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TURKU UNIVERSITY OF
APPLIED SCIENCES
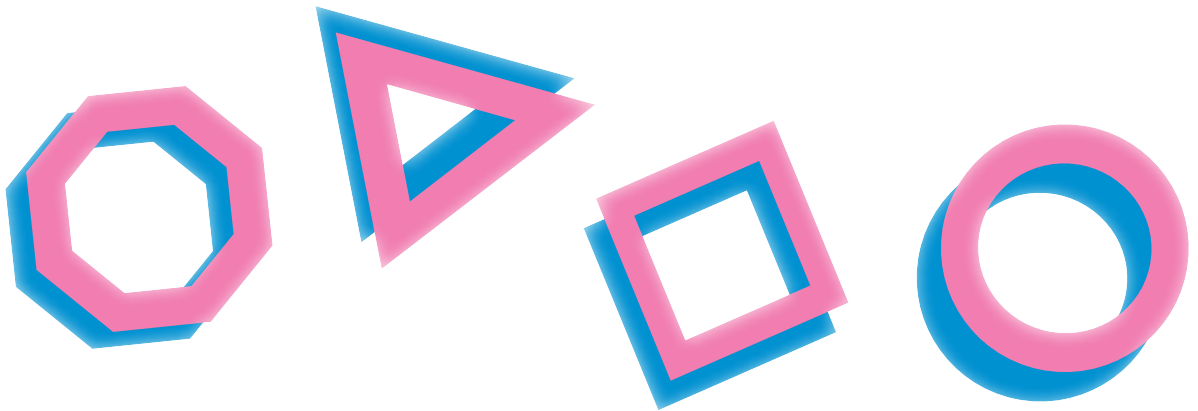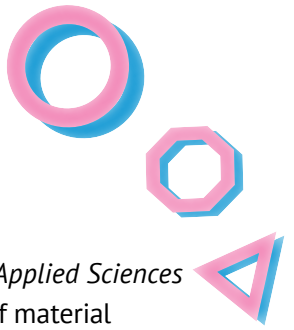
The Future is Open

Principles of Research Data Management at Turku University of Applied Sciences

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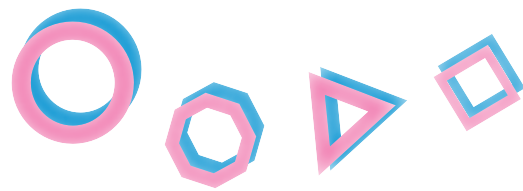
1. Introduction

Principles of research data management at Turku University of Applied Sciences describes the principles and policies regarding the handling of material generated in research, development and innovation (RDI) activities.

At Turku University of Applied Sciences (TUAS), research data refers to the digital material that the staff and students produce in their RDI activities. Examples of such material include measurement results, statistics, images, audio recordings, transcripts of interviews, surveys and field-work observations. The principles also apply to students' theses, irrespective of whether they are part of an RDI project.

The RDI activities of Turku University of Applied Sciences are as open as possible and as closed as necessary. The activities adhere to

1) good data management practices
2) the principles of research ethics
3) legislation and
4) funding conditions and contracts regarding RDI activities.

The protection and data security of confidential and sensitive material must be ensured when creating, using, storing, sharing, archiving and disposing of the material. Materials and methods produced through the RDI activities of TUAS are made openly accessible and published, unless other agreements have been made in individual cases for instance due to aspects related to data protection or data commercialization. To make research data open, high-quality data management is needed to ensure the preservation, accessibility, understandability and reusability of data.

The usability of research data from RDI activities can be ensured by using appropriate documentation and metadata as well as by developing methods and information systems related to data curation. National and international services are used as much as possible as tools in research

data management and long-term storage. If required, research data can be stored in services managed by Turku University of Applied Sciences, especially in the case of dynamic data and other material.

At TUAS, the infrastructure of openness is developed in cooperation with national and international operators and by utilizing the services offered by our cooperation partners. Separate instructions will be provided on recommended external organizations on a case-by-case basis.

The Data Management Guidelines published by the Finnish Social Science Data Archive as well as comparative analyses of the principles adopted at the University of Helsinki, University of Oulu, Tampere University of Technology and University of Turku have been used for support when preparing these principles of research data management at Turku University of Applied Sciences.

