE Principles for Indigenous Data Governance https://www.gida-global.org/care letzter Zugriff am 22.08.2022