

NANYANG
TECHNOLOGICAL
UNIVERSITY
RESEARCH DATA
POLICY

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NANYANG TECHNOLOGICAL UNIVERSITY

RESEARCH DATA POLICY

1. INTRODUCTION AND OBJECTIVES

- 1.1 NTU recognizes that research data is an important part of all research and scholarly work carried out in the university, not only for supporting research findings and discovery but also in contributing to the advancement of science and scholarship through its availability for sharing. Moreover the proper management of research data is necessary to ensure that the research integrity of research work carried out in NTU is beyond reproach.
- 1.2 This policy aims to ensure that research data generated in the conduct of research projects at NTU are managed in a systematic and comprehensive manner to ensure integrity, accountability, long term availability, appropriate sharing and compliance with requirements of funding agencies.

2. POLICY IMPLEMENTATION

- 2.1 The Research Support Office (RSO) is responsible for the promulgation and implementation of the policy.

3. POLICY APPLICATION

- 3.1 This Policy shall apply to all NTU faculty, staff, researchers, students and any other persons, including consultants, visiting researchers, those involved in the design, conduct or reporting of research performed at or under the auspices of the University.

4. DEFINITIONS

- a. **Research data**
Research data are data in whatever formats or form collected, observed, generated, created and obtained during the entire course of a research project. This would include numerical, descriptive, aural, visual or physical forms recorded by the researcher, generated by equipment and derived from models, simulations.
- b. **Final research data**
The final dataset is a collection of final version of data that exists during the last stage in the data lifecycle in which all re-workings and manipulations of the data by the researcher have ceased.

- c. **Data management plan**
A Data Management Plan (DMP) describes the data management life cycle for all datasets that will be collected, processed or generated by the research project. It is a document outlining how research data will be handled during and after the project is completed, describing what data will be shared and/or made open, and how it will be curated and preserved.
- d. **Data repository**
A system where data are stored securely and made available for use. This includes but is not limited to the university data repository, a discipline specific repository, a funder repository or a commercial system.
- e. **Data management**
It refers to all the processes and actions required to manage data using good practice throughout the research life-cycle for current and future research purposes and users.
- f. **Metadata**
It refers to information or facts about a set of research data for the purpose of attribution, description, management, verification and discovery.

5. REQUIREMENTS FOR RESEARCH DATA MANAGEMENT

5.1 OWNERSHIP

- 5.1.1 The University owns all research data produced by research projects conducted at or under the auspices of NTU regardless of funding source, unless specific terms of sponsorship, other agreements or university policy supersede these rights.
- 5.1.2 In joint projects with other external parties, there shall be clear agreement for NTU to jointly hold all rights and ownership of research data arising from the project.
- 5.1.3 The University assigns automatic rights to the PI and his/her designated researchers to use and publish all research data arising from their project for non-commercial purposes only.
- 5.1.4 If a PI leaves NTU for another institution together with his research project, ownership of research data produced during the period may be transferred with the approval of the Director of Research though NTU will continue to retain the rights to use and publish the data.

5.2 DATA MANAGEMENT PLAN

- 5.2.1 All research proposals must include a data management plan (DMP) that records the intention on how research data arising from the research project will be managed, used and shared.

5.3 RETENTION

- 5.3.1 All research data shall be stored in facilities, equipment, devices or virtual resources where the University has full access and control unless specific permission is granted by the Director of Research Support Office.
- 5.3.2 Reasonable steps shall be taken to ensure that all research data are properly protected from loss, theft, damage and unauthorized access. In addition, data integrity (i.e. prevention of corruption, tampering, transmission errors, etc.) over the entire data life cycle must be safeguarded.
- 5.3.3 All research data related to a research project shall be retained for 10 years after publication or after the completion of the project, whichever is later. If litigation proceedings, investigation on research misconduct, review of financial management or other formal enquiries are started during this ten-year period, all research data shall be retained until the satisfactory completion of these proceedings.
- 5.3.4 A longer retention period for research data may be imposed if required by government oversight, funding agencies and negotiated terms with external project partners and sponsors.
- 5.3.5 Research data from human subject research studies must be maintained consistent with the NTU Institutional Review Board Guidelines and national legislation and regulations.