Turku University of Applied Sciences is committed to promoting open science methods. The related general policies are described in a separate document called *Principles of open RDI at Turku University of Applied Sciences*. The implementation of research data management principles are regularly monitored and assessed by our internal open science steering group.

2. Good data management practices

Turku University of Applied Sciences adheres to good research data management practices, which are part of good scientific practice. Each member of our community is responsible for following good research data management practices.

Good research data management practices refer to ensuring that the material and descriptions preserve all data in a usable, reliable and safe format throughout their life cycle.

A research data management plan must be drawn up for each RDI project in which new data are generated.
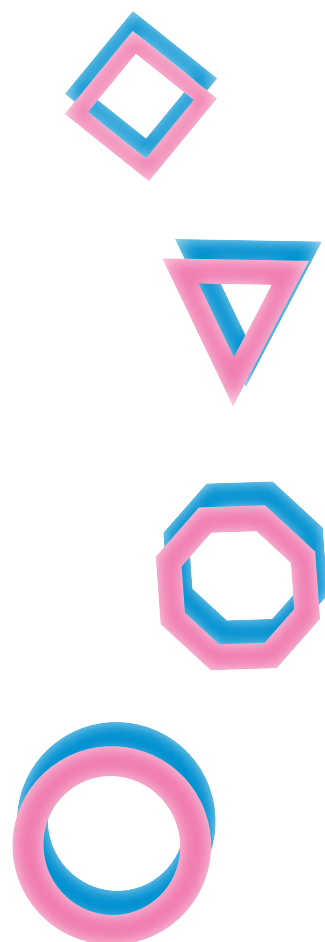
3. Adherence to the guidelines on research ethics

All members of the TUAS community must adhere to the guidelines on research ethics when dealing with research data management and ensure the protection, data security and data protection of confidential information in compliance with legislation, good scientific practice as well as the guidelines and regulations issued by Turku University of Applied Sciences.

The national guidelines published by the Finnish National Board on Research Integrity as well as the guidelines on research ethics of Turku University of Applied Sciences are available to the TUAS community.

4. Legal aspects

Every member of the community of Turku University of Applied Sciences must comply with legislation in research data management as well as protect all confidential information in their material and adopt appropriate data security and data protection measures for such information.

The project coordinator is responsible for ensuring that the contracts regarding the ownership and access rights of research data are drawn up as early as possible – even before the project launch, where appropriate. The details of these contracts are also recorded in the research data management plan and metadata.

Turku University of Applied Sciences provides its research groups support for identifying and solving legal and ethical questions related to research data.

5. Data management plan

A data management plan must be prepared for all projects that produce research data. Careful planning of data management enables safe handling of sensitive data throughout their life cycle, including secondary use after the project.

An appropriate data management plan ensures adherence to the funding conditions and contracts regarding RDI as well as compliance with good research data management practices, principles of research ethics and legislation during the project.

The data management plan is stored in the project management system of Turku University of Applied Sciences and it is updated during the project. Further directions and recommendations for data management are available in the data management instructions of Turku University of Applied Sciences.

6. Secondary use and reuse of research data

The research data produced at Turku University of Applied Sciences and included in published research results are primarily open and available for shared use. However, their openness can be restricted for justified reasons. The commercial use of research data and results as well as the protection of related rights are taken into account when putting the principles of openness into practice.

Data description includes both the metadata that enables the data to be found and the documentation that ensures the usability of data.

Metadata must be prepared for all data sets to ensure that the data can be found and referenced in addition to securing their secondary use and reuse. Other documentation included with the data indicates the nature of the data and the details related to its use.
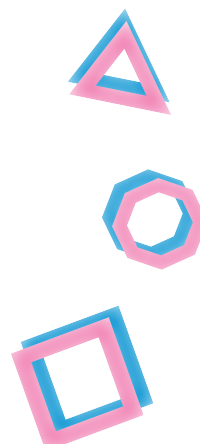
In connection with secondary use, the authors of the research data must be mentioned as required by good scientific practice. Turku University of Applied Sciences must be mentioned as the source of the research data.

The costs of data management must be taken into account in the project's research and funding plan. A compensation can be charged and conditions set for the use of research data and data sets that have been processed for the needs of business, industry and other societal actors.

7. Support for research data management

Turku University of Applied Sciences introduces the members of its community to good data management practices and their adoption as part of its normal staff and student orientation.

TUAS offers support and guidelines for adherence to good data management practices throughout the project life cycle.