

Policy of the Retention of Primary Materials and Data

1. Preamble

The Technical University of Denmark (DTU) shall be known and respected globally as a leading technical university that produces excellent research meeting the highest quality standards. Meeting the highest standards for research excellence means that all research associated with DTU must strive for trustworthiness and high integrity; this includes honesty, transparency and accountability.

Responsible conduct of research includes proper management of research data. Proper management of research data ensures that research is credible and transparent. Furthermore it ensures that data is findable, accessible, interoperable and re-usable. Hence proper research data management enables research to be more efficient and open. DTU encourages that research data are made freely accessible, except when this is in conflict with legal or contractual obligations or current regulations on for example ethical, confidentiality or privacy matters or intellectual property rights.

The contribution of researchers and participants to the collection and creation of primary materials and data is of great importance to DTU. Research data is recognised as supporting research findings, contributing to further research and discussion, and enabling public trust in research.

Purpose

The intention of the policy is to support departments, researchers and research support staff by outlining how research data are managed at DTU from planning, during and beyond the life of the research project:

- To be in accordance with best practice in the respective field of research, codes, ethical protocols, including confidentiality, and privacy and other legal requirements including the *Danish Code of Conduct for Research Integrity*¹;
- To ensure, where appropriate, that primary materials and research data are available to support research findings and to contribute to other research projects;
- To enable, where appropriate, that research data support Open Science², by making data findable, accessible, interoperable and reusable;

¹ Danish Code of Conduct for Research Integrity (2014): <http://ufm.dk/publikationer/2014/the-danish-code-of-conduct-for-research-integrity>

² Open science is the umbrella that includes transparent methods and public access to results, including publications, data and code.

- To align research data management practices with requirements from funders and publishers of scientific journals;
- To promote visibility and recognition of DTU's research.

Scope

This policy applies to staff, students, visiting researchers, and honorary and adjunct appointees undertaking or supporting research activities at all DTU locations and external research locations (in the following referred to as researchers).

This policy applies to research data that has been collected and/or used during DTU research activities, including materials, data, records and datasets, held in all formats and media.

2. General principles

Research data should be:

- a. Recognised as valuable
- b. Planned for (when commencing a new research project)
- c. Stored securely and appropriately
- d. Findable, accessible, interoperable and reusable (i.e. FAIR-principles)³
- e. Retained in accordance with disciplinary traditions, otherwise for a minimum of five years after publication or public release of the research
- f. Appropriately disposed
- g. Managed in line with ethical protocols, including confidentiality
- h. Compliant with legal requirements, such as privacy and data protection

3. Definitions

Research data is the material, data, records, files, and other evidence underpinning the research projects' findings, or other outcomes. This includes:

- *Primary material* is any material (e.g. specimens, laboratory notebooks, interviews, texts and literature, digital raw data, recordings and any other records including computer code necessary for the reconstruction and evaluation of

³ FAIR-principles refers to Findable, Accessible, Interoperable and Reusable. Reference: Wilkinson, M. D., Dumontier, M., Aalbersberg, I. J., Appleton, G., Axton, M., Baak, A., ... Mons, B. (2016). Comment: The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3, 160018. doi:10.1038/sdata.2016.18

reported results of research, and the events and processes leading to those results) that forms the basis of the research.

- *Data* are detailed records of the primary materials that comprise the basis for the analysis that generates the results.

Research data management is planning for and organising the collection, analysis, storage, re-use and disposal of research data. It ensures that researchers and institutions are able to meet their obligations towards funders, improve the efficiency of research, and make data available to verify their findings or for reuse, where appropriate.

4. Responsibilities

DTU acknowledges the importance of ensuring that all research data are managed so that they are secure, accessible, and, where appropriate, reusable, and so that any ethical, confidentiality and privacy requirements and concerns are respected. The responsibility is shared between:

Principal investigators (PI) / Main researchers:

- *Supervise Research Data Management:* PIs must ensure that researchers under their management are instructed to conduct research in accordance with the policy and are made aware of their responsibilities as mentioned in this policy.

Researchers:

- *Research Data Management:* Researchers must ensure that research data are managed in line with best practice in their field; this includes planning the management of their primary materials and data.
- *Storing research data:* Researchers must ensure that primary materials and data are retained, stored and managed in a clear and accurate form that allows results to be assessed, the procedures to be retraced and, when relevant and applicable, the research to be reproduced.
- *What to store and for how long:* Researchers are, unless otherwise regulated⁴, responsible for deciding the extent to and duration for which primary materials and data are to be retained. When deciding this,

⁴ This refers to collections of primary materials and data that may be regulated by contractual agreements or by the law to be kept for a specified time, e.g. governmental research institutions

researchers should consider the value of the primary materials for assessing the results of the research and the physical and technical possibility of storage at the institution.

- *Disposal:* Researchers should plan for the appropriate disposal of primary materials and data.
- *Access and sharing:* Researchers are responsible for managing the access to their research data and are encouraged to make their research data freely accessible, except when this is in conflict with contractual legal obligations or current regulations on for example ethical, confidentiality or privacy matters or intellectual property rights.

Technical University of Denmark:

- **Data storage:** DTU must provide a storage system that allows researchers to manage their data responsibly. Such a storage system includes: storage space, access control, and back-up.
- **Research Data Catalogue:** DTU must provide a research data catalogue that enables data to be findable, accessible and citable.
- **Research Data Management Support:** DTU should 1) provide education and training opportunities; 2) provide advice on practice, legal issues and infrastructures; and 3) develop and maintain common systems and infrastructures for research data management.

5. Policy process

The DTU Policy of the Retention of Primary Materials and Data was approved by the Executive Board 29 June 2016, and should be considered for review every five years.

7 December 2016