

HZB Data Policy

Introduction

The proper management of scientific data is imperative for safeguarding the integrity and reproducibility of scientific findings. The Deutsche Forschungsgemeinschaft (DFG) recommends in the Proposals for Safeguarding Good Scientific Practice [1]: “Primary data as the basis for publications shall be securely stored for ten years in a durable form in the institution of their origin.”

Furthermore, the concept of open access to scientific results gains increasingly appreciation. In 2007, the Organisation for Economic Co-operation and Development (OECD) formulated Principles and Guidelines for Access to Research Data from Public Funding [2]. This document emphasizes the importance of openness and the free exchange of ideas, information and knowledge for the advancement of science and postulates that research data from public funding should be openly accessible. The Alliance of German Science Organisations took this idea up in the Principles for the Handling of Research Data [3] where it “supports the long-term preservation of, and the principle of open access to, data from publicly funded research.” This is substantiated by the DFG in the Leitlinien zum Umgang mit Forschungsdaten [4] in the context of their funding regulations.

The HZB approves the principle of open access to research data. In doing so, it strives for a careful balance between aspects of competition and collaboration in science. HZB supports its users to fulfill the requirements placed by funders and the scientific community. To this end, it provides the necessary infrastructure for the data management and regulates the access to the data in the present policy.

Last but not least, data management at HZB should be considered as a service to the researchers. It aims to help them to document their results and to ease the burden of the data archiving.

The present policy is based on a model formulated by the PaNdata Europe project [5].

1. General principles

- 1.1 This policy sets the rules for the management of scientific data collected by public research at HZB’s large-scale facilities. This includes the ownership of, the curation of and access to the data.
- 1.2 Acceptance of this policy is a condition of the award of beamtime.
- 1.3 For the data from proprietary research, users must make a separate agreement with HZB management how they wish their data to be managed before the start of any experiment.

2. Definitions

For the purposes of this policy:

- 2.1 The term *raw data* pertains to data collected from experiments performed on HZB instruments. This definition includes data that are created automatically or manually by facility specific software and/or facility staff expertise in order to facilitate subsequent analysis of the experimental data.
- 2.2 The term *results* pertain to data, intellectual property, and outcomes arising from the analysis of raw data. This does not include publications.
- 2.3 The term *metadata* describes information pertaining to other data, including (but not limited to) the context of the experiment, the experimental team, experimental conditions and other logistical information.
- 2.4 The term *public research* refers to research done during public funded beamtime granted by HZB after peer review of a proposal. Furthermore, all in-house research at HZB is public research for the purposes of this policy.
- 2.5 The term *proprietary research* refers to research done through purchased (commercial) access to HZB's facilities.
- 2.6 The term *experimental team* includes the proposer that have been awarded beamtime, the co-proposers, and any person involved in the creation of the raw data.
- 2.7 The term *data access team* includes the proposer, the co-proposers, and any other person designated by him/her to have access to the scientific data. Additional persons may be added on request by any member of the data access team, if no other member objects.
- 2.8 The term *open access* or *openly accessible* means that data is made freely available to everyone.

3. Raw data and associated metadata

- 3.1 The experimental team waives all copyright and related or neighboring rights together with all associated claims and causes of action with respect to the raw data and associated metadata according to the Creative Commons CC0 Dedication (see appendix).
- 3.2 All raw data will be curated in well-defined formats, for which the means of reading the data will be made available by HZB.
- 3.3 Associated metadata will be curated either within the raw data files, within an associated on-line catalogue, or within both.

- 3.4 Raw data and associated metadata will be stored by HZB for at least ten years.
- 3.5 Access to raw data and the associated metadata is restricted to the data access team for a period of five years after the end of the experiment. Thereafter, it will become openly accessible. Any member of the data access team that wishes their data to remain restricted access for a longer period will be required to make a special case to HZB management. Data can always be made openly accessible earlier on simple request of any member of the data access team, if no other member objects.
- 3.6 In deviation from 3.5, appropriate facility staff (e.g. instrument scientists, computing group members) has access to any HZB curated data or metadata for facility related purposes. HZB will undertake that they will preserve the confidentiality of such data.
- 3.7 Any member of the data access team has the right to create and distribute copies of his raw data.

4. Results

- 4.1 Copyright and related or neighboring rights with respect to results are not affected by this policy.
- 4.2 HZB will provide a means for the data access team to upload results and associated metadata to the facility and enable them to associate these results with raw data. The storage period for results is determined by the storage of associated raw data. The upload of results and associated metadata may be subject to volume restrictions.
- 4.3 HZB does not take any responsibility to fully curate results e.g. to ensure that software to read / manipulate this data is available.
- 4.4 Access to results is restricted to the data access team. They may be made openly accessible on request of any member of the data access team, if no other member objects. Paragraph 3.6 applies accordingly.

5. Good practice for metadata capture and results storage

- 5.1 The experimental team is encouraged to ensure that experimental metadata are as complete as possible, as this will enhance the possibilities for them to search for, retrieve and interpret their own data in the future.
- 5.2 HZB undertakes to provide means for the capture of such metadata items that are not automatically captured by an instrument, in order to facilitate recording the fullest possible description of the raw data.

- 5.3 Researchers who aim to carry out analyses of raw data and metadata which are openly accessible should, where possible, contact the original experimental team to inform them and suggest a collaboration if appropriate.
- 5.4 Researchers who carry out analyses of raw data and metadata are encouraged to link the results of these analyses with the raw data / metadata using the facilities provided by the on-line catalogue. Furthermore, they are encouraged to make such results openly accessible.

6. Privacy and other legal requirements

- 6.1 The proposer must ensure in the design and preparation of the experiment that the raw data comply with the legal data protection regulations (Bundesdatenschutzgesetz) and do not contain any personal or otherwise particularly sensitive data. The HZB is not responsible for the compliance of the user data with data protection legislation.

A. Creative Commons CC0 1.0 Universal Public Domain Dedication

A.1. Statement of Purpose

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B. Version history

0.1	2015-10-20	R. Krahl	First german draft.
0.2	2015-12-10	R. Krahl	Introduction, mention in-house research in 2.4, move discussion in appendix.
0.3	2015-12-18	R. Krahl	Add notes on implementation.
0.4	2016-03-22	R. Krahl	English version (without discussion and implementation).
0.5	2016-04-26	R. Krahl	Extend embargo period to five years. Eliminate the principle investigator in favour of the experimental team.
0.6	2016-06-01	R. Krahl	Modified formulation for 6.1, essentially changing from “should” to “must”. Drop 6.2.
1.0	2016-06-14	R. Krahl	Final version, no changes.
1.1	2017-01-19	R. Krahl	Introduce distinction between experimental team and data access team.

References

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