5.4 DISPOSAL

- 5.4.1 Beyond the period of retention specified here, the destruction of the research record is at the discretion of NTU in consultation with the PI and his or her research entity.
- 5.4.2 Records that may be relevant to emerging or current allegations of research misconduct or challenged research results must not be modified or destroyed and must be retained at least until notification from the University that the matter is resolved.

5.5 DEPOSIT

- 5.5.1 The final research data used in establishing and validating research findings must be deposited in the NTU Data Repository or a recognized open access data repository no later than publication of the article. If the latter, the URL link and access method to the dataset must be registered with the Library.

5.6 DATA SHARING

- 5.6.1 The final research data from projects carried out at NTU shall be made available for sharing (via the NTU Data Repository) unless there are prior formal agreements with external collaborators and parties on non-disclosure or proprietary use of the data.
- 5.6.2 The sharing and use of research data shall be based on Creative Commons license CC:BY:NC, where others may use data for non-commercial applications only and must correctly attribute the data source in NTU.

6. ROLES AND RESPONSIBILITIES IN DATA MANAGEMENT

6.1 PRINCIPAL INVESTIGATORS (PIs)

- 6.1.1 Have overall responsibility for the proper and effective management of research data generated during the research project, in accordance with NTU policy and guidelines.
- 6.1.2 Prepare a data management plan using either the NTU DMP template or that provided by the funding agency and submit it online onto the NTU platform specified by the University within three months upon approval of the project grant. The PI shall provide an updated version whenever there are substantive changes to the research project.
- 6.1.3 Submit the final research data to the NTU Data Repository or external open access repository no later than the first online publication of the article.
- 6.1.4 Any data which is retained elsewhere, for example in an international data service or domain repository should be registered with NTU Libraries at time of deposit.
- 6.1.5 Ensure that formal agreements are reached with external collaborators and parties, if any, on the ownership, rights, use and sharing of research data arising from the research project before commencement of project.

6.1.6 Provide statement and justification if there is a strong need to deviate from NTU research data policy including sharing of final research data.

6.1.7 Exclusive rights to reuse or publish research data should not be handed over to any external organisation without retaining the rights to make the data openly available for re-use, unless this is a condition of funding.

6.2 COLLEGES AND SCHOOLS

6.2.1 Ensure that all research projects include a DMP and that is attached to the relevant record in the NTU research information management system.

6.2.2 Ensure that PIs adhere to their obligations as detailed in this policy.

6.3 RESEARCH SUPPORT OFFICE

6.3.1 Implement and coordinate the execution of the Research Data Policy.

6.3.2 Ensure that all NTU staff are informed about the Research Data Policy and any subsequent changes.

6.3.3 Ensure that the Research Data Policy is updated to take into account the latest funder requirements and national research directives and guidelines.

6.4 LIBRARY

6.4.1 Provide training and advice on research data management including metadata description, DMP preparation, copyright and licenses.

6.4.2 Develop, revise and maintain the NTU DMP template and other data management tools.

6.4.3 Develop and manage the NTU Data Repository for submission of final research data and maintain the Registry of NTU Research Data deposited in external open access data repositories.

6.5 CENTRE FOR IT SERVICES

6.5.1 Provide technical support to maintain all systems (such as the NTU data repository and DMP submission system) required for compliance with the research data policy.

6.5.2 Advise and make available storage of research data where necessary throughout the data life cycle of a research project.

6.5.3 Provide software to support effective research data management.

7. OTHER RELEVANT POLICIES AND GUIDELINES

This policy will operate in conjunction with other University policies such as:

- [NTU Policy on Research Integrity and the Responsible Conduct of Research](#)
- [NTU Policy on Intellectual Property](#)
- [NTU Institutional Review Board Guidelines](#)
- [NTU Personal Data Protection Statement](#)
- [NTU Open access mandate](#)
- [NTU Procedures for Responding to Allegations of Research Misconduct](#